Functional grammar of Nunggubuyu

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TEXT

Text A 592-598

Abbreviations and symbols

a) book references.

NMET Heath, Nunggubuyu Myths and Ethnographic Texts
TNT Hughes, Tales of the Nunggubuyu Tribe
MT Hughes, More Tales of the Nunggubuyu Tribe
[see Bibliography, pp. 647-48, for references]

b) phonological symbols

:	vowel length
-	morpheme boundary
=	boundary before verb root or predicative NAdj
#	word boundary (in some rules also stem boundary)
C	consonant
G	stop archiphoneme, p. 13
L	liquid consonant, pp. 24, 134
N	nasal consonant or nasal archiphoneme, pp. 13-14
V	vowel or vowel archiphoneme
w_1	/w/ becoming /g/ by Hardening P-18
w_2	/w/ becoming /b/ by Hardening P-18

c) other symbols

/.../	enclosing phonological transcriptions
//...///	enclosing underlying or presurface transcriptions
[...]	enclosing phonetic transcriptions
--	a) 'becomes' in phonological rule b) subject/object relationship (pronominal prefixes)
'	morpheme-initial vowel contracted by VV-Contraction P-49
∅	zero (nil morpheme)

d) kinship terms (Chapter 5)

♂	male
♀	female

[for 'Br', 'Mo', etc., see list p. 221

e) subscripts (X represents word/symbol with subscript)

X_a	A series pronominal prefix, p. 338ff.
X_b	B " " " "
X_c	Continuous
X_{der}	derivational
X_{infl}	inflectional
X_p	Punctual
$X_\emptyset$	$ANA_\emptyset$ subclass of ANA class or unprefixed[Text A]
X_{wu}	ANA_{wu} subclass of ANA noun class
X_1, X_2, etc.	usage varies, see Index

f) grammatical

A	A series, p. 338ff.
A_1 etc.	[verb classes, p. 408]
Abl	Ablative
Aft	afterthought, p. 592ff.
All	Allative
ANA	a noun class
$ANA_\emptyset$	subclass of ANA
ANA_{wu}	other subclass of ANA
Anaph	Anaphoric demonstrative
Arg	argument, p. 525
B	B series, p. 338ff.
Backgr	background, p. 592ff.
Benef	Benefactive
Br	broken-off; brother
BO	Benefactive obj., p. 550
C	clause
Caus	Causative
Centrif	Centrifugal demonstr.
Centrip	Centripetal demonstr.
CM	component morpheme
cpd.	compound[ing initial]
Comit	Comitative
Cont	Continuous
Contr	Contrastive pronoun
D	demonstrative, p. 42/256
Dat	Dative
DemAdv	demonstrative adverb
DemPro	demonstrative pronoun
DER	derivational, p. 145
dir.	direct (object)
Dist	Distant demonstrative
Du	Dual
Emph	Emphatic pronoun
Erg	Ergative
Evit	Evitative
Ex	exclusive person
F	feminine
Fact	Factitive
HM	high monotone, p. 592ff.
HumSg	human singular
I_1 etc.	[verb classes, p. 408]
Imm	Immediate demonstrative
In	inclusive person
Inch	Inchoative
L	list intonation p. 592ff.
Loc	Locative
M	Masculine
MA_1 etc.	[verb classes, p. 410]
MANA	a noun class
MN	modifier-nucleus cpd. p. 464
Mult	Multiple deriv. prefix
N	noun; a verb class, p. 409
NA	a noun class
NAdj	adjectival noun
NAdv	adverbial noun
Nc	common noun
NC	noun class
N^gARA	a noun class
N^gA_1 etc.	[verb classes, p. 410]
Nk	kin-term noun
NM	nucleus-modifier cpd.
O/obj.	object
P-1 etc.	[phonological rules]
Per	Pergressive
Pl	Plural; place
Pred	predicate
Pron	pronoun
PROP	propositus (of kin term)
Rdp	reduplicated [cf. p. 342]
Recip	Reciprocal
Refl	Reflexive
Rel	Relative
S/Subj	Subject
Sg	Singular
Tr	Trial number
TS	transitive subject, p. 258
U_1 etc.	[verb classes, p. 409]
V	verb [in phonology: vowel]
VOC	vocative (esp. kin term)
VP	verb phrase
WARA	a noun class
YA	[a verb class, p. 409]

Chapter 1

Introduction

1.1 The Nunggubuyu people.

This grammar completes a three-volume series begun with Nunggubuyu Myths and Ethnographic Texts (1980) and Nunggubuyu Dictionary (1982), hereafter referred to as "NMET" and "the dictionary," respectively.

The two or three hundred people who speak this language with varying degrees of proficiency were formerly hunters and gatherers on the mainland coast of Arnhem Land opposite Groote Eylandt, in the Northern Territory of Australia. The majority of Nunggubuyu were settled at Numbulwar Mission in 1952, and it was there that most of my fieldwork was done between 1973 and 1977. During the years immediately before 1952, the Nunggubuyu spent some time at other earlier settlements but, due to periodic outbreaks of friction with the locally dominant groups there and to their culturally engrained attachment to their own local territory and its food and ritual resources, they also spent much time in the bush living their traditional life. Several of my major informants and narrators therefore grew up in the bush, and even in the mid seventies spoke little or no English and had made little adjustment to European culture (as opposed to European material phenomena).

The present grammar is therefore a record of a living language spoken by fully competent adult native speakers for whom this was still the vernacular of daily life as well as the medium in which traditional culture was expressed.

Additional information about clans, moieties, rituals, and individual narrators is provided in NMET; indeed, NMET as a whole is a kind of mini-encyclopedia of traditional Nunggubuyu life, told mainly by Nunggubuyu. Since this information is usually not directly relevant to grammatical matters we do not repeat it here, though we will discuss the kinship system in Chapter 5, below. Additional ethnographic references are given in NMET (pp. 10-12).

1.2 Main features of the language.

Although attaching simple typological labels to a language as immensely difficult as this one would be arbitrary and unhelpful,

I will try to mention a number of features which characterise it and which perhaps cohere with each other in some way, in order to provide an initial orientation to readers:

a) word order flexible (§15.4);
b) multi-word syntactic units like NP, VP, and clause are difficult to justify except as informal approximations or potentialities (for ex., coreferential elements in a "NP" may be scattered, and can be analysed as appositional), see §15.2, §15.3, §15.5;
c) intonational/breath groups ('strings') only occasionally coincide exactly with (intuitive) "clauses," because of frequent pauses within a "clause" and because two or more "clauses" may be run together (§15.5);
d) direct marking of cases is also rather casual, since zero (Nominative) is used for subject and direct object, and often as an option for other case categories (§4.18ff.);
e) elaborate system of noun-class affixation, with different subsystems used for nouns, pronouns, demonstratives, and pronominal prefixes (subject-object) in verbs (§4.7ff.);
f) proliferation of morphology, with each word-class (nouns of several types, personal pronouns, demonstrative pronouns, cardinal-direction adverbs, verbs) developing its own highly unique set of forms and categories;
g) direct influence of discourse factors in much of the morphology--choice among two series of noun-class prefixes or absence of prefix (§4.8), use of a whole series of personal pronoun formations expressing different kinds of focus and emphasis (§6.8-10), use of demonstratives separately marking nuances of discourse status in roots (§7.1), prefixes (§7.4), and suffixes (§7.6-7), use of reduplication and compounding in some types of repetitions of verbs (§8.3-4, §14.8, §17.5-6), use of distinctive intonation patterns (§17.4), and use of a number of particles with framing effects (Chapter 12, §17.9), in addition to partial discourse determination of word order (§15.4);
h) extensive morphological and syntactic interactions between tense-aspect, mood, and negativity (with effects on noun-class prefixes on nouns and pronominal concord prefixes on verbs), so that instead of separate formal expression these categories tend to blend into interactive configurations (Chapter 8, §15.6);
i) "possession" not a unified phenomenon, rather an umbrella label for a number of quite distinct formal mechanisms, including propositus[Ego-of-reference] indexing in kin terms (Chapter 5), derivational ("inner") noun-class concord for whole-part harmony (§4.7, §4.9), and genitive usage of a broader "Relative" case marker (§4.30, §6.4), along with special forms for predicate genitive (§6.5), see overall discussion in §15.8;
j) use of direct rather than indirect quotation (§16.3);
k) "subordinated" clauses including Relatives having semi-autonomous status, formally with normal inflected verbs and nouns plus a subordinator (§16.2, §16.4ff.);

l) use of a small number of interjection-like "root forms" as uninflectable forms with the meaning of an inflected verb, for certain meanings (§12.2);
m) use of some lexical nouns as abstractives with verbal meaning (§4.33);
n) use of some lexical nouns with agentive meaning (§14.21).

It is equally important to indicate some features of the more familiar languages which are <u>not present</u>:

o) no infinitive or similar reduced complement clause type;
p) no productive participial (deverbative) formation;
q) no productive verbal noun form (derived from verb);
r) no relative-clause construction requiring coreferential head noun (though such coreference is occasionally overtly marked in the Nunggubuyu "Relative" construction, §16.4);
s) no switch-reference system or other cross-clause rules triggered by coreferentiality (for a minor and somewhat dubious exception see the 'to want' construction described in §16.8);
t) no copula;
u) no formal distinction between imperative and future (except for 'come!', §8.5);
v) aside from dubious 'to want' construction mentioned in (s), no complex surface constructions with a "higher" verb like 'can', 'must', 'promise to', 'persuade to', etc. (see §16.9 for Nunggubuyu counterparts);
w) no passive or antipassive rules creating demoted (chômeur) nouns (for derivations roughly similar to agentless passive and objectless antipassive see §10.5 and §14.9).

It is not appropriate to launch here into a long typological disquisition involving data from many other languages. However, we can say that some of these positive and negative features make sense, either by direct reference to nonlinguistic way of life (use of a few lexical, unsegmentable nouns with abstractive verbal or agentive participial meaning, instead of having productive deverbative formations, reflecting small number of traditionally institutionalised "activities" and absence of occupational specialisation), or by reference to others among the features listed. In particular, the prolific noun-class indexing system (e) and the use of discourse-controlled affixation in all major word-classes (g) seem to be centrally important, compensating for (and thus permitting) fluid word order (a), looseness of phrasal and clausal structure (b-c), casualness of case marking (d), looseness of subordination (j-k), and several of the negative features, cf. also the use of noun-class derivational marking for one type of "possession" (i).

In these respects, Nunggubuyu seems to have gone farther than even the neighbouring Aboriginal languages which I have also worked on (Ngandi, Warndarang, Mara, Ritharngu, Dhuwal, etc.). For this reason, and because these publications on Nunggubuyu are much more detailed and reflect much more effort than earlier ones on those languages, it would seem to me that Nunggubuyu is a language which deserves recognition by serious typologists, as representing maximal development of a certain discourse/grammatical strategy.

1.3 The data base and its usage here.

A casual thumbing-through of chapters in this grammar (except the early phonetics/phonology ones) will immediately reveal a large number of lists of numbers like "15.4.3, 17.5.2/3, TNT 4, MT 6." These numbers indicate textual references, and play a major part in the organisation of the present volume (as they did in the dictionary). The three-part sequences like "15.4.3" refer to NMET (i.e., my own texts volume) and indicate text number (15), segment number within that text (4), and line of Nunggubuyu text (disregarding English interlinear glosses) within that segment (3). "17.5.2/3" with slash indicates occurrence of the feature in question on both line 2 and line 3 of text segment 17.5, while "17.5.2-3" indicates that the feature spills over from line 2 into line 3. "TNT" (Tales of the Nunggubuyu Tribe) and "MT" (More Tales of the Nunggubuyu Tribe) refer to two volumes of mimeoed texts prepared by Rev. Earl Hughes, and which are available at the library of the Australian Institute of Aboriginal Studies in Canberra (as well as at Numbulwar itself); citations with TNT or MT are followed by page number only.

These textual citations serve several purposes. When attached to a fully cited Nunggubuyu ex., they have basically documentary value--the reader is assured that the ex. is from a real text, and a reader wanting to know more or having doubts about the analysis can find it and analyse it. Often, however, I cite just one or two exx. of some pattern in this way, then append a list of other textual exx.--readers get an immediate idea of how common the pattern is (if the list is stated to be exhaustive at least for NMET), and a reader with a specialist's interest in a particular grammatical problem will be able to analyse a much larger number of real exx. than could possibly be presented in full in a one-volume grammar. I also occasionally use an intermediate format, with perhaps one ex. presented in full, and with an accompanying list of other textual exx. with a schematic "English" translation or summary added to the numerical citation in parentheses or brackets. Such formats give readers at least an idea of the kinds of contexts involved, again without taking up too much space. In this way, we take maximal advantage of the published texts (especially NMET), achieving a far higher level of documentation than is observable in other reference grammars, while still being able to devote most of the pp. in this volume to commentary and analysis.

The standards of accuracy and documentation which I have set for myself in preparing this volume have been high, though I may not have lived up to them uniformly. In essence, this is a corpus-based grammar, and my ideal has been to account for all or nearly all instances in the texts of each morpheme or other feature under consideration. Accordingly, I have totally revised earlier unpublished versions of this grammar, which were based to a large extent on directly elicited sentences and on my own "knowledge" of the language. In combing through the texts while preparing various sections of the final version, I have discovered that some of my rules were wrong, but above all that my rules were oversimplified, missing semantic and syntactic patternings which emerged from collating and organising large numbers of textual occurrences.

Particularly in the case of demonstratives (Chapter 7), I found it necessary in addition to generate statistics about correlations among roots and affixes. I therefore installed a concordance program in our computing centre at Harvard (the Oxford Concordance Project), typed in the more than 3000 tokens of demonstratives in NMET with a schematisation of contexts, and produced a working concordance and statistical word-list. This material was highly valuable in identifying categorical and statistical covariation patterns among the morphemes in the demonstrative system, and led to previously unsuspected conclusions about the usage of each morpheme. Some statistical material is also given in connection with nouns (Chapter 4), though in that case the problems were more manageable without computational resources.

The extensive exposition of textual citations and statistics in many chapters of this volume may strike some readers as reflecting a personal fetish of mine. While this may be true, it is a fetish which I would defend. The format used permits those readers who just want the bottom line to get it (by skipping over lists of exx., statistics presented in tables, etc.), and indeed I assist them further by double-underlining of important terms and conclusions. On the other hand, it gives a more patient (or more skeptical) reader a feeling for the raw data which underlie the analysis and an opportunity to "cross-examine" the author by going directly to the data. It also encourages readers with highly specialised interests, or with a different theory of language, to discover new patterns which I overlooked or did not have space to discuss.

My concern with documentation reflects my own sad experiences as a reader of other linguists' grammars, which have almost never provided me with the information I wanted to undertake my own (re-)analysis of the language in question. It also reflects my experience that most published grammars are based on material obtained in unreliable direct-elicitation (sentence-translation) sessions, and/or utterances which were produced by the linguist with or without "confirmation" from a native informant. I have no confidence whatever in such data, since my own early "data" of this type often turned out to be seriously wrong. Accordingly, to other linguists who express disapproval of my emphasis on documentation, I suggest that they try doing an analysis based on a comparable textual corpus and see if it doesn't add to their understanding of their favourite language.

In the present volume, I have been least concerned with textual documentation in the phonetics/phonology chapters, and in Chapter 9 (pronominal prefixes), since even a large corpus would not contain all of the pronominal prefixes, and certainly not all of the forms needed to specify details of phonological rules and their ordering relationships. I have also kept textual documentation low in some syntax sections such as §15.2 (status of "NP") and §15.4 (word order) because of the open-endedness of the problems raised (and the finiteness of this volume). Of course, elicited utterances have been used as exx. in various places where no suitable textual ex. was available or for other reasons, but this should be clear from the absence of numerical citations if not from the commentary.

1.4 Use of this grammar.

Aside from the difficulty of arriving at satisfactory analyses of a phonologically and morphosyntactically complex language like this, I have the problem of a potentially diverse readership with quite different interests--teachers and literacy personnel at Numbulwar, academic linguists specialising in Australian languages (perhaps mainly interested in historical reconstructions), and other linguists with different theoretical specialties.

I think it would be advisable for most readers approaching the language for the first time not to try to read the grammar chapter by chapter, like a novel. I would suggest an initial skimming around, with subsequent more concentrated reading of those chapters or sections of most immediate interest.

For example, someone interested in comparative Australian linguistics (e.g., the genetic position of Nunggubuyu) might find the verbal morphology, notably the pronominal prefixes (Chapter 9) and the inflectional suffixes (Chapter 11), the most useful for purposes of reconstruction and genetic classification, since these are relatively closed paradigmatic systems. Such a reader will also have to learn the phonological rules (Chapter 3) fairly well.

A teacher or literacy person would probably do best to concentrate on the morphology chapters, with occasional reference to relevant phonological rules; the outline of the verbal inflectional system in Chapter 8 should be learned well.

A theoretical linguist interested in morphosyntactic typology (or coming from a typologically concerned theory, such as relational grammar or ergative-syntax theory) should start from the list of major typological features in §1.2, above, and should begin by following up the references given there to various specific sections in later chapters. If such a reader has a functional-discourse orientation, or is at least willing to consider such an approach, I recommend Chapter 17 (mainly a discussion of a particular text and the various morphosyntactic features which interact in it to produce referential clarity and discourse coherence) as a basic point of departure, since it shows the various morphological forms discussed elsewhere "in action," so to speak.

A more traditional syntactician will probably be attracted mainly to Chapters 15 and 16. I hope, however, that those chapters make it clear that "syntax" is difficult to separate from "morphology" and "discourse" even to the extent this separation is possible in analysing English; some central conclusions of Chapters 15 and 16 suggest there is no purely syntactic solution to many of the problems raised there.

A theoretical phonologist will have to learn something about the morphology as well as examining Chapters 2 and 3, since many of the phonological rules are morphologically restricted, and since some "phonological" rules have a partly morphological character (both types of reduplication, $n^g u$-Epenthesis, etc.). With regard to current debates about root-to-affix phonological cycles, such readers should note the general points in §3.54, and should go over the ordering relationships discussed in §3.52-53. It should be noted that the cases of cyclical application of rules affect

the portion of the word going leftward from the root (for compound, the final root) in a somewhat different way from the rightward portion. In addition, it can be argued that a distinct "inner" cycle of rules applies within the component morphemes of the pronominal prefix of a verb, so there are two distinct clusters within with the earliest (morphophonemic) rules apply. The notions of 'contact', 'blind', and 'one-eyed' rules are developed in §3.54 as a way of looking at various boundary rules, depending on the extent to which a process affecting an outer segment of one morpheme requires knowledge of specific phonological segments on the other side of the boundary.

For linguists interested in metrical and "autosegmental" phonology, one of the more interesting rules is Initial Reduplication P-2 (§3.3), which in its productive application gives bisyllabic reduplicative segment when the stem begins with a stop, monosyllabic otherwise--thus the specification of CV(CV)- canonical shape for the reduplication is not independent of the specific segmental composition of the stem. (There is also a quite different Final Reduplication P-3). Such phonologists may also want to examine some of the insertion and epenthesis rules (P-1, -7, -20, and -21 in §3.2/8/21/22, respectively), as well as the rules affecting vowel length.

Aside from grist for particular existing phonological models, I would hope that some rather language-specific phonological patterns would be noticed. For example, a synchronically somewhat peculiar class of "paired continuants" including most but not all nonnasal sonorants acts as a set in some crucial rules (§2.5, §2.10). Related to this, a quite curious $n^g u$-Epenthesis rule P-1 (§3.2), inserting a dummy morpheme /-$n^g u$-/ in a partly phonologically defined environment, can be looked at as a kind of functional adjustment to the Hardening rule (P-18)--i.e., a device to counteract some threatened surface mergers. This kind of consideration is rarely noted in discussions of phonological theory.

While I welcome theoretical usage of the material in this grammar, I would suggest that modeling of the data be evaluated on the basis of whether it sheds light on some largish combination of Nunggubuyu data. Mere demonstrations that a given model, with or without patching up for the occasion, can "handle" some Nunggubuyu facts will be less impressive.

Because this is designed to be a permanent reference grammar of an interesting language, my discussion in chapters to follow is not overtly subordinated to current theoretical debates. However, many passages have been implicitly written with some such debates in mind, and usually it is not difficult to see how the data could be applied to them. The real test of this grammar, however, will be whether it continues to be useful some years hence for linguists interested in different issues and using different formalisms.

1.5 Acknowledgements.

The fieldwork was done between 1973 and 1977 and lasted three years, excluding one year in the middle when I was back in Chicago. My fieldwork was supported by the Australian Institute of Aboriginal

Studies (A.I.A.S.). I thank the then Principal, Peter Ucko, along with Bob Dixon and Michael Silverstein, for helping to arrange that opportunity. In addition, I have many obligations to staff members of the Institute, too numerous to name, who provided expert assistance in such areas as servicing and air-freighting Uher tape recorders, maintaining a fine library in Canberra, processing my tapes and manuscripts, and publications. To mention only the linguists connected with the Institute at that time, I thank Barry Blake, Barry Alpher, Peter Sutton, Paul Black, Bruce Rigsby, and Michael Walsh for various forms of services and support.

The job of writing and typing the three Nunggubuyu volumes has required considerable post-fieldwork time. Fortunately, my position at Harvard has permitted a reasonable degree of term-time research activity. In addition, a long leave of absence in 1980-81 enabled me to finish the dictionary and continue work on the grammar. I acknowledge primary support in 1981 from the National Endowment for the Humanities (research fellowship), and local support during parts of that year from the Universität Hamburg (Prof. Jurgen Meisel), the Freie Universität Berlin (Prof. Norbert Dittmar), and again from A.I.A.S. (courtesy of then Acting Principal Warwick Dix).

It would be impossible to list all of the Australianists, linguists and (other?) anthropologists, to whom I have debts of one kind or another, and from whom I have learned something useful about the Aboriginals and their languages.

At Numbulwar, I thank the town council for my initial research permit and subsequent renewals. I particularly thank Lindsay and Dirrjuna, and for hospitality at Roper River (Ngukurr) also the Rev. Michael Gumbili (another Nunggubuyu).

The Rev. Earl Hughes, the former chaplain at Numbulwar and the author of the first publications on the language (see References), left before I arrived, but of course his work, principally his texts and dictionary, were of great value to me. I have debts, in addition, to linguists who were there while I was--Miss Kathie Warren (teacher turned literacy specialist), and later on Mr. Michael Hore (Bible translator). I thank Mr. Hore in particular for replying to my recent inquiries about paradigmatic gaps.

I think that anyone who reads this grammar will appreciate how hard it must have been for a young graduate student to tackle this language, but also how rewarding the experience eventually proved to be in the long run--making him come to grips with phenomena which are scarcely dealt with in a conventional linguistic curriculum. Whether they know it or not, the Nunggubuyu who served as my hosts for three years provided me with an enriching personal and professional experience of a sort which few colleagues have enjoyed.

My debts are thus mainly to Nunggubuyu. I thank my earliest teachers (Mujiji, Jibulunguy, Milton, Dick), and my later one Yurrumurra, who engaged in elicitation sessions but mostly helped me understand and transcribe recordings. My (other) narrators, mostly now dead, were acknowledged more fully in the texts volume but deserve another mention--Maadi, Larrangana, Gaagadug, Johnnie, Reuben. May their descendants prosper.

Chapter 2

Segmental phonetics/phonology

2.1 Vowel segments.

In this chapter we identify the phonemes and archiphonemes of the language, and discuss the general principles behind their combination into morphemes and words.

The vowels are:

i u	i: u:		o: [see §2.12]
a	a:		

Surface long vowels may represent underlying long vowels, or may arise by VV-Contraction P-49. (For phonological rules P-1 through P-50 see Chapter 3.) With regard to underlying long vowels, there do not seem to be any minimal pairs for /i/ vs. /i:/ or /u/ vs. /u:/. However, there are a handful of pairs involving /a/ vs. /a:/, hence /lhanda/ 'antmound' vs. /lha:nda/ 'young kangaroo' (no etymological relationship); /lharag/ 'quinine bush' vs. /lha:rag/ 'log coffin'; /=$w_2$ala-/ 'to arrive' vs. /=w_1a:la-/ 'to put (things) together' (for /w_1/ vs. /w_2/ see below, §2.5).

These phonemic (underlying) length contrasts are of very little functional interest. Aside from the fact that only a handful of pairs can be found, the items in question are usually distinguishable even when the length opposition is blurred: the paired nouns above have different noun-class prefixes, and the verbs differ in transitivity (hence in pronominal prefixation).

Of more functional significance is the length opposition created by VV-Contraction P-49, an important rule applying at morpheme boundaries with underlying vowels on both sides. For example, Benefactive prefix //-aG-// may be realised on the surface solely by lengthening the preceding vowel (in environments where the //G// archiphoneme is deleted without leaving a trace by Stop-Deletion P-29, and when the preceding morpheme ends in //i//): /n^{g}ani=na-n^y/ 'he saw me' vs. //n^{g}ani-aG=na-n^y// ➝ /n^{g}ani:-'=na-n^y/ 'he saw (it) for me'.

Also important are length oppositions in the pronominal prefixes used with verbs. Thus /nani-/ 3MSg ➝ 1InDu$_a$ vs. /na:ni-/ 1ExMDu ➝

NA_b; /nunu-/ 2Sg⟶$3MSg_a$ vs. /nu:nu-/ 2Pl⟶$3MSg_a$; /nini-/ 2Sg⟶NA_a vs. /ni:ni-/ 2Pl⟶NA_a; and a few other similar pairs. Moreover, pronominal prefixes ending in /rV/ optionally drop this segment with compensatory lengthening of the preceding vowel in some environments (see rV-Truncation P-36), creating further oppositions: /n^ga-/ 1Sg⟶$ANA_{\emptyset-a}$ vs. //n^gara-//⟶/n^ga:-/ 1Sg⟶$3Pl/WARA_a$; /wu-/ ANA_a vs. //$w_2$uru-//⟶/w_2u:-/ $3Pl/WARA_a$; etc. (For a maximally abstract analysis of the pronominal prefixes, recognising internal component morphemes, see Chapter 9.)

Phonetically, short and long vowels are distinguished both by duration and by effect on word intonation, with long vowels characterised by higher pitch. However, these phonetic oppositions are by no means consistent, because phrasal or word-level intonational patterns may override segmental length in particular utterances. The transcription of phonemic vowel length for lexical items requires listening to the item a number of times, preferably in a variety of morphological frames in naturalistic utterances. As an indication of the difficulty linguists have had in transcribing vowel length for this language, it may suffice to point out that the pioneering publications by Hughes recognise phonemic length only for /a/ vs. /a:/ (his "aa"); that one other linguist who worked on the language subsequently came to the conclusion that there were no phonemic length oppositions; and that even once we agree what the phonemes are, the various linguists have disagreed among each other as to which morphemes show length. One linguist now working on the language has indicated (p.c.) agreement with about 95% of my length transcriptions for lexical items, which suggests that at least some convergence is now occurring; the major disagreement involving affixes is my /...i-n^y/ vs. the other linguist's /...i:-n^y/ (with $Past_1$ or $Nonpast_1$ suffix /-n^y/ added to verb stem).

Some particular morphologically determined alternations involving short and long vowels are discussed in phonological rules P-39 through P-45 (see also P-20, -35, -36, and -49).

2.2 Vowel archiphoneme /V/ and other problematic cases.

Ordinarily, the vowel for each syllable is given in underlying forms and is independent of vowels in adjoining syllables and independent of adjacent consonants. However, there are some rules given in the next chapter (V-Assimilation P-37, V-Ablaut P-38, and V-Fronting P-50), each of which subsumes an assortment of morphologically restricted cases where vowel quality is determined by the vowel of the next syllable (P-37), by a following "palatal-type" consonant (P-50), or by an irregular ablaut process (P-38).

In many cases, a vowel which is affected by one or more of these rules in some contexts is unaffected by them in others, so that we can determine the underlying vowel quality. However, in a very small number of morphemes, the surface quality of a given vowel is always determined by one of these rules (P-37, -38, -50), so we represent the vowel in underlying forms by the archiphoneme symbol //V// (or long //V://).

The morphemes in question are certain component morphemes in pronominal prefixes used with verbs, under the maximally abstract

analysis of Chapter 9. These morphemes are 1ExNonsg //nV:-// or //nV-// (length depends on morphological position), 1InNondu //n^gV:-//, and Nonsg //-w_2V-// in some positions. The 1ExNonsg and 1InNondu morphemes are always followed by at least one other (nonzero) component morpheme within the pronominal prefix. This is true of the cases of Nonsg //-w_2V-// which we are interested in; there are some other cases where the Nonsg morpheme is final within the pronominal prefix, but there it acquires any of three surface vowels (/a i u/) depending on morphological factors, so no general base form for the morpheme can be given with a fully specified underlying vowel. The 1ExNonsg, 1InNondu, and (relevant cases of the) Nonsg morpheme become /a/ (or /a:/) before Inverse morpheme //-N-// (nasal archiphoneme, with ablaut affecting preceding vowel), and assimilate the vowel quality of the following syllable in all other combinations.

There are some other component morphemes in pronominal prefixes which are subject to V-Ablaut P-38 or V-Assimilation P-37 (or both) in some contexts, but they also occur in some combinations where we think we can identify an underlying vowel quality (see discussions of P-38 and P-37, next chapter).

Another place where there is some difficulty in identifying a unique underlying vowel quality is at the end of a verb root (i.e., just before the inflectional suffix marking tense-aspect, etc.). For example, consider these inflected forms of the verb 'to arrive': $Past_1$ /=$w_2$ali-n^y/, $Past_2$ /=$w_2$ala-n^gi/, $Nonpast_1$ /=$w_2$ala-n^g/, $Nonpast_2$ /=$w_2$ali:-'/, $Nonpast_3$ /=$w_2$ali-$\emptyset$/, and Evitative /=$w_2$ala-n^gan/. I take roots of this type as ending in //a//, hence //=$w_2$ala-// is the dictionary representation; this is because, in the context of the overall morphological analysis of inflected verb forms (Chapter 11), it appears possible in this class (A_2) to take surface /=$w_2$ali-/ as from //=$w_2$ala-// with V-Fronting P-50 before $Past_1$ /-n^y/ and $Nonpast_3$ //-y//, and surface /=$w_2$ali:/ in the $Nonpast_2$ as reflecting VV-Contraction P-49 from //=$w_2$ala-i//. While the final surface /a/ in the $Nonpast_1$ can also be explained away (this time by V-Ablaut P-38), there is no obvious or independently supported rule for deriving final /a/ in the $Past_2$ or Evitative forms from any distinct underlying vowel; we therefore set up underlying //a//. Similar arguments are used for the other inflectional verb classes (Chapter 11). However, it must be recognised that the arguments in this instance are often indirect, and that we are dealing with rather fused sequences where the morpheme boundary's location (not to mention the precise underlying segmental transcription) is perhaps synchronically ambiguous. See discussion in §11.3-4.

In other morphological environments, underlying transcription of vowel qualities is straightforward. This remark applies to noun stems, verbs except for root-final vowels, case suffixes, postpositional suffixes, derivational prefixes and compound initials, prefixes (except component morphemes within pronominal prefixes in a few cases), and uninflected particles.

2.3 Consonantal segments.

The consonant phonemes are set out in Table 2-1.

TABLE 2-1

Consonant Phonemes

	stop	nasal	liquid: lateral	liquid: rhotic	semivowel
labial	b	m			w_2
interdental	dh	(nh)	lh		
alveolar	d	n	l	r	
retroflexed	d	n	l	r	
laminoalveolar	j	n^y			y
velar	g	n^g			w_1

There is a single stop series (as in Anindilyakwa, and languages to the south), in contrast to Ngandi and other languages to the north and west with fortis vs. lenis series in medial position. Phonetically, interdental /dh/ and to a lesser extent laminoalveolar /j/ are pronounced like fortis consonants in the languages with both series, while the other stops are phonetically lenis (i.e., short and voiced) at least intervocalically.

There is a corresponding full series of nasals, but interdental /nh/ is very rare, occurring only in a handful of fauna nouns (none of high frequency): /minha:ri/ 'centre section of ray fat', /ma:nha(g)/ 'heron sp.', /munhal/ 'perchlet'. Note that /n^y/ is our symbol for laminoalveolar, equivalent to /ɲ/, and that /n^g/ is the symbol for velar, equivalent to /ŋ/.

There are three laterals; note that an interdental lateral is present (though absent from most neighbouring languages), but no laminoalveolar /l^y/ occurs in the language (there is a /ly/ cluster but it has no unit-phoneme articulatory or structural features). As in most Australian languages, there are two rhotics: tap /r/ (not trilled, except in its rare word-initial occurrences and then only optionally), and a retroflexed approximant /ɾ/ roughly similar to the "r" of American English.

Semivowels are /y/ and /w/. The latter is divided into /w_1/ and /w_2/ in morpheme-initial position because of different morphophonemic behaviour (/w_1/ alternates with /g/, /w_2/ with /b/); other cases (non-morpheme-initial, and morpheme-initial in morphemes which do not occur in relevant morphophonemic contexts) are just transcribed as /w/ and are indeterminate morphophonemically. More details on /w_1/ and /w_2/ are given below.

/b/ and /m/ are phonetically bilabial. Interdental /dh nh lh/ are strongly laminal. Alveolars /d n l/ and retroflexed consonants /ɖ ɳ ɭ/ are both apical, differing from each other mainly in the distinctive r-coloured onset to the retroflexed consonants. Hearing the distinction clearly requires a preceding vowel, so the two series are effectively indistinguishable following a stop, nasal, or liquid. For convenience, in the table we list /ɾ/ with the

alveolars and /ɾ/ with the retroflexed consonants; this is approximately correct articulatorily (and is consistent with phonological alternations), but the main difference between /r/ and /ɾ/ is not point of articulation but rather tap vs. approximant constriction. Laminoalveolar /j/ and /n^y/ are clearly distinct from the other laminal series (interdental) in this language; /n^y/ sounds rather like palatal nasals in Romance languages, but /j/ is different from the English affricate "j" or similar European phonemes, notably in its more fronted articulation and its lack of an affricated release when syllable- or word-final. Velar /g/ and /n^g/ are normally front velars rather than back velars/uvulars. Because of its lack of aspiration, word-final /g/ is difficult to hear after a liquid or even after a vowel.

2.4 Consonant archiphonemes /G/ and /N/.

Although there are a large number of rules (Chapter 3) involving consonantal alternations or deletions, it is usually easy to determine the underlying forms of consonants. However, there are some prefixes and suppletive compound initials which must be set up as ending in a final stop or a final nasal, but where this segment is either deleted or assimilated (in point of articulation) in all surface forms so that we cannot directly observe its underlying point of articulation. We thus use //G// for a stop archiphoneme, and //N// for a nasal archiphoneme.

In the case of //G//, we could identify the underlying stop specifically as velar //g//, since this would always produce the correct outputs. However, we play safe and use //G//, since we never actually see the supposed underlying velar (which may or may not be etymologically correct). Similarly, if we substitute //n^g// for //N// we will always produce the correct surface forms, but we nonetheless use the more conservative archiphoneme transcription.

Prefixes ending in //G// include derivational noun-class prefixes like MSg/NA //niG-// (see §4.7), Benefactive //-aG-// §10.2 (variant //-wa:G-//), Multiple allomorphs //-$w_1$araG-// (less common than //-$w_1$ara-//) and //-n^garaG-// (alternates with //-n^garan-// §10.4), and various compound initials or minor derivational prefixes (see dictionary entries for //-baG-//, //-burG-//, //-dirG-//, //-lha(G)-//, //-lhagarG-//, //-lhiG-// or //-liG-//, //-malan^{g}aG-//, //-malG-//, //-marG-//, //-n^{g}uraG-//, //-ragarG-//, //-aga:G-//, //-ambuluG-//, and //-$w_1$urG-//). The //G// always disappears on the surface due to Stop-Deletion P-29), but is needed since following morphemes undergo Hardening P-18 of their initial segments (a rule which requires a preceding stop or nasal), along with other rules likewise requiring such a consonant. Thus //-baG=$w_1$urya-// → /-ba=gurya-/ 'to pour over eyes' and //-baG=$w_2$urlha-// → /-ba=burlha-/ 'to rub eye', among other compounds, point to //-baG-// rather than *//-ba-// as the form of the compound initial meaning 'eye' (not directly related to the independent noun of this meaning).

Archiphoneme //N// occurs, in the maximally abstract internal analysis of pronominal prefixes (Chapter 9) in the Inverse morpheme //-N-// (requiring ablaut of vowel in some preceding morphemes). It always acquires its surface point of articulation by assimilation

to a following consonant except when it is deleted entirely; thus it shows up as surface velar in ANA→1Sg$_a$ //n^{g}a-N-w$_1$u-//→ //n^{g}a-N-gu-//(Hardening P-18)→/n^{g}an^{g}gu-/(Nasal Assimilation P-27), but as surface labial in 3Pl/WARA→1Sg$_a$ //n^{g}a-N-w$_2$i-//→ //n^{g}a-N-bi-//(P-18)→/n^{g}ambi-/(P-27). (We generally omit internal hyphens in surface transcriptions of pronominal prefixes.) Other morphemes for which //N// is given in the dictionary as final segment are Gentilic //nuN-// (used mainly with clan names §14.1 and these minor compound initials or derivational elements: //-lhaN-//, //-lhan^{g}aN-//, //-l̲aN-//, //-n^{g}aN-//, //-r̲aN-//, //-ambaN-//, //-albun^{g}uN-//, //-aN-//, and //-ilbuN-//. In all of these we have a nasal segment which acquires surface point of articulation from the following consonant, or else is deleted by the usual rule which deletes (certain) nasals in the relevant combinations (Nasal-Deletion P-30).

For the majority of prefixes, compound initials, and the like we do not need consonantal archiphonemes: either the morpheme clearly ends in a vowel, or it ends in a consonant which can be uniquely specified. Many compound initials, for example, are merely special uses of stems which also occur as independent nouns, and in the latter function it is easy to determine the final segments.

2.5 Paired stops and continuants; the problem of /w$_1$/ and /w$_2$/.

Nunggubuyu is characterised by a series of alternations in which each of the six stop phonemes is paired with another consonant (lateral, rhotic, or semivowel):

b	⟷	w$_2$
dh	⟷	lh
d	⟷	r
d̲	⟷	r̲
j	⟷	y
g	⟷	w$_1$

In most instances, the stop is derived from the other consonant by Hardening P-18, a rule which applies to the underlying consonants shown above (in the right column) when they are preceded by a stop or nasal (see top of this page for exx.). However, there is also a more restricted morphophonemic rule in which the stop appears to be underlying and the other consonant derived (Lenition P-16). (Other hardening/lenition rules are P-17 and -19.)

In this publication we use the term continuant (or paired continuant) for this specific set of sonorants related by these rules to the various stop phonemes. Note that this set of six continuants does not form a natural phonetic class, since three continuants are included but two others (/l l̲/) never alternate with stops.

The other problem, of course, is that /w/ is related both to /b/ and to /g/. This forces us to recognise two distinct entities which we label //w$_2$// (related to /b/) and //w$_1$// (related to /g/), though this distinction can only be made in morpheme-initial

position since the alternations occur there (there are also some cases of morpheme-initial /w/ which cannot be subclassified since they do not happen to occur in a Hardening environment).

It might seem that we could evade several difficulties by assuming that instead of hardening continuants to stops, the phonological rules lenite underlying stops to continuants. This would save us the trouble of distinguishing //w$_1$// from //w$_2$//, since we would have just underlying //g// and //b//, whose lenited outputs would happen to converge as /w/; this would also save us from recognising a non-natural phonological class of paired continuants, since we would have an underlying natural class of six stops. However, this analysis is synchronically quite impossible, except for the lexically restricted set of alternations dealt with by Lenition P-16. The vast majority of stop/continuant alternations dealt with here by Hardening P-18 must have an underlying continuant rather than stop.

To begin with, in such alternations the continuant has a broader distribution than the stop: in the morphemes in question the initial continuant is found in word-initial position, and medially after a vowel, liquid, or semivowel, while the paired stop is found only medially after stop or nasal. Secondly, a hardening rule (continuant → stop) makes sense for such items, since a sequence of surface stop or nasal plus continuant is impossible in Nunggubuyu (see discussion of possible surface consonant clusters below, this chapter). There is no such canonical-pattern motivation for an inverted lenition rule for these morphemes (stop → continuant), since a stop can perfectly well occur on the surface in word-initial position or medially after vowel or any consonant.

Finally, handling these productive alternations with a hardening rather than a lenition rule allows us to have a perfectly natural set of morpheme-initial consonants in underlying forms. Some morphemes always begin in a stop /b dh d d̲ j g/ which never becomes a continuant; we set these up as having underlying initial stop. Other morphemes show stop/continuant alternations (the stop only medially after stop or nasal); we set these up as having underlying initial continuant. There is no third set of morphemes with invariant initial continuant which resists hardening to stop after stop or nasal (though there are some morphemes which do not happen to occur in such an environment and thus happen to show initial continuant in all attested forms). If we replace Hardening P-18 with a productive lenition rule, we will then have to prohibit /w lh r r̲ y/ as morpheme-initial consonants (though /l l̲/ would be permitted), and would have to recognise one stop series /b$_1$ dh$_1$ d$_1$ d̲$_1$ j$_1$ g$_1$/ which undergoes lenition vs. a distinct stop series /b$_2$ dh$_2$ d$_2$ d̲$_2$ j$_2$ g$_2$/ subject to lenition. The analysis would result in a quite horrendous proliferation of indexing, along with an unnecessary and awkward set of underlying constraints.

A few additional remarks about //w$_1$// and //w$_2$// are in order. Aside from being related to different stops, they also differ in that //w$_1$// as stem-initial segment shows a distinctly greater tendency to be deleted than does //w$_2$// in such environments as /a-___a/ (see w$_1$-Deletion P-9). There is a suggestion, then, that

/w_1/ and /w_2/ might be articulatorily distinct as surface consonants, with the consequent possibility of distinguishing them even in morpheme-medial (or -final) position. In environments where w_1-Deletion P-9 is applicable, instead of complete deletion one sometimes hears (and/or sees) a half-hearted lip-rounding, giving a faintly audible approximation to surface /w/. However, speakers differ in their treatment of //w_1// in these positions (some retaining it, others deleting it entirely, others half-pronouncing it, or fluctuating among these). There does not seem to be any distinction possible in such environments as /u-___a/. In general, attempts to transcribe /w_1/ vs. /w_2/ morpheme-internally have been unsuccessful, and my feeling is that the fairly systematic distinction between //w_1// and //w_2// in deletability (by P-9) is limited to morpheme-initial position, where it is reinforced by the important phonological opposition between the two in connection with Hardening P-18.

In some lexical items, initial /w/ fluctuates between /g/ and /b/ as its hardened counterpart, hence dictionary entries give both /w_1/ and /w_2/ as variants. In the case of /=$w_1$urya-/ 'to pour (liquid) on', the hardened form is always /=gurya-/ in compounds, but can be either /=gurya-/ or /=burya-/ in uncompounded form. The same pattern is found with /=$w_1$uldha-/ 'to sever' and with /=$w_1$irgira-/ 'to be skinny' (i.e., variants with /w_2/ occur occasionally in uncompounded forms only). On the other hand, with /=$w_2$ayama-/ 'to proceed, keep moving' and /$w_2$ulhuwulhur/ 'first, previous' the hardened form in compounds is with /b/ in all attested exx.; again, the uncompounded form shows /b/ or /g/. It looks as though the older form is best preserved in compounds, while the uncompounded forms show some tendency to introduce fluctuation. Other stems for which some variation is attested are: /=wajala-/ 'to pull out sedge roots', /=$w_1$alhalha-/ 'to shake spear with woomera', /=waradar-wu-/ 'to eat leftovers in morning', /=warwargu-/ 'to carry along', /=wayajara-/ 'to lay out (bed)', /=wuyuguyuma-/ 'to carry in arms', /wundul/ 'calm', /=wuriyi-/ 'to lift up', and /=$w_1$udha-/ 'to be up (on roof)', where we show /w_1/ or /w_2/ in the transcription only if there is a compound attested showing the presumably older form.

With some noun stems, the distinction between initial //w_1//, //w_2//, and zero may be difficult to determine in underlying transcriptions. The distinction is very clear in verbs, and if the noun happens to be one which can be used as a compound initial (with following verb) we merely add appropriate verbal inflectional prefixes and observe phonological behaviour. If the noun is an adjectival noun (i.e., one which can be used as a predicate with intransitive inflectional prefixes), the same tests are applicable. With nonadjectival nouns which cannot be used as compound initials we may be in trouble. Some such nouns, denoting body parts or the like, may occur with derivational noun-class prefixes (§4.7), like MSg/NA /niG-/; this permits recognition of //w_2// if we get initial surface /b/, but initial surface /g/ could be either the hardened form of //w_1//, or else surface /g/ inserted before stem-initial vowel by Velar-Insertion P-8 (thus for some nouns our dictionary entry shows initial /(w_1)a.../ or the like indicating

that we cannot determine whether an initial //w_1// is present or not. Other nonadjectival nouns do not occur with such derivational noun-class prefixes. If the unprefixed form starts with /wu.../, we try the form with (inflectional) noun-class prefix, which will usually tell us whether the surface /w/ is real or is inserted by a low-level rule (P-5) applying in word-initial position, in which case the prefixed form should undergo V-Truncation P-46. If the /w/ is real, we probably will never know whether it is //w_1// or //w_2//, so we just leave it as /w/ in the dictionary. If the form without prefix starts with /wa.../ or /wi.../, the chances are it is really //w_2// at the beginning, since //w_1// is often (but not rigorously) dropped in such positions by w_1-Deletion P-9. If the form starts with /a.../, we could have either underlying vowel-initial stem, or else underlying //w_1a...// with the //w_1// deleted by P-9, and again it may not be possible to go any farther (we write /a.../ in the dictionary entry if there is no definite indication of presence of semivowel).

We might mention that borrowed /w/ from well-integrated English loans may come in as //w_2//. English work as a noun is heard as /warg/, and a verbalised form /=$w_2$ardha-/ 'to work' is now common: cf. /n^gam=bardhi:-'/ 'I will work'. Since //w_1// in this position is often deleted by w_1-Deletion P-9, the clear pronunciation of the /w/ in the English word probably favoured //w_2// in the borrowing.

2.6 Distributional restrictions: vowels.

There are relatively few restrictions on the co-occurrence of vowels with other segments, but there are some which must be mentioned.

Word-initially, /a/ and /a:/ are permitted in underlying and surface forms. Underlying /u/ and /i/ also occur, but a homorganic semivowel is normally inserted before them in this position by Initial Semivowel-Insertion P-5, so //u// ⟶ /wu/ and //i// ⟶ /yi/. For exx. of this see the discussion of P-5, next chapter. Exx. of /a/ and /a:/ are ANA noun-class prefixes /ana-/ and /a-/, the latter with variant /a:-/ before one demonstrative root (see P-35) and before one noun (see P-43, next chapter); /agalgi/ 'yesterday', /aban/ 'ground, earth', and /Ø=a:ru-n^y/ 'it(ANA/MANA) abandoned it(ANA/MANA)'. Initial /a/, /a:/, /i/, and /u/ occur in underlying or intermediate forms in root-initial position, especially verbs, but are most often subject to VV-Contraction P-49.

All vowels occur word-finally. Some suffixes which are normally word-final are Dual /-w_2a:/, Ablative /-$w_1$ala/, Similative /-yi:/, and Evitative /-magi/. Some stems which can occur word-finally are /n^gurudhu/ 'bird, game animal', /adaba/ 'now', and /$w_1$ujbi/ 'female'. Final long /u:/ is less common but does occur in Nonpast$_3$ verb forms of roots ending in /u/, as in /=a:ru:-'/ 'will not abandon' (base form of suffix disputable, but most likely //-u//, hence //=a:ru-u// with VV-Contraction P-49); long /u:/ also occurs on the surface in demonstrative forms with Concrete suffix //-u//, as in //da-ni-u// ⟶ /da-nu:-'/ '(it is) that(ANA)' (§7.6).

While all vowels, including long ones, can occur word-finally, it seems true that long vowels do not occur as final segments in

noun or verb roots (except for monosyllabic noun roots and verbal root-plus-suffix sequences of some types, see P-44), and long vowels are also very rare as underlying final segments of prefixes (an exception is /yi:-/, the punctual prefix for NA and N^{g}ARA noun class; for surface long vowels in prefixes due to various rules see P-35, -36, -43).

Vowel clusters do not normally occur within a word in surface forms. The exception is that some cases of bisyllabic /aa/ have been observed, generally due to deletion of a previously intervening underlying /w$_1$/ or etymological *w (see P-9): /bagaraag/ 'cycad nut', /=lhaayi-/ 'to lie stretched out in line', etc. Usually such /aa/ clusters are unstable, and a contracted variant /a:/ is also attested, except that contraction (by P-49) is not reliable over a boundary when synchronic underlying //w$_1$// has been deleted. Other underlying vowel clusters like //a-i// and //u-a// are common at morpheme boundaries, especially between a prefix and following verb root, but these clusters are not retained on the surface: usually VV-Contraction P-49 combines the two into a single long surface vowel, and if not an epenthetic semivowel is inserted by P-7 or -10 (cf. also P-6).

There are no major restrictions on the combinability of vowels with preceding or following consonants. There are some cases of a back vowel shifting to /i/ before a "palatal-type" consonant /j n^{y} y/, but this is sporadic and limited to a few tight-knit combinations (see P-50). Both short and long vowels can occur before consonant clusters: exx. of long vowels are /ba:lmi/ 'pelican' and //n^{g}a:mba=anma-n^{g}//→/n^{g}a:mba:='nma-n^{g}/ 'we(InPl) will look for them(WARA)'. Aside from forms involving monosyllabic noun or verb roots, word-final /...V:C/ with long vowel followed by consonant seems impossible.

2.7 Distributional restrictions: initial and final C, CC.

The basic consonants shown in Table 2-1 can all occur word- or stem-initially. An exception is the rare phoneme /nh/, shown in parentheses in Table 2-1, since this interdental nasal occurs only medially in a handful of uncommon noun stems.

Word-initial /CC/ clusters do not normally occur. Stem-initial /n^{g}g/ occurs in a couple of nouns (borrowed from Warndarang to the south, which has homorganic nasal-stop clusters in this position, arguably unit phonemes): /-n^{g}gurya/ 'excrement', /-n^{g}gi<u>l</u>yirin^{g}gi<u>l</u>yiri/ (name of beings in Gunabibi myth). In Nunggubuyu, the initial nasal is usually pronounced when a prefix (ending in a vowel) is present, but it is dropped in absolute word-initial position by rule P-33.

It should also be noted that tap /r/ is very uncommon in word- or stem-initial position, though there are a few items like /ramu-n^{y}ij/ 'person and his/her FaMo' and /=ra-/ 'to swear at' which can occur word-initially or -internally. Alveolar /l/ is also uncommon word- or stem-initially, but cf. /larawal/ 'sedge sp.' and a few others.

We omit exemplification of all word- and stem-initial consonants since exx. can readily be found in the dictionary.

Let us now consider word- and stem-final consonants (excluding clusters for the moment). The following table identifies consonants which are rare or impossible in this position.

TABLE 2-2

Final Consonants

stop:	b	rare, only in interjections (including verbal root forms, §12.2)
	*dh	impossible
	d	occasional
	<u>d</u>	fairly common
	j	common
	g	common
nasal:	m	rare, only in interjections
	*nh	impossible
	n	fairly common
	<u>n</u>	fairly common
	n^{y}	common
	n^{g}	common
liquid:	*lh	impossible
	l	common
	<u>l</u>	common
	r	common
	<u>r</u>	fairly common
semivowel	y	fairly common
	w	very rare

The basic generalisations are these: <u>interdental</u> /dh nh lh/ <u>do not occur finally</u> (this is part of a more general restriction limiting these consonants to syllable-initial position); <u>labials occur finally only in a handful of interjections</u>, including verbal root forms (see §12.2); /w/ is also very rare, although the other semivowel /y/ is not uncommon; apicals are reasonably common, but velars and laminoalveolars are most common of all.

Attested exx. of /b/ are /wub!/ 'to spear', /gab!/ 'to eat', /garab!/ 'to eat', and /julub!/ or /lub!/ 'to jump in'; all of these are uninflected root forms pronounced as interjections. Exx. of /m/ are /n^{g}am!/ 'to eat', /<u>d</u>um!/ (sound of popping), and one pronunciation of the noun /jubam(i)/, a rare stem designating one of the five fingers (possibly a borrowing). The attested exx. of /w/ are two root forms, /jan^{g}gaw!/ and /jaw!/ 'to pick up', and two bird terms: /gandhaw/ 'bittern sp.' and /garbaw(g)/ 'owl sp.'.

These restrictions on /b/, /m/, and /w/ can be generalised to all morpheme-final position (i.e., including prefixes and compound initials) in underlying forms, though on the surface we can get /m/ as final segment of a nonfinal morpheme by Nasal-Assimilation P-27, as in /a-ma<u>r</u>an^{g}-w$_2$a:/→/a-ma<u>r</u>am-ba:/ 'two hands'.

We give one ex. each of the more common stem- and word-final consonants: /malwad/ 'tree sp.', /yimbid/ 'cypress', /wu:j/ 'beeswax', /r̲an^{g}ag/ 'tree', /mu:n/ 'foot', /marin̲/ 'pandanus basket', /lha:n^{y}/ 'tongue', /mu:n^{g}/ 'hair', /lha:l/ 'country', /balwal̲/ 'flounder', /lha:r/ 'crossing', /gagar̲/ 'lightweight', and /a:y/ 'nest, raft'. These are all nouns formally. Verb forms have more limited possibilities, since verb roots end in vowels, and since the obligatory inflectional suffixes which follow them are few in number (those ending in a consonant have final /y/, /n/, /n^{g}/, or /n^{y}/).

Word- or stem-final /CC/ clusters are rather restricted. The form /garbawg/ 'owl sp.' was recorded, though other speakers have just /garbaw/. Aside from this, the only final /CC/ clusters attested are of the type liquid (/l l̲ r r̲/) plus velar or laminoalveolar stop or nasal (/g j n^{g} n^{y}/), and not all possible combinations of these are attested. The recorded clusters, each given with one ex., are these:

wg	garbaw(g) 'owl sp.' (variant)
lg	lhagabun̲ulg 'dirt'
l̲g	dha:mbul̲g 'feathered stick'
rg	wunbarg 'mangrove tree sp.'
r̲g	war̲bar̲g 'crow'
*lj	---
*l̲j	---
rj	lhabarj 'important'
r̲j	-dhanbar̲j 'fishtail'
ln^{g}	-lhamuln^{g} 'root tuber'
l̲n^{g}	dhan^{g}umiln^{g} 'genitals'
rn^{g}	w$_{l}$umurn^{g} 'shelter'
*r̲n^{g}	---
*ln^{y}	---
*l̲n^{y}	---
rn^{y}	ma:rn^{y} 'snake'
*r̲n^{y}	---

Evidently /r/ is particularly common as first element, with /l/ probably next most common; /g/ is most common as second element.

2.8 Distributional restrictions: medial CC clusters.

We deal hear with medial clusters of two consonants, both within and across morpheme boundaries. /CCC/ clusters are dealt with in §2.9, below.

On the following page, Table 2-3 summarises the attested /CC/ clusters (note that the table's explanation carries over into the page after that). The table is somewhat simplified, but still perhaps difficult to understand, and for that reason we will try to provide a reasonably clear prose commentary here.

First, we observe that interdentals /dh nh lh/ never occur as first member of a cluster (more generally, they never occur in syllable-final position). The only possible counterexample would be the homorganic nasal-stop cluster /ndh/, if retranscribed as /nhdh/ (the two do not contrast).

TABLE 2-3
Intervocalic C_1C_2 Clusters

C_1 \ C_2	b	dh	d	d̲	j	g	m	nh	n	n̲	n^{y}	n^{g}	l	l̲	lh	r	r̲	w	y
b	---	---	xxx	-x&?	x?x	x?x	-x-	---	xxx	-x-	-x-	xxx	-x-	-x-	-x&	-?x	-?x	-?x	x?x
dh	---	---	-x-	-??	x?x	x?x	-x-	---	xxx	-x-	-x-	xxx	-x-	-x-	-x&	-?x	-?x	-?x	x?x
d	xxx	-??	-x-	-??	x?x	x?x	-x&	---	xxx	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
d̲	xxx	x?x	-?x	-?-	x?x	x?x	-x&	---	xxx	-?-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
j	xxx	-x&	-x&	-x&	-x-	-x-	-x-	---	xxx	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
g	-x-	-x-	-x-	-x-	-x-	-x-	-x-	---	xxx	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
m	x-x	---	---	---	---	---	---	---	xxx	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
nh	---	---	---	---	---	---	---	---	xxx	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
n	xxx	xxx	xxx	-x&	xxx	xxx	xxx	xxx	xxx	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
n̲	x?x	x?x	-?x	x?x	x?x	x?x	-x-	---	-x-	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
n^{y}	x?x	-?x	-?x	-?-	x?x	x?x	-x-	---	-?x	-?-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
n^{g}	-x-	-x-	-x-	-x-	-x-	-x-	-x-	---	-x-	-x-	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
l	xxx	x?x	-?x	-?x	xxx	x?x	xxx	---	-xx	-?x	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
l̲	xxx	x?x	?x	-?x	x?x	x?x	xxx	---	-??	-??	-?&	-?&	-??	-??	-?&	-?x	-?x	-?x	x?x
lh	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
r	xxx	x?x	x?x	-?x	x?x	x?x	-x-	---	xxx	-??	x?x	xxx	-??	-??	-xx	-?x	-?x	-?x	x?x
r̲	xxx	-?x	x?x	-?-	x?x	x?x	-x-	---	-xx	-??	xxx	xxx	-??	-??	-?-	-?x	-?x	-?x	x?x
w	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
y	x?-	-?-	-?-	-?-	-?-	x?-	-xx	---	-xx	-?x	-?x	-?x	-?x	-?x	---	-?x	-?x	-?x	-?x

(explanation follows)

Table 2-3

Explanation of Table 2-3. Each possible cluster is shown in the table with the first consonant identified by the row headings running down the far left of the page, and the second consonant identified by the column headings running along the top. For each possible cluster there is a sequence of three symbols (- x ? &); the first indicates whether the cluster occurs within a morpheme, the second indicates whether it occurs as underlying (or other presurface) cluster across a boundary, and third whether it occurs as surface cluster across a boundary. Symbol x means yes, symbol - means no, ? indicates uncertainty as to whether the cluster is prohibited or merely happens not to be attested, & indicates that a surface cluster at a boundary is possible but unstable. Thus -x- means that the cluster is unattested within a morpheme, that it occurs in presurface representations at boundaries, but is not realised on the surface in this form at those boundaries. In the third symbol position, we are generous in showing x for some potential clusters which are not actually recorded but where we assume this is due to the chance absence of a morpheme sequence which would show this combination.

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Second, the rare interdental /nh/ is even more restricted than other interdentals, since it cannot even occur as second member of a cluster (recall that it is likewise unattested as morpheme- or word-initial segment).

Third, labials /b/ and /m/ do not occur as first members, except for the important homorganic cluster /mb/. Semivowel /w/ is also very rare as first member; there are no attested clusters /wC/ within a morpheme, and the only possible clusters of this type at boundaries are combinations of the two bird terms ending in /w/ (see preceding section) plus a case suffix.

Fourth, velars /n^g/ and /g/ do not occur on the surface as first member, except in the important homorganic cluster /$n^g g$/. Both /n^g/ and /g/ are common as first members in presurface forms, but /g/ is deleted by Stop-Deletion P-29, and /n^g/ is deleted by Nasal-Deletion P-30 or else assimilated by Nasal-Assimilation P-27.

Fifth, the "paired continuants" (see above, §2.5) /lh r r̲ w y/ do not occur as surface forms following a stop or nasal; if such underlying clusters occur at a boundary, the continuant is converted into the counterpart stop by Hardening P-18.

Having made these five general remarks (which we will refer to in what follows), we now go over particular types of cluster (stop-stop, nasal-stop, etc.) one by one, indicating the types of boundaries where the clusters occur, the rules which alter underlying clusters, and rules which create surface clusters. We refer to the most significant phonological rules (Chapter 3), but do not aim at completeness.

stop-stop. Possible underlying initials are /d d̲ j g/; possible finals in underlying forms are all six stops. Since no relevant suffix begins with underlying stop, and no inflectional prefix ends with a stop, the only possible underlying stop-stop combinations

are compounds and similar derivatives, in practice almost exclusively with a verb as the second morpheme. It is difficult to produce all relevant underlying clusters since relatively few verbs begin with underlying stop and since /d d̲/ in particular are uncommon at the end of compound initials or derivational prefixes.

Moreover, compounds and derivatives of this type normally trigger n^gu-Epenthesis P-1, which inserts a dummy morpheme /-n^gu-/ between the verb and the preceding compounding/derivational element, so the underlying stop-stop sequence is not realised as such. On the other hand, surface stop-stop clusters are created by Hardening P-18 from underlying clusters with a stop followed by a paired continuant across a boundary. Thus underlying //j-b// at a derivational boundary will become //j-n^gu-b// (and eventual //n^y-n^gu-b//) by P-1 (and P-27), but underlying //j-w_2// at any kind of boundary will become surface /j-b/ by P-18. Thus /jb/ is one of a set of stop-stop clusters which occur both in underlying and surface forms at boundaries, but where the underlying and surface exx. happen to involve a completely distinct set of combinations.

Generalisations discussed earlier in this section explain the absence of /dh/ or /b/ plus other stop, and the surface absence of /g/ plus other stop (because of P-29). Geminate clusters like //dd// and //jj// are reduced by Geminate-Contraction P-31. Other clusters involving /j/ plus coronal stop /dh d d̲/ are unstable as surface forms because the /j/ is often deleted by Palatal-Deletion P-26.

Some exx. of stop-stop clusters within morphemes: /(w)adbar/ 'grevillea', /wud̲ba/ 'cocky-apple', /bajbara/ 'mat', /=$w_1$ad̲dha-/ 'to get bogged', /=$w_2$adja-/ 'to hit', /mad̲jar/ 'fighting stick', /bagarawadgarawad/ 'squinting', /=gud̲ga-/ 'to prod', and /=$w_2$ujga-/ 'to bail out'. Exx. of surface stop-stop clusters at boundaries, where the second element is an underlying continuant hardened by P-18, would include any noun ending in a stop (see §2.7, above) plus a nominal suffix like Ablative /-$w_1$ala/, Pergressive /-$w_2$aj/, Locative /-ruj/, or Similative /-yi:/, which become (after another stop) /-gala/, /-baj/, /-duj/, and /-ji:/, respectively. Exx. of underlying stop-stop clusters which are broken up by n^gu-Epenthesis P-1 are any verb root beginning in stop preceded by a compound initial like /-r̲an^{g}ag-/ 'tree, wood', /-lhaj-/ 'chopped wood', or /-lhud̲-/ 'power(ful)'.

nasal-stop. The homorganic type /mb ndh nd n̲d̲ n^yj n^gg/ is very common, especially since (at boundaries) underlying //n^g// or archiphoneme //N// (along with one case of //n//) assimilate to a following stop's point of articulation. Aside from these, /n/ and /n̲/ occur as first elements with several following stops; /n^y/ is a little more restricted and does not occur within morphemes with following nonhomorganic coronal stop /dh d d̲/, though if such a cluster arises at a boundary it may survive.

At compound/derivational boundaries, an underlying nasal-stop cluster will be broken up by n^gu-Epenthesis (which applies in this morphological environment before stem-initial stop regardless of the segments to the left of the boundary). Thus, once again, the underlying nasal-stop clusters are altered into something else, while surface nasal-stop clusters at boundaries are created secondarily by Hardening P-18. Thus //-dan=balhu-// ⟶ /-dan-n^gu=balhu-/

(P-1) 'to cut up guts' shows a would-be //nb// cluster broken up, while the same initial morpheme as independent noun occurs in such case forms as //ama-da:n-$w_2$aj//→/ama-da:n-baj/ 'around the guts' (with P-18).

Morpheme-internal exx.: /manba/ 'armband', /m̲anba/ 'tree sp.', /an^{y}baj/ 'different', /yimbiri/ 'mangrove jack fish', /wundhumug/ 'water lily sp.', /=ma:n̲dha-/ 'to make (good)', /wundul/ 'not fighting', /wun̲dan^{y}/ 'young wallaby', /manjar/ 'leaves and branches', /n^{g}an̲ji/ 'baler shell', /mun^{y}juj/ 'green plum', /wungali/ 'exchange', /an̲gi/ '(man's) Fa-in-law', /=$w_2$an^{y}gala-/ '(fish) to move around', and /n^{g}a:n^{g}gu/ 'frog'. Many of these clusters also occur on the surface at boundaries when a noun ending in nasal (see §2.7, above) is followed by a nominal suffix beginning in underlying paired continuant; at such boundaries we can also get surface /n^{y}d/ in /wu-dhan^{g}un^{y}-duj/ 'in the wind' (from //-ruj//). It is likely that compounds could be elicited with /n^{y}/ followed by surface /d̲/ (from //r̲//) and /dh/ (from //lh//), for example with a compound initial like /-lhan^{g}un^{y}-/ 'wind' or /-lhan^{y}-/ 'tongue' plus a verb like //=r̲abala-// 'to emerge' or //=lhan^{g}arma-// 'to reach, catch up to', but no such compound happens to be attested (mainly for semantic reasons, no doubt). Underlying nasal-stop clusters which end up as something else are instances where n^{g}u-Epenthesis has applied (see above), with a compound initial like /-dan-/ 'guts', /-lhan^{g}un^{y}-/ 'wind', /-l̲an^{g}-/ 'top of head', or /-lhan̲-/ 'wound, scar' plus any verb beginning in (nonleniting) underlying stop.

liquid-stop. We have already seen that this is the only regular type of word- or stem-final /CC/ cluster (§2.7, above), and it is not surprising that they also occur medially. Initials are /l l̲ r r̲/ (but not /lh/), and finals can be any stop, except that /d/ and /d̲/ in such clusters are indistinguishable phonetically (our convention is to write /d/ or /d̲/ on the basis of analogy to other forms of the same morphemes).

The most striking thing about liquid-stop clusters is that all more-or-less homorganic clusters are avoided except when they occur naturally at a boundary. This contrasts sharply with nasal-stop clusters, where the homorganic type is very productive in all positions. Thus /ld l̲d l̲d l̲d/ are conspicuously rare within morphemes, while /rd/ and /r̲d/ are attested but uncommon in this position. On the other hand, the four relevant liquids are all attested both within morphemes and at boundaries with following /b/, /j/, and /g/; all are found at surface boundaries before /dh/ and only /r̲/ is unattested before /dh/ within a morphemes (perhaps because of an accidental gap or because of phonetic similarity to /d̲dh/; if we include recent loans we can cite /=$w_2$ar̲dha-/ 'to work').

Because of n^{g}u-Epenthesis, underlying liquid-stop clusters at boundaries are normally broken up. Surface liquid-stop clusters at boundaries are basically due to combinations of morphemes ending in //Lg// (or sometimes //Lj//), where //L// is /l l̲ r r̲/, plus a morpheme beginning in a paired continuant which is hardened to a stop by Hardening P-18 (the //g// or //j// would then be deleted by Stop-Deletion P-29 or Palatal-Deletion P-26). Note that a morpheme ending merely in a liquid will not induce Hardening P-18 in a following morpheme (a stop or nasal is required).

Exx. of morpheme-internal clusters are: /(n^{g})alba̲lan^{g}/ 'quickly', /ma̲ban^{g}gari/ 'flying fox sp.', /arbidi/ 'anyway', /mar̲bidi/ 'ray sp.', /aldha/ 'racing', /=yal̲dha-/ 'to slip away', /=lhagardha-/ 'to form rows', borrowing /=$w_2$ar̲dha-/ 'to work' (from English), /jurgul̲dumbul̲/ 'female bandicoot' (uncommon stem, only ex. of /l̲d/ or /l̲d/, probably historically a compound), /=n^{g}arda-/ 'to be pried loose', /war̲da/ 'yam sp.' (/r̲d/ distinct from simple /d̲/ only by greater emphasis on r-coloured onglide to stop), /n^{g}uljun/ 'young sleepy cod', /al̲ja/ 'python sp.', /n^{g}urji/ 'loose possessions', /war̲jar/ 'catfish sp.', /wulguy/ 'admittedly', /wal̲gara/ 'herring sp.', /argi/ '(some) other', and /=mir̲ga-/ 'to do away with'. Exx. of surface clusters at boundaries can be obtained by adding nominal suffixes to nouns ending in /lg/, /l̲g/, /rg/, or /r̲g/ (§2.7, above). Exx. of underlying liquid-stop clusters which are broken up by n^{g}u-Epenthesis P-1 are cases of any verb root beginning in a stop preceded by a compound initial like /-jir̲-/ 'hair, fur', /-n^{g}al-/ 'slime', /-ambal̲-/ 'top of head', or /-$w_1$al̲ar-/ 'stem', but rather few such liquid-stop combinations can be cited from dictionary entries.

stop-nasal. The basic problem with this type of cluster is that when such an underlying cluster arises, the stop will usually assimilate nasalisation from the following consonant, so that //dn^{g}//→/nn^{g}/, and so forth (see Nasalisation P-22). This rule is not rigorously applied, so some stop-nasal clusters originating at boundaries will occasionally be heard as such, but all are unstable and are marked with & in Table 2-3. Moreover, no stop-nasal cluster is attested within a morpheme, showing that P-22 has been operative (as a historical change) within morphemes.

By far the most common underlying stop-nasal cluster is the combination of a noun ending in a stop with following Instrumental case suffix /-miri/, as in /yimbid̲-miri/ 'by means of cypress (wood)', optionally becoming /yimbin̲-miri/ by P-22. Other possible stop-nasal combinations might occur if a compound initial or derivational prefix were followed by a root beginning with a nasal (n^{g}u-Epenthesis applies only before stops and so is inoperative here). Some such compound initials are /-r̲uluj-/ 'shadow', /-lhud̲-/ 'power(ful)', and /-r̲an^{g}ag-/ 'wood, tree', but we can cite only a handful of resulting stop-nasal clusters (often nasalised): //-r̲uluj=na-//→/-r̲ulun^{y}=na-/ 'to see shadow', //-lhud̲=n^{g}awi-'-//→/-lhun̲=n^{g}awi-'-/ 'to die after struggle'. When //g// is the initial segment it is deleted without trace by P-29 (or possibly by P-30 if Nasalisation P-22 has been allowed to apply).

stop-liquid. When a paired continuant, including /lh r r̲/, is preceded by a stop (or nasal), Hardening P-18 always converts the continuant into the paired (homorganic) stop. Thus Locative /-ruj/ becomes /-duj/ after any stop or nasal, and verb roots beginning with /lh r r̲/ shift this segment to /dh d d̲/ when preceded by any morpheme ending in stop (or nasal). Exx. are //a-r̲an^{g}ag-ruj//→ //a-r̲an^{g}ag-duj//(P-18)→/a-r̲an^{g}a-duj/(P-29) 'in the tree', and //-yan^{g}=lhurba-//→/-yan=dhurba-/(P-18 and -27) 'to obey'. Thus this type of stop-liquid cluster is reasonably common in underlying forms but does not make it to the surface even at boundaries.

This leaves us with the possible combination of a stop with following /l l̲/, the liquids which do not become stops by P-18. Such clusters would probably be phonetically awkward in this language, since /l l̲/ are virtually unattested as second elements in clusters; also, we have seen that homorganic liquid-stop clusters like /ld/ tend to be avoided, and it is reasonable to think that clusters like /dl/ with a more marked order of the same elements would be resisted even more so. In any event, we cannot cite a single ex. of stop plus /l l̲/ within a morpheme, and it is difficult to concoct an ex. involving a boundary. One that does occur as underlying form is /gl/, but /g/ is not of much interest since it is always deleted before another consonant by Stop-Deletion P-29: //-yinag=l̲al̲a:da-//→/-yina=l̲al̲a:da-/ 'to have skin of head removed'. We have one ex. of underlying //dl// where the //d// is omitted from the surface: //-lhud=l̲al̲agi-'-//→/-lhu=l̲al̲agi-'-/ 'to get up powerfully'. I suspect that there is a variant pronunciation retaining the /d/ on the surface. Before setting up specific phonological rules for such clusters we would need more data involving several clusters of stop plus /l l̲/, but it is very difficult to elicit relevant forms, which would have to be exx. of the relatively few verbs starting with /l̲/ (the situation with /l/ is hopeless since no suitable verb is available) preceded by appropriate compound initials ending in /d d̲ j/. I doubt that a representative range of forms even for /l̲/ are in actual usage, and I suspect informant hesitation and fluctuation in producing elicited combinations.

stop-semivowel. All underlying combinations of this type are automatically altered by Hardening P-18, with //w_1//→/g/, //w_2//→/b/, and //y//→/j/. Thus all underlying clusters of this kind will show up as something else, usually a stop-stop cluster (or a simple stop if the first stop is then deleted by Geminate-Contraction P-31 or some other rule). There are, of course, no surface stop-semivowel clusters within morphemes, either.

nasal-nasal. A fair number of nasal-nasal clusters occur both within morphemes and at boundaries. However, //n^g// is deleted by P-30 before any other nasal, /nh/ does not occur in any clusters, /n^y/ is deleted in some environments before /n/ by Palatal-Deletion P-26, and geminates are reduced by P-31. It is also difficult to elicit actual exx. of some nasal-nasal clusters at boundaries because only /m/ is readily available as a productive suffix-initial nasal, and because /n n̲ n^y/ occur as initial segment in relatively few verbs which can take compound initials.

Attested morpheme-internal clusters are seen in these exx.: /=anma-/ 'to go gathering', /mun̲ma/ 'tree sp.', /man^{y}maji/ 'deserted (place)', /=bun̲n^{y}urn^{y}urwa-/ 'to sizzle' (variant form), /munn^{g}u/ 'shrub sp.', /man̲n^{g}ulg/ 'sacred (food)', and /min^{y}n^{g}u/ 'night'. For some speakers a stem /lha:n^{g}ma/ 'young python' is recorded, the only ex. in the entire corpus of /n^g/ followed by another nasal; other speakers pronounce this /lha:ma(g)/.

At boundaries, the most common exx. involve Instrumental /-miri/ added to a noun like /r̲aman/ 'white emu down', /marin̲/ 'basket', or /ma:rn^y/ 'snake' (but stems ending with /n^g/ drop this segment by P-30 before /m/). It should be noted that underlying stops also optionally nasalise (by P-22) before a suffix or other morpheme beginning with a nasal, hence //yimbid̲-miri//→/yimbin̲-miri/ 'by means of cypress (wood)'; this generates additional exx. of nasal-nasal surface clusters at boundaries. It is difficult to elicit exx. of nasal plus /n^y/, since the latter is rare as initial segment of verb roots, but with /n/ instead of /n^y/ as second element we can cite /-malan^y=na-/ 'to see fin' (the /n^y/ seems stable as first segment in this ex., presumably because of the preceding /a/-vowel; some other cases of underlying //n^yn// are reduced to /n/ by P-26).

nasal-liquid. Liquids which have phonologically related stops, namely /lh r r̲/, become stops /dh d d̲/ after another nasal by Hardening P-18. For example, Locative suffix /-ruj/ is always /-duj/ after a noun ending in nasal, so no surface nasal-liquid cluster results. The same is true of compounds involving roots beginning in /lh r r̲/ when preceded by a nasal, except that the very few verb roots beginning in tap /r/ are unaffected by preceding //n// at the end of a pronominal prefix (the //n// then gets deleted without a trace by P-30). Ex.: //-yan^g=lharma-//→/-yan=dharma-/(P-18 and P-27) 'to follow the voice of'.

The only remaining possibilities for surface nasal-liquid clusters are, therefore, cases of nasal plus /l l̲/. However, these clusters are also unacceptable, and the nasal is deleted by P-30. Since /l/ does not occur in initial position in a relevant verb, our exx. involve root-initial /l̲/: //-man=l̲u:lha-//→/-ma=l̲u:lha-/ '(group) to wade'; //-mar̲an^g=l̲al̲agi-'-//→/-mar̲a=l̲al̲agi-'-/ 'to raise one's hand'. Pronominal prefixes ending in //n// likewise drop the nasal without trace before roots beginning with /l̲/ and (unhardened) /r/, as in //n^{g}an=l̲al̲agi-'-n^y//→/n^{g}a=l̲al̲agi-'-n^y/ 'I will get up'.

There are, consequently, no surface nasal-liquid clusters in the data, though perhaps one of the compounds just listed is occasionally pronounced with the nasal retained.

nasal-semivowel. This cluster-type is common in underlying representations at boundaries, but is always altered by Hardening P-18, which converts the semivowel into a stop in the usual way. Ex.: //a-mu:n-yin^{y}un^g//→/a-mu:n-jin^{y}un^g/ 'of the foot'. There are no surface nasal-semivowel clusters. (Laminoalveolar /n^y/, like similar consonants in languages like Spanish, is structurally a unit phoneme, not a cluster.)

liquid-nasal. Combinations of /l l̲ r r̲/ plus following nasal are reasonably plentiful. As usual, interdental /lh/ does not occur as initial segment of a cluster. The four non-interdental liquids are attested before most of the nasals, but except for an odd case of /rn/ we do not find /n/ or /n̲/ after a liquid within a morpheme (when such clusters arise at a boundary, however, they are retained on the surface).

Within morphemes we cite these exx.: /(w)almaraba/ 'crab sp.', /r̲abara-wul̲ma/ 'whip snake', /n^{g}arma-j/ 'laughter', /warmurn^g/ 'wild cucumber', /=n^{g}urni-/ 'to look back', /biln^{y}alga/ 'unsteady' (variant form), /wumbuln^{y}in/ 'fishtrap', /arn^{y}al̲/ 'grass sp.', /gar̲n^{y}irimba/ 'many, lot', /r̲aln^{g}ar(g)/ 'cockatoo sp.', /mal̲n^{g}ar/ 'rays', /=dhabil̲irn^{g}i-/ 'to slip', and /n^{g}ar̲n^{g}ar̲/ 'roly-poly'.

At boundaries, we note that Instrumental /-miri/ can follow nouns ending in /l l̲ r r̲/. Among the other liquid-nasal clusters which can occur at boundaries we may mention that in /-lhal=na-/ 'to see country', since /ln/ does not occur within morphemes. We should also note that surface liquid-nasal clusters may arise when a morpheme ending in /Lg/ or /Ln^{g}/ (where /L/ is /l l̲ r r̲/) is followed by a morpheme beginning with a nasal. Thus /-lhal=na-/, just cited (above), could also (potentially) mean 'to see flame' from //-lhaln^{g}-// 'flame' (instead of //-lhal-// 'country'), since the //n^{g}// disappears by Nasal-Deletion P-30; another ex. is //lhagabunulg-miri//→/lhagabunul-miri/ 'by means of dirt'.

liquid-semivowel. Liquids /l l̲ r r̲/ (but not /lh/) can occur with following /w/ or /y/, which do not undergo Hardening P-18 in such clusters. It should be noted, though, that at boundaries a //w$_1$// (but not //w$_2$//) is often deleted by w$_1$-Deletion P-9 in some environments.

Attested clusters within morphemes are illustrated by /milwin̲/ 'gnat', /=du:lwi-/ 'to sing (totem)', /arwar̲/ 'on top', /marwa/ 'edible root sp.', /=galyaba-/ 'to sit astride', /walya/ 'male', /marya/ 'vegetable food', and /=w$_1$urya-/ 'to pour on'.

At boundaries, we can add Similative /-yi:/ §4.29 to a noun ending in a liquid, e.g., /a-lha:l-yi:/ 'like a country'. Suffixes beginning with /w/, such as /-w$_2$ugij/ 'still, only', often show (optional) deletion of the semivowel by P-28 or P-9, but Dual /-w$_2$a:/ retains its semivowel, hence /a-lha:l-wa:/ 'two countries', and so forth. There are also a number of relevant compounds such as /-al̲=yarba-/ '(floater) to run along', /-ar̲=yi-/ '(water) to lie flat', and /-n^{g}al̲=wagiwa-/ 'to break off' (also attested once with semivowel dropped).

liquid-liquid. Clusters with /l r r̲/ plus /lh/ are the most important ones; unattested */l̲lh/ may be an accidental gap. /lr̲/ is also acceptable. Most other liquid-liquid clusters are difficult to elicit, e.g., because /l/ does not occur as initial segment of verb roots or suffixes. Underlying clusters of /l l̲ r r̲/ plus /r/ occur in cases where Locative case suffix /-ruj/ follows a noun ending in a liquid, but here the //r// is deleted by r-Deletion P-25.

Within morphemes we may cite /=n^{g}allha-/ 'to be stuck in' (also /=lhalamillha-/ '(moon) to rise', /=w$_1$allha-/ 'to float', where /llh/ differs from simple /lh/ by duration), /=w$_2$urlha-/ 'to sink, drown', /ar̲lhag/ 'eucalypt sp.', and /=lhulr̲ungi-/ 'to be harmless'.

These same clusters also occur at boundaries, though //llh// in this position is sometimes reduced to /lh/, to judge by /-an̲bu=lhaayi-/ '(branch) to extend out' (with //-an̲bul-//), if correctly transcribed. To the clusters above we may add /rl̲/ in /yamar-l̲i:n^{g}u/ 'along side'.

There is one apparent ex. where //r̲// is deleted after /l/ at a boundary: /=r̲an^{g}ara-/ 'to wait for', cpd. /-lhal=an^{g}ara-/ 'to take care of (country)', rdp. /-lhal-an^{g}a=r̲an^{g}ara-/. However, this may involve contamination, namely, the influence of /-an^{g}a-/ 'camp'. Surface /lr̲/ does occur at boundaries in other cases: /-n^{g}ul=r̲aya-/ 'to urinate', /lhal-r̲arn̲dar/ 'arid land'.

semivowel-stop. /w/ is virtually unattested as first member of a cluster, or indeed in any syllable-final position. There are no cases of /w/ plus stop within a morpheme. The only possible way to get such a cluster at a boundary is by adding a nominal suffix to /garbaw(g)/ 'owl sp.' in those idiolects where the final /g/ is present: //a-garbawg-w$_2$aj//→/a-garbaw-baj/ 'around the owls', etc., where the initial segment of the suffix undergoes Hardening P-18.

There are a couple of fauna terms with /y/ followed by /b g/ within the stem: /waraybaray/ 'lorikeet' (frozen rdp.), /waygawuma/ 'duck sp.', and /l̲a:ygulhu/ 'catfish sp.' At boundaries, we might get underlying /y/ plus stop with compound initial /-ay-/ 'nest' and verb root beginning with stop, but n^{g}u-Epenthesis P-1 would apply here, inserting /-n^{g}u-/. There are no underlying or surface /y/ plus stop clusters at stem-suffix boundaries.

semivowel-nasal. The infrequency of semivowels as initial segments in clusters is also the case before nasals. Within a morpheme we can only cite the infrequent term /gunduyn^{g}ur̲u/ 'young whale'.

At boundaries, we can add Instrumental /-miri/ to a noun ending in /y w/, hence /dhuday-miri/ 'by means of water marker', /garbaw-miri/ 'by means of owl sp.' (the forms with /w/ would all be semantically anomalous). Aside from this, we can imagine the odd compound involving initial /-ay-/ 'nest' and a following verb root beginning with a nasal, but no actual ex. can be cited from the corpus (it is possible that Palatal-Deletion P-26 might apply sporadically before coronal nasals).

semivowel-liquid. No exx. of this type of cluster are attested within a morpheme.

At boundaries, underlying semivowel-liquid clusters could arise when a noun ending in a semivowel has Locative suffix /-ruj/, as in /a-gandhaw-ruj/ 'at the bittern sp.'. However, the combination of /y/ plus /r/ at a boundary is subject to yr-Contraction P-14, which commonly deletes the /y/. Other clusters involving /y/ plus a liquid could arise if compound initial /-ay-/ were to precede a verb root beginning in a liquid /l̲ lh r̲/, but again deletion may occur, as in the attested form //ay-lhamungur//→/a-lhamungur/ (by P-26 this time); actually this particular ex. involves an adjectival noun as second element.

semivowel-semivowel. Within morphemes, /yw/ but not */wy/ is recorded: the attested exx. are /w$_2$ayway/ 'flat', /mal̲aywiwi/ 'egret', /waraywaray/ 'lorikeet', and /=w$_2$uywulha-/ '(women) to perform dance'.

At boundaries, both /yw/ and /wy/ can occasionally be found. There are a fair number of nouns ending in /y/, and we can add a suffix like Pergressive /-w$_2$aj/ to produce forms like /a-madugay-waj/ 'among the shark sp.'; note also the compound /-ay=w$_2$ann^{g}a-/ 'to step on (nest)'. The only way to get /wy/ is to add a suffix like Similative /-yi:/ to one of the two nouns which end in /w/, as in /a-garbaw-yi:/ 'like an owl sp.'.

2.9 CCC clusters.

Within a morpheme, the only triple consonant clusters consist of a liquid followed by a homorganic nasal-stop cluster. The actually attested ones are the following:

lmb	/=lhalmba:ra-/ 'to catch fire' /=$w_2$almbalndha-/ 'to discuss'
rmb	/murmbu-murmbulu-j/ 'hot'
r̲mb	/yimar̲mba/ 'shellfish sp.'
lndh	(see 'to discuss', above, and 'to hunt', below)
rn̲d	/r̲arn̲dar/ 'waterless (land)'
ln^{g}g	/=$w_1$aln^{g}galndha-/ 'to hunt (on land)'
rn^{g}g	/wirn^{g}gil/ 'pond scum' (and a few others)

Some of the exx. involve frozen compounds or reduplications. For /lmb/ the first ex. is etymologically related to /-lhaln^g-/ 'flame' and the second item is a frozen reduplication, perhaps originally *=baln^g-baln^g-dhV- or the like (with thematic suffix). The ex. for /ln^{g}g/ is a similar frozen reduplication, and the ex. for /rn̲d/ is probably also an old reduplication of the type *r̲arN-r̲ar or *d̲arN-d̲ar (etymologically related to /r̲a:r/ 'burnt-out grassland'). However, there does not seem to be any way to explain away the /rn^{g}g/ cases, nor the single /r̲mb/ ex. (though the latter may be a loan from Anindilyakwa, as is usually the case with NA class nouns beginning with /yi/).

Other /CCC/ clusters can be generated at boundaries without much difficulty. At the end of §2.7, above, we listed /CC/ clusters which can occur at the end of a noun stem, including /ln^g/, /l̲n^g/, and /rn^g/. If we add to these a case suffix like /-$w_2$aj/, /-ruj/, /-$w_1$ala/, or /-yin^{y}un^g/, the suffix-initial continuant will become a stop by Hardening P-18, and the preceding stem-final /n^g/ will assimilate in point of articulation to this stop by P-27. This will produce the clusters /lm-b/, /ln-d/, /ln^g-g/, /ln^y-j/, /l̲m-b/, /l̲n-d/, /l̲n^g-g/, /l̲n^y-j/, /rm-b/, /rn-d/, /rn^g-g/, and /rn^y-j/. For example, from /$w_1$umurn^g/ 'shelter' we get Pergressive /a-wumurm-baj/, Locative /a-wumurn-duj/, Ablative /a-wumurn^g-gala/, and Relative /a-wumurn^y-jin^{y}un^g/.

Other possible stem-final clusters shown in §2.7 include /rj/, /r̲j/, and /rn^y/ (we disregard clusters involving liquid plus /g/, since the /g/ will disappear by P-29 before a suffix-initial consonant, and so cannot produce a triple cluster). Since /j/ and /n^y/ do not disappear before other consonants (except when geminated, and to some extent before coronals, see P-26 and -30), we can get some additional triple clusters at boundaries with case suffixes: /rj-b/, /rj-d/, /rj-g/, /r̲j-b/, /r̲j-d/, /r̲j-g/, /rn^y-b/, /rn^y-g/ and /rn^y-j/. If we add Instrumental suffix /-miri/ we can get underlying //rj-m//, //r̲j-m//, and //rn^y-m//; Nasalisation P-22 would normally apply to the first two, so that //rj-m// and //rn^y-m// would converge on the surface as /rn^y-m/, while //r̲j-m// would show up as /r̲n^y-m/.

2.10 Phonologically significant phoneme classes.

We here mention briefly some ways in which the phonological rules of Chapter 3, accounting for alternations in paradigms and derivations, provide evidence for phonologically (not just phonetically) operative classes of phonemes.

Not much can be said of vowels since there are not many relevant rules, especially if minor length alternations are omitted. A high vs. low opposition seems apparent in the environment for V-Truncation P-46 (§3.47), since /u i/ diverge from /a/. However, in the more significant VV-Contraction P-49 (§3.50), the most productive subrules seem to show a scalar dominance hierarchy /i > u > a/, with several local complications.

Most rules involve consonants. Hardening P-18 (§3.19) and some other rules such as Lenition P-16 (§3.17) point to the phonological significance of stops on the one hand and paired continuants on the other, as already noted in §2.5. The latter group is noteworthy since /w_2 w_1 lh r r̲ y/ is not a natural class phonetically (since /l l̲/ are omitted). The category of stops is also needed in some other rules such as n^{g}u-Epenthesis P-1 (§3.2), Initial Reduplication P-2 (§3.3), and Nasal-Assimilation P-27 (§3.28), and is obviously a major phonological class. A residual class of non-stops, namely nasals, liquids, and semivowels (i.e., sonorants), may be identified negatively in these same rules, and indeed one could combine this with vowels to give a class of sonorants and vowels.

However, a different division is needed in the conditioning environment for Hardening P-18 (§3.19). This rule requires that the final consonant of the preceding morpheme be a stop or nasal, and thus negatively identifies a residual class of nonnasal sonorants (plus vowels). There are also rules by which stops are converted into nasals or vice-versa (Nasalisation P-22 §3.23, Denasalisation P-23 §3.24), and rules deleting stops (Stop-Deletion P-29 §3.30) and nasals (Nasal-Deletion P-30 §3.31) are roughly parallel. The class of nasals is further supported as a phonological unit by Nasal-Assimilation P-27. (Velar-Insertion P-8 §3.9 provides additional evidence for a stop/nasal category since the inserted phoneme is either /n^g/ or /g/, but the details are messy.)

There is some evidence for breaking up "nonnasal sonorants" further into liquids and semivowels. Liquids /l l̲ r r̲/ but not semivowels condition r-Deletion P-25 (§3.26); /lh/ is missing from the list but this is presumably because it does not happen to occur in the relevant (morpheme-final) position for this rule. Semivowels are a class in Initial Semivowel-Insertion P-5 (§3.6), and both /w/ and /y/ get dropped in roughly similar environments in the irregular alternations dealt with by Homorganic Semivowel-Deletion P-4 (§3.5). However, other rules apply to /w_1/, /w_2/ and /y/ in distinctive ways.

Point-of-articulation classes are relevant with reference to the output constraints dealt with above in this chapter, such as the absence of interdentals in morpheme- or syllable-final position, and the absence of labials in the same positions except for verbal root forms (§12.2) and a few marginal items. No special phonological rules are needed since the underlying forms already satisfy the constraints.

A class of what we will call palatal-type consonants including semivowel /y/ and laminoalveolars /n^{y} j/ is needed; see Palatal-Deletion P-26 (§3.27) which might be formally combined with yr-Contraction P-14 (§3.15), cf. also V-Fronting P-50 (§3.51).

Velar consonants /n^{g} g/ can perhaps be considered a phonological class since they are maximally subject to point-of-articulation assimilation (sometimes leading to deletion) before another consonant. (Since labials do not normally occur as morpheme-final consonants, and since /m b/ do not occur as nonhomorganic first members of intramorphemic consonant clusters, it is indeterminate whether we should expand this "velar" class to include labials, as in other languages where "noncoronal," "grave," or "peripheral" consonants behave as a unit.)

2.11 Intonation and pitch contour.

It is difficult to analyse pitch contours at word level, because word-level patterns are commonly distorted or overridden by higher-level intonational patterns; see §17.4, where we discuss how intonation is used for discourse purposes in a real text, and see also §3.40 for elongated interjections.

Although it is somewhat artificial to "factor out" such intonational patterns (extended high monotones, etc.), we may try to indicate in general terms what "unmarked" pitch contours for words are like. Without pretending to understand the nuances of pitch contours perfectly, I offer the following general points:

a) long vowels attract high intonation and stress, especially when adjoining syllables have short vowels.
b) when the last few syllables of a word have short vowels, the penultimate attracts high pitch and a little stress, and a pattern of alternating high-pitched, stressed vowels in even-numbered syllables (right-to-left) may result.
c) in multisyllabic stems (especially nouns), the stem may be organised into "foot" units of two to three syllables based on apparent reduplicative segments, with each such unit having high pitch and some stress on the initial syllable.

We may illustrate with some exx. (recall that all pitch transcriptions, using ´ for high pitch with light stress, and occasionally ` for intermediate stress/pitch, are somewhat idealised "context-free" transcriptions which may be overridden by intonational patterns).

/n^{g}a=ná-ni/ 'I saw it'	penultimate
/n^{g}à=n^{g}u-yí:/ 'I eat it'	long V: attracts stress
/n^{g}á=na-n^{y}/ 'I saw it'	penultimate (on prefix)
/ná:=ná-ni/ 'We saw them'	penultimate, also long V:
/ána-lágu/ 'honey'	penultimate, alternating
/á-lagú-wuy/ 'to honey'	case suffix causes shift
/a-lágu-yín^{y}un^{g}/ 'of honey'	bisyllabic suffix has little effect on stem
/wù:=yà:-rì:/ 'they go'	contour level (but unstable) with several long V:'s
/gúrujújurg/ 'whistling eagle'	two 2-syllable feet

/wúrulámbilámbi/ 'grass sp.'	three 2-syllable feet
/gáramín^{y}anmín^{y}an/ 'bee sp.'	" " "
/wádanawádana/ 'hawk sp.'	two 3-syllable feet
/ambúruyuwúruyuj/ 'grass sp.'	" " " plus initial syllable

When a monosyllabic suffix is added to one of the last few noun stems shown above, only the pitch/stress of the final foot is shifted to the word-penultimate syllable: /wá:-gáramín^{y}anmin^{y}án-guy/ 'to the bees'.

When there is no obvious reduplication or other internal structure in a stem, the usual preference seems to be in favour of 2-syllable feet (rather than 3-syllable). In the last ex., above, the pitch contour is due to identification of reduplicative patterning; note that /b/ after nasal may be underlying /w$_2$/ after Hardening P-18. The "reduplication" in such situations is often unrelated to the regular, productive reduplication rules (P-2, P-3). The latter never give reduplicative segments more than two syllables, and never have more than one vowel quality in the reduplicative segment (contrast trisyllabic "reduplication" in the final two exx. above, and distinct vowel qualities in the bisyllabic reduplicative segments in the two exx. preceding them).

Word-final consonant clusters do not greatly affect pitch/stress patterns, though they may give a final syllable slightly more pitch and stress than it would otherwise acquire: /wúmurn^{g}/ 'stringybark shelter', /wúnalg/ 'painting torso'. In nonfinal syllables, a syllable closed with a consonant or consonant cluster (not counting the consonant opening the following syllable) may have some extra pitch/stress, but this is not very consistent: /wírn^{g}gil/ 'pond scum', Allative-Dative /à-wirn^{g}gíl-wuy/ or /à-wìrn^{g}gíl-wuy/. Some consonant clusters, notably homorganic nasal-stop clusters like /mb/, appear to syllabify with the following (not preceding) vowel so that the nasal component cannot really be said to close the preceding syllable for purposes of this (occasional) effect on pitch/stress contours.

2.12 /o:/.

The /o:/ vowel shown in the list of vowel semments (§2.1) is not a basic phoneme of this language. Instead, it represents underlying //au// in certain combinations involving Anaphoric demonstrative root //-uba-// (Chapter 7), principally that involving the punctual form //a-// of the class prefix of the ANA noun class (§4.7). It is also sometimes used in the texts for the rounded trail-off vocalism in the elongated interjection pronunciation of some words after phonological rule P-39 applies.

In the demonstrative combinations just mentioned, the actual phonetic realisation of //au// ranges from something like [aw] to [ow] or [o:], and does not usually have the steady-state quality suggested by the transcription. We generally normalise transcriptions, as in /o:-'ba-ni/ 'that one[ANA class]', rather than aiming at a close phonetic transcription for each individual occurrence.

Chapter 3
Phonological rules

3.1 General.

In this chapter we are concerned with alternations in the surface forms of morphemes in different positions. Since there is no overriding polemical orientation of this chapter, I will present the data in fairly conventional generative form, recognising a large number of 'rules' or 'processes' which convert idealised underlying forms into surface forms. I will, however, informally point out alternative ways of identifying and formulating the individual rules and will outline later some ways of reconceptualising them as surface-to-surface transformations.

I do not use a rigid format for writing the rules, and in particular I do not always use feature matrices, preferring simpler formulations like "a→ i." However, terms like 'stop', 'semivowel', and 'apicoalveolar' are used frequently when there is a generalisation to be made.

Rules are numbered in order of presentation here, which does not correspond necessarily to order of application in the generative format. The order of presentation here is partly topical. Order of application is discussed at the end of the chapter (§3.52, §3.53).

Readers who are not primarily interested in phonology may wish to skim over this chapter. Some particularly important rules which such readers should become familiar with are P-1, P-18, and P-49.

Some very minor alternations are treated in connection with the appropriate morphology section in other chapters. However, the present chapter discusses the great majority of attested alternations.

3.2 $n^{g}u$-Epenthesis P-1.

A meaningless morpheme /-$n^{g}u$-/ is automatically inserted between a prefix P and a following morpheme (prefix or stem) Q under certain conditions. Q must begin with a stop /b dh d d̲ j g/ at the (early) stage when the rule applies. P can be a derivational prefix or compound initial of any phonological shape; it can also be an inflectional prefix but in this event must be terminated by a consonant. The rule may apply more than once within a word.

We exemplify with the verb /=bura-/ 'to sit' as our stem Q. Most inflectional prefixes (marking pronominal subject) end in a vowel and thus do not cause n^gu-Epenthesis: /n^ga=buri-Ø/ 'I sat'. However, a handful of these prefixes end in a consonant, namely /n/, as in 1Sg$_b$ /n^gan-/, and here the epenthesis does apply: //n^gan=bura-y//→ /n^ga-n^gu=buri-Ø/ 'I was going to sit'. (Note that the prefix-final /n/ is deleted by a later rule.)

When a derivational prefix or compounding initial intervenes between the inflectional prefix and the stem, epenthesis always applies to stop-initial roots like /=bura-/, as in /-an^{y}ji-n^gu=bura-/ 'to sit with (someone)' (Comitative /-an^{y}ji-/).

With noun stems, epenthesis does not apply when the only prefix is an inflectional noun-class prefix: /gulmun^g/ 'belly' takes prefixed forms /mana-gulmun^g/ and /ama-gulmun^g/ without /-n^gu-/. However, some nominal constructions involve an intervening derivational noun-class prefix, and these all happen to end in a consonantal archiphoneme which we represent as /G/ (the inflectional noun-class prefixes end in vowels). Whether because of this /G/ or because of the difference between derivational and inflectional prefixes, stems like /gulmun^g/ require /-n^gu-/ in the derivational forms, e.g., //mana-maG-gulmun^g//→ /mana-ma-n^gu-gulmun^g/ 'belly (of certain objects)'. Compounds in which the second element is a noun are not very numerous, but when they do occur /-n^gu-/ is added if the second element begins in a stop: /n^gul-n^gu-jir/ 'pubic hair' from /-jir/ 'fur, body hair' (see §4.7, §14.5).

The epenthesis rule does not apply in pronominal or demonstrative forms, but this is presumably due to the fact that no phonologically appropriate combinations occur in these morphological classes. We therefore formulate the rule as follows.

(P-1) n^gu-Epenthesis

$$\emptyset \rightarrow \text{-}n^g\text{u-} \;//\; \text{P-}__\text{-Q}$$

where P is an inflectional (pronominal) prefix ending in a consonant, or a derivational prefix or compounding initial (of any form), and Q is a root or a pre-root derivational/compounding element beginning in a stop.

There are a few exceptions, perhaps reflecting the fact that this is clearly an 'unnatural', highly morphologised rule. Consider, for example, the clan name /nun^g-garan^{g}ari/, based on place name /garan^{g}ari/ and Gentilic prefix /nuN-/. With n^gu-Epenthesis we should finally end up with */nu-n^gu-garan^{g}ari/, but here the epenthesis clearly does not apply.

This, and a scattering of similar examples, can be analysed formally as exceptions to P-1, but there is an alternative: they could be considered instances where a stem-initial stop is lenited (e.g., /g/→ /w$_1$/) as derivational/compounding final, so that n^gu-Epenthesis cannot apply; a later rule then hardens the continuant back to stop articulation (/w$_1$/→ /g/ in this case). In fact, the lenition and hardening rules are independently motivated (see P-16 and P-18, also P-19), and there are some verb forms where this is clearly a legitimate excuse for nonapplication of P-1. In other cases, like /nun^g-garan^{g}ari/, there is no independent evidence that these particular stems are subject to the lenition rule (which is lexically restricted).

There are also a tiny handful of noun stems which appear to take /-n^gu-/ in forms with derivational/compounding initial but which begin in consonants other than stops: /n^gumij/ 'ants', derivational noun-class forms like /ma-n^gu-n^gumij/ 'scraps, bits and pieces' (prefix //maG-//). Such forms are clearly isolated and may involve semantic shifts which make synchronic connections with the simple stems dubious.

Overall the exceptions are few in contrast to the great number of stems for which the rule works neatly. How can we explain the existence of such an unusual rule, in which a morpheme of distinctive phonological shape (not merely a schwa or the like) functions as an epenthetic element?

In a number of cases n^gu-Epenthesis permits retention on the surface of important consonantal oppositions threatened with loss due to other rules. Specifically, Hardening P-18 converts stem-initial continuants /w$_1$ w$_2$ y r̲ r lh/ to stops /g b j d̲ d dh/ when preceded by a stop or nasal. Were it not for n^gu-Epenthesis, stem-initial oppositions like that seen in //=jura-// 'to push' and //=yura-// 'to transport' would be neutralised on the surface when preceded by a prefix (inflectional or derivational) or compound initial ending in a stop or nasal. In fact, however, //=jura-// will always become /-n^gu=jura-/ in such environments (plus some others where homophony is not threatened). This functional explanation accounts for the otherwise strange fact that /-n^gu-/ is inserted only before underlying stops, and accounts (in part) for further details of the rule.

Etymologically, /-n^gu-/ may be traceable to *-gu-, a morpheme found at the end of some complex pronominal-prefix combinations in near and intermediate protolanguages. Originally a dative marker, then a postconsonantal oblique (accusative/dative) allomorph with a semi-epenthetic character, it occurs in various functions in nearby attested languages (Mara -gu- in pronominal prefixes, Ngandi -gu- and Warndarang -n^gu- in similar functions). The alternation of g with n^g in these cognates is irregular, but the innovative nasal form may be due to cluster assimilation in such forms as *n^gan-gu- (→ *n^gan-n^gu-).

3.3 Initial Reduplication P-2.

We are here concerned with the primary reduplication rule, applying either at the beginning of the noun or verb root or, more regularly, at the beginning of the first morpheme following inflectional prefixes. This rule is most common with verbs (indicating repetition or prolongation) but occurs with some nouns (plural). Some roots, often having both verbal and nominal forms and with generally adjective-like meaning, are often reduplicated regardless of aspect or plurality. Details are covered in §4.14, §8.4, §13.5, §14.14-15. Many roots (flora-fauna nouns, for example) have no reduplications. A distinct reduplication affecting demonstrative pronouns is dealt with in the following section.

The point in the unreduplicated input where the reduplicative segment (-Rdp-) goes is determined by morphology. For verbs it is

characteristically immediately after the inflectional (pronominal) prefix, and the segment reduplicated may therefore be the root or a preceding derivational/compounding element (except that epenthetic /-n^{g}u-/ from P-1 may not be at the beginning of the reduplication). In the case of the bisyllabic -Rdp- type (see below), the input segment may involve an internal morpheme-boundary. For example, in the input form /CV-C_1V_1=$C_2V_2C_3V_3$-/ where /-C_1V_1=/ is a derivational or compounding element, the reduplication may be /CV-$C_1V_1C_2V_1$-C_1V_1-=$C_2V_2C_3V_3$-/ (the initial /CV-/ representing an inflectional prefix not considered in the reduplication). Similarly, if the input is /CV=C_1V_1-C_2V_2/ with monosyllabic verb root /=C_1V_1-/ and a following inflectional suffix, the latter may be included in the reduplication if the bisyllabic -Rdp- type is found, hence /CV-$C_1V_1C_2V_1$=C_1V_1-C_2V_2/.

In some cases, reduplication applies at the beginning of the verb root and disregards earlier derivational/compounding elements; there are also a few cases (mostly in narrative/song style involving a specific set of stems) where both the root and an earlier derivational/compounding element are reduplicated. These types are lexically restricted. See "internal" and "double" redup. (§8.4).

The only suffixes which can constitute input are derivational and inflectional verbal suffixes (mainly marking tense/aspect). Other suffixes (including all nominal suffixes) are not involved in the reduplication even when the preceding root is monosyllabic.

Basically, the form taken by the -Rdp- segment is as follows:

-C_1V_1- if the input begins with a stop
-$C_1V_1C_2V_1$- if the input begins with another consonant
-$V_1C_1V_1$- if the input begins with a vowel

Thus /=bura-/ 'to sit' reduplicates as /-bu=bura-/; /=lhan^{g}arma-/ 'to reach, find' as /-lhan^{g}a=lhan^{g}arma-/; and /=agi-/ 'to fetch' as //-aga=agi-// (which then becomes /-aga:='gi-/ by P-49). Note that in the bisyllabic types the vowel of the second syllable is /V_1/, not /V_2/ as in the root; a further example is /=ma-n^{g}i/ 'got' (including $Past_2$ suffix) becoming /-man^{g}a=ma-n^{g}i/.

Of the three types listed above, clearly the second and third are simply subtypes of a general bisyllabic type, the only difference between them being whether the input (and hence -Rdp-) has or lacks an initial consonant. The basic rule is thus: monosyllabic -Rdp- before input beginning with stop, otherwise bisyllabic type.

While the rule works fairly well as stated, there are some exceptions: a) monosyllabic inputs; b) cases of /-C_1V_1-/ instead of expected bisyllabic /-$C_1V_1C_2V_2$-/; c) special /-$C_1V_1C_2$-/ used with a few stems. We now discuss these in turn.

With monosyllabic input, not surprisingly we are limited to a monosyllabic -Rdp-. There are not many inputs that are this short. For nouns I can cite only /yilg/ 'silly', rdp. /yi-yilg/. For verbs, we do have some monosyllabic roots which can take inflectional suffixes of the shape /-∅/ and/or /-C/, and since the input to reduplication ends with the inflectional suffix the inputs here are monosyllabic. The actual inputs are /=C_1V_1-C_2/ with short vowel and /=C_1V_1:-∅/ with no final consonant but with long vowel. (In some cases the latter type is arguably derived from the earlier type, or from //=C_1V_1-V_2//, but this need not worry us here.)

As I hear them, the rdp. forms from these inputs are as follows:

/=CV:/ becomes /-CV:=CV:/ (morpheme boundary omitted)
/=CVC/ " /-CV=CVC/ (" " ")

Examples of the first type are a handful of $Nonpast_3$ verb forms from /=CV-/ verbs, with suffix /-i/ or /-u/ being absorbed by the root vowel by P-49. Thus /=ni:-'/ 'will not see' becomes /-ni:=ni:-'/ 'will never see', and /=yu:-'/ 'will not give' forms /-yu:=yu:-'/.

Examples of the second type involve $Nonpast_1$ forms in /-n^g/ or /-n^y/, and $Past_2$ forms with /-y/, added to monosyllabic verbs in certain inflectional classes. Examples are /=na-n^g/ 'will see' or 'does not see', rdp. /-na=na-n^g/; and /=lha-y/ 'was standing', rdp. /-lha=lha-y/.

I should add that since actual vowel-length contrasts do not occur in these contexts, and since phonetic vowel length is highly subject to intonational skewing, these transcriptions of length are impressionistic. Since $Nonpast_1$ and $Nonpast_3$ are infrequently reduplicated, the only common forms are the $Past_2$ ones, and here the suffix /-y/ occurs only with two monosyllabic roots, /=lha-/ 'to stand' and /=yi-/ 'to sleep'.

We now consider cases of /-C_1V_1-/ reduplication for stems which should give bisyllabic -Rdp- by the rules given above. Essentially what is going on here is that bisyllabic reduplications which would involve several identical or very similar syllables are simplified. For example, there are some roots which already happen to have /C_1/ and /C_2/ identical (whether or not the vowels are also identical), as in the cases of the adjectival noun /mamar/ 'empty' and the verb /=lala-/ 'to tear'. Expected reduplications */mama-mamar/ and */-lala=lala-/ with four consecutive identical /CV/ sequences are in fact simplified to /ma-mamar/ and /-la=lala-/. However, the form /=na-ni/, $Past_2$ of /=na-/ 'to see', always reduplicates as /-nana=na-ni/ with bisyllabic -Rdp-. It appears, then, that this particular alternation in reduplicative shapes may be lexically specific even though a phonological basis is detectable. (We could attempt to avoid this, suggesting that /=na-ni/ behaves differently because its two vowels are different, or because of the internal morpheme boundary, but we do not have a large range of forms which might permit us to identify clearcut patterns of this type. A form /-lhalha=lhalhara-/, rdp. of /=lhalhara-/ 'to fall out', was obtained in an elicitation session, and if valid this clearly shows lexically based variation.)

There are a few other cases of /-C_1V_1-/ for expected bisyllabic -Rdp-. These include /=lu:lha-/ 'to wade', rdp. /-lu=lu:lha-/, where /C_1/ and /C_2/ are distinct but both laterals, and two important verbs beginning in /ma/, /=ma:ndha-/ 'to make' and rdp. /-ma=ma:ndha-/, /=ma:jga-/ 'to make' and rdp. /-ma=ma:jga-/. (Vowel length in root may be a factor here, but many other verbs with long vowel in first syllable behave normally in reduplication.)

A special /-$C_1V_1C_2$-/ reduplication is used for a small number of roots whose simple form already appears in what looks like a reduplication of this same syllabic shape. Exx. are /=gujguji-/ 'to hold up', rdp. /-guj=gujguji-/; /=bilwila-/ 'to be weak', rdp. /-bil=wilwila-/. Others can be gleaned from §14.5.

This pattern is restricted lexically as well as phonologically, and some former reduplications of this type are being reinterpreted

as separate roots. Thus /=w$_1$uldha-/ 'to cut, sever' (*-gulk-dhu-) and /=w$_1$ulguldha-/ 'to cut up (wood, etc.)' (*-gulk-gulk-dhu-) are now essentially independent of each other but were once related as simplex to reduplication (the reconstructed forms still occur as such in Ngandi). They now each have their own synchronic reduplication, /-w$_1$uldhu=wuldha-/ and /-w$_1$ulgu=wulguldha-/, respectively, and note that the latter shows full bisyllabic reduplication.

We have discussed vowel length in the monosyllabic-root reduplications (preceding page, top), but not for the nonmonosyllables When the reduplicative segment itself is monosyllabic, its own vowel is clearly short in all cases, while the root retains the same vowel length it has in the simplex: /-l̲u=l̲u:lha-/ from /=l̲u:lha-/ 'to wade'; /-bu=bu:la-/ from /=bu:la-/ 'to be smoking'; /-ju=ju̲ra-/ from /=ju̲ra-/ 'to push'. When the -Rdp- segment is bisyllabic, both of its vowels are always short, and if the root has /V$_1$/ long this is shortened (subsequent vowels are not affected). Thus from /=ya:-ri:/ 'goes' we have rdp. /-yara=ya-ri:/, and from /=yu̲ri:-'/ 'transports' we have rdp. /-yu̲ru=yu̲ri:-'/. When the root starts with a vowel the same pattern can be presumed, but later rules (P-49) eventually combine adjacent vowels into new long vowels. Thus both /=a:gi-/ 'to return' and /=agi-/ 'to fetch' have reduplications which can be represented as underlying //-aga=agi-//, surface /-aga:='gi-/ (and with the first vowel in the -Rdp- segment usually combining with the final vowel of the prefix to form another long surface vowel).

A few remarks concerning nominal reduplication are appropriate here. In general, the formal pattern is the same as already seen with (mostly) verbal examples. As far as the point where -Rdp- begins, we should note the following. To a greater extent than verbs, nouns tend to disregard compounding initials and derivational prefixes (aside from noun-class prefixes) and begin the -Rdp- with the root. This is particularly true of high-frequency, sometimes irregular, plural reduplications of certain adjectival nouns such as /dhama-lhamungur/ from /dhamungur/ 'short', /ala:-'la:di/ from /ala:di/ 'bad', and irregular /w$_2$ura:yun^g/ from /w$_2$irig/ 'small'. Thus pattern carries over to predicative uses (with verbal prefixes), hence /wu-r̲an^{g}a=dhamungur/ 'the tree (/r̲an^{g}ag/) is short', plural /wu-r̲an^{g}a-dhama=lhamungur/ 'the trees are short', not */wu-r̲an^{g}a-r̲an^{g}a=dhamungur/. (However, double rdp. /wu-r̲an^{g}a-r̲an^{g}a--dhama=lhamungur/ is possible.)

The major exception is that the derivational noun-class prefixes are included in the reduplication. Since reduplication in this context is possible only for semantically human nouns, only human plural derivational prefix /-uG-/ is affected, and only a few stems are involved (since most roots which take derivational noun-class prefixes are strictly nonhuman). Thus from /uG-muwaj/ 'name(d)' (syntactically a noun) we get human plural /uGmu-uG-muwaj/, surface /-umu:-'-muwaj/. Similarly, Gentilic prefix /nuN-/ is included in reduplications, as in /nun^{y}ju-nun^y-jul/ from /nun^y-jul/ 'bush (inland) person'.

In reading texts, the major difficulty in recognising and analysing reduplications is that the underlying form may be obscured by later rules, most notably VV-Contraction P-49. Suppose we find a form /n^{g}awa:ra:ru:/ 'I kept leaving it (behind)'. To clarify the

structure we first retranscribe it with punctuation as /n^{g}awa:-'ra:='ru:-'/, following the system used in my earlier publications. Here /'/ indicates elision of morpheme-initial vowel. It is now easier to see the underlying structure //n^{g}awu-ara=aru-u// (the root being actually /=a:ru-/). As another example, consider two forms /n^{g}ani:na:nani/ 'he saw (it) for me' and /n^{g}aninananani/ 'he kept seeing me'. The latter is straightforwardly /n^{g}ani-nana=na-ni/, but the former is less simple. By first rewriting it as /n^{g}ani:-'na:-'=na-ni/ we can see that the input form differs from the input to the other form in having Benefactive prefix /-aG-/ just before the verb root, hence //n^{g}ani-Rdp-aG=na-ni//. The underlying form of the reduplication is thus //n^{g}ani-aGna-aG=na-ni//, which ends up as /n^{g}ani:-'na:-'=na-ni/. Readers working through my texts will find that the punctuation helps clarify word structure, but those transcribing new material or working through texts lacking such punctuation may sometimes find it difficult to identify and correctly analyse some reduplications.

We summarise the formulation of the rule as follows:

(P-2) Initial Reduplication

Rdp → { C_1V_1:- // ___-C_1V_1:#
$C_1V_1C_2$- // ___-$C_1V_1C_2C_{1a}V_1C_2$
for certain roots, where C_{1a} is identical to C_1 or in morphophonemic alternation (stop/continuant) with it
$C_1V_1C_2V_1$- // ___-C_1V_1(:)C_2V_2(:)
where C_1 is a consonant other than a stop and C_2 is any consonant or consonant cluster (this part of the rule fails to apply to certain lexically marked roots, mostly with C_1 and C_2 identical)
$V_1C_1V_2$- // ___-V_1(:)C_1V_2(:)
where C_1 is any consonant or consonant cluster
C_1V_1- // elsewhere (i.e., for monosyllables of type -$C_1V_1C_2$#, for all roots beginning with stops, and for lexically marked roots which fail to take bisyllabic -Rdp- }

Note: In this rule # represents a word boundary or potential word boundary (end of noun stem; end of inflected verb form including tense/aspect suffix but no other suffixes). Location of -Rdp- is either at beginning of root or at beginning of first segment following inflectional prefix.

3.4 Final Reduplication P-3.

This rule applies only to a derived demonstrative form meaning '(on) this/that side'. The derived form involves reduplicating the final

/CV/ of the demonstrative pronoun or adverb which serves as input. The Centripetal suffix /-ala/ is added. There is also a parallel but less common form with Centrifugal /-ali/. For further details and exx. see §7.21 (also §6.11).

Consider these input forms: /ya:-ni/ 'this (ANA class)' and adverb /ya:-ji/ 'here'. The relevant derived forms are //ya:-ni-ni-ala// → /ya:-ni-ni:-'la/ and //ya:-ji-ji-ala// → /ya:-ji-ji:-'la/.

These forms present no difficulties; we just reduplicate the final /CV/, add /-ala/, and have the surface form produced regularly by VV-Contraction P-49. However, some difficulties arise in insuring that human nonsingular forms are correctly generated.

Consider input forms /ya:-wi-n̲i/ (MDu), /ya:-wi-r-n^{g}i/ (FDu) and /ya:-wu-ru/ (Pl) 'these'. The derived forms are /ya:-wi-n̲i-n̲i:-'la/, /ya:-wi-r-n^{g}i-n^{g}i:-'la/ and /ya:-wu-ra-ra:-'la/. These forms force us to specify more precisely what gets reduplicated and also whether the -Rdp- segment precedes or follows the relevant input syllable.

In the FDu form, note that the /-r-/ morpheme is not included in the -Rdp- segment. This is a Nonsingular morpheme. Only the F morpheme (Feminine) gets reduplicated.

In the MSg form, /-n̲i-/ is arguably underlying //-r-ni-// with the same Nonsingular //-r-// and M //-ni-//, which is related to other M morphemes in verbal and nominal morphology with /n/, not /n̲/. A rule //rn// → /n̲/, though unproductive, could possibly be recognised (see P-24, below). If so, we must argue that this contraction rule precedes Final Reduplication, since in the relevant MSg form we get /-n̲i-n̲i:-/ instead of */-ni-n̲i:-/.

The Pl form is even more tricky. From input /ya:-wu-ru/ we might expect output *//ya:-wu-ru-ru-ala//, which would produce surface */ya:-wu-ru-ra:-'la/, but the attested form is /ya:-wu-ra-ra:-'la/. Note that the third morpheme /-ra-/ shares surface vowel quality with the following syllable. However, the latter in turn has acquired its surface vowel quality through VV-Contraction involving the initial vowel of the Centripetal suffix, with //ua// becoming /a:/. In generative terms, then, it is probably best to order Final Reduplication P-3 after VV-Contraction P-49. If this is done, we must locate the -Rdp- segment before the identical segment of the input, and specify that the vowel of the -Rdp- segment is short regardless of the length of the input vowel.

(P-3) Final Reduplication

Rdp → $-C_1V_1-$ // D-___$-C_1V_1(:)-$

where D- is a demonstrative root

An alternative would be to take //ya:-wu-ru-ru-ala// as the underlying form after all, with P-3 followed by an ad hoc assimilation rule. This would require the assimilation rule, but not P-3 itself, to follow VV-Contraction P-49. Another alternative, for those linguist not favorable to generative rules, would be a surface-to-surface schema deriving the reduplicated form directly from the unreduplicated surface form (this would be relatively easy in this instance).

3.5 Homorganic Semivowel-Deletion P-4.

This is an interesting but minor morphophonemic rule applying to certain forms of /=w_2u-/ 'to hit, kill' and /=yi-, =u-/ 'to give'.

The initial semivowel is deleted when followed on the surface by a short homorganic vowel. Inflected forms in which the surface root vowel has been changed by one rule or other are unaffected; in addition, long-vowel forms are not affected.

The basic inflected forms of /=w_2u-/ 'to hit, kill' can be represented as $Past_1$ /=w_2a-n^{g}/, $Past_2$ /=w_2i-ni/, $Nonpast_1$ /=w_2i-n^{y}/, $Nonpast_2$ /=u-ma-na/, $Nonpast_3$ /=w_2u:-'/, and Evitative /=u-ma-n^{g}un/. It appears that /=w_2u-/ is the most basic form but that when the /u/ is not lengthened or altered in quality the /w_2/ is deleted ($Nonpast_2$ and Evitative). See Table 11-6, MA_1 type.

The deletion of the /w_2/ is manifested on the surface in various ways. Specifically, VV-Contraction P-49 commonly applies to the output, since the inflected forms shown above are usually preceded by prefixes ending in a vowel: //wara=w_2u-ma-na// → //wara=u-ma-na// (P-4) → /waru:='-ma-na/ 'they kill them', where without P-4 we would have gotten output */wara=wu-ma-na/. Similarly, Pronominal d-Insertion P-20 applies only to vowel-initial verb stems when preceded by pronominal prefixes ending in /n/, and P-20 does apply here: //n^{g}an=w_2u-ma-na// → //n^{g}an=u-ma-na//(P-4) → /n^{g}and=u:-ma-na/ 'I will kill it ($ANA_{\emptyset}$)'. Without P-4 we would have gotten incorrect */n^{g}am=bu-ma-na/.

The root /=w_2u-/ happens to be suppleted by /=$w_2$adja-/ in its ordinary compounds and most other derivatives. It does, however, form Benefactive /-a=bu-/ from //-aG=w_2u-//, showing retention of /w_2/ (surface /b/) in all forms, e.g., $Nonpast_2$ /a=bu-ma-na/. Other than this, /=w_2u-/ occurs (usually without its basic meaning) in a number of 'auxiliary' compounds in which the preceding element determines the sense, as in /=$w_2$argad̲-bu-/ 'to belch' and /=r̲a-wu-/ 'to test, try out' (in such forms the = boundary is shown before the nuclear element). When the nuclear element in the auxiliary compound ends in a nonnasal sonorant (liquid, conceivably semivowel), the /w_2/ is often not heard when followed by homorganic vowel, as in $Nonpast_2$ /=lhilhir-(w_2)u-ma-na/ 'passes by', but this optional omission seems to be due to a low-level rule (see P-28, below) distinct from the specialised morphophonemic rule under consideration here. It does not appear that the latter operates in these auxiliary compounds.

The other verb, /=yi-, =u-/ 'to give' presents additional difficulties, and it is unclear how many underlying stem-variants must be posited and what they should be. (The immediate historical prototype, incidentally, is *-wo-.) See Table 11-7.

In compounds there is evidence pointing toward /=u-/ or /=w_1u-/ as basic form. In /-mar̲an^{g}=u-/ 'to hand over, give by hand' we must take /=u-/ as basic, since underlying //w_1// following a nasal would have been hardened to /g/ by Hardening P-18. $Past_1$ /-mar̲an^{g}=a-n^{y}/ shows that the //w_1// is not clearly present even when the root vowel is changed to a nonhomorganic quality. However, in /-r̲an^{g}ga=wu-/ 'to give at night' we do seem to have /=w_1u-/ since no VV-Contraction P-49 occurs over the = boundary. There are a few other attested compounds and derivatives but they mostly end in stops or nonvelar nasals, and in this environment the surface form, /=gu-/, could reflect either underlying //=w_1u-// by Hardening P-18 or underlying //=u-// via Velar Insertion P-8. An ex. is /-n^{g}aran̲=gu-/ '(all) to give', $Nonpast_1$ /-n^{g}aran̲=ga-n^{y}/.

In forms not involving a compound initial or a derivational prefix, 'to give' has forms pointing to /=yV-/, with the semivowel deleted when the vowel is surface /i/, hence $Past_1$ /=ya-n^y/, $Past_2$ /=i-ni/, $Nonpast_3$ /=yu:-'/, etc. We will use /=yi-/ as the citation form and presumed underlying form, with P-4 deleting the //y// in the relevant forms.

The deletion rule, however, does not apply to Reciprocal form /=yi-n^{y}ji-/ 'to give to each other, to share'. Thus note absence of VV-Contraction P-49 in /wuru=yi-n^{y}ji:-na/ 'they are sharing' versus application of this rule in nonreciprocal //n^{g}anu=yi-ni//→ //n^{g}anu=i-ni// (P-4)→ /n^{g}anu:='-ni/ (P-49) 'I gave (it) to him'.

Summing up the verbal exx., we can say that //y// and //w_2// are deleted in basic inflected forms of 'to give' and 'to hit, kill' when followed by a short homorganic vowel; forms of 'to give' with compound initial or derivational prefix appear to show some variation between /=w_1u-/ and /=u-/, but under different conditions (which are, moreover, partly indeterminate due to alternative base forms for some combinations).

We also mention here a few instances of similar deletions of root-initial semivowels in noun morphology. As in the case of the verbs, deletion is sharply restricted lexically. The nominal exx. involve forms of the moiety term /(y)irija/.

The unprefixed form /yirija/ is ambiguous since underlying //yirija// or //irija// would turn out like this (see P-5, below). As predicate adjectival noun with intransitive pronominal prefixes, the form is clearly /yirija/, as in /n^{g}a=yirija/ 'I am Yirija' and /ni=yirija/ 'He is Yirija' (i.e., of Yirija moiety). The same is true of most nominal forms with (inflectional) noun-class prefixes: /na-yirija-yun^g/ 'Yirija man', /mana-yirija/ 'Yirija (object of MANA noun class)'.

However, in forms with FSg or N^{g}ARA class prefix /n^{g}ara-/ we get /n^{g}ar-irija-yun^g/ (human FSg) and /n^{g}ar-irija/ (nonhuman of class N^{g}ARA). These point to //n^{g}ara-irija(-yun^g)// as presurface form since /n^{g}ar-/ is the normal allomorph for this noun class prefix when the following stem is vowel-initial, but not otherwise. (See V-Truncation P-46.)

The other ex. of this type is the unusual human Pl form /mand-irija/ 'persons of Yirija moiety (collective)'. Since the prefix here elsewhere shows up as //man-//, we assume that the /d/ is due to d-Insertion P-21. The root must have presurface form //-irija// for this rule to apply, and in any event //-yirija// would produce the incorrect form */man^y-jirija/ or */man-jirija/.

Our final minor ex. of this semivowel-deletion rule involves a root /=$w_2$ula-/ which shows up in verbal and nominal forms based on the sense 'two', and some closely related numeral stems. In such verbal forms as /=$w_2$ula-ga-/ 'to do (something) twice to (someone)' the inflected forms are consistent with presence of /w_2/ in all forms.

As a noun, the usual form is /-$w_2$ula-wa:/ with Dual suffix, being the usual numeral for 'two'. This can occur with the usual inflectional noun class prefixes, as in /na-wula-wa:/ 'two (men)'. However, more characteristically we get predicate-adjective forms like /wini=wula-wa:/ 'they are two' (even when English uses a simple

attributive numeral). In the MANA class form /mu:='la-wa:/ we clearly have VV-Contraction P-49 involving the prefix //ma-// and the root, which must therefore have a presurface form //=ula-wa://. The same is true of ANA class form /wu:='la-wa:/, although this would not be easy to distinguish on the surface from */wu=wula-wa:/ except in relatively well-articulated speech. See §14.25.

The same alternations occur with /$w_2$ulan^{y}baj/ 'three' and /$w_2$ulal$w_2$ulal/ 'four', which are etymologically related to /$w_2$ula-/ 'two' and still probably closely associated with it synchronically (though not derived from it by otherwise established mechanisms).

The Homorganic Semivowel-Deletion rule P-4 must therefore be formulated as a loose grouping of distinct subrules which share only the basic property that a following homorganic short vowel is required for the deletion to occur.

(P-4) Homorganic Semivowel-Deletion

a. S → ∅ // X-___V-Y

where S is a semivowel, V a short vowel homorganic to the semivowel, X a pronominal prefix (or pronominal prefix plus -Rdp-), and Y an inflectional suffix (in particular, not Reciprocal /-n^{y}ji-/); the rule applies only to /=w_2u-/ 'to hit, kill' and /=yi-/ 'to give'

b. w_1 → ∅ // X-___V-

where X is a compound initial or derivational prefix (but not -Rdp-) ending in /n^g/ and the root is /=w_1u-/ 'to give' (V in this case does not have to be homorganic at least on the surface; the rule can also be assumed to apply when X ends in a stop or nonvelar nasal, but resulting surface forms happen to be identical to those produced by derivations not involving P-4)

c. y → ∅ // X-___i

in forms of moiety term /yirija/, where X is Pl prefix /man-/ or F or N^{g}ARA prefix /n^{g}ara-/

d. w_2 → ∅ // X-___u

where X is /ma-/ or /w_1u-/ (nonhuman intransitive pronominal prefixes); applies only to predicate-adjective forms of /$w_2$ula-/ 'two', /$w_2$ulan^{y}baj/ 'three', and /$w_2$ulalwulal/ 'four'

As our discussion has implied, there are many stems beginning in /yi/ or /wu/ which do not undergo deletion by P-4 (and which therefore, for example, become /ji/ and either /gu/ or /bu/ after stop or nasal). Exx. are /yin^{g}gulbandi/ 'barramundi fish', /=$w_1$uldha-/ 'to cut, sever', and /$w_2$uruj/ 'human, person'. There are also some suffixes like /-$w_2$ugij/ 'still, only' and /-yin^{y}un^g/ (Relative) with stable semivowel except for optional omission in some environments by low-level rule P-28. There are some roots and prefixes which begin in /i/ or /u/ with no evidence of underlying

initial semivowel: /in^{y}gura/ 'Anindilyakwa (tribe)', /=ijga-/ 'to take (dog) hunting', cpds. with /-ij-/ 'word, truth', derived nouns with derivational ANA class prefix /-uG-/. While these will 'grow' an initial semivowel when word-initial by P-5, in all noninitial forms they behave like vowel-initial morphemes.

3.6 Initial Semivowel-Insertion P-5.

There are a number of morphemes which begin in presurface forms with /u/ or /i/, whether this is the underlying initial segment or whether an underlying initial semivowel has been deleted before it (see preceding section). When such morphemes occur in word-initial position, they are not distinguishable from otherwise identical morphemes beginning in /yi/ or /wu/, and the most common pronunciation in either case is with the semivowel present on the surface. We therefore need a low-level rule changing //i// to /yi/ and //u// to /wu/ word-initially. There is no rule for word-initial /a/, which can occur on the surface. Length of the vowel is not relevant to the insertion of the semivowel.

Exx. are /ø=wu-ma-na/ 'it is hitting it' from //ø=u-ma-na// (presurface form, see preceding section); /wu-dhan^{g}un^{y}/ 'wind, breeze' from //uG-lhan^{g}un^{y}//; /yin^{y}gura/ 'Anindilyakwa (tribe) person' from //in^{y}gura//. In these cases the underlying form without semivowel is based on morphophonemic behaviour in forms with prefixes (see discussions of P-2, P-4, P-18, P-20, P-21, P-49).

Sporadically and unreliably, some of these same roots can grow the semivowel in medial postvocalic position. This does not seem to be possible with verbs, but does occur with nouns, especially when preceded by ANA$_{p}$ noun class prefix /a-/ and (less often) with ANA$_{c}$ prefix /ana-/, the exx. generally involving following /-uG-/ derivational noun class prefix. Thus /a-wu-dhan^{g}un^{y}/ and /ana-wu-dhan^{g}un^{y}/ 'wind' (in different syntactic environments) in addition to word-initial /wu-dhan^{g}un^{y}/ (see preceding paragraph). For /ana-/ the more common output is /an-u-dhan^{g}un^{y}/ (see P-46). For /a-/ there is no clearly established alternative output, but the /a-/ seems to be omitted fairly often where we would expect it. It is fair to conclude that the type /a-wu-dhan^{g}un^{y}/ does occur but that speakers are not very comfortable with it.

(P-5) Initial Semivowel-Insertion

a. $\emptyset \rightarrow \begin{bmatrix} w \\ y \end{bmatrix} \;//\; \#__ \begin{bmatrix} u(:) \\ i(:) \end{bmatrix}$

b. $\emptyset \rightarrow \begin{bmatrix} w \\ y \end{bmatrix} \;//\; \#X\text{-}___ \begin{bmatrix} u(:) \\ i(:) \end{bmatrix}$

where # is a word boundary and X is an ANA class prefix (/a-/, /ana-/); the rule is obligatory in part (a) but sporadic in (b)

3.7 w_1-Insertion P-6.

The verb root /=a:yu-/ 'to cut up' behaves like a vowel-initial root when immediately preceded by a pronominal (inflectional) prefix and thus undergoes such rules as VV-Contraction P-49, as in

//n^{g}awu=a:yu-n^{y}// → /n^{g}awa:='yu-n^{y}/ 'I cut it up'. However, the presurface form of this root appears to be /=w$_1$a:yu-/ in compounds and forms with derivational prefixes, an example being the cpd. /-w$_2$angid̲i=wa:yu-/ or /-w$_2$angid̲i=ya:yu-/ 'to cut up stingray flesh'. These forms require a presurface semivowel to prevent VV-Contraction P-49, and /w$_1$/ seems to be the best candidate since it optionally becomes /y/ after /i(:)/ vowel. Deletion of the semivowel after a liquid, as in /-an^{y}jabal=a:yu-/ 'to cut up armpit (or pectoral fin)', is also regular. (See P-9 and P-10.) In some contexts it is not possible to tell whether /w$_1$/ has been inserted in /=a:yu-/, since an output /=ga:yu-/ will result either way (by Hardening P-18 of //w$_1$// to /g/, or by Velar-Insertion P-8 inserting /g/). The doubtful context here is position following stop or nasal consonant. There is circumstantial evidence that /w$_1$/ is inserted in all cases of /=a:yu-/ following compound initial or derivational prefix; namely, after velar nasal we get /=ga:yu-/ presumably by Hardening P-18, while a surface form */=n^{g}a:yu-/ should be the favoured result if Velar-Insertion P-8 were the rule involved (hence the input should be //=w$_1$a:yu-// instead of //=a:yu-//). An ex. is /-mulun^{g}=ga:yu-/ 'to cut the elbow of (someone)'.

(P-6) w_1-Insertion

$\emptyset \rightarrow w_1 \;//\; X\text{-}__a:$

where X- is a compound initial or derivational (i.e., nonpronominal) prefix, and where the root is /=a:yu-/ 'to cut up'.

Other verb roots beginning with long /a:/ are /=a:ru-/ 'to abandon', /=a:gamba-/ 'to roast', and /=a:gi-/ 'to return' but no relevant combinations occur. P-6 may affect /ala:di/ 'bad' in some forms.

3.8 w-Insertion P-7.

The alternations discussed in this section, though superficially resembling those seen in the preceding section, are sufficiently distinct in detail to justify separate treatment.

The NA and N^{g}ARA nonhuman noun classes are marked, in what I call the Continuous series, by prefixes /na-/ and /n^{g}ara-/, respectively. In the Punctual series the two are merged as /yi:-/ (§4.7).

Several nouns in these classes begin with short /a/. After /na-/ and /n^{g}ara-/ the usual VV-Contraction rule P-49 applies and we get such forms as //na-a̲ragu//→ /na:-'a̲ragu/ 'the young male dugong' and //n^{g}ara-a̲narag//→ /n^{g}ara:-'a̲narag/ 'the young goanna'. However, with prefix /yi:-/ VV-Contraction does not occur (since the prefix vowel is long). For some speakers the outputs are /yi:-ya̲ragu/ and /yi:-ya̲narag/, with surface /y/. However, other speakers (especially younger and middle-aged ones) prefer /yi:-wa̲ragu/ and /yi:-wa̲narag/, with surface /w/, in all such forms. For the /w/ dialect, a rule inserting the /w/ is needed, and even speakers of the /y/ dialect are compatible with this analysis, since /w$_1$/ usually becomes surface /y/ in the environment /i__a/ (see P-9 and P-10).

For some (apparently most) speakers of the /w/ dialect, in the one relevant case where the noun root begins with long /a:/ we get /y/ instead of /w/, the form being /yi:-ya:mun^{y}/ 'common fly' from

/a:mun^{y}/. This suggests that /w/ is not inserted in this form, except for certain speakers who do say /yi:-wa:mun^{y}/.

(P-7) w-Insertion (for some speakers, mostly young)

$\emptyset \rightarrow$ w // yi:-___a

where /yi:-/ is the noun class prefix, and (for most speakers) the /a/ is short

Reasons for dissociating this rule from P-6 are that the latter applies only in a long-vowel form (with /a:/) while P-7 applies for most speakers only in short-vowel forms, and that P-6 applies only to a root preceded by a derivational prefix or compound initial while P-7 applies after an inflectional prefix.

P-7 is designed to apply to forms involving nouns which clearly begin with /a/, or for which there is no specific evidence that there is any underlying segment (such as a semivowel) preceding the /a/. It should be noted that there are some other stems which appear to begin with underlying /w$_{1}$a/ which loses its /w$_{1}$/ in some surface environments (including word-initial position). For these roots (which normally cannot undergo VV-Contraction P-49, for example) an alternation of the type word-initial /a.../ vs. prefixed /yi:-wa.../ need not be due to P-7. The latter rule applies to all nouns beginning in /a/ which occur after /yi:-/, including those which clearly have underlying initial /a/ instead of /w$_{1}$a/, such as /ala:di/ 'bad'.

3.9 Velar-Insertion P-8.

This rule inserts /g/, and in a few instances /n^{g}/, at the beginning of a morpheme normally beginning with vowel, after a morpheme which ends in a stop or nasal. It should be noted that another rule P-20, Pronominal d-Insertion, is a competing rule which applies in a similar (though distinct) environment. P-20 applies when the preceding morpheme is a pronominal prefix ending in /n/; there is a variant P-21 applying to the Pl moiety term /mand-irija/. This leaves Velar-Insertion P-8 to apply in all remaining combinations where the preceding morpheme is a derivational prefix or compound initial ending in a stop or nasal.

For example, consider /=abi-/ 'to jump'. With pronominal prefix /n^{g}an-/ '1Sg$_{b}$' we get /n^{g}and=a:bi-n^{y}/ by P-20, which inserts /d/ and also lengthens the root-initial vowel. On the other hand, with derivational prefix /-n^{g}aran-, -n^{g}araG-/ 'Multiple' (§10.4) we get /-n^{g}aran=gabi-/ or /-n^{g}ara=gabi-/. It is suggested that Velar-Insertion P-8 is involved in the latter forms.

The morpheme before which the velar consonant is inserted can begin with /a/, /a:/, or /i/. There are no exx. involving /i:/, /u/, or /u:/, but this is simply because the relevant underlying combinations do not occur. Similarly, the insertion normally applies at the beginning of a root or a preceding derivational/compounding element, not at the root-suffix boundary, but again this appears to be due to nonoccurrence of relevant underlying combinations. Exx. involving Benefactive /-aG-/ (where /G/ is a stop archiphoneme) are /-a=gabi-/ 'to jump for', /-a=ga:ru-/ 'to leave for', and /-a=gin^{y}ga-/ 'to complete for' from /=abi-/, /=a:ru-/, and /=in^{y}ga-/. Here the /G/ triggers Velar-Insertion (then disappears by Stop-Deletion P-29).

The velar consonant which gets inserted is always /g/ when the preceding morpheme ends in a stop (whether or not the stop itself subsequently disappears). Exx. are /-mij=gajarga-/ 'to get (name) wrong' from /=ajarga-/ 'to miss', and /lhamij-gala:di/ 'bad-tasting' from /ala:di/ 'bad'. With a preceding morpheme ending in a nasal, the situation is more complex. Available exx. involving /n/ and /n^{y}/ show insertion of /g/ in all cases; available exx. involving /n^{g}/ and /n/ show insertion of /n^{g}/ in most cases but sometimes of /g/ (in the case of /n^{g}/ inserted after /n^{g}/ the insertion has no surface effect because of subsequent simplification by Geminate-Contraction P-31). Exx. with /n^{g}/ following /n/ are /-lan=n^{g}adada-/ 'to have knees sticking out of water' from /=adada-/ 'to go up on shore'; /mun-n^{g}ala:di/ 'having bad foot/feet' from /ala:di/ 'bad'; and perhaps /-raman=n^{g}ala-/ 'to be decorated with raman feathers' if derived from /=ala-/. Exx. involving (vacuous) insertion of /n^{g}/, subsequently deleted, after /n^{g}/ are: /-maran^{g}=andarma-/ 'to shake hand' from /=andarma-/ 'to shake'; and /run^{g}-ala:di/ 'badly behaved' from /ala:di/ 'bad'. Exx. showing insertion of /g/ after a nasal are: /-w$_{1}$uln^{g}=gabi-/ '(animal) to move out' if from /=abi-/ 'to jump' (initial segment not found elsewhere); /-mun=gala-/ 'to leave tracks behind' from /=ala-/; /-malan^{y}=gala-/ 'to have fins visible' also from /=ala-/; recall also /-n^{g}aran=gabi-/ from preceding page.

Instead of a rule inserting /g/ directly, we could also consider an alternative analysis involving insertion of presurface /w$_{1}$/, which will then automatically become surface /g/ after stop or nasal by Hardening P-18. This approach is not used here, since the underlying vowel-initial roots which get /g/ by Velar-Insertion also regularly (though not always) get /n^{g}/ after /n/ or /n^{g}/. The other roots with initial underlying /w$_{1}$V/ never show the /w$_{1}$/ becoming /n^{g}/; after all nasals (and stops) the /w$_{1}$/ becomes /g/. Therefore the alternative to the present analysis (with Velar-Insertion) would require insertion of /w$_{1}$/ in precisely those cases where this becomes surface /g/, and we would still need a separate rule inserting /n^{g}/.

(P-8) Velar-Insertion

$\emptyset \rightarrow$ {

n^{g} // X-___V

where X- is a compounding initial or derivational prefix ending in /n/ or /n^{g}/ and where /V/ is the initial vowel (long or short) of a root (this subrule applies to most but not all instances of this environment)

g // X-___V

where X- is a compounding initial or derivational prefix ending in a stop or nasal, and /V/ is as in the preceding subrule

}

The specification that X- must be a compounding initial or derivational prefix (i.e., cannot be an inflectional pronominal or noun=class prefix) is not necessary if P-20 and P-21 are ordered before P-8 and if V-Truncation P-46 also precedes P-8.

P-8 applies to nouns as well as verbs: //uG-ambal//$\rightarrow$ //uG-gambal// (P-8)$\rightarrow$ /wu-gambal/ (P-5 and P-29) 'its head'.

3.10 w_1-Deletion P-9.

As noted in the preceding chapter, there are two morphophonemically distinct /w/ phonemes represented as /w_1/ and /w_2/. The distinction applies clearly only in morpheme-initial position and is based primarily on whether the hardened form is /g/ or /b/, respectively (see Hardening P-18).

In addition to this, /w_1/ is more frequently deleted than is /w_2/ in some nonhardened contexts. We therefore posit a rule P-9 applying to underlying //w_1// only. Unfortunately, the details of the rule are tricky and the deletion is frequently optional, different speakers differing in their regular patterns. Moreover, we do not have a simple either/or rule; instead, there appear to be intermediate articulations in which a very weak and possibly inaudible /w/ is produced, mostly when the adjacent vowel(s) is (are) /a/.

The situation with verbs (and adjectival nouns which can be inflected prefixally like intransitive verbs) is relatively simple. There are very few such stems beginning with /w_1i/. Those attested are the noun root /-$w_1$in-/ 'flesh (of nut or shellfish)', which can be used as a compound initial in verb stems, as in /-$w_1$in=ma-/ 'to get the flesh of (something)'; /=$w_1$irgira-/ 'to be skinny', a frozen reduplicative pattern showing the usual alternation of /w_1/ and (hardened) /g/; and perhaps /=yi-wu-/ 'to scorch' if we set up the base form as //=w_1i-wu-// on the basis of the synonymous compound /-lhaln^g=gi-wu-/. In the first two cases, the initial /w_1/ is stable and is not deleted; in the case of 'to scorch' if set up as //=w_1i-wu-// the //w_1// must become /y/ at an early stage in the uncompounded form /=yi-wu-/, and a later rule of w_1-Palatalisation P-13 is used to account for this. Therefore none of these forms undergoes P-9.

There are many verbs (and adjectival nouns) beginning in /w_1/, but they show no evidence of P-9 since the semivowel is usually heard on the surface (or else is hardened to /g/).

The remaining verbs and adjectival nouns are those which begin with //w_1a(:)//. Because of w_1-Insertion P-6, which inserts /w_1/ at the beginning of verb roots, and w-Insertion P-7, which inserts /w/ in front of noun roots (including some adjectival roots which also have predicative forms with verbal prefixes), it is necessary to point out that we are here concerned with underlying, not derived, //w_1a(:)// sequences in root-initial position. This transcription is indicated when the root shows up as //=ga(:)// following pronominal prefixes ending in //n// and when the //w_1// is normally retained as /w/ or /y/ following vowels. (Note that underlying //a(:)// will result in Pronominal d-Insertion P-20 after /n/ and application of VV-Contraction P-49 after vowels.)

In verbs and adjectival nouns beginning with //w_1a(:)//, the semivowel is most often deleted in word-initial position (e.g., after /Ø-/ pronominal prefix) and following a nonnasal sonorant (a combination which occurs in some compounds). In addition, when preceded by a morpheme ending in /a/, the semivowel is usually weakened and is often inaudible if articulated at all, resulting in a vowel cluster with unstable hiatus /a=a(:)/, subject in rapid speech to low-level contraction to /a:='/. The weakening/deletion of //w_1// also occurs when the prefix ends in long /a:/, but in this case low-level contraction is not common and we usually get /a:=a(:)/ with a hiatus.

Examples of roots (and prefixes) subject to these alternations are: Multiple /-$w_1$ara-/ in verbs and a few nouns, verb root /=$w_1$aba-/ 'to wrap', and adjectival noun /-$w_1$alalij/, all shown in the form they take after a prefix ending in /u/, for example. Word-initially we get /ara-/, /aba-/, /alalij/. With preceding /a(:)/ we have exx. like /n^ga-ara=ma-n^gi/ 'I got them (ANA$_Ø$ class) all', which may contract to /n^ga:-'ra=ma-n^gi/. The Future tense of this is /n^gan^g-gara=ma-ni/ 'I will get them all', clearly showing underlying //w_1// in its hardened form /g/; were the underlying form //-ara-// without //w_1// the future would have been */$n^g$and-a:ra=ma-ni/ by Pronominal d-Insertion P-20.

There are not very many exx. involving a preceding nonnasal sonorant, since no pronominal prefix ends in such a segment. However, /$w_1$aba:ru/ 'clean-surfaced' has a compound /ambal-(w)aba:ru/ 'bald' with frequent omission of the parenthesised semivowel, and a few other similar forms are attested.

The other /w/ phoneme, /w_2/, normally resists deletion in these environments. Thus, from /=$w_2$argu-/ 'to carry on shoulder', whose /w_2/ is guaranteed by the hardened form /=bargu-/ (not */=gargu-/), does not normally lose its semivowel in initial position, as in /Ø=wargu-ri-n^y/ 'it carried it', or in other deleting positions as in /n^ga-ara=wargu-ri-n^y/ 'I carried them all'.

There are a few verbs which fluctuate between /w_1/ and /w_2/. Thus /=$w_2$ayama-/ 'to keep going' always shows /w_2/ in compounds and often in the simplex, but is occasionally found with hardened /g/ instead of /b/ in simplex forms and thus has an alternate representation /=$w_1$ayama-/. Forms of this verb in word-initial and other deleting environments show consistent retention of the semivowel on the surface, following the expected pattern for the dominant representation /=$w_2$ayama-/.

Summarising so far, /w_1/ is typically deleted in root-initial (or prefix-initial) position in verb forms when preceded by zero, by /a(:)/, or by a nonnasal sonorant.

We now turn to (nonadjectival) nouns, whose normal environments are word-initial position, and position following inflectional and/or derivational noun class prefixes. In the case where a derivational noun class prefix immediately precedes the root, we cannot tell whether w_1-Deletion applies, since undeleted /w_1/ would then be hardened to surface /g/ by P-18, while if /w_1/ is deleted a surface /g/ will be inserted anyway by Velar-Insertion P-8. This analysis would apply to such forms as //maG-$w_1$al(w)ag// → /ma-gal(w)ag/ 'neck (of MANA class object)'.

In the other positions where a (nonadjectival) noun can occur (leaving aside compound-final position, which is impossible for the majority of noun roots), we do not have a sufficient range of phonological environments to distinguish clearly between /w_1a/, /w_2a/, and /a/ as initial segments of roots. The inflectional noun class prefixes all end in /a/ except for /yi:-/, and as we have seen (cf. P-7, above) the latter induces w-Insertion anyway.

The patterns which emerge from this restricted set of environments are these: stable initial /a/, stable initial /wa/, or fluctuation between /a/ and /wa/ across informants (each speaker generally sticking with a given variant of each individual stem).

For example, /arjambal/ 'antelopine kangaroo' and /warmin/ 'Saratoga fish' have always been heard in the forms shown, whether word-initial or with inflectional noun class prefix as /ana:-'rjambal/ and /na-warmin/. On the other hand, with nouns such as /(w)alburun^{g}gu/ 'bustard (bird sp.)' and /(w)adbar/ 'grevillea', the semivowel is pronounced by some speakers but omitted by others. The fluctuating stems appear to range from cases where most speakers pronounce the /w/ to cases where only a few do.

For noun stems (excluding adjectival nouns, which can occur in forms with verbal prefixes and thus a wider range of phonological contexts than ordinary nouns), it is therefore rather difficult to apply the underlying distinctions set up for verbs, with /w_1a/, /w_2a/, and /a/ clearly distinguished. For the small number of noun stems which can occur as compound initials or finals, we may be able to set up one of these three underlying forms with confidence, but in most of the other cases it would be speculative to differentiate /w_1a/ from /w_2a/, or to argue that surface /a/ can sometimes represent underlying /w_1a/. For most nouns, therefore, we set up initial /wa/ (without numerical subscript) or /a/, recognising also that for one set of nouns speakers differ in their choice of these two initial possibilities. The w_1-Deletion rule P-9 is therefore not designed to apply to these ordinary nouns. It does apply, however, to a handful of nonadjectival nouns such as /$w_1$al(w)ag/ 'neck', which has the form /alwag/ as a simple noun but the underlying form /-$w_1$alag/ (with idiosyncratic stem-internal w-deletion as well) in compounds.

There are no alternations in nouns between /w_1i/ and /i/, or between /w_1u/ and /u/, which require application of P-9.

(P-9) w_1-Deletion

$$w_1 \rightarrow \emptyset \quad // \left\{ \begin{array}{l} \# \\ a(:) \\ i(:) \\ \left[\begin{array}{l} +\text{consonant} \\ -\text{nasal} \\ +\text{sonorant} \end{array} \right] \end{array} \right\} \text{-}__a(:)$$

note: optional but common in most of the contexts

I have included the environment after /i(:)/ in this formulation. The actual output from /i=w_1a/ is either /i=wa/ (where P-9, an optional rule, does not apply) or /i=ya/, the latter being more common. The latter form can be generated either by a rule converting /w_1/ into /y/ (cf. P-13, below), or else by allowing P-9 here to delete the /w_1/ and allowing y-Insertion P-10 to insert /y/. The analysis used here is the latter, so P-9 and P-10 apply in the case of surface /i=ya/.

It should be mentioned that there seems to be a tendency among younger speakers to reduce the scope of P-9, restoring surface /w/ in some of the deleting environments for those roots (chiefly verbs) where the /w_1/ is clearly present in other surface forms of the same roots. Thus /wara=aba:-'/ from //=$w_1$aba-// 'to wrap' is common among my older informants, but many younger persons pronounce this /wara=waba:-'/ 'they wrapped them'.

3.11 y-Insertion P-10.

This rule accounts for epenthetic /y/ inserted between a morpheme ending in /i(:)/ and a morpheme beginning in a vowel at the time when the rule applies. (Many underlying sequences of this type are contracted to a long vowel by VV-Contraction P-49, which precedes the present rule. The present rule applies to forms involving long /i:/ at the end of the initial morpheme, which do not undergo P-49, and presurface //i-V// sequences due to w_1-Deletion P-9.)

Examples of P-10 are //yi:-a:mun^{y}//→ /yi:-ya:mun^{y}/ 'common fly' (note that w-Insertion P-7 does not apply because of the long /a:/), and //-$w_2$angidi=a:yu-//→ //-$w_2$angidi=wa:yu-//(P-6)→ //-$w_2$angidi=a:yu-//(P-9)→ /-$w_2$angidi=ya:yu-/ 'to cut up flesh (of rays)'.

(P-10) y-Insertion

$$\emptyset \rightarrow y \;\; // \;\; i(:)\text{-}__V(:)$$

We might consider extending P-10 to also insert /w/ after /u(:)/ in a similar environment. However, in the relevant cases, with surface sequences like /u-wV/, we are generally dealing with underlying morpheme-initial /w/. Having P-10 (re-)insert /w/ would make sense only if an intervening rule deleted the underlying //w//. One could possibly make a case for just such an analysis, with w_1-Deletion P-9 deleting //w_1// not only after /a(:)/ and /i(:)/ but also /u(:)/.

3.12 Prefixal w_2-Deletion P-11.

Although we have noted in section §3.10, above, that /w_2/ is normally much more resistant to deletion than /w_1/, there are a handful of specific morphological combinations where /w_2/ is regularly deleted. For cases involving /w_2/ at the beginning of a stem, see the next section (§3.13). In the present section we deal with phenomena affecting pronominal prefixes attached to verbs.

As background we take the maximally abstract internal analysis of pronominal prefixes presented in Chapter 9. That is, in this analysis a pronominal prefix (specifying, say, both subject and object pronominal category for a transitive verb) can be broken down into a number of atomic morphemes tied together by an intricate relational system. If we do not accept this maximally abstract interpretation, and instead consider the pronominal prefixes to be internally unsegmentable, the following cases of Prefixal w_2-Deletion would be regarded as at most of historical (not synchronic) interest.

The relevant atomic morphemes are /-$w_2$an-/, /-w_2a-/, and /-w_2V-/, the latter with variable vowel. The morpheme /-$w_2$an-/ is used chiefly to distinguish the A and B series of pronominal prefixes (Chapter 9), each series being associated with a particular set of verbal categories (tense, aspect, mood, negation; see Chapter 8). Thus $1Sg_b$ /n^{g}a-/ (e.g., in Present Positive) vs. $1Sg_b$ //n^{g}a-$w_2$an-//→ /n^{g}an-/$_a$ (e.g., in Present Negative). The morpheme /-w_2a-/ occurs chiefly as the 1→ $2Sg_b$ transitive prefix /(w)a-/ and arguably in certain other combinations. The morpheme /-w_2V-/ is Nonsingular, and occurs in certain 2nd and 3rd person forms.

In the case of /-$w_2$an-/, the basis for identifying the initial

segment as /w_2/ is that surface /b/ appears when this morpheme is preceded by Inverse morpheme /-N-/, as in //n^ga-N-$w_2$an-w_2i-//→ /n^gambambi-/ '3Pl/WARA→ 1Sg_b'. However, the corresponding '3Pl/WARA→ 1Sg_a' form, lacking /-N-/, is //n^ga-$w_2$an-w_2i-//→ /n^gambi-/, where the /w_2/ of /-$w_2$an-/ has been deleted (with some subsequent readjustments as well). Moreover, when /-$w_2$an-/ occurs in word-initial position (with no preceding morpheme), the /w_2/ is usually not pronounced, except by some older persons. Thus compare 3MSg_a /ni-/ with 3MSg_b //$w_2$an-ni-//→ /(w)ani-/.

The 1→ 2Sg_b morpheme is pronounced /wa-/ or /a-/, depending on the speaker. However, the basic form seems to be /wa-/, since when the following morpheme (usually a verb root) begins in /i/ we get surface /wi:/ for all speakers, as in //wa=i-yi://→ /wi:='-yi:/ 'I will give to you'. It is reasonable to argue that speakers who drop the semivowel in the form /(w)a-/ have a deletion rule. The evidence for taking /wa-/ as /w_2a-/ rather than /w_1a-/ is not very strong in this case; however, 2Sg→ 1_{ab} /numba-/, variant /nimba-/, can perhaps be analysed as containing /-w_2a-/ as the final atomic morpheme, with /w_2/ appearing on the surface as /b/. There is also a 2Sg morpheme /ba-/ which might also be related, though not by any synchronically productive rules.

The Nonsingular morpheme /-w_2V-/ has its surface vowel quality (where relevant) assigned either by morphologically based allomorph rules (Chapter 9), or else (in other combinations) by V-Assimilation P-37. The choice of vowel has no effect on the deletability of the semivowel. The latter is not deleted word-initially, hence it occurs as the initial part of /wuru-/, /wara-/, and /wiri-/ (with various endings). Noninitially, the /w/ is retained, in hardened form /b/ by Hardening P-18, when immediately preceded by a nasal (Inverse /-N-/ or B morpheme /-$w_2$an-/), as in //n^ga-N-w_2i-//→ /n^gambi-/ '3Pl/WARA→ 1Sg_a'. However, when /-w_2V-/ is preceded by a vowel, the semivowel is always deleted with subsequent contraction of the two vowels (the relevant rules being VV-Contraction P-49 and Nonsg-Shortening P-41). Thus //n^ga-w_2a-ra-//→ /n^gara-/ '1Sg→ 3Pl/$WARA_a$', among other exx. It should be noted that the treatment of /w_2/ in such forms permits us to avoid homophonies involving Multiple prefix /-$w_1$ara-/ (a derivational prefix inserted between pronominal prefix and stem), hence /n^gara-/ (just mentioned) is distinct from /n^ga-ara-/ (variant /n^ga:-'ra-/) with 1Sg→ $ANA_{\emptyset a}$ /n^ga-/ followed by /-$w_1$ara-/. Similarly, the failure of the present w_2-Deletion rule to apply word-initially permits differentiation between /wara-/ '3Pl/WARA→ 3Pl/$WARA_a$' (containing /w_2V-/) and /∅-ara-/ (zero 'ANA/MANA→ $ANA/MANA_{ab}$' prefix plus Multiple /-$w_1$ara-/).

Because the three atomic morphemes beginning with /w_2/ which we have discussed show deletion of this semivowel in somewhat distinct environments, we formulate the rule in three parts.

(P-11) Prefixal w_2-Deletion

a. -$w_2$an- → -an- // $\left\{\begin{matrix}\#\\ V(:)-\end{matrix}\right\}$ —

for all but a few elderly speakers; here /-$w_2$an-/ is the B morpheme in pronominal prefixes

b. w_2a- → a- // #___-X

where /w_2a-/ is 1→ $2Sg_b$ and X does not begin with /i/; it is indeterminate whether the rule applies when X begins with /u/ (because P-5 would restore surface /w/ here); some speakers do not apply P-11b at all

c. -w_2V- → -V- // V-___

where /-w_2V-/ is the Nonsg morpheme with pronominal prefixes; rule applies rigorously for all speakers

3.13 Stem w_2-Deletion P-12.

Ordinarily, /w_2/ at the beginning of a stem resists deletion. However, there are two kin-term roots which show alternations of the type /-bV/ after a stop vs. /-V/ after a vowel or in word-initial position. We handle these by posit a basic form /-w_2V/, with the usual /w_2/→ /b/ after stop by Hardening P-18. This requires an idiosyncratic deletion of the /w_2/ for these stems in non-Hardening environments.

The more common of the two roots is /-$w_2$ibi/ 'Mo' (Table 5-1, Bii); the base form just shown is consistent with Pl forms /mij-bibi/ 'your mothers' and /mij-bibi-yun^g/ 'his/her/their mothers'. With FSg prefix /n^gara-/, however, we find /n^gar-ibi/ 'your mother' and /n^gar-ibi-yun^g/ 'his/her/their mother'. The reduction of /n^gara-/ to /n^gar-/ is regular before a morpheme beginning in /i/ (but not, say, /yi/ or /wi/), see V-Truncation P-46. We therefore need a rule converting /-$w_2$ibi/ into /-ibi/ before V-Truncation applies.

With no noun-class prefix, /-$w_2$ibi/ takes the form /yibi/ or /ribi/ 'your mother' (add suffix /-yun^g/ for 3rd person form). The variant /yibi/ is compatible with an intermediate form /ibi/, with the /y/ added as a low-level phenomenon by Initial Semivowel-Insertion P-5. However, /ribi/ represents an optional restructuring of the basic form of the root (presumably by resegmentation of /n^gar-ibi/ as /n^ga-ribi/, influenced also by the 1Sg form /rigan^g/ 'my/our mother'). Speakers who consistently use /ribi/ instead of /yibi/ for 'your mother' (with noun-class prefix absent) require recognition of two distinct basic forms for '(your) mother', one /-$w_2$ibi/ to account for /mij-bibi/, and another /ribi/ for the word-initial case; the simplest way to analyse /n^garibi/ (i.e., /ribi/ with noun-class prefix present) is as /n^ga-ribi/ (for /n^ga-/ surface allomorph of FSg /n^gara-/ see discussion of Feminine Prefix-Truncation P-34; this latter rule could be generalized to take care of /n^ga-ribi/ if needed).

A somewhat similar alternation occurs with /-$w_2$awan-n^yij/ 'father and child' (with dyadic suffix), as seen in /mij-bawan-n^yij/ 'father and children' (Pl /mij-/ inducing Hardening P-18 of /w_2/ to /b/). Compare prefixless /awan-n^yij/ and prefixed /na:-'wan-n^yij/ 'father and child' (the prefix is M /na-/), pointing to a form without the initial /w_2/. (See Table 5-1, Aii).

We should caution that all of these alternations are rather frozen, and the derivations suggested highly opaque. In the case of

'father and child', there is an alternative representation with /w_1/ instead of /w_2/, hence Pl /mij-gawa$\underline{n}$-n^{y}ij/, though the other form is still /awa$\underline{n}$-n^{y}ij/ with no prefix. (There are a few other stems with fluctuating initial /w_1/ or /w_2/.) For speakers with /w_1/, no special rule (P-12, below) is needed, since //$w_1$awa$\underline{n}$-n^{y}ij// will become /awa$\underline{n}$-n^{y}ij/ anyway by w_1-Deletion P-9.

In any event, the special rule P-12 is needed for /$w_2$ibi/, and for most speakers also for /$w_2$awa$\underline{n}$-n^{y}ij/. It is difficult to identify the precise phonological context for the rule, since there are so few relevant forms. The exx. given above show that the deletion applies word-initially and after /a/, but does not apply after /j/. The compound /lhal-ibi-yun^g/ '(clan) country of his mother' shows deletion after /l/. Derivatives like /ma-bibi-yun^g/ 'its (MANA class) mother', base form //maG-$w_2$ibi-yun^g//, show nondeletion after stop archiphoneme /G/. The evidence is incomplete, but it looks as though /w_2/ is retained after stop or nasal, where Hardening P-18 will convert /w_2/ to /b/, and it is deleted in non-Hardening environments. If we just order P-18 before the deletion rule, no special phonological restrictions are needed.

The rule applies to the only two kin terms beginning with /w_2/, so it is reasonable to specify this in the rule.

(P-12) Stem w_2-Deletion

$w_2 \rightarrow \emptyset$ // -___

at the beginning of a kin-term noun

3.14 w_1-Palatalisation P-13.

Just as /w_1/ is more susceptible than /w_2/ to deletion (leaving aside kin terms and pronominal prefixes), /w_1/ is also more prone to become /y/. Usually no special rule is needed, since //i-w_1a// → /i-ya/ is already explained by the combination of w_1-Deletion P-9 and y-Insertion P-10. However, there are one or two rather frozen derivational relationships which may require a direct palatalisation of /w_1/ under the maximal generative analysis.

The verb 'to scorch' has the shape /=yi-wu-/ in uncompounded form, and in the compound /-jir=yi-wu-/ 'to scorch (fur of)'. The uncompounded form behaves like other stems with underlying initial /y/ in its inflections, and thus shows //y// → /j/ after stop or nasal by Hardening P-18, as in /n^{g}an^y=ji-wi-n^y/ 'I will scorch it (ANA$_\emptyset$)'. However, the compound with /-lhaln^g-/ 'flame' is not the expected */-lhaln^y=ji-wu-/, rather /-lhaln^g=gi-wu-/, which points to underlying //-lhaln^g=w_1i-wu-//. The alternation is frozen, but we could account for it by setting up //=w_1i-wu-//, with /w_1/ becoming /y/ (presumably by assimilation to the following vowel) in the uncompounded form, and in compounds with initial element not ending in stop or nasal.

(P-13) w_1-Palatalisation

$w_1 \rightarrow$ y // X=___i-

in /=w_1i-wu-/ 'to scorch' where X is not a compound initial ending in a stop or nasal.

3.15 yr-Contraction P-14.

The underlying sequence /yr/ occurs over a morpheme boundary in combinations involving Locative case suffix /-ruj/, which can be added to verbs (to form Locative relative clauses) as well as to nouns. The /y/ is regularly deleted, though occasionally retained. Deletion is seen in /wu-ga-ruj/ 'in/at the nest' from //uG-ay-ruj//, and in /wuru=lha-'-ruj/ '(the place) where they were standing' from //wuru=lha-y-ruj//. (P-14 might be merged with P-26, below.)

It is not clear whether stem-final /w/ before /r/ is also deleted. In theory, such a combination could occur when a noun like /gandhaw/ 'bittern (bird sp.)' is followed by /-ruj/. However, there are very few nouns (and no verbs) ending in /w/, some of them having other variants not ending in /w/, and for semantic reasons informants rejected Locative case forms of them.

(P-14) yr-Contraction (usual but not obligatory)

y → ∅ // ___-r

3.16 iy-Contraction P-15.

There is a rule (V-Fronting P-50) which converts /a/ or /u/ into /i/ before palatoalveolar /j/ or /n^y/. There are also some apparent cases of //ay// or //uy// becoming /i/ in similar positions. It is reasonable to consider these as cases where V-Fronting converts //ay// or //uy// to //iy//, which is then reduced to /i/ by a rule we will call iy-Contraction.

In the case of /-w_1a$\underline{r}$an^{g}gay/ 'spear shaft', the two rules fail to apply in the noun forms, which require derivational noun class prefix, hence /ma-ga$\underline{r}$an^{g}gay/ from //maG-w_1a$\underline{r}$an^{g}gay// 'spear shaft (MANA class)'. However, the rules apply in case the stem is used as a compound initial (with following verb stem), as in /-w_1a$\underline{r}$an^{g}gi=ma-/ 'to pick up spear (shaft)'. See Table 14-2.

In the case of verb /=lha-/ 'to stand', the usual Past$_2$ inflected form is /=lha-y/, as in /wuru=lha-y/ 'they stood'. This form never contracts. However, with a preceding compound initial or a derivational prefix like Multiple /-$w_1$aragara-/, the form /=lha-y/ frequently reduces to /=lhi-∅/, as in /wu-waragara=lhi-∅/ 'they (ANA class) were all standing (e.g., trees)'. The full form /wu-waragara=lha-y/ is also possible but not so common. On the other hand, the paradigmatically parallel Past$_2$ form /=ya-y/ 'slept' does not reduce to */=yi-∅/ even in compounds, the Multiple form for this stem being /-lhagara=ya-y/ 'all slept'. See Table 11-5 (N^gA_2).

There are also some other possible cases of //ay// reducing to /i/ by P-50 and P-15, but they involve fairly abstract analysis of inflectional verbal paradigms. First, the N^gA_1 (i.e., first N^gA) verb class shows stem-final /a/ in most forms: Past$_1$ /=bura-n^{g}a-n^y/ 'sat down', etc. However, the Past$_2$ is of the type /=buri-∅/. We could analyse this as //=bura-y// with P-50 and P-15 converting //ay// to //iy// and then /i/. Moreover, there are clear affinities between the N^gA_1 class and that of /=lha-/ 'to stand' (preceding paragraph), which I call the N^gA_2 type (essentially the monosyllabic-stem equivalent of the N^gA_1 type). Again, see Table 11-5.

There is also a much more general inflected form for many verb classes which we here call $Nonpast_3$ (mainly used as future negative). For the great majority of stems ending in /a/ or /i/, the $Nonpast_3$ is of the form /i-Ø/. Obviously, for stems ending in /i/ we can regard this as a zero suffix, but for those ending in /a/ it is possible to set up the suffix as //-y// with P-50 and P-15 then changing //ay// to /i/. Thus /yagi niwu=ma:ndhi-Ø/ 'he will not make it (ANA_{wu})' from /=ma:ndha-/ 'to make'. It is also possible to set up /-y/ as $Nonpast_3$ suffix for the relevant stems ending in /i/, so that //i-y// is also reduced to /i-Ø/ by P-15. There are one or two verbs ending in /u/ which also show $Nonpast_3$ /i-Ø/, as with /=rugu-/ 'to weep' (class U_3), $Nonpast_3$ /=rugi-Ø/, and of course we can set this up as //=rugu-y// with P-50 and P-15 then applying (compare $Past_1$ /=rugi-n^y/ 'wept' showing P-50 before palatoalveolar). However, there are other $Nonpast_3$ forms, notably /u:-'/ for some other stems ending in /u/, where it seems that an underlying $Nonpast_3$ allomorph other than /-y/ should be recognised. See Table 11-

It is possible to formulate P-15 as an automatic rule reducing //iy// to /i/ in syllable-final position. The various morphological restrictions on the reduction of //ay// to /i/, noted above, are restrictions on P-50 (which changes the //a// to /i/ here) rather than on P-15.

(P-15) iy-Contraction

$$y \rightarrow \emptyset \quad // \quad i__ \begin{cases} \# \\ C \end{cases}$$

3.17 Lenition P-16.

The language has a number of important alternations of stop and continuant, of the type j/y, b/w, g/w, d/r, dh/lh, and (rarely) d/r. In the majority of these alternations, we are dealing with an underlying continuant which is "hardened" to a stop after a nasal or stop. On the other hand, stems beginning with underlying stop retain this stop in all forms; in the environments where the continuant-initial stems undergo Hardening, the stop-initial stems add a preposed morpheme /-n^gu-/. These are the regular treatments of stem-initial continuants and stops; see discussion of n^gu-Epenthesis P-1 (above) and Hardening P-18 (below).

However, in addition to the regular patterns, there are some more specialised patterns observed with a minority of stems, requiring supplementary rules applying only to such stems. Basically, this minority type behaves like a stop-initial type when no compound initial (or derivational prefix) precedes, and like a continuant-initial type in compounded/derived position. Moreover, consideration of reduplications and other details shows that there are really at least two minority patterns of this general type, requiring distinct analyses.

One subtype, to be described in connection with Leftward Hardening P-19 in section §3.20 (below), appears to have underlying continuant, but shows hardening to a stop when immediately

preceded by an inflectional prefix or by zero. Thus /dhamungur/ 'short', /wu=dhamungur/ 'it is short', etc. Compare the form /-lhamungur/ as compound final or after derivational prefix, as in /wurugu-lhamungur/ 'small (short) lake'. The crucial reduplicated Pl form is /dhama-lhamungur/, becoming /-lhama-lhamungur/ in compounds and derivatives. Because the reduplicative segment is bisyllabic, the base form should be //lhamungur// at the time of Initial Reduplication P-2, even in uncompounded forms, so what we need is a later rule converting the continuant, here //lh//, into a stop, here /dh/, in the relevant positions. This is what is done by Leftward Hardening P-19. (It should be noted that the hardened form /-dhamungur/ and the unhardened form /-lhamungur/ produced by P-19 are themselves subject to later, lower-level rules, and that /-lhamungur/ may become /-dhamungur/ by the regular Hardening rule P-18 if preceded by stop or nasal.)

In the present section, however, we are concerned not with this subtype, rather with a distinct one which we will exemplify with /=dhida-/ 'to close off'. Leaving aside the reduplications, we observe that when no compound initial or derivational prefix is present, the stem behaves like underlying /=dhida-/; however, when such an element is present, the stem behaves like /=lhida-/, as in /-gari=lhida-/ 'to shut off from behind'. The representation /=lhida-/ is also appropriate for instances in compounds/derivatives where //lh// becomes /dh/ after nasal or stop by the regular Hardening rule P-18. So far, the alternation /=dhida-/ vs. /=lhida-/ is like that of /-dhamungur/ and /-lhamungur/ (preceding paragraph). However, if 'to close off' were fully parallel to 'short', the regular reduplication by P-1 should be */-dhidi=lhida-/, with the bisyllabic reduplicative segment appropriate for stems beginning in continuants, and with the post-reduplicative stem overtly showing the continuant. Instead, we get /-dhi=dhida-/, which is the regular reduplication for stop-initial stems. Despite the similarities, it seems important to distinguish the subtype represented by /-lhamungur/ 'short' (where the continuant is clearly underlying) from that represented by /=dhida-/ 'to close off'. In the latter case, I choose to take the form with stop as basic, and set up a rule leniting the stop to the homorganic continuant, here //dh// to /lh/, when the stem is preceded by a compound initial or derivational prefix (not including simple reduplicative segments). The derivational prefixes here include Benefactive /-aG-/ or /-wa:G-/, Multiple /-$w_1$ara-/ and its allomorphs, etc.; an ex. of Benef is /-wa:=dhida-/^{1} 'to shut off for', which must have a form //-wa:G=lhida-// rather than *//-wa:G=dhida-// at an early stage, since the latter would incorrectly give */-wa:-n^gu=dhida-/ by n^gu-Epenthesis P-1.

The full set of lenitions attested in verbs of this type is: //b//→ /w_2/, //dh//→ /lh/, //j//→ /y/, //d//→ /r/, and //g//→ /w_1/. In other words, formally Lenition is the inverse of Hardening (P-18, also P-19), which converts these same continuants into these same stops. Very often the effects of Lenition are apparently undone by subsequent application of Hardening P-18. This is seen in the ex. 'to shut off for' (preceding paragraph), and is regular for those stems which undergo Lenition in compounds

and derivatives when the preceding morpheme happens to end in a stop or nasal, as is the case with Benef /-aG-/ or /-wa:G-/ (where /G/ is a stop archiphoneme). However, even in such exx., Lenition applies early in the derivation to generate the correct output, by preventing the application of n^gu-Epenthesis P-1.

(P-16) Lenition (applies only to certain stems)

$$\left\{\begin{array}{ll} b \rightarrow & w_2 \\ dh \rightarrow & lh \\ \underline{d} \rightarrow & \underline{r} \\ j \rightarrow & y \\ g \rightarrow & w_1 \end{array}\right\} \quad // \ X\text{-}___$$

at the beginning of a noun or verb stem, where X is a compound initial or any derivational prefix (other than a simple -Rdp- segment)

It remains to specify the set of stems which are affected. There are a number of clear cases where all attested forms are consistent with P-16; there are a few stems which show the effects of the rule in some compounds/derivatives but not others; and there are some ambiguous or idiosyncratic cases requiring separate commentary. In the following discussion and lists we separate verbs from nouns. Verbs to which P-16 applies regularly are:

/=ja<u>r</u>ya<u>r</u>a-/	/=ya<u>r</u>ya<u>r</u>a-/	'to go down'
/=ba<u>r</u>ama-/	/=w_2a<u>r</u>ama-/	'to be constipated'
/=barlha-/	/=$w_2$arlha-/	'to be stiff'
/=dhalba:rin^{y}ji-/	/=lhalba:rin^{y}ji-/	'to spread out'
/=dhida-/	/=lhida-/	'to close off'
/=dhilila-/	/=lhilila-/	'to drip'
/=<u>d</u>ilin^{g}iriya-/	/=<u>r</u>ilin^{g}iriya-/	'to lean'
/=jalalaga-/	/=yalalaga-/	'to jut out'
/=jiriri(j)ga-/	/=yiriri(j)ga-/	'to form line'
/=jiryira-/	/=yiryira-/	'to drip'

The lefthand column shows the underlying form, also the dictionary citation form; the middle column shows the form after P-16. The actual data are set out in the dictionary entries; for some of these the data are not complete, and further data might show that some show Lenition only in certain compounds, or that one or two of these verbs have underlying continuant and undergo Leftward Hardening P-19 instead of P-16.

Other verbs to which P-16 applies in some compounds/derivatives only (perhaps only to older, more frozen ones), are these:

/=balhu-/	/=$w_2$alhu-/	'to cut up'
/=barga-/	/=$w_2$arga-/	'to set ablaze'
/=bilya-/	/=$w_2$ilya-/	'to be tilted'
/=burda-/	/=$w_2$urda-/	'to dig'

There are also some nouns, including adjectival nouns, which can be considered exx. of P-16. For the nonadjectival nouns, few cases of compound-final position are attested. However, there is

an important set of derivational noun-class prefixes like ANA or WARA class /uG-/ and MANA class /maG-/. When the following noun stem begins with an underlying stop, n^gu-Epenthesis P-1 normally applies, hence /uG-gulmun^g/→ /wu-n^gu-gulmun^g/ 'its belly' (ANA or WARA class). However, a few such nouns beginning in stops fail to show the /-n^gu-/ morpheme. Thus from /dhan^{g}ara/ 'flower' we get /wu-dhan^{g}ara/ 'its flower', not */wu-n^gu-dhan^{g}ara/. The form /wu-dhan^{g}ara/ is what we would expect if the base form were //uG-lhan^{g}ara//, since n^gu-Epenthesis does not apply before a stem-initial continuant and since the //lh// will regularly become /dh/ after the stop //G// by Hardening P-18. Accordingly, to account for the type /dhan^{g}ara/, /wu-dhan^{g}ara/ we must either label this stem an exception to n^gu-Epenthesis directly, or else accomplish the same effect indirectly by having Lenition apply in the derivative form by an early application of P-16. This analysis is chosen here. The relevant stems are these:

/dhagarijgaba:ban^{y}juj/	'tracks of'
/dhan^{g}ara/	'flower (of)'
/gadhuwa/	'young, new'

Nouns to which Lenition seems to apply only in certain compounds or derivatives are these:

/ga<u>l</u>ij/	'fun, games'
/jarmayarmaj/	'long, tall' (adjectival)

We briefly mention a few other apparent alternations of stop and continuant outside of the regular Hardening alternations described by P-18, and outside of the minority patterns just described here and described in connection with P-19.

First, there are a handful of alternations (§12.2) between verb stems and a corresponding verbal "root form" (interjection-like element which may be used as an abbreviation for a regular form or may be added to it): /dhawa<u>d</u>!/ and inflected /=lhawa<u>d</u>ba-/ 'to come out', /<u>d</u>ulmurg!/ and inflected /=<u>r</u>ulmurda-/ 'to run'. Note the dh/lh and <u>d</u>/<u>r</u> alternations. However, we do not handle the alternations with phonological rules in this analysis, since the root forms are best considered separate lexical items; they are usually suppletive, occur for only a limited number of verbs, and even when etymologically cognate are not derivable by any consistent synchronic rules. Similarly, there are a few archaic alternations of two forms for certain fauna terms, where a stop-initial form designates the adult of the species and the "lenited" form the juvenile; see dictionary entries for /wubug/ and /bubug/, /almarug/ and /galmarug/, /yigama/ and /jigama/. Again, we prefer not to set up phonological rules since these forms do not constitute a productive pattern.

If /bugag/ 'old' is related to /-$w_2$ugag/, a compound final meaning 'huge', we may have another case of Lenition, at least historically.

The verb /=ba<u>r</u>uma-/ and variants 'to roll up', derived/compounded form /=w_2a<u>r</u>uma-/, is another probable case of Lenition. The situation is complicated by the existence of variant stem-form /=bawa<u>r</u>uma-/, which might itself be an irregular reduplication of /=ba<u>r</u>uma-/.

The relationship between /bibi/ '(my) mother's brother' and /-$w_2$ibi/ '(your) mother' is etymological rather than synchronic. This is also the case with /baba/ '(my) father' and /$w_2$awan-/ in /$w_2$awan-n^yij/ 'father and child pair'. Cf. also the next section.

3.18 digu-Lenition P-17.

The adjectival noun /digu/ 'unripe, raw' has a form /-rigu-/ (or occasionally /-rugu-/) when used as a compound initial, where it means 'unripe, raw, unconscious, dead', as in /-rigu=rabi-/ 'to fall down unconscious/dead' with /=rabi-/ 'to fall down'. The form /-rigu-/ is subject to Hardening P-18 after stop or nasal, giving /-digu-/, but even in such cases the representation must be /-rigu-/ at one stage to prevent application of n^gu-Epenthesis P-1.

Other d/r alternations are accounted for by Hardening P-18 and by Lenition P-16. However, the present d/r alternation has a quite different distribution. It is independent of the choice of preceding segment and so is distinct from Hardening P-18 (which, however, may apply to the output). It also differs from Lenition P-16 in that the presence or absence of another derivational or compounding element before the stem is not relevant; both noun /digu/ and compound initial /-rigu-/ typically occur directly after the inflectional prefix (noun-class or pronominal). Moreover, the noun /digu/ is attested as compound final in /mada-n^gu-digu/ 'raw (green) grass' with /mada/ 'grass', retaining its stop /d/ (and thus requiring n^gu-Epenthesis P-1).

(P-17) digu-Lenition

d → r // -___

only in the stem /digu/ 'raw' when used as a compound initial

3.19 Hardening P-18.

This is a very important rule by which certain continuants are converted into a homorganic stop after a stop or nasal; it is thus essentially the opposite of Lenition P-16. (A distinct hardening rule applying to a few stems under particular circumstances is presented in the following section.)

The basic Hardening rule is this:

(P-18) Hardening

$$\left\{\begin{array}{ll} w_2 \rightarrow & b \\ lh \rightarrow & dh \\ r \rightarrow & d \text{ (in some morphemes)} \\ r \rightarrow & d \\ y \rightarrow & j \\ w_1 \rightarrow & g \end{array}\right\} \quad // \left\{\begin{array}{l} \text{Stop} \\ \text{Nasal} \end{array}\right\} -___$$

There are no exceptions to the rule, except for //r//→ /d/, and no surface clusters created by later rules which escape it.

However, the rule applies only to the continuants listed; it does not apply to /l/ or /l/, for example, even though it does apply to /lh/. This is presumably because /l/ and /l/ are not "paired" with any particular stop (if associated with /d/ and /d/ they would overlap with /r/ and /r/ morphophonemically).

Although in most cases the stop is historically basic, there is good reason to take the continuant as underlying synchronically. This is because, in addition to the stems showing the stop/continuant alternations, there is another set showing consistent initial stop, but no third set showing consistent initial continuant. Moreover, the alternating stems show the surface stop only after stop or nasal, and show the continuant in all other environments, including word-initially.

The subrule //r//→ /d/ is not very important, since very few morphemes begin with underlying /r/ (though /r/ is common). The most common is Locative case suffix /-ruj/, which does become /-duj/ after stop or nasal, as in //a-ran^{g}ag-ruj//→ /a-ran^{g}a-duj/ 'in the tree' (note that the //g// constitutes the conditioning environment for Hardening but is then deleted by a later rule, probably Geminate Contraction P-31). Similarly, the Dyadic kin term /mi-digi-j/ 'mother and child group' contains Pl //mij-// and /rigi-j/ 'mother and child pair'.

However, //r//→ /d/ does not work for verbs. There are two relevant stems, /=ra-/ 'to swear at' and /=ru-bu-/ 'to cook on open fire', and when preceded by stop or nasal they do not harden the /r/, hence //n^gaN=ru-bu-ma-na//→ /n^ga=ru-bu-ma-na/ 'I will cook it (ANA$_\emptyset$)'. This is also true of compound verbs beginning with /-riN-/ (compound initial used in myths as characteristic of the speech of Brolga).

There is also a minor instance of //r// becoming /d/ instead of /d/. This is Dyadic /ramu-n^yij/ 'FaMo and SoCh pair' and its Pl form /mi-damu-n^yij/ 'FaMo and SoCh group', again with Pl //mij-//. However, we should remark that Pl Dyadic kin terms are rather irregular, with /mid-/ sometimes appearing as Pl allomorph before stem beginning (otherwise) in a vowel, so it is perhaps misleading to treat this as a straightforward case of //r//→ /d/.

The other continuant/stop alternations in the rule, indicated above, are attested with hundreds of morphemes in all positions in the word. For example, most of the case suffixes begin with a continuant: Relative /-yin^{y}un^g/, Allative-Dative /-$w_1$uy/, Simple Pergressive /-$w_2$aj/, etc.; these all show hardened variants when the stem ends in stop or nasal, so with /ran^{g}ag/ 'wood' we get /a-ran^{g}a-jin^{y}un^g/, /a-ran^{g}a-guy/, and /a-ran^{g}a-baj/. Nouns like this one which permit derivational noun class prefixes like ANA //uG-// and MANA //maG-// also show alternations at the prefix boundary, hence //uG-ran^{g}ag//→ /wu-dan^{g}ag/ 'wood (of ANA object)'. Verb stems can be preceded by prefixes ending in stops or nasals, such as 1Sg$_b$ //n^gaN-// (contrast 1Sg$_a$ //n^ga-//), hence with /=ya-n^ggi/ 'went' we get Past Continuous /n^ga=ya-n^ggi/ vs. Past Potential /n^gan^y=ja-n^ggi/.

Further exx. are /n^ga=wi-ni/ 'I hit it (ANA$_\emptyset$)' vs. /n^gam=bi-ni/ 'I would have hit it' with //w_2//→ /b/; /n^ga=lha-y/ 'I stood' vs.

/n^{g}an=dha-y/ 'I would have stood' with //lh//→ /dh/; /n^{g}a=riyaldha-n^{g}i/ 'I got angry' vs. /n^{g}an=diyaldha-n^{g}i/ 'I would have gotten mad' with //r//→ /d/; /n^{g}a=ya-y/ 'I slept' vs. /n^{g}an^{y}=ja-y/ 'I would have slept' with //y//→ /j/; and /n^{g}a=wuldha-n^{g}i/ 'I cut it (ANA$_{\emptyset}$)' vs. /n^{g}an^{g}=guldha-n^{g}i/ 'I would have cut it' with //w$_1$//→ /g/. (These particular exx. also show Nasal-Assimilation P-27.)

Other, less productive, stop/continuant alternations are dealt with in connection with Leftward-Hardening P-19 (below), and with Lenition P-16 and digu-Lenition P-17 (above).

3.20 Leftward Hardening P-19.

This rule is needed to account for a handful of stems which behave as continuant-initial stems in some contexts but show a surface initial stop word-initially or directly after an inflectional prefix. This type is similar to that discussed in connection with Lenition P-16, but differs in that the reduplication pattern presupposes the initial continuant, so that we need a later rule converting the continuant to the paired stop.

An example is /dhamungur/ 'short', reduplicated Pl /dhama-lhamungur/. The bisyllabic -Rdp- segment presupposes a base //lhamungur// with initial continuant, since Initial Reduplication P-2 produces a monosyllabic pattern with stem-initial stop. When a compound initial or derivational prefix is present, the forms are Sg /-lhamungur/ and Pl /-lhama-lhamungur/, though the initial /lh/ is subject to subsequent conversion to /dh/ if preceded by a stop or nasal, by Hardening P-18. In uncompounded and underived position, the forms /dhamungur/ and /dhama-lhamungur/ do not have initial /dh/ due to Hardening P-18, but behave like underlying /dh/; specifically, they induce n^{g}u-Insertion P-1 under the same conditions as true stop-initial stems. We therefore need an early rule applying to selected stems, such as /lhamungur/, converting the //lh// into /dh/ when not preceded by a compounding/derivational element; this special rule follows Initial Reduplication P-2 but precedes later rules such as n^{g}u-Epenthesis P-1. An ex. is /na-n^{g}u-dhama=lhamungur/ 'you and I will be short', illustrating both P-2 and P-1.

(P-19) Leftward Hardening (for a few stems only)

$$\left\{\begin{array}{ll} w_2 \rightarrow & b \\ lh \rightarrow & dh \\ y \rightarrow & j \end{array}\right\} \qquad // \ \#\ (\text{inflect. prefix})\text{-}___$$

In principle, we expect the rule also to involve //w$_1$//→ /g/ and //r//→ /d/, by analogy to Hardening P-18 and Lenition P-16. However, P-19 is known to apply to a handful of stems only, and we cannot cite exx. involving these particular changes. The stems affected by P-19 are these (but see also §7.22):

/=w$_2$ara-/	/=bara-/	'to become bent/crooked'
/=w$_2$ilwila-/	/=bilwila-/	'to sway'
/lhamungur/	/dhamungur/	'short'

Although I take the form with continuant as underlying, the dictionary lists these items under the variant with stop, since the latter is perhaps the more salient form (the form with continuant is given with a cross-reference to the other form).

An additional stem, now frozen, is a probable further ex. historically: /jarmayarmaj/, in compounds/derivatives /-yarmayarmaj/ 'long, tall'. Even the simple form appears to be historically a reduplication. However, this form is now frozen and a new reduplicated Pl /ja-jarmayarmaj/ is attested, forcing us to consider this a case of Lenition P-16.

3.21 Pronominal d-Insertion P-20.

There are a number of pronominal prefixes added to verbs which appear to have an underlying form ending in //n//. Most often, the following morpheme begins with a consonant, and the //n// is eventually realised as a surface nasal homorganic to a following stop, or else deleted (before another nasal, /l/, /l/, or /r/). However, the prefix ending in //n// can occasionally be followed by a morpheme beginning in an underlying vowel, often /a/ or /a:/ but not restricted to these, and in this event a /d/ is inserted between the //n// and the vowel.

The only pronominal prefixes of this type are 1Sg$_b$ (intr.) or 1Sg→ ANA$_{\emptyset b}$ //n^{g}an-//, 1InPl$_b$ or 1InPl→ ANA$_{\emptyset b}$ //nan^{g}-//, and 2Sg$_a$ or 2Sg→ ANA$_{\emptyset a}$ //nun^{g}-//. In general, other prefixes (and compound initials) do not result in insertion of /d/ by the present rule; instead, Velar-Insertion P-8 applies, inserting /n^{g}/ or sometimes /g/, if the prefix ends in a stop or nasal.

We exemplify with verb stems //=abi-// 'to jump' and //=a:gi-// 'to return (intr.)'. Compare //n^{g}a=abi-n^{y}//→ /n^{g}a:='bi-n^{y}/ 'I jumped' with //n^{g}an=abi-n^{y}//→ /n^{g}and=a:bi-n^{y}/ 'I will jump', also /nand=a:bi-n^{y}/ 'you and I will jump' and /nund=a:bi-n^{y}/ 'you(Sg) jumped'. Compare also //n^{g}a=a:gi-n^{y}//→ /n^{g}a:=-'gi-n^{y}/ 'I returned' with //n^{g}an=a:gi-n^{y}//→ /n^{g}and=a:gi-n^{y}/ 'I will return', also /nand=a:gi-n^{y}/ 'you and I will return' and /nund=a:gi-n^{y}/ 'you returned'. With prefix /-n^{g}araG-/, one of the Multiple affixes, we get /wuru-n^{g}ara=gabi:-ni/ 'they all jumped' and /wuru-n^{g}ara=ga:gi:-ni/ 'they all returned', with Velar-Insertion P-8.

The same prefixes which induce insertion of /d/ in these forms have the same effect before /i/ and /u/ that they have before /a/. Thus //n^{g}an=u-ma-na//→ /n^{g}and=u:-ma-na/ 'I will hit/kill it (ANA$_{\emptyset}$)' and //n^{g}an=in^{y}gal̲a-gi-'-n^{y}//→ /n^{g}and=i:n^{y}gal̲agi-'-n^{y}/ 'I will take a shortcut'.

The exx. in the preceding paragraphs show that, in addition to inserting a /d/, the present rule also lengthens the following vowel (usually stem-initial, but also the initial vowel of a compound initial or derivational prefix if present).

(P-20) Pronominal d-Insertion

V(:) → d-V: // n-___

where /n-/ is at the end of a pronominal prefix

We write the /d/ to the left of the morpheme boundary, but this is arbitrary (it avoids confusion about the identity of the stem).

3.22 Derivational d-Insertion P-21.

As noted above, Pronominal d-Insertion P-20 applies when vowel-initial stems (including compounds/derivatives) are preceded by certain pronominal prefixes ending in //n//. The rule does not apply, in general, to other phonologically similar combinations, even when a compound initial or derivational prefix ending in /n/ is followed by a vowel-initial stem. Instead, Velar-Insertion P-8 normally applies. Thus //mun-ala:di// → /mun-n^{g}ala:di/ 'having bad feet'.

However, there is one isolated instance where the rule inserting /d/ does apply in a compound. Unlike Pronominal d-Insertion P-20, this ex. does not show lengthening of the following (stem-initial) vowel, so we formulate it as a separate rule here.

The relevant form is /mand-irija/, Pl of /yirija/ (one of the human moiety terms, thus comprising about half of the Nunggubuyu people). The Sg form /yirija/ behaves like /irija/ (i.e., as vowel-initial stem) in some forms, notably /n^{g}ar-irija-yun^{g}/ 'woman of Yirija moiety'. [The relevant entry on p. 278 of Nunggubuyu Dictionary has a typo; emend (n^{g}ara-)n^{g}ari-irija-yun^{g} to (n^{g}ara-)n^{g}ar-irija-yun^{g}.] Since the Pl prefix here is /man-/ in several other compounds/derivatives, we take //man-irija// as base form here and posit a rule inserting /d/, under approximately the same conditions as Pronominal d-Insertion, but without affecting the length of the following vowel.

(P-21) Derivational d-Insertion

$$\emptyset \rightarrow d \;//\; man___\text{-irija}$$ ('persons of Yirija moiety')

3.23 Nasalisation P-22.

We are here concerned with assimilations of nasalisation in consonant clusters at boundaries, where an underlying stop is followed by a nasal.

The stops of Nunggubuyu are /b dh d d̲ j g/. Of these, /b dh/ do not occur at the end of morphemes (except for a couple of ininflectable verbal root forms or interjections ending in /b/), so they are irrelevant. Velar /g/ is common at the end of stems and other morphemes, but is always deleted as nonfinal element in a consonant cluster by Stop-Deletion P-29, so it is also irrelevant. This leaves /d d̲ j/.

Of these, /j/ is by far the most common morpheme-finally. It is regularly nasalised to /n^{y}/ before a nasal consonant. For example, Pl prefix //mij-// is often followed by a nasal consonant, resulting in forms like //mij-n^{g}alan^{y}ji// → /min^{y}-n^{g}al̲an^{y}ji/ 'girls'. For the underlying form //mij-// cf. /mij-gulmur/ 'young circumcised men' from /w$_{1}$ulmur/, where the prefix must end in underlying //j// rather than //n^{y}// (there being no denasalisation rule which could apply to this prefix). Similarly, compound initials like /-lhaj-/ 'firewood' and /-n^{g}aj-/ '(solid) fat' show final /n^{y}/ in compounds like /-n^{g}an^{y}=ma-/ 'to get (solid) fat'. Nouns ending in /j/ show /n^{y}/ before Instrumental suffix /-miri/, as in /wu-dhan^{y}-miri/ 'by means of firewood' from //uG-lhaj-miri//. There are no consistent counterexx.

Relevant combinations involving underlying morpheme-final /d d̲/ are uncommon, since these are not high-frequency stem-final consonants. There are, however, a few noun stems ending in them which can be followed by Instrumental /-miri/. In these combinations Nasalisation is possible but not obligatory. Thus from /yi:mid/ 'tree sp. (Planchonella)' we get /yi:mid-miri/ or /yi:min-miri/, and from /yimbid̲/ 'cypress tree' we get /yimbid̲-miri/ or /yimbi̲n-miri/.

(P-22) Nasalisation

$$\left\{\begin{array}{l} j \rightarrow n^{y} \\ d \rightarrow n \\ \underline{d} \rightarrow \underline{n} \end{array}\right\} \;//\; ___ \text{-} \; C_{[+\text{nasal}]}$$

usually obligatory for /j/, optional for /d d̲/

There is no strong argument against a more general formulation of the rule, to the effect that (any) stop is nasalised before a nasal. As noted above, /b dh/ do not occur in the relevant context, so there is no reason to exclude them specifically. As for the remaining stop /g/ (and the stop archiphoneme /G/, which is indistinguishable in its effects from /g/), we have mentioned that it just disappears in the relevant contexts. This can be taken care of by Stop-Deletion P-29, which deletes /g/ and /G/ before any consonant. However, it would be possible in principle to allow P-22 to apply to combinations like //g-n//, giving intermediate //n^{g}-n//, since /n^{g}/ is also subject to deletion before another nasal by Nasal-Deletion P-30. In other words, we could allow P-22 to apply to //g// as well as the other stops, though in the case of //g// the application would be vacuous so far as the eventual surface output is concerned.

3.24 Denasalisation P-23.

This is a minor rule applying to one verbal suffix. In its simple form, the suffix is /-ni/, giving the Past$_{2}$ form of certain high-frequency, mostly monosyllabic verbs: /=na-ni/ 'saw', /=n^{g}u-ni/ 'ate', /=yan^{g}a-ni/ 'heard', /=i-ni/ 'gave'. The corresponding Nonpast$_{2}$ suffix for these verbs is /-yi:/, as in /=na-yi:/ 'sees'. These suffixes are not characteristic of other verb classes.

However, there is one other fairly small verb class which does have a closely associated suffixal paradigm. This is the N class (see Table 11-4, in Chapter 11). The Nonpast$_{2}$ for this class is /-nji:/, which we analyse as //-n-yi:/ with //y// → /j/ by Hardening P-18. In other words, this is the same /-yi:/ ending seen in /=na-yi:/ 'sees', along with a class marker /-n-/. Now the Past$_{2}$ form, where we might expect *//-n-ni//, reducing by Geminate Contraction P-31 to */-∅-ni/, is in fact /-n-di/ for the N class. Thus /=yara-n-ji:/ 'smells', Past$_{2}$ /=yara-n-di/ 'smelled'. If we assume that /-n-di/ is structurally the /-n-/ class marker plus the same Past$_{2}$ element seen in /=na-ni/ 'saw', we need a minor rule changing //n// to /d/ by dissimilation to the preceding nasal consonant. This is not a productive rule; other combinations of two //n// segments are reduced to /n/ by Geminate Contraction P-31.

3.25 rn-Contraction P-24.

The combination /rn/ (with tap /r/) is not common at any level of derivations. In relatively productive compounds and the like, when morpheme-final /r/ comes into contact with following morpheme-initial /n/ the sequence may be retained: /-r̲ajbur=na-/ 'to mock' (compound with /=na-/ 'to see').

However, in some of the more frozen combinations we appear to have a rule by which /rn/ is converted into /n̲/. First, in demonstrative (including interrogative) pronouns, we find a MDu ending /-n̲i/ in opposition to a FDu form /-r-n^{g}i/, as in /ya:-wi-n̲i/ 'here they (MDu) are' vs. /ya:-wi-r-n^{g}i/ 'here they (FDu) are' (Table 7-1, Chapter 7). Similar endings occur with independent personal pronouns (Table 6-1, Chapter 6). The M morpheme elsewhere shows up as /na-/, /ni-/, or /nu-/ depending on the particular context (inflectional vs. derivational noun-class prefix, intransitive vs. transitive pronominal prefix, etc.), opposed to F morpheme /n^{g}ara-/, /n^{g}i-/, or /n^{g}u-/. It seems reasonable, on a fairly abstract analysis, to represent /-r-n^{g}i/ as consisting of a special Nonsingular morpheme /-r-/, related to Nonsingular /-rV-/ in pronominal prefixes; by analogy, we could take MDu /-n̲i/ as surface form of a sequence //-r-ni// with Nonsg /-r-/ and M /-ni/. If so, we need a rule by which //rn// → /n̲/.

The other instance of this rule is now even more frozen. There is a verb /-w$_2$u=n̲a-/ 'to make large campfire', which has the same (very unusual) suffixal paradigm as /=na-/ 'to burn' (trans.), and which can thus be regarded as a compound thereof. It is quite possible that the compound initial is historically identical to /wurg/ 'bushfire or grass fire', although synchronically this relationship is at best opaque. (The /w/ of /wurg/ seems to be /w$_1$/ rather than /w$_2$/, to judge by the verb /=agurgan^{y}ji-/ 'to set fires in bush', which seems to be from */-aG=w$_1$urg-ga-n^{y}ji-/.) In any event, if /-w$_2$u=n̲a-/ is indeed to be treated as a compound of /=na-/, we probably need a rule of the type //rn// → /n̲/.

(P-24) rn-Contraction

rn → n̲

in the combination of Nonsg /-r-/ with M /-ni/, and in the compound /-w$_2$u=n̲a-/ from //-w$_2$urg=na-//

There is also a compound /-w$_2$u=n̲agi-/ '(fire in oven) to be burning well', related to /=nagi-/ 'to burn' (intrans.). Essentially, /=nagi-/ functions as an irregular intransitivised (mediopassive) of /=na-/ 'to burn' (trans.). It is thus not surprising that /-w$_2$u=n̲a-/ has a counterpart /-w$_2$u=n̲agi-/, both showing P-24. However, both /-w$_2$u=n̲a-/ and /-w$_2$u=n̲agi-/ are intransitive, and they are not semantically related in precisely the same way the uncompounded stems are.

3.26 r-Deletion P-25.

This rule deletes tap /r/ when preceded by any liquid /l l̲ r r̲/. In the case of /rr/ with two taps, the reduction to /r/ can be handled either by this rule or by Geminate Contraction P-31.

The remaining lateral /lh/ does not occur morpheme- or syllable-finally and so is irrelevant to the present rule.

The most common forms involving deletion of /r/ are nouns with Locative suffix /-ruj/. Exx. are /a-lha:l-uj/ 'in the country', /a:-'mbarar̲-uj/ 'in the open country', /a:-'mbal̲-uj/ 'on the top of the head', and /ama-lhalgur-uj/ 'in the mangrove sp.'.

(P-25) r-Deletion

r → ∅ // Liquid - ___

An alternative would be to replace P-25 by a special assimilation rule by which /r/ would assimilate to a preceding liquid, creating a geminate cluster which is then reduced by Geminate-Contraction P-31.

No deletion applies to /r̲/, as we can see in /lhal-r̲an^{g}-gurun^{g}/ '(clan) country of your mother-in-law'.

3.27 Palatal-Deletion P-26.

The consonants /y j n^{y}/ are deleted under certain conditions before other consonants, mainly coronal (alveolar, retroflexed, etc.). Such combinations as /jj/ and /n^{y}n^{y}/ will be reduced anyway by Geminate-Contraction P-31. However, /j y n^{y}/ are also deleted in some nongeminate clusters and a rule must be set up. It is possible, though, that this rule should be combined with yr-Contraction P-14.

The laminoalveolar stop /j/ is commonly deleted before coronal stops /dh d d̲/. The rule applies rigorously in established compounds and derivatives, but is sometimes suspended in newer, transparent combinations--particularly when a noun ending in /j/ is followed by a case or postpositional suffix. Exx. of deletion: //lhaj-lhamungur// → /lha-dhamungur/ 'short piece of wood'; //mij-rigi-j// → /mi-digi-j/ 'mother and child dyad'; //-ij=r̲agu-// → /-i=d̲agu-/ 'to forget (be looking for) word'. Deletion does not occur very often before /b/ or /g/, except that deletion before these consonants is moderately common after /i/-vowel, especially in Causative verb forms with suffix /-jga-/ following /i/. Exx. showing failure to delete /j/ before /b g/ are /mij-b̲awan-n^{y}ij/ and variant /mij-gawan̲-n^{y}ij/ 'father and child dyad'.

It is difficult to obtain a full set of exx. of underlying /y/ followed by various consonants. However, we can cite //ay-lhamungur// → /a-lhamungur/ 'short raft' with //y// disappearing before /lh/. We cannot cite any example involving the combination *//ydh//. In principle, we ought to be able to concoct a compound involving //-ay-// 'nest; raft' as compounding initial and some verb beginning in //dh// as compound final, but no exx. have materialised. It is reasonable to assume that they would undergo deletion of the //y// at least as an optional pronunciation. As for //yr//, simplification of this cluster to /r/ is accounted for by rule P-14 (yr-Contraction), see above.

There are some exx. showing deletion of /n^{y}/ before /n/. The available exx. involve underlying //j-n//, where presumably //j// → /n^{y}/ by Nasalisation P-22. In any event, with Pl prefix //mij-//

we get surface /min^{y}-/ before velar nasal in /min^{y}-n^{g}alan^{y}ji/ 'girls', but just /mi-/ in /mi-ni-n^{y}ara-yun^{g}/ 'his/her/their fathers' and other forms with following /n/. However, just as /j/ is deleted before /g/ preferentially when preceded by /i/, this deletion of /n^{y}/ before /n/ may be favoured by preceding /i/, since deletion does not occur in //-lhaj=na-// → /-lhan^{y}=na-/ 'to see (cut) wood', where the preceding vowel is /a/. In short, the deletion appears to apply to /n^{y}/ following /i/ and preceding /n/ (presumably also /n/, though we have no exx.); it clearly does not apply to /n^{y}/ before velar /n^{g}/, nor does it apply to /n^{y}/ before /m/, as in /-nin^{y}-miri/ 'by means of (grass) roots'. We have no exx. involving underlying //n^{y}// followed by the (rare) interdental nasal phoneme /nh/; the geminate cluster //n^{y}n^{y}// is handled by Geminate-Contraction P-31.

We attempt to summarise the deletions which we have just detailed as follows:

(P-26) Palatal-Deletion

a. $j \rightarrow \emptyset$ // $\left\{ \begin{array}{l} __ - \begin{array}{c}\text{Stop}\\ [+\text{coronal}]\end{array} \\ i__g \quad \text{(optional)} \end{array} \right.$

b. $y \rightarrow \emptyset$ // $__ -$ lh

and perhaps before some other coronal consonants like /dh/

c. $n^{y} \rightarrow \emptyset$ // i__n

3.28 Nasal-Assimilation P-27.

The velar nasal /n^{g}/ normally assimilates to the point of articulation of a following stop; exceptions are largely limited to artificially slow speech. Thus /gulmun^{g}/ 'belly' has case forms like Locative /ama-gulmun-duj/, Pergressive /ama-gulmum-baj/, and Relative /ama-gulmun^{y}-jin^{y}un^{g}/. In the case of following /j/, we sometimes get /n/ instead of fully assimilated /n^{y}/, hence a variant Relative /ama-gulmun-jin^{y}un^{g}/.

A few prefixes and compound initials end in a nasal which behaves like /n^{g}/. Since it occurs only in environments where it acquires surface point of articulation by assimilation, we represent it conservatively as an archiphoneme /N/, though setting it up more concretely as //n^{g}// would produce the right outputs. An ex. is Inverse //-N-//, a morpheme occurring within pronominal prefixes, as in ANA → 1Sg$_{a}$ prefix //n^{g}a-N-w$_{1}$u-// → /n^{g}an^{g}gu-/.

Our reluctance to set this up specifically as //n^{g}// is due to the fact that in some prefixes what appears to be final //n// also undergoes point-of-articulation assimilation. Thus what we call the B morpheme in pronominal prefixes, representable as /-w$_{2}$an-/ under a maximally abstract analysis, does show assimilation. For example, 1Sg$_{b}$ //n^{g}a-w$_{2}$an-// appears as //n^{g}an-//, and undergoes assimilation in combinations like /n^{g}am=bann^{g}a-na/ "I will dance' and /n^{g}an^{g}-gal=n^{g}u-yi:/ 'I will drink'. (The evidence for

transcribing the underlying form with /n/, rather than /n^{g}/ or archiphoneme /N/, is indirect but is related to the rule for Pronominal d-Insertion P-20.)

In other morphemes, final /n/ is stable on the surface, avoiding assimilation. Thus /man-/ 'group', a derivational prefix, occurs in combinations like /-man=bayama-/ '(group) to keep going', and /da:n/ 'guts' in its compound-initial form /-dan-/ retains its /n/ in /-dan-gara=gayi-'-/ 'to have a bellyache'. The same pattern is seen at the boundary between a noun and following case suffix, as in /a-mu:n-baj/ 'by foot'.

It appears, then, that the rule applies to /n^{g}/ and /N/ as a regular process, but to /n/ only in pronominal prefixes in which B morpheme //-w$_{2}$an-// is involved. The rule does not apply to /n^{y}/, which retains its laminoalveolar point of articulation with a following stop. The same is true of /n/. There is no evidence one way or the other for /m/, which does not occur in any relevant underlying combination.

(P-27) Nasal-Assimilation

a. $\left\{ \begin{array}{l} n^{g} \\ N \end{array} \right\} \rightarrow [\alpha F]$ // $__ -$ Stop [αF]

b. n → [αF] // -w$_{2}$a__ - Stop [αF]

where /-w$_{2}$an-/ is the B morpheme of a pronominal prefix, and where [F] represents point-of-articulation features of consonants

Actually, the rule is slightly oversimplified as stated. We have mentioned that, in part (a) of the rule, we can get /nj/ as a variant of /n^{y}j/ when /j/ follows the nasal. In addition, when the stop is /dh/ the output is what we write as /ndh/, rather than */nhdh/. There is no opposition between /ndh/ and */nhdh/, since the latter does not occur, consistent with the general principle that interdentals do not occur syllable-finally, but the sound we hear in /ndh/ is /n/ rather than /nh/.

3.29 Semivowel-Deletion P-28.

This is an optional but frequent low-level rule simplifying //yi// to /i/ and //wu// to /u/ after a consonant in some cases. The rule applies particularly often to Relative suffix /-yin^{y}un^{g}/ and to postposition /-w$_{1}$ugij/ 'only; still', as in /lha:l-(w)ugij/ 'only country' and /a-lha:l-(y)in^{y}un^{g}/ 'of the country'. Some auxiliary compounds involving /-w$_{2}$u-/ (see §14.4) are also affected, as in the case of /=lhilhir-wu-/ 'to pass by (someone), grazing (him)', but only when the vowel /u/ remains on the surface; thus /=lhilhir-(w)u-ma-na/ Nonpast$_{2}$ but /=lhilhir-wa-n^{g}/ Past$_{1}$. Other morphemes also beginning with semivowel and homorganic vowel do not undergo deletion; note Allative-Dative /-w$_{1}$uy/ and Similative /-yi:/ 'like' in /a-lha:l-wuy/ 'to the country' and /a-lha:l-yi:/ 'like (the) country'. Verb stems beginning in /=w$_{2}$u/, /=w$_{1}$u/, or /=yi/ do not regularly show deletion in compounds.

In addition to applying after consonants (the relevant ones being nonnasal sonorants, since these are the only consonants which a semivowel can follow on the surface), the deletion applies optionally after a vowel, as in /wu:=buri-∅-(w)ugij/ 'they were still sitting' and /wu:=buri-∅-(y)in^{y}un^{g}/ '(the ones) who were sitting'. In rapid speech it is rather hard to hear the difference between deleted and full forms of these suffixes, and in the texts volume I have tended to use the full transcription when in doubt (this has the advantage, also, of assisting the reader in identifying morphemes).

The present rule is here distinguished from an apparently very similar rule which we have presented above as Homorganic Semivowel-Deletion P-4. Rule P-4 is a very early one, applying to a few stem-initial semivowels. After it applies, the relevant forms are treated as vowel-initial in a series of other phonological rules including Pronominal d-Insertion P-20 and VV-Contraction P-49, and the deletion applies rigorously regardless of preceding morphemes. The present rule is a low-level, optional rule applying to suffix-initial (not stem-initial) semivowels, does not feed into other rules, and is very much affected by preceding segments. In particular, when such suffixes as /-yin^{y}un^{g}/ are preceded by a stop or nasal, Hardening P-18 applies, converting the semivowel into a stop: //y//→ /j/, //w_1//→ /g/, //w_2//→ /b/. Therefore, while recognising that P-4 and P-28 are rules of the same type, I prefer to separate them formally. Some readers may wish to consider them as two instances of the application of one and the same rule, applying at two distinct stages in derivations, perhaps with some version of the phonological cycle accounting for the difference in treatment of stem-initial and suffix-initial semivowels. However, in both morphological environments we are dealing with unproductive or semi-productive alternations limited to specific stems and morphemes, and in some theories we should handle them all as minor lexical alternations.

(P-28) Semivowel-Deletion (optional)

$$\begin{bmatrix} y \\ w \end{bmatrix} \rightarrow \emptyset \;/\!/\; \text{-}__ \begin{bmatrix} i \\ u \end{bmatrix}$$

in certain suffixes and compound finals:
Relative /-yin^{y}un^{g}/, postposition /-$w_2$ugij/ 'still; only', auxiliary compound final /-w_2u-/

3.30 Stop-Deletion P-29.

We have already dealt with some deletions involving a stop before another consonant. Thus in Palatal-Deletion P-26 we saw deletion of //j// before a coronal stop.

We need another rule to account for deletion of //g// before any other consonant. Note /ninig/ 'soft', verbal derivative /=nini-bi-/ for //=ninig-w_2i-//; also noun /wulug/ 'honey-eating material' in case forms Locative /ama-wulu-duj/, Pergressive /ama-wulu-baj/, Relative /ama-wulu-jin^{y}un^{g}/, and Allative-Dative /ama-wulu-guy/. Note that Hardening P-18 applies to the suffix-

initial consonant, e.g., //-$w_2$aj//→ /-baj/, before the //g// is deleted.

We also use the symbol //G// for a stop archiphoneme in a prefix or compound initial, where the stop is manifested indirectly by inducing Hardening P-18 and perhaps other effects on the following morpheme, but where the stop never appears on the surface. Such a stop archiphoneme has the same effects as //g//, and if we replace //G// by /g/ we will derive the correct forms. Exx. of such morphemes are Benefactive prefix /-aG-/ and compound initial /-baG-/ 'eye'. An exx. of a full word would be //baG-ala:di//→ //baG-gala:di//(P-8)→ /ba-gala:di/ 'blind' ('eye-bad').

There is no general deletion of /j/ before other consonants; for a more restricted rule deleting /j/ in some preconsonantal environments see Palatal-Deletion P-26. There is no general deletion of /d/ or /d̲/, which are not very common before other consonants but are stable in forms where they do occur in this position. The stops /b dh/ do not occur in any relevant underlying combination so we have no evidence as to whether they are deleted before another stop.

(P-29) Stop-Deletion

$$\begin{Bmatrix} g \\ G \end{Bmatrix} \rightarrow \emptyset \;/\!/\; __\text{-C}$$

The effect of this rule is to delete morpheme-final //g// or //G// when it is not word-final. This is because when there is a following morpheme within the same word, either this morpheme has an underlying initial consonant or else a morpheme-initial consonant is inserted by rule (P-8, P-6).

3.31 Nasal-Deletion P-30.

Velar nasal /n^{g}/ and nasal archiphoneme /N/ (which can be regarded as /n^{g}/) are deleted before another nasal consonant. Pronominal prefixes ending in the B morpheme /-$w_2$an-/, where the evidence for positing underlying alveolar //n// is somewhat indirect and tenuous, show the same treatment before a nasal. There is also reason to believe that these nasals are deleted before (surface) liquids, though not all relevant underlying combinations can be cited in the data.

Exx. involving /n^{g}/ are /wulan^{g}/ 'blood' in case form /wula-miri/ 'by means of blood', and some compounds of /=na-/ 'to see' like /-dhalama=na-/ 'to see broken-off branch' with /-dhamalan^{g}-/. There are no consistent counterexx. at boundaries, though in artificially slow and careful speech the /n^{g}/ is sometimes heard.

Inverse morpheme /-N-/, a component of many transitive pronominal prefixes, is deleted before other nasals; the available exx. involve following /m/, /n^{g}/, /n/. Thus MANA→ 1Sg$_a$ //n^{g}a-N-ma-//→ /n^{g}ama-/ with no surface effect of the //-N-// morpheme, so this is homophonous with 1Sg→ MANA$_a$ //n^{g}a-ma-//→ /n^{g}ama-/.

Pronominal prefixes ending in B morpheme //-$w_2$an-// behave like morphemes with final //n^{g}// or archiphoneme //N// in connection

with Nasal-Assimilation P-27, and also behave like morphemes ending in these nasals in the present deletion rule. Thus //n^gan=n^gu-yi:// → /n^ga=n^gu-yi:/ 'I will eat it', where //n^gan-// itself is analysable as //n^ga-$w_2$an-// with the B morpheme on a more abstract analysis. However, in other cases morpheme-final /n/ remains as such before another nasal, as in /ra:n-miri/ 'by means of a vine sp.' and in compound /-mun=n^galn^gala-/ 'to have foot shining'.

There are not a great many attested combinations of /n^g/, /N/, or /n/ before a (surface) liquid. This is because a following /lh/, /r/, or (in most cases) /r/ will undergo Hardening P-18 after a nasal, so we end up with a nasal-stop sequence. However, there are a few combinations in which /r/ escapes Hardening, and there are also some combinations with following /l/ or /l/, the two liquids which have no Hardening counterpart. In the available combinations, the preceding /n^g/, /N/, or /n/ is deleted, at least in the most common pronunciation. Indeed, deletion of the nasal in this environment may apply even more generally than before another nasal, since /-man-/ (a P1 derivational prefix or compound initial) normally keeps its /n/ before another nasal but seems to drop it in the usual pronunciation of compound /-ma(n)=lu:lha-/ 'to wade as a group'. An ex. with /n^g/ is /-ya=lalaga-/ 'to make (it) louder' with compound initial related to /ya:n^g/ 'voice, sound'.

As noted above, ordinarily morpheme-final /n/ is not deleted before another nasal. Likewise, /n^y/ is often retained before another nasal; for a more restricted deletion rule in some preconsonantal environments see Palatal-Deletion P-26. Nasals /nh/ and /m/ do not occur in any relevant underlying combination, so we have no evidence for or against their deletability before another nasal. The remaining nasal, retroflexed /n/, is stable before other nasals.

The following is an attempt to summarise the facts.

(P-30) Nasal-Deletion

a. Nasal → ∅ // __- Lateral [i.e., /l l r/]

b. $\left\{ \begin{matrix} n^g \\ N \end{matrix} \right\}$ → ∅ // __- Nasal

c. n → ∅ // -w_2a___- Nasal

where /-$w_2$an-/ is the B morpheme in a pronominal prefix

For some of the combinations, if not all, we could also consider an analysis in which the nasal is assimilated in all features to the following nasal or lateral, and then deleted by Geminate-Contraction P-31, to which we now turn.

3.32 Geminate-Contraction P-31.

Ordinarily, when two identical consonants form a cluster, the cluster simplifies to a single consonant. In some cases, like /gg/, /rr/, and /jj/, we already have rules which account for the contraction, or could easily be modified to do so. However, even those consonants for which no existing rule accounts for deletions undergo Geminate-Contraction.

An ex. is //dd// → /d/, as in /ama-yi:mi-duj/ 'on the apple tree', with /yi:mid/ as the stem and suffix //-ruj// → /-duj/. Similarly, note //nn// → /n/, as in the usual pronunciation of /n^ganu-mu(n)=na-n^y/ 'I saw his foot', with /mu:n/ 'foot'. In new compounds of this type, the geminate cluster is occasionally heard on the surface in slow speech, but in more casual styles the contraction is virtually automatic.

(P-31) Geminate-Contraction

C_1 → ∅ // ___-C_1

Of course, it is arbitrary to say that the first rather than the second member of the cluster is deleted. We prefer to transcribe the surface forms as though the first member were deleted, for two reasons. First, in the majority of non-geminate cluster simplifications, it seems that the first consonant is the more likely to be deleted. Second, our transcription makes it easier for readers to identify the morphemes correctly, on the assumption that omission of a morpheme-final segment is less likely to cause misidentification than omission of a morpheme-initial segment.

3.33 lh-Delateralisation P-32.

Ordinarily, interdental /lh/ is a stable phoneme in the positions where it is permitted, except that it becomes /dh/ after stop or nasal by Hardening P-18. However, in one verb paradigm it appears to alternate with /y/ in some forms. This is /=bilya-/ 'to be tilted'. In the $Past_2$, I recorded /=bilya-y/ and /=billhi-∅/, where in addition to the alternation of /y/ and /lh/ we also have an alternation between /ay/ and /i/. Here it would appear that the /i/ variant involves optional application of V-Fronting P-50 to //iy//, then shortened to /i/ syllable- and word-finally by iy-Contraction P-15.

While the alternation of /ay/ with /i/ is not unusual, that of /y/ and /lh/ is. For speakers who have the forms as just listed, I incline to posit underlying //lh// becoming /y/ when followed (on the surface) by /a/, but kept as /lh/ when followed by /i/ (for the full paradigm see Table 11-5, N^gA_2 paradigm).

(P-32) lh-Delateralisation

lh → y // ___a

in the stem /=billha-/ 'to be tilted'

It is also possible to posit underlying //y// becoming /lh/ before /i/. In neither formulation would the rule be generalisable to other forms in the language. Elsewhere /llha/ and /lyi/ are acceptable sequences, as in /=$w_2$allhi-∅/, $Nonpast_3$ of /=$w_2$allha-/ 'to float', and /a-n^gajal-(y)in^{y}un^g/ 'of the (water) spring'.

It is reasonable to think that /=billha-/ has been affected historically by analogies from the two other verbs with identical or near-identical suffixal paradigms, /=lha-/ 'to stand' and /=yi-/ 'to sleep'. It is possible that /=billha-/ is historically a compound of one, but has been influenced by the other as well. For

some speakers the stem is /=bil-yi-/ with exactly the same paradigm as /=yi-/ 'to sleep' and can thus be considered to be a synchronic auxiliary compound of it.

3.34 Initial Nasal-Deletion P-33.

There are very few morphemes which need to be set up with an underlying initial sequence of nasal and stop. Excluding one or two possible suffixes of this type, the only important cases are /-n^{g}gurya/ 'excrement' and /n^{g}gil̲yirin^{g}gil̲yiri/, the name of a group of mythical figures prominent in Gunabibi ritual. The full form with the nasal pronounced occurs with preceding noun-class prefix, hence /mana-n^{g}gurya/ 'excrement' and /wara-n^{g}gil̲yirin^{g}gil̲yiri/ 'Gunabibi dreamings', though even here some speakers (especially younger ones) omit the nasal. Word-initially it is usual to drop the nasal: /gurya/, /gil̲yirin^{g}gil̲yiri/.

(P-33) Initial Nasal-Deletion

Nasal → ∅ // #__C

There are no other stems beginning with clusters.

The two lexical items just mentioned are borrowings from languages to the south (Warndarang, possibly Mara), but they are established in Nunggubuyu as the basic terms for these meanings.

3.35 Feminine Prefix-Truncation P-34.

The F (feminine) noun-class prefix is /n^{g}ara-/. This prefix, along with the phonologically similar Pl/WARA prefix /wara-/, undergoes contraction to /CV:-/ (/n^{g}a:-/, /wa:-/) under certain conditions described later in connection with rV-Truncation P-36. See §4.7.

However, in addition to that reduction, /n^{g}ara-/ undergoes a distinct reduction to /n^{g}a-/ (with short vowel) before a kin term whose stem includes the prefix /-r̲an^{g}-/, which marks 2nd/3rd person positus ("possessor"). Thus we have /r̲an^{g}-gurun^{g}/ 'your mother-in-law', with noun-class marker /n^{g}a-r̲an^{g}-gurun^{g}/ instead of */n^{g}ara-r̲an^{g}-gurun^{g}/ or */n^{g}a:-r̲an^{g}-gurun^{g}/. We need a special rule to produce the attested sequence /n^{g}a-r̲an^{g}-/. This is not a general rule for the treatment of /n^{g}ara-/ before a morpheme beginning with /r̲/, since other nouns starting with /r̲/ show the usual surface allomorphs /n^{g}ara-/ and /n^{g}a:-/, as in /n^{g}ara-r̲idharn^{g}u-n^{y}un^{g}/ 'woman of Ritharngu tribe', optional variant /n^{g}a:-r̲idharn^{g}u-n^{y}un^{g}/ by P-36.

(P-34) Feminine Prefix-Truncation

n^{g}ara- → n^{g}a- // ___-r̲an^{g}-

where /n^{g}ara-/ is the F noun-class prefix and /-r̲an^{g}-/ is the 2nd/3rd person positus marker for kin terms [See Table 5-1 in §5.2.]

3.36 Prefix-Truncation P-35.

Under the present rule we group two similar sets of /CV:-/ allomorphs of noun-class prefixes. First, one of the four demonstrative roots, Immediate /-da-/, has a distinctive set of noun-class prefixes by which what are elsewhere /CV-/ and /CVCV-/ prefixes merge as /CV:-/. Secondly, a similar pattern of /CV:-/ prefixes is found with three kin terms.

In the case of /-da-/ demonstratives, we list below the noun-class allomorphs in the lefthand column, with the other column showing the full regular forms of the same prefixes with other nouns and other demonstrative pronouns.

with /-da-/	elsewhere	category
na:-	na-	MSg, MDu, NA
n^{g}a:-	n^{g}ara-	FSg, FDu, N^{g}ARA
a:-	ana-	ANA
ma:-	mana-	MANA
wa:-	wara-	Pl, WARA

For a more complete discussion, including some additional irregularities, see Chapter 7 (including Tables 7-2 and 7-3).

The forms used with /-da-/ can be derived from the full regular forms used elsewhere by lengthening the first-syllable vowel, and by dropping the second syllable if there is one. There is no straightforward way to derive the "elsewhere" forms from the forms used with /-da-/.

The kin terms in question can co-occur only with the human noun-class prefixes for MSg/MDu and FSg/FDu. (These kin terms are forms used with 1st person positus of "possessor," and the Pl is expressed by a special suffix rather than by using the Pl noun-class prefix.) First, there are the two 1st person sibling terms /muruyun^{g}/ and /mun^{y}un^{y}un^{g}/, which mean respectively 'elder sibling' and 'younger sibling'. To mark gender we add noun-class prefixes, giving /na:-murunyun^{g}/ and /na:-mun^{y}un^{y}un^{g}/ for 'brother', /n^{g}a:-muruyun^{g}/ and /n^{g}a:-mun^{y}un^{y}un^{g}/ 'sister'. So far as we can tell, this is the same phonological process seen more elaborately in the forms with /-da-/. There is also one other ex. in kin terms, /n^{g}a:-rigan^{g}/ '(my/our) mother', cf. unprefixed form /rigan^{g}/.

(P-35) Prefix-Truncation

$C_1V_1(C_2V_2)$- → C_1V_1:- // #___- { demonstrative /-da-/ ; certain kin terms }

The rule is obligatory for the kin terms mentioned; for /-da-/ the rule usually applies, but the regular (untruncated) prefix forms are also possible. The rule does not apply to the "punctual" set of noun-class prefixes like NA/N^{g}ARA /yi:-/ and MANA /ama-/, which can occur with /-da-/ (but not with human nouns such as the kin terms mentioned).

A somewhat similar alternation, that of /gu:gu/ 'water', prefixed /a:-gugu/ or /ana:-gugu/ for expected */a-gu:gu/ and */ana-gu:gu/, is described separately as Length-Shift P-43. The truncation of F /n^{g}ara-/ to /n^{g}a-/ in one type of kin term is dealt with by Feminine Prefix-Truncation P-34 (note that the resulting vowel is short). The optional truncation of /Cara-/ noun-class prefixes to /Ca:-/ before consonant (not affecting

other bisyllabic noun-class prefixes like /mana-/ and /ana-/) is handled by rV-Truncation P-36. Although there are superficial similarities among these rules, they differ both in the form of the truncation and in the morphological or phonological triggering conditions, and it is unwise to lump them together.

3.37 rV-Truncation P-36.

This rule applies to bi- and trisyllabic pronominal prefixes used with verbs (or predicate adjectives), and to bisyllabic noun-class prefixes (there are no trisyllabic ones), optionally deleting a final /rV/ sequence and giving compensatory lengthening to the preceding vowel.

The noun-class prefixes are F/N^{g}ara prefix /n^{g}ara-/ and Pl/WARA prefix /wara-/, which optionally become /n^{g}a:-/ and /wa:-/ before a consonant: /n^{g}ara-wa:yin/ or /n^{g}a:-wa:yin/ 'emu', /wara-wa̲da:bir/ or /wa:-wa̲da:bir/ 'goanna'. Both variants are very common, though perhaps the full forms are more common. In the case of /wara-/ we should note that /wa:-/ is also the regular "punctual" form of this noun-class prefix (while /yi:-/ is the counterpart of /n^{g}ara-/), and in many textual occurrences we cannot be certain whether we are dealing with punctual /wa:-/ or with the truncated form /wa:-/ from continuous /wara-/. See §4.7.

The truncation also applies to the many pronominal prefixes used with verbs which end in /rV/, which can here be identified as a Pl/WARA morpheme (the F/N^{g}ARA forms in pronominal prefixes do not have a /rV/ extension). Exx. are 3Pl/WARA$_a$ /w$_2$uru-/, 3Pl/WARA$_b$ /amburu-/, 3Pl/WARA→ 3Pl/WARA$_a$ /w$_2$ara-/, and 3Pl/WARA→ ANA$_{wu-a}$ /w$_2$iri-/. When these occur before a consonant, the /rV/ segment is optionally dropped with compensatory lengthening of the preceding vowel: /wuru=ya-n^{g}gi/ or /wu:=ya-n^{g}gi/ 'they went', etc. The long vowel is often important in perception; contrast /wu=ya-n^{g}gi/ 'it (ANA class) went' with short vowel. See Chapter 9.

The truncations just described occur before consonants, but ordinarily not before vowels. In elicited sentences and word forms, truncation did not seem ever to occur before a vowel; instead, the /rV/ sequence combines with the following vowel by VV-Contraction to form a long vowel, as in //w$_2$uru=abi-n^{y}//→ /wura:='bi-n^{y}/ 'they jumped'. However, in rapid speech in some texts the /rV/ segment was sporadically dropped with VV-Contraction then applying, as in infrequent variant /wa:='bi-n^{y}/ 'they jumped'. (It is likely that this is not really a phonological phenomenon, rather a matter of leveling of the distinction between the Pl/WARA and the ANA class prefixes.)

We formulate the regular operation of the rule thus:

(P-36) rV-Truncation (optional)

$C_1V_1rV- \rightarrow C_1V_1:- \;//\; __-C$

at the end of an inflectional noun-class prefix or a pronominal prefix with verb/adjective

Some superficially similar rules applying internally within pronominal prefixes (on an abstract analysis) are treated in

Chapter 9. They are, however, analytically distinct from P-36, which applies after the prefix-internal rules do, and which is operative at the boundary between the entire (conglomerate) pronominal prefix and the following stem or derivational/compound element. It must be stressed that P-36 does not apply internally within the (composite) pronominal prefix. For example, the prefix /w$_2$irima-/ for 3Pl/WARA→ MANA$_a$, abstractly analysable as //w$_2$V-rV-ma-//, never becomes anything like */wi:ma-/ by P-36.

3.38 V-Assimilation P-37.

There is no widespread system of vowel harmony in Nunggubuyu. However, scattered throughout the morphology are numerous isolated alternations which can be described as assimilation of one vowel to another--usually regressive, occasionally progressive. We lump these alternations together as V-Assimilation P-37, but it is not suggested that they cohere into a single rule in any psychologically or even historically real sense. It would be possible to set up ten distinct rules, though we would be hard-pressed to come up with ten labels for them.

Before giving the exx., we should mention that other vocalic alternations are dealt with by different rules in the present publication. Changes such as /=yambi-/ 'to speak' becoming /=yamba-/ in Nonpast$_1$ /=yamba-n^{g}/, also /=w$_2$i-n^{y}ji-/ 'to hit each other' forming Nonpast$_1$ /=w$_2$i-n^{y}ja-n^{g}/, cannot be described as due to assimilation to another vowel and are treated as cases of V-Ablaut P-38 (another "basket" rule with several subrules). Changes like that of /a/ or /u/ to /i/ before a laminoalveolar like /j/ or before semivowel /y/ are not vowel-to-vowel assimilations but vowel-to-consonant assimilations and are handled by V-Fronting P-50. In addition, V-Assimilation P-37 does not deal with length alternations.

The verb /=w$_2$u-/ 'to hit, kill' (cf. Reciprocal /=w$_2$i-n^{y}ji-/ just mentioned, with //u//→ /i/ by V-Fronting) displays its underlying /u/ vowel in Nonpast$_2$ /=u-ma-na/ (with /w$_2$/ lost by Homorganic Semivowel-Deletion P-4), Nonpast$_3$ /=w$_2$u:-'/ (see MA$_1$, Table 11-5 in Chapter 11 for the paradigm). In the Reciprocal form and also in Nonpast$_1$ /=w$_2$i-n^{y}/, the shift to /i/ is due to V-Fronting P-50. However, there is another form, Past$_2$ /=w$_2$i-ni/, where it would seem that the root vowel shifts to /i/ by assimilation to /i/ in the suffix /-ni/. However, other stems ending in /u/ avoid this shift: /=ra̲gu-ni/ 'looked for', /=ru̲gu-ni/ 'wept' (both Past$_2$).

The demonstrative adverbs /bu-guni/ 'to there' and /yu:-guni/ 'to there' (both Allative, see Chapter 7) show irregular forms of demonstrative roots which elsewhere appear as /ba-/ (Anaphoric) and /yuwa:-/ (Distant), respectively. If we take //ba-guni// as one base form, we have a simple assimilation to /bu-guni/ (but contrast /ba-gu/ 'there' from the same root). To get from //yuwa:-guni// to /yu:-guni/ we can perhaps consider an initial assimilation to //yuwu:-guni// by V-Assimilation P-37, followed by a special contraction rule (Adverb-Shortening P-42). These derivations are opaque and would only be valid on the most adventurously abstract analysis. See §7.13.

There are some other possible cases of assimilation involving Anaphoric /ba-/. There is a demonstrative construction translatable 'this/that sort of thing', with Relative suffix /-yin^{y}un^{g}/ or in some cases Absolute suffix /-yun^{g}/ in special meanings. The construction is found only with Proximate /ya:-/ and Anaphoric /ba-/ stems. The forms are Proximate /yi:-jin^{y}un^{g}/ and /yi:-jun^{g}/, and Anaphoric /bu-jun^{y}un^{g}/. These forms are quite problematic phonologically and it is hard to see how we could achieve any straightforward derivations. The Proximate stem could be thought of as //yi:G-// here, with the stop archiphoneme //G// needed to account for following //y//→ /j/ by Hardening P-18. We could also consider the /i:/ in the stem as having been shifted from //a:// by V-Fronting P-50 because of the following /j/, so the base forms could be represented as //ya:G-yin^{y}un^{g}// and //ya:G-yun^{g}// with only the //G// distinguishing the stem allomorph from the usual one /ya:-/. In the case of /bu-jun^{y}un^{g}/, we could conceivably posit //baG-yin^{y}un^{g}// as the base, with the //u// vocalism spreading leftward in two stages to give //buG-yun^{y}un^{g}//, which would then produce the attested form. See §7.25.

Additional assimilations occur in some personal and demonstrative pronominal forms in connection with a special set of noun-class suffixes found only with these word types: MDu /-ni/ (from //-r-ni//, see rn-Contraction P-24), FDu /-r-n^{g}i/, and Pl /-ru/. When the preceding morpheme ends either in //a(:)// or unspecified //V(:)//, assimilation occurs. However, in most of the personal pronominal paradigms (1st inclusive, 2nd, and 3rd), a morpheme /-gu-/ intervenes between pronominal root and the noun-class suffix, and this /-gu-/ does not assimilate (MDu /-gu-ni/, etc.). Thus for the personal pronouns the only paradigm affected is that of 1st exclusive, involving 1ExNonsg root /nV(:)-/, from which we get 1ExMDu /ni-ni/, 1ExFDu /ni-r-n^{g}i/, and 1ExPl /nu-ru/. Compare the Anaph demonstrative forms /bi-ni/, /bi-r-n^{g}i/, and /bu-ru/; Distant /yuwi-ni/, /yuwi-r-n^{g}i/, and /yuwu-ru/; Immediate /di-ni/, /di-r-n^{g}i/, and /du-ru/; and Proximate /ya:-wi-ni/, /ya:-wi-r-n^{g}i/, /ya:-wu-ru/. (In these Prox forms, the root /ya:-/ is extended to /ya:-wV-/ but the assimilation does apply to the /-wV-/ extension.) For the shortening of roots before these suffixes, as in /yuwi-ni/ from Distant root /yuwa:-/, see Nonsg-Shortening P-42.

The verbs /=lha-/ 'to stand' and /=yi-/ 'to sleep' have a shared inflectional paradigm type which we refer to as N^{g}A$_2$ (Table 11-5, Chapter 11). The difference in root vowels is seen in the forms with /-n^{g}a-/ augment, as in Past$_1$ /=lha-n^{g}a-n^{y}/ 'stood up' and /=yi-n^{g}a-n^{y}/ 'went to sleep'. However, /=yi-/ does take the surface shape /=ya-/ in some combinations. In Past$_2$ /=ya-y/ and Evitative /=ya-n/ we must have recourse to V-Ablaut since there is no obvious phonological basis for shift to /a/ vowel; the same is true of Causative /=ya-n^{g}i-jga-/. However, in the case of Nonpast$_2$ /=ya-ra/ 'sleeps' we have a good argument for an assimilation analysis. (An alternative is to take 'to sleep' as really /=ya-/, becoming /=yi-/ in some forms; however, there are no parallels in the language where a palatal-type consonant has a shifting effect on a following--as opposed to preceding--vowel.)

The remaining cases of V-Assimilation involve the component elements of the pronominal prefixes used with verbs (and predicative adjectives). These cases presuppose the abstract analysis of such prefixes presented in Chapter 9, and can be disregarded if we consider the pronominal prefixes to be unsegmentable. If we do adopt the abstract analysis, and thus identify numerous component morphemes within the longer pronominal prefixes, we observe that some such morphemes consistently show V-Assimilation, others never do, and yet others do only in certain combinations.

The component morphemes which always assimilate in vowel quality, and thus must be represented as having an unspecified vowel //V(:)//, are these: 1ExNonsg /nV:-/ and /nV-/, and 1InNondu /n^{g}V:-/. When followed by Inverse morpheme /-N-/ these become /na-N-/ and /n^{g}a:-N-/ by V-Ablaut P-38, but elsewhere acquire their surface vowel quality by V-Assimilation. Thus 1ExPl$_a$ //nV:-ru-//→ /nuru-/, 1ExPl→ MANA$_a$ //nV:-ri-ma-//→ /nirima-/, 1ExPl→ 3Pl/WARA$_a$ //nV:-w$_2$V-ra-//→ //na:-a-ra-//→ /nara-/, and 1InPl→ 3MSg$_a$ //n^{g}V:-nu-//→ /n^{g}u:nu-/.

The component morpheme which we label Nonsg can be represented as //-w$_2$V-//. When it is the final component morpheme in the overall pronominal prefix, it acquires its surface vowel by an allomorphic rule sensitive to morphological factors; for example, it is //-w$_2$i-// for transitive subject when following Inverse //-N-// §9.11. However, when nonfinal within the pronominal prefix, //-w$_2$V-// gets its vowel by V-Ablaut, becoming //-w$_2$a-N-// with Inverse //-N-//, or by V-Assimilation (other combinations). Thus //w$_2$V-ru-//→ /wuru-/ (3Pl/WARA$_a$), //w$_2$V-ni-//→ /wini-/ (3MDu$_a$), etc.

Another component morpheme with similar patterning is 2Nonsg //-na-//. We base the underlying transcription on the one occurrence of the morpheme at the end of the overall pronominal prefix, //n^{g}a-na-//→ /n^{g}ana-/ (1⟶2Pl$_a$). Elsewhere we get the familiar pattern with the vowel becoming (actually, remaining) /a/ before Inverse //-N-//, and assimilating the vowel quality seen in the following syllable in other combinations. Thus 2MDu$_a$ //na-w$_2$V-ni-// → //ni-i-ni-//→ /ni:ni-/, and 2Pl→ 3MSg$_a$ //na-w$_2$V-nu-//→ //nu-u-nu-//→ /nu:nu-/.

The component morphemes we have been considering--1ExNonsg /nV:-/ or /nV-/, 1InNondu /n^{g}V:-/, Nonsg /-w$_2$V-/, and 2Nonsg /-na-/--differ apparently in whether they always undergo V-Assimilation or only do so when nonfinal in the pronominal prefix. However, these differences are merely a function of the possible positions where the component morphemes can occur; the 1ExNonsg and 1InNondu morphemes cannot occur finally, while the two others can. In fact, all four are consistent with the position that V-Assimilation applies regularly to these morphemes when nonfinal in the pronominal prefix (except where V-Ablaut applies to them, before Inverse //-N-//).

Some other component morphemes in pronominal prefixes show partial assimilation behaviour. 2Sg$_a$ morpheme //nun-// (perhaps itself segmentable) assimilates to following /i/ but not /a/ (of course it remains with /u/ before a following /u/). Thus //nun-ni-//→ /nini-/ for 2Sg→ NA$_a$, but //nun-ma-//→ /numa-/ for 2Sg→ MANA$_a$.

The F/N^{g}ARA morpheme in pronominal prefixes has a predominant allomorph /-n^{g}i-/, though /-n^{g}u-/ and /-n^{g}a-/ occur in object function at the end of the pronominal prefix, as in 1Sg→ 3FSg/N^{g}ARA$_{a}$ /n^{g}an^{g}u-/ and 1ExPl→ 3FSg/N^{g}ARA$_{a}$ /nirin^{g}a-/. In nonfinal position /-n^{g}i-/ is regular in both subject and object function, as in 3FSg/N^{g}ARA→ ANA$_{wu}$-a /n^{g}iwu-/ and ANA$_{wu}$→ 3FSg/N^{g}ARA$_{a}$ /n^{g}in^{g}gu-/. However, /-n^{g}i-/ is replaced by assimilated /-n^{g}u-/ before 3MSg object marker /-nu-/, hence 3FSg/N^{g}ARA→ 3MSg$_{a}$ /n^{g}unu-/ instead of */n^{g}inu-/.

The 1Sg component morpheme /n^{g}a-/ is ordinarily relatively stable: 1Sg→ 3MSg$_{a}$ /n^{g}anu-/, 1Sg→ NA$_{a}$ /n^{g}ani-/, etc. There is, however, one instance of assimilation, namely 1→ 2Sg$_{a}$ //n^{g}a-nu-// → /n^{g}unu-/. Notice that this assimilation enables surface differentiation of /n^{g}anu-/ (with 3MSg object) and /n^{g}unu-/ (with 2Sg object). However, /n^{g}unu-/ is now homophonous with 3FSg/N^{g}ARA → 3MSg$_{a}$ /n^{g}unu-/, so the assimilation is only of doubtful functional value.

We have seen a number of cases of V-Assimilation in the component morphemes within pronominal prefixes. Some of these morphemes have close counterparts in the system of independent personal pronouns, and we may ask whether the same assimilations are recorded in these independent forms as well.

In the case of 1ExNonsg //nV(:)-//, we have already seen that assimilations do apply in the independent personal pronouns, hence /ni-ni/ 'we(ExMDu)' and /nu-ru-/ 'we(ExPl)'. The formally equivalent inclusive pronouns begin with /n^{g}a-gu-/, where there is no sign of assimilation. The nonsingular 2nd person pronouns begin with /nu-gu-/, and it is arguable that the initial morpheme here is really //na-// or //nV-/ with assimilation to the /u/ of the following syllable, but there is only indirect evidence (from pronominal prefixes) for this underlying analysis. Similarly, in the third person nonsingular personal pronouns, we get an initial sequence /wu-gu-/, where we might set up the first element as //w$_{2}$V-// (by analogy to the pronominal prefixes) and allow an assimilation to apply; again, the evidence is indirect.

Our major results are presented as follows:

(P-37) V-Assimilation

a. u → i // =w$_{2}$___-ni

in the form /=w$_{2}$i-ni/ 'hit, killed' (Table 11-6)

b. a(:) → u(:) // ___-guni

in Allative demonstrative adverbs (§7.13)

c. V → u // b___-j___n^{y}un^{g}

in //baG-yin^{y}un^{g}//→ /bu-jun^{y}un^{g}/ 'that sort of thing' [applies twice in same form] (§7.25)

d. $\begin{Bmatrix} a(:) \\ V(:) \end{Bmatrix}$ → $\begin{cases} i(:) \text{ // } ___\text{-} \begin{Bmatrix} \underline{n}i \\ r\text{-}n^{g}i \end{Bmatrix} \\ u(:) \text{ // } ___\text{-ru} \end{cases}$

in personal or demonstrative pronouns

e. i → a // =y___-ra (Table 11-5)

in the form //=yi-ra//→ /=ya-ra/ 'sleeps'

f. $\begin{Bmatrix} a(:) \\ V(:) \end{Bmatrix}$ → V$_{1}$(:) // ___-C*V$_{1}$(:)

where /C*/ is from zero to two consonants, the morpheme affected is 1ExNonsg /nV(:)-/ or 1InNondu /n^{g}V:-/ or Nonsg /-w$_{2}$V-/ or 2Nonsg /-na-/, the following morpheme is not Inverse //-N-//, and the entire sequence (including /-C*V$_{1}$(:)/) is within a pronominal prefix (Chapter 9)

g. u → i // n__(n)-C(C)i

with 2Sg$_{a}$- and another pronominal morpheme

h. i → u // n^{g}___-nu-

in 3FSg/N^{g}ARA→ 3MSg prefixes

i. a → u // n^{g}___-nu-

in 1→ 2Sg$_{a}$ //n^{g}a-nu-//→ /n^{g}unu-/

Note: in the above rules, /V/ or /V:/ in the formulation refers to an unspecified variable vowel of certain morphemes, not to ordinarily fully specified vowels

3.39 V-Ablaut P-38.

Under the present category we group changes in vowel quality (not length) in one morpheme due to the influence of another adjoining morpheme. We exclude cases involving assimilations of one vowel to the vowel of a following syllable (see V-Assimilation P-37), and fronting of /a/ or /u/ to /i/ before a palatal-type consonant (see V-Fronting P-50). That is, the cases handled by V-Ablaut are those where there is no obvious phonetic motivation for the vowel change. However, our terminology is not meant to suggest a close parallel with what is called "ablaut" in any particular other language family.

The specific cases happen to involve a shift to /a(:)/ before a nasal. The morphological contexts are the boundary between a verb stem and following suffix, and boundaries among the component morphemes which combine to form pronominal prefixes used with verbs.

First, within the pronominal prefixes we deal with combinations involving Inverse //-N-//, a component morpheme on an abstract analysis of the pronominal prefixes (Chapter 9). There is a set of other component morphemes which, when directly preceding //-N-//, show conversion of their vowel to /a(:)/. Moreover, this /a(:)/ remains on the surface, resisting the effects of V-Assimilation P-37, which would otherwise apply to these combinations. The preceding morphemes affected are 1ExNonsg /nV(:)-/, which combines with //-N-// to produce /na-N-/; 1InNondu /n^{g}V:-/, which gives

/n^{g}a:-N-/; Nonsg /-w$_2$V-/ producing /-w$_2$a-N-/; 2Nonsg /na-/ giving /na-N-/; and Pl /-rV-/ giving /-ra-N-/. (All of these elsewhere acquire surface vowel quality in forms without //-N-// by assimilation from the vowel of the following syllable, except that this is not true of Pl /-rV-/.)

As an ex. of this ablaut, consider 3MSg/NA→ 3Pl/WARA$_a$ prefix //w$_2$V-N-ni-//→ /wani-/. Compare this with 3Pl/WARA→ NA$_a$ prefix //w$_2$V-ni-//→ /wini-/, which contains the same morphemes (Nonsg //-w$_2$V-// and M/NA //-ni-//), but with Inverse //-N-// present in the first combination. Note that in /wani-/ the vowel of the first syllable shifts to /a/, and does not then undergo V-Assimilation, while in /wini-/ we do see the assimilation. Since the //-N-// itself is dropped by another rule (Nasal-Deletion P-30) before another nasal, the vowel ablaut is the only surface effect of this underlying morpheme.

This instance of ablaut does not apply to M/NA morpheme /-ni-/ nor to F/N^{g}ARA morpheme /-n^{g}i-/. Thus //ni-N-w$_1$u-//→ /nin^{g}gu-/ for ANA→ 3MSg/NA$_a$ and //n^{g}i-N-w$_1$u-//→ /n^{g}in^{g}gu-/ for ANA→ 3FSg/N^{g}ARA$_a$ transitive prefixes. There are also a couple of other morphemes which may precede //-N-// but which have stable /a/-vowel in most of the prefix combinations, so we cannot tell whether the surface form with //-N-// shows ablaut or just retention of underlying quality: 1Sg /n^{g}a-/ and 1InDu /na-/, which combine with //-N-// as /n^{g}a-N-/ and /na-N-/. Basically, then, the ablaut applies to a small set of preceding morphemes which have unstable or indeterminate vowel quality, and which (in combinations lacking //-N-//) acquire surface vowel quality by V-Assimilation (or, in the case of Pl /-rV-/, by morphological rule).

We now consider the cases of ablaut affecting stem-final vowels in verbs. We should caution that inflectional suffixes are fairly tightly fused to verb stems, that the boundaries are therefore perhaps ambiguous, and that identification of "underlying" stem-final vowel is sometimes based on questionable deductions; see §11.4.

The Past$_1$ suffix for some verb classes, and the Nonpast$_1$ suffix for a distinct (but marginally overlapping) set of verb classes, is /-n^{g}/. If the preceding vowel is not already /a/, it becomes /a/ by ablaut. Thus from /=yambi-/ 'to speak' we get Nonpast$_1$ /=yamba-n^{g}/, and from Reciprocal /=w$_2$i-n^{y}ji-/ 'to hit each other, fight' we get Nonpast$_1$ /=w$_2$i-n^{y}ja-n^{g}/. For these stems we have strong evidence (from a majority of inflected forms) that the underlying or basic stem-final vowel is /i/, not /a/. From the much smaller set of verbs ending in /u/, we may cite /=ragu-/ 'to look for', Nonpast$_1$ /=raga-n^{g}/. We cannot cite many exx. of Past$_1$ ablaut, since the verbs which take Past$_1$ /-n^{g}/ are almost all stems which already have underlying stem-final /a/; however, we can cite /=w$_2$a-n^{g}/ 'hit. killed' from a stem whose underlying form seems to be, in our analysis, /=w$_2$u-/ (see Table 11-6, Chapter 11).

Ordinarily, the other major Nonpast$_1$ and Past$_1$ allomorph, /-n^{y}/, either leaves the underlying stem-vowel unchanged or converts it to /i/ (we treat this under V-Fronting P-50). In one paradigm, it appears that the vowel is ablauted to /a/ before this suffix: /=ya-n^{y}/ 'gave', whereas the other forms from this root show stem-final /u/ or /i/ (Table 11-7, Chapter 11). There is no ablaut

in this paradigm before suffix /-n^{y}/ when the latter has the Nonpast$_1$ (instead of Past$_1$) meaning, hence /=i-n^{y}/ after losing the initial //y// by Homorganic Semivowel-Deletion P-4.

There is a similar pattern observed in the MA$_2$ verb class, which is basically a specialised offshoot of the MA$_1$ class consisting of /=w$_2$u-/ 'to hit, kill' and its compounds. Instead of the usual Past$_1$ form /=w$_2$a-n^{g}/, the small number of compounds which take the offshoot MA$_2$ paradigm (Table 11-6, Chapter 11) have Past$_1$ /-w$_2$a-n^{y}/. This would seem to require a shift of //u// to /a/ before suffix /-n^{y}/ similar to that seen in /=ya-n^{y}/ 'gave'.

Finally, we have the alternation between /=yi-/ and /=ya-/ in the paradigm of 'to sleep' (Table 11-5, N^{g}A$_2$ type). In the present analysis we take /=yi-/ as underlying on the basis of the important set of forms with augment /-n^{g}a-/, like Past$_1$ /=yi-n^{g}a-n^{y}/. In this event we must account for the /=ya-/ forms by one rule or another. In Nonpast$_2$ /=ya-ra/ we have already suggested that V-Assimilation P-37 applies (see above). This, however, leaves us with another set of forms not easily amenable to such an analysis: Evitative /=ya-n/, Past$_2$ /=ya-y/, and Causative /=ya-n^{g}i-jga-/. One analysis is that /=yi-/ is ablauted to /=ya-/ when not followed by augment /-n^{g}a-/ retaining its (the augment's) /a/ vowel. However, identifying base forms here is difficult, and we could consider the alternative by which /=ya-/ is taken as basic with /=yi-/ due to a special rule (not paralleled by other forms in the language) applying before augment /-n^{g}a-/ (except in the Causative form).

(P-38) V-Ablaut

a. $\begin{Bmatrix} a(:) \\ V(:) \end{Bmatrix}$ → a(:) // ___-N-

where //-N-// is the inverse morpheme within a pronominal prefix; rule does not apply to /-ni-/ (M/NA) or /-n^{g}i-/ (F/N^{g}ARA), and is vacuous with /n^{g}a-/ (1Sg) and /na-/ (1InDu), but applies to all other preceding morphemes

b. V → a // ___-n^{g}

where /-n^{g}/ is the Past$_1$ or Nonpast$_1$ suffix

c. V → a // ___-n^{y}

where /-n^{y}/ is the Past$_1$ (not Nonpast$_1$) suffix and the verb is /=yi-/ 'to give' or a compound of /=w$_2$u-/ 'to hit, kill' taking MA$_2$ paradigm

d. i → a // ___-$\begin{Bmatrix} n \\ y \\ n^{g}i\text{-}jga\text{-} \end{Bmatrix}$

where the root is /=yi-/ 'to sleep' and the suffixes are Evitative /-n/, Past$_2$ /-y/, and Causative /-n^{g}i-jga-/

3.40 Interjection-Formation P-39.

Another rule affecting vowels is a special process applied only to words uttered as interjections. Normally the final vowel is strongly lengthened, with high pitch. The process is distinguished from ordinary stylistic lengthening in narratives by the fact that in the interjection type a /u/ (sometimes heard just as /w/) is added to the final vowel. Thus from noun /baba/ '(my) father' we get the interjection vocative form /baba:::u!/.

If the input form ends in vowel plus consonant, the consonant is just dropped and /u/ added to the vowel. Thus from /rigan^{g}/ '(my) mother' we have vocative interjection /riga:::u!/.

Other exx. showing a nonvocative noun, and an inflected verb form, are these: /n^{g}ura:::u!/ 'fire' from /n^{g}ura/, and /wu:=ri-n^{y}ji:-na:::u!/ 'they are fighting' from /wu:=ri-n^{y}ji:-na/. The interjection form of these words is used only for a strongly exclamatory force (warnings of immediate danger, etc.).

Verbal root forms like /jalg!/, related to inflected /=yaldha-/ 'to go past', are also interjection-like but do not show the vowel lengthening and addition of /u/ characteristic of the type of interjections just illustrated.

(P-39) Interjection-Formation

V(:)(C)# → V:::u#

to make an ordinary noun or verb into an interjection

3.41 Rdp-Shortening P-40.

In both the Initial Reduplication rule P-2 and the morphological restricted Final Reduplication rule P-3, we have already specified that the vowel(s) of the reduplicative segment is(are) short, regardless of the length of the vowel(s) in the input. Thus from /=ya:-ri:/ 'goes' we get reduplicated /-yara=ya-ri:/.

Actually, P-2 as formulated should produce */-yara=ya:-ri:/, since we as yet have no rule for altering the length of the input stem segment in the overall reduplicated form. Indeed, as the forms show, the second syllable of the stem (here /ri:/) maintains its underlying length in the reduplication. However, /-yara=ya-ri:/ does show (in addition to short vowels in the reduplicative segment /-yara-/ itself) shortening of the underlying long vowel in the first syllable of the stem. It turns out that this is characteristic of all regular reduplications with bisyllabic reduplicative segment, so that the overall reduplicated stem shows three consecutive short vowels (two in the reduplicative segment, one in the first syllable of the following stem) in all cases. (Of course, if there is no stem-initial consonant, two of the short vowels will eventually combine by VV-Contraction P-49 into a surface long vowel.)

The situation with monosyllabic initial reduplications is different. As we can see in /-bu=bu:lha-/ 'to blow' and /-lu=lu:lha-/ 'to wade' (both reduplicated), no shortening occurs in this subtype. (For the rules on bisyllabic vs. monosyllabic reduplicative segments, see P-2.)

We need a rule shortening a long vowel in a stem preceded by a bisyllabic P-2 reduplication.

(P-40) Rdp-Shortening

V: → V // Rdp = (C)___

where -Rdp- is a bisyllabic reduplicative segment added by rule P-2

3.42 Nonsg-Shortening P-41.

One of the component morphemes within pronominal prefixes (Chapter 9) is the Pl morpheme /-rV-/, which occurs in a number of contexts involving nonsingular pronominals. The preceding morpheme always shows a surface short vowel, even where we have reason to think that this vowel is an underlying long vowel (i.e., because it is long in other combinations).

There is a related morpheme /-ru/ used in Pl independent pronouns (Chapter 6), and associated elements /-ni/ (from //-r-ni//, see rn-Contraction P-24) for MDu (or MTr) and /-r-n^{g}i/ for FDu (or FTr). The same forms are used with demonstrative pronouns (§7.2). In all of these cases there is evidence that the preceding vowel must be shortened.

We first exemplify with these pronominal elements. First, the Distant demonstrative root is clearly /yuwa:-/, as in /yuwa:-gi/ 'there he/she is', /yuwa:-ni/ 'there it(ANA) is', etc. However, the human nonsingular forms are MDu /yuwi-ni/, FDu /yuwi-r-n^{g}i/, and Pl /yuwu-ru/. Here the //a:// of //yuwa:-// shows changes in vowel quality due to V-Assimilation P-37 (part d), but also shows shortening. All other forms involving these suffixes also require preceding short vowels, though in cases other than that of /yuwa:-/ we cannot demonstrate that the underlying form of the vowel is long.

Within the pronominal prefixes used before verbs, we observe shortening before Pl /-rV-/ in such exx. as 1InPl$_a$ //n^{g}V:-ru-// → //n^{g}u:-ru-//(P-37) → /n^{g}uru-/. That the initial morpheme in this sequence, 1InNondu /n^{g}V:-/, has underlying long vowel is shown by a number of other pronominal prefixes such as 3Pl/WARA → 1InPl$_b$ //n^{g}V:-N-w$_2$an-w$_2$i-// → //n^{g}a:-N-w$_2$an-w$_2$i-// → /n^{g}a:mbambi-/, which contrasts precisely by vowel length with a distinct prefix, 3Pl/WARA → 1Sg$_b$ /n^{g}ambambi-/. Other available data are consistent with the suggestion that vowel length is neutralised before the /-rV-/ morpheme (in its various shapes: /-ru-/, /-ri-/, /-ra-/).

(P-41) Nonsg-Shortening

V: → V // ___- { rV- / ru / r-ni / r-n^{g}i } [surface /-ni/]

where /-rV-/ is Pl suffix in pronominal prefixes and the other elements are nonsingular endings of personal and demonstrative pronouns

3.43 Adverb-Shortening P-42.

The Distant demonstrative stem /yuwa:-/ shows a few minor shortenings or contractions in some of its adverbial derivatives. The Locative

adverb is, regularly, /yuwa:-gu/. However, the corresponding Centripetal adverb, with suffix /-ala/ added to the Locative, is only occasionally pronounced /yuwa:-ga:-'la/, the form we would expect; rather, the usual pronunciation is /yuwa-ga:-'la/ 'from there (to here)'. Note shortening of the root vowel. This also applies to the form of the adverb with an additional noun-class prefix, /an-uwa-ga:-'la/ (same gloss). We may contrast these forms with cases of the same suffix /-ala/ added to a demonstrative pronominal form of the same root, like /yuwa:-gi:-'la/ 'there he/she comes', with the same underlying canonical shape but with vowel length normally preserved on the surface.

The Allative adverb related to Distant demonstrative root /yuwa:-/ is /yu:-guni/ 'to there', parallel in structure to /bu-guni/ 'to there (Anaphoric)' from a different root. In order to convert //yuwa:-// into /yu:-/, we first apply V-Assimilation P-37 (part b) to get //yuwu:-//, but we need to contract this further to /yu:-/ by the present rule. In the form with noun-class prefix, I usually heard /an-u-guni/ rather than /an-u:-guni/, though the latter was heard on occasion.

(P-42) Adverb-Shortening

a. a: → a // ___-ga:-'la

in Centripetal adverbs with root /yuwa:-/ §7.15

b. uwu: → u: // ___-guni

in unprefixed Allative adverb with /yuwa:-/ §7.13

c. uwu: → u // ___-guni

in Allative adverb from /yuwa:-/ with noun-class prefix present §7.13

3.44 Length-Shift P-43.

The noun /gu:gu/ 'water' has the length pattern shown when no noun-class prefix is present. When there is such a prefix, it appears that the length of the stem-initial vowel is transferred to the final vowel of the prefix: /a:-gugu/ or /ana:-gugu/ with ANA class prefixes which show up elsewhere as /a-/ and /ana-/. There are no other nouns which show this transfer. The behaviour of /gu:gu/ in compounds is indeterminate since it is not attested as compound final and since it is suppleted by /-ar-/ as compound initial.

(P-43) Length-Shift

a. a-gu:gu → a:-gugu

b. ana-gu:gu → ana:-gugu

3.45 Monosyllable-Lengthening P-44.

Under certain conditions a noun or verb form whose underlying form appears to be //CV(C)// is lengthened to /CV:(C)/.

One important class of items to which this rule does not apply are verbal "root forms." These are interjection-like, uninflected

particles with verbal force, often used as adjuncts to full verb forms of the same meaning. Those of /CVC/ shape do not lengthen, hence /gad!/, associated with /=w_2a-/ 'to bite'. Even those of /CV/ shape resist lengthening, to judge by the example of /wa!/, related to /=$w_2$ala-/ 'to arrive'. In this case, the surface pronunciation involves a nonphonemic final aspiration: [wah!]. See §12.2.

However, regular inflected verb forms do sometimes lengthen. The $Nonpast_3$ of most verbs is formed by changing the stem-final vowel to /i/. (A possible analysis of this is that the suffix is //-i// with VV-Contraction P-49 applying; or we could take the suffix as //-y// with V-Fronting P-50 making the preceding vowel /i/ and with the semivowel then deleted by iy-Contraction P-15.) Thus /=bura-/ 'to put', $Nonpast_3$ /=buri-Ø/. However, a monosyllabic root like /=na-/ 'to see', whose underlying short vowel is seen in forms like $Past_2$ /=na-ni/, shows lengthened vowel in $Nonpast_3$ /=ni:-'/. The same applies to all other //=CV// forms (combinations of root with inflectional suffix). When such a verb is the second member of a compound, there is some variation from one stem to another as to whether lengthening occurs (i.e., as to whether just the root and suffix, or the whole compound stem plus suffix is taken as the basis for computing the input syllabic structure). It happens that /=na-/ 'to see' normally does lengthen even in compounds, while auxiliary compounds with /=w_2u-/ 'to hit' usually do not; the shortened $Past_2$ form /=lhi-Ø/ 'stood' used in some compounds, vs. /=lha-y/ elsewhere, also does not undergo lengthening. An ex. of lengthening in a compound is /n^gawu-lhal=ni:-'/ 'I will not see (clan) country' (used with negative preverb /yagi/). While, for some stems, compound initials are considered part of the stem and thus block lengthening, pronominal prefixes are disregarded. Monosyllabic suffixes like /-ma-/, /-w_1a-/ remain short.

Regular inflected verb forms of the shape /=CVC/ (including inflectional suffix) do not seem to undergo a complete lengthening of the vowel. Actual pronunciations often seem intermediate between short and long vowels, but I can find no consistently lengthened forms and transcribe these verbs with short vowel: $Past_1$ /=na-n^y/ 'saw', /=w_2a-n^g/ 'hit', /=ma-n^y/ 'got'; $Nonpast_1$ /=na-n^g/ 'will not see', /=ma-n^g/ 'will not get'; $Past_2$ /=ya-y/ 'slept', /=lha-y/ 'stood'. The vowels in the $Past_2$ exx. just given sound a little longer than the others, on average, but this could be due to low-level factors involving choice of final consonant.

Turning to nouns, we observe that a few nouns of the type /CV:/ do occur: /ra:/ 'tooth', /ru:/ 'tears'. The short-vowel type */CV/ does not occur. The /CV:/ nouns retain long vowel in forms with noun-class prefix: /mana-ra:/, /ana-ru:/. However, as compound initials we get /-ra-/ and /-ru-/ with short vowels: /-ra-wara=wararada-/ 'to have irregularly shaped teeth', and /-ru=wadbar-wi-'-/ 'to have one's tears drip down'. Since we know that /=CV/ verbs lengthen to /=CV:/, it is reasonable to take these nouns as //CV//, with a lengthening rule applying to them when not part of compounds.

There are also many nouns for which the independent (uncompounded) form is /CV:C/, as I hear it. I am not aware of any minimal pairs of the type /CV:C/ vs. /CVC/ in noun stems, and the stems which do

occur usually have phonetic long vowel. Surface length in such nouns is variable, but this appears to be the case for all of the stems and so is not (so far as I can determine) a basis for recognising a /CVC/ stem as opposed to /CV:C/. As with the /CV:/ nouns just mentioned, the /CV:C/ nouns appear to be unaffected by regular affixes, such as noun-class prefixes, but are heard with short vowel when functioning as compound initials. Thus /lha:l/ 'country', with prefix /ana-lha:l/, with case suffix /a-lha:l-wala/ 'from the country', etc.; but in compound /lhal-wara-waru-j/ 'crooked country'.

In a theoretical analysis it would perhaps be advisable to represent /CV:/ nouns as //CV// and /CV:C/ nouns as //CVC//, with the attested forms (outside of compounds) derived by a lengthening rule. However, as a practical matter I generally use the independent noun form with long vowel as citation form, and as the head of dictionary entries. (However, because of the many length alternations and because structural vowel length is often indistinct or entirely altered by phrasal intonation contours, vowel length is disregarded in alphabetisation in the dictionary.)

The situation with nouns of the type /CV(:)CC/ is also difficult. For example, I usually heard /wurg/ 'bush fire' with short vowel, but /lhi:rj/ 'cassava tree (Cochlospermum)' with long vowel (note that the latter is a probable reduction from a bisyllabic prototype now seen in Ngandi /dhiwir?/). Phonetic vowel length is, as usual, inconsistent even in such forms, but at least predominant patterns can be gleaned from enough occurrences of each item, and for /CV(:)CC/ stems I do attempt a phonemic transcription of length.

If, as indicated above, we adopt in our theoretical model the view that /CV:/ and /CV:C/ nouns have underlying short vowels which are lengthened by rule except in compounds, we leave open the possibility that there may be underlying long vowels in similar stems which remain long in compounds. Indeed, there are some compound initials and derivational prefixes (two categories which are difficult to differentiate) with stable long vowels. For example, one Benefactive allomorph is /-wa:G-/, and there is a noun-like compound initial /-ya:l-/ which keeps its long vowel in most forms. Moreover, while the majority of /CV:CC/ nouns, like /lhi:rj/ 'cassava tree', do not happen to occur as compound initials, we can cite /ma:lg/ 'correct kinship relation for marriage', which is usually /-ma:lg-/ with long vowel in compounds. However, there are a few apparent instances of /-ya:l-/ or /-ma:lg-/ being shortened to /-yal-/ or /-malg-/ in compounds, and /mu:rn^{g}/ 'carapace (upper shell)' shortens its vowel in the form with derivational noun-class prefix, e.g., /wu-murn^{g}/ 'its (ANA class) shell'. There is thus a little evidence that our approach (recognising fairly few underlying long vowels, and having short vowels lengthened in some circumstances) does not account for all of the data, and that some facts suggest a countervailing reanalysis with many underlying long vowels which are shortened in compound-initial position.

(P-44) Monosyllable-Lengthening

a. V → V: // X-C___-Y#

where Y is zero, or a suffix other than a (nonzero) verbal inflectional suffix; the rule is blocked in some combinations where X is a compound initial or derivational prefix

b. V → V: // -(C)__C-Z

in noun stems, where Z is not a compound final

3.46 Verb-Lengthening P-45.

Under certain conditions the final vowel of a verb root or stem is lengthened.

The verb 'to go' is a unique suppletive paradigm with some forms based on /=ruma-/ and others on /=ya-/ (Table 11-8, Chapter 11). The forms based on the second root are Past$_2$ /=ya-n^{g}gi/, Evitative /=ya-n^{g}gan/, and Nonpast$_2$ /=ya:-ri:/. There is no regular rule shortening //a:// to /a/ before a cluster like /n^{g}g/, so we set up the root as //=ya-// and allow the vowel to become lengthened in /=ya:-ri:/. This is simply an irregularity of this paradigm; the suffix /-ri:/ does not otherwise occur in the language (it is perhaps historically a composite of an augment *-rV- associated with this verb and Nonpast$_2$ /-i/).

The other lengthening process applies to an important set of verb stems ending in /i/ which we call the I$_1$ and I$_2$ classes (Table 11-2, §11.2, has paradigms). The lengthening, which is not consistent (and is more common for I$_2$ than I$_1$ class), is found when the stem-final vowel is in an open, nonfinal syllable within the verb form (stem plus inflectional suffix). Thus from /=yambi-/ 'to speak' we have Past$_2$ /=yambi:-ni/ and Nonpast$_2$ /=yambi:-na/, but Past$_1$ /=yambi-n^{y}/, Nonpast$_1$ /=yamba-n^{g}/, and (usually) Nonpast$_3$ /=yambi-Ø/. The Evitative forms, such as /=yambi-n^{g}un/, are not affected, suggesting either that the /-n^{g}un/ or /-n^{g}an/ Evit suffix has a distinct morphological status, or that the lengthening applies specifically when the following inflectional suffix is of /-CV/ (not /-CVC/) shape.

This lengthening process does not regularly apply to stem-final /a/ or /u/, although they occur in similar paradigms sharing the suffixes /-ni/ (Past$_2$) and /-na/ (Nonpast$_2$) just seen with lengthened stem-final /i:/. Thus /=w$_2$ann^{g}a-na/ 'dances' and /=a:ru-na/ 'abandons' (Nonpast$_2$). What seems to be going on here is that the lengthening of /i/ in this position is by analogy to cases involving Reflexive suffix //-i-//, where the long vowel is arguably regular by VV-Contraction P-49. For example, the Refl of /=adbar-wu-/ 'to spill (nonliquid)' is /=adbar-wi-'-/, from //=adbar-wu-i-//, and long vowel in forms like /=adbar-wi:-'-ni/ (Past$_2$) arguably involves contraction of //u-i// to long /i:/ (in open syllable). The suggestion is that the distinction between stems with original final /i/, and Refl stems with added suffix //-i-//, is blurry and that Refl length patterns are being optionally extended to other stem-final /i/.

It should be noted that the $Past_2$ of /=w_2u-/ 'to hit, kill', /=w_2i-ni/, does not undergo lengthening. It is thus distinct from the $Past_2$ of its own Refl form /=w_2i:-'-ni/ from //=w_2u-i-ni//.

(P-45) Verb-Lengthening

a. =ya- → =ya:- // ___-ri:

affecting /=ya:-ri:/ 'go(es)'

b. i → i: // ___-CV(-X)#

where /-CV/ is inflectional suffix in verb (rule does not apply to simple MA_1/MA_2 class form

3.47 V-Truncation P-46.

The regular (inflectional) noun-class prefixes, used with independent nouns and with most demonstratives, include some monosyllabic prefixes (/na-/, /yi:-/, /a-/) and several bisyllabic ones (/wara-/, /n^gara-/, /ana-/, /mana-/, /ama-/). The bisyllabic prefixes are subject to a number of rules shortening them in one way or another. Feminine Prefix-Truncation P-34 shortens FSg /n^gara-/ to /n^ga-/ before some kin terms. Prefix-Truncation P-35 converts all noun-class prefixes to /CV:-/ shape before one of the demonstrative roots. See §4.7.

In this section we consider yet another distinct rule of this type. This deletes the final vowel of a bisyllabic noun-class prefix when followed by a morpheme beginning in a high vowel /i/ or /u/, but not /a/. Thus from //ana-uG-muwaj// we eventually get /an-u-muwaj/ 'named (noun of ANA class)'. Were it not for this deletion, the sequence //a-u// would have combined to form a long vowel by VV-Contraction P-49. In this example the second prefix is a derivational (inner) noun-class prefix //-uG-//, used with WARA as well as ANA class derivatives, and combinations involving this prefix are the most frequent instances of the deletion (truncation) rule. However, we see the rule also applying in cases like //n^gara-in^{y}gura-yun^g//→ /n^gar-in^{y}gura-yun^g/ 'woman of In^{y}gura (Groote Eylandt Aboriginal population)' and //ana-in^{y}gura//→ /an-in^{y}gura/ 'In^{y}gura (Anindilyakwa) language'.

When the initial vowel is /a/, this truncation does not occur. Instead, the final /a/ of the noun-class prefix and this stem- (or prefix-) initial vowel undergo VV-Contraction P-49, producing a long /a:/, as in /ana-aban/→ /ana:-'ban/ 'the ground'. It should be noted that nouns beginning with /a/ are very common, much more so than those beginning with other vowels.

No similar rule applies in verbal morphology. There are many bisyllabic pronominal prefixes, and some following stems beginning with underlying high vowel, but VV-Contraction P-49 rather than truncation applies, producing a long vowel: //n^gara=u-ma-na//→ /n^garu:='-ma-na/ 'I am hitting (killing) them'.

(P-46) V-Truncation

$$V \rightarrow \emptyset \;//\; \#(C)VC___\text{-} \begin{Bmatrix} i \\ u \end{Bmatrix}$$

at the end of a noun-class prefix

3.48 yi-Elision P-47.

The verb 'to give', for which /=yi-/ is the citation form (but which is very different in inflection from /=yi-/ 'to sleep'), has forms such as /=i-yi:/ ($Nonpast_2$) and /=i-n^y/ ($Nonpast_3$), from //=yi-yi:// and //=yi-n^y//, where the root-initial semivowel has been deleted by Homorganic Semivowel-Deletion P-4. See Table 11-7.

The $Nonpast_2$ form /=i-yi:/ is in question here. A bisyllabic representation is indicated by such exx. as //n^gan=i-yi:// → /$n^g$and=i:-yi:/ 'I will give (something) to it ($ANA_\emptyset$ class)', where Pronominal d-Insertion P-20 has applied (inserting /d/ and lengthening the following root-initial vowel). All other forms of /=i-yi:/ with preceding nonzero prefix likewise show outputs compatible with this bisyllabic underlying representation, though VV-Contraction P-49 applies at the = boundary in most exx.

However, there is also a /Ø-/ pronominal prefix, used when both subject and object (in a transitive combination) are in low-ranking noun classes (ANA, MANA), and occasionally as optional replacement for other nonhuman-nonhuman prefixes. When this /Ø-/ prefix occurs with /=i-yi:/, the result is not */Ø=yi-yi:/ as we would expect (with low-level initial semivowel inserted by P-5). Instead, we get just /Ø=Ø-yi:/ 'it gives (something) to it' with only one syllable. (It is possible that in deliberate speech the bisyllabic form is allowed, but I have not heard it.) We therefore seem to have an isolated haplology rule.

(P-47) yi-Elision

yi → Ø // #Ø=___-yi:

where the deleted sequence is the root 'to give' and the /-yi:/ in the environment is the $Nonpast_2$ inflectional suffix

3.49 $w_2$an-Contraction P-48.

Under the abstract internal analysis of pronominal prefixes presented in Chapter 9, we recognise a morpheme //-$w_2$an-// which characterises the 'B' series of pronominal prefixes and is absent from the 'A' series (the two series being associated with different tense-aspect-mood categories). For further complications on the distribution of the morpheme see Chapter 9.

Some exx. of A vs. B pronominal prefixes:

A	B	
/n^ga-/	/n^gan-/	1Sg
/wu-/	/(w)an^{g}gu-/	ANA
/n^gambi-/	/n^gambambi-/	3Pl/WARA→ 1Sg

We represent these particular B forms as //n^ga-$w_2$an-//, //$w_2$an-w_1u-//, and //n^ga-N-$w_2$an-w_2i-//. Each differs from the A form by adding //-$w_2$an-//, which follows 1st and 2nd person markers but precedes 3rd person markers, and also follows Inverse //-N-//.

The optional dropping of word-initial //w_2// seen in the ANA form is handled by Prefixal w_2-Deletion P-11. The only remaining phonological problem is that when the //w_2// is deleted intervocalically (also by P-11), we should expect a long vowel after the

application of VV-Contraction P-49; instead, as the 1Sg form shows, we get a short vowel when the underlying preceding vowel is short. On the other hand, when the preceding vowel is long the surface vowel is also long, hence //nV:-$w_2$an-ni-//→ /na:ni-/ '1ExMDu$_a$'. We therefore either need a modified version of VV-Contraction P-49 (which in most other combinations always produces a long vowel), or else an additional rule. We adopt the latter course.

A satisfactory rule for the present case is one which simply deletes the //a// of the //-$w_2$an-// prefix when (after deletion of the //w_2// by P-11) directly preceded by another vowel. The rule deleting //a// must be fairly late not only in order to insure that it follows P-11 but also because in such forms as the 1ExMDu$_a$ example just given, deletion of //a// follows the operation of V-Assimilation P-37 (part f), which gives the unspecified underlying //V:// its surface /a:/ quality.

(P-48) $w_2$an-Contraction

a → ∅ // V-__n-

where //-an-// from earlier //-$w_2$an-// is the 'B' morpheme in a pronominal prefix

3.50 VV-Contraction P-49.

This is the most general rule applying to sequences of vowels which come together over a morpheme boundary. Such underlying clusters are common, because many noun and verb stems begin and/or end in vowels; most prefixes and some verbal suffixes contain vowels which may contract with adjacent stem vowels.

There are some other phonological processes which prevent P-49 from applying as formulated below. The combination of a noun-class prefix like /n^gara-/ (FSg/N^gARA) and a following stem beginning with high vowel /u i/ is handled by V-Truncation P-46. We have just seen, in P-48 (above), another rule applying in place of P-49. However, we could argue that P-46 and P-48 are really just minor variants of the more general rule P-49 (P-46 and P-48 are needed basically because P-49 would give a long output vowel as formulated below). Other rules which prevent P-49 from applying by inserting a nonsyllabic segment between the two vowels are w-Insertion P-7 and w_1-Insertion P-6, both limited to a handful of morphemes.

The basic outputs are the following in cases of boundaries between prefix and stem (noun or verb) or between stems in compounds (see below for special remarks on stem-suffix boundaries):

geminates: //aa//→ /a:/, //ii//→ /i:/, //uu//→ /u:/

combinations involving //i//:
- //ai//→ /i:/
- //ia//→ /i:/
- //ui//→ /u:/ or /i:/
- //iu//→ /u:/ or /i:/

combinations of //a// and //u//:
- //au//→ /u:/
- //ua//→ /a:/

The same outputs are obtained when the second of the two vowels is long.

The treatment of geminate (identical) vowel sequences is no surprise. Exx. of verbs are //n^ga=abi-n^y//→ /n^ga:='bi-n^y/ 'I jumped, shifted' (note that the apostrophe ' indicates that a contraction has occurred at the boundary); //ni=in^{y}ga̲la̲-gi-'-n^y//→ /ni:='n^{y}ga̲la̲-gi-'-n^y/ 'he took a shortcut' (for the moment disregard the second contraction here in the suffix complex); and //n^ganu=w_2u-ma-na//→ //n^ganu=u-ma-na//(P-4)→ /n^ganu:='-ma-na/ 'I am hitting him'. In nominal morphology, the only underlying geminate cluster that occurs at prefix-stem boundaries is //a// plus //a(:)//, as in //ana-aban//→ /ana:-'ban/ 'the ground'.

As the display on the preceding page (bottom) indicates, when one of the input vowels is //i// this is usually the quality of the resulting long output vowel. This is consistently the case with //ia// or //ai// as input. For example, when a pronominal prefix like 3MSg/NA$_a$ //ni-// precedes one of the many verbs which begin with //a// or //a://, the result is /i:/, thus //ni=abi-n^y// → /ni:='bi-n^y/ 'He jumped'. There are only a few verbs that begin with //i//, but there are some and their number is increased if we add compounds beginning with compound initial //-ij-// 'word, truth'. If we combine such a verb stem with a pronominal prefix ending in //a// we again get /i:/, hence //n^gamba=ijga-n-ji://→ /n^gambi:='jga-n-ji:/ 'I will take them (dogs, WARA class) hunting' (Text 27.1.2).

When the input is //ui// or //iu//, the result is variable. Let us begin with //ui//, which occurs when a pronominal prefix ending in //u// is followed by a verb stem beginning in //i// like those just mentioned (preceding paragraph). The available data suggest the following distribution of the outputs /i:/ and /u:/, depending principally on the preceding segments in the pronominal prefix: /i:/ as output when the prefix is or ends in ANA class marker //-w_1u-// (when not hardened to /-gu-/ by Hardening P-18), Pl morpheme //-ru-//, or Nonsg morpheme //-w_2u-// (the latter, in the relevant exx., happens to occur in hardened form /-bu-/). The /u:/ output, on the other hand, is attested with pronominal prefix ending in /-gu-/ (hardened from ANA morpheme //-w_1u-//), and is regular with prefixes ending in MSg //-nu-// or FSg/N^gARA //-n^gu-//, except that when the entire pronominal prefix is multisyllabic (and has traces of the quality of the final underlying vowel retained in earlier syllables by V-Assimilation P-37) we can get /i:/ from //-nu-// or //-n^gu-//.

Exx.: //n^gawu=in^{y}ga-n^y//→ /n^gawi:='n^{y}ga-n^y/ 'I completed it' (for other exx. with //-w_1u-// see Texts 73.2.5, 73.6.4); //na:mbu=in^{y}ga̲la̲-gi-'-n^y//→ /na:mbi:='n^{y}ga̲la̲-gi-'-n^y/ 'We(ExPl) will take shortcut' (disregard phonology of suffix complex) where /bu/ in the prefix is from //-w_2u-//; //nuru=in^{y}ga̲la̲-gi-'-n^y//→ /nuri:='n^{y}ga̲la̲-gi-'-n^y/ 'We(ExPl) took shortcut'; //an^{g}gu-ij=mamala̲n^g-maga://→ /an^{g}gu:-'n^y=mama̲la̲-maga:/ 'the words (//-ij-//) will not be pleasant' (Text 69.3.5) with /gu/ in prefix from ANA marker //-w_1u-//; //n^ganu=in^{y}gala:ba:ba-n^y//→ /n^ganu:='n^{y}gala:ba:ba-n^y/ 'I made him swerve'; //n^gunu=yi-ni//→ //n^gunu=i-ni//(P-4)→ /n^gunu:='-ni/ 'She gave it to him' (Text

73.5.1); //nu=yi-yi://→ //nu=i-yi://(P-4)→ /nu:='-yi:/ 'He gives (it) to him' (Text 74.2.2); //n^ganu=yi-n^y//→ //n^ganu=i-n^y// (P-4)→ /n^ganu:='-n^y/ 'I will give (it) to him' (Text 80.2.1); //n^gu=yi-ni//→ //n^gu=i-ni//(P-4)→ /n^gu:='-ni/ 'She gave (it) to her'; //ambunu=yi-n^y//→ //ambunu=i-n^y//(P-4)→ /ambuni:='-n^y// 'They will give (it) to him' (Text 78.1.5/8) where //ambunu-// ends in MSg //-nu-// but also shows V-Assimilation P-37 copying the vowel quality onto the preceding syllable.

There is no obvious way to summarise these facts about the treatment of //ui// in a purely phonetic fashion. It is likely that functional factors are partly at work, since only a fairly small number of prefixes are involved in such combinations. It should be noted that MSg //-nu-// (object function) is involved in a number of minimal pairs where the distinct form is otherwise identical on the surface except for ending in a morpheme //-ni-// (MSg subject, NA class subject or object) or //-na-// (2Pl). There are also some surface minimal pairs involving prefixes that end in FSg/N^gARA //-n^gu-// (object) vs. FSg/N^gARA //-n^gi-// (subject). By having //ui// become /u:/ in such cases, while //ii// of course becomes /i:/, such prefixal distinctions are maintained (with no loss of information about the following verb stem, as it turns out). In the case of a long pronominal prefix like //ambunu-// (from //$w_2$an-w_2V-nu-// in the abstract analysis of Chapter 9), functional considerations are no longer important since the initial sequence /ambun.../ in the surface form is sufficient uniquely to characterise the prefix. For the other pronominal-prefix morphemes which show //ui//→ /i:/, thus losing the underlying quality of the prefix-final vowel, it turns out that few or no cases of undesirable (ambiguity-creating) surface neutralisations result.

The underlying sequence //iu// is rare. Stem-initial //u// occurs only in a few paradigmatic forms of //=w_2u-// 'to hit, kill' when Homorganic Semivowel-Deletion P-4 deletes the //w_2//, as in Nonpast$_2$ /=u-ma-na/. Elicited exx. with such forms preceded by a pronominal prefix ending in //i// generally show /i:/ as output vowel, but with /u:/ as an alternative option. Thus from //n^gani=u-ma-na// we usually get /n^gani:='-ma-na/ 'I am hitting it(NA class)', contrasting with //n^ganu=u-ma-na//→ /n^ganu:='-ma-na/ 'I am hitting him', but the distinction is not rigidly maintained. If the elicited material is representative of normal usage, it is consistent with the functional considerations of the paragraph above.

We now consider the remaining class of vocalic sequences at the prefix-stem boundary, //au// and //ua//. In these cases, the output vowel quality is that of the second input vowel (recall that with //iu// and //ui// it is usually the quality of the first input vowel which survives). The //au// cluster occurs both in verbs and demonstratives (and, in one problematic type, with nouns), while //ua// is a much more common combination with verbs only. (As usual, in this context we classify as "verbs" all forms with the pronominal prefixes associated with verbs, thus including some kinds of predicate adjective.)

The verbal exx. of //au// are combinations involving the few verbs like //=u-ma-na// 'hits' (see two paragraphs up), when

preceded by a prefix ending in //a//. The output /u:/ is observed in //wara=u-ma-na//→ /waru:='-ma-na/ 'They are hitting them' and //wa=u-ma-na//→ /wu:='-ma-na/ 'I will hit you'. With demonstratives some combinations of //a// and following //u// are simplified to just /u/ by V-Truncation P-46 (deleting the //a// with no effect on the /u/), but with a monosyllabic prefix this does not occur and the regular contraction to /u:/ is found in forms like //na-uba-gi//→ /nu:-'ba-gi/ 'that(MSg, Anaphoric)'.

When the prefix consists solely of ANA noun-class form /a-/ (punctual prefix series) and this is followed by stem-initial //u// (or derivational noun-class prefix //-uG-//), the situation is not so straightforward. In the high-frequency demonstrative form //a-uba-ni// 'that(ANA, Anaphoric)', which is also the basis for several adverbial formations with further suffixation, my textual transcriptions show /o:-'ba-ni/. This represents a range of surface pronunciations including [ɔwbani] with an unusual diphthong-like articulation. In the case of nouns with the same prefix /a-/ followed by derivational prefix //-uG-//, similar articulations may result but more often the prefix is just omitted (which is syntactically easier for nouns than for demonstrative pronouns, whose prefixless forms have a special meaning, normally predicative), or else the derivational prefix takes an allomorph //-wuG-// resulting in bisyllabic /a-wu.../ on the surface. It is apparent that speakers are somewhat uncomfortable with this combination of /a-/ prefix and //-uG-//, and pronunciation is somewhat inconsistent.

The remaining underlying sequence, //ua//, occurs commonly in verbs (but not other word classes) when a pronominal prefix ending in //u// is followed by one of the numerous verbs beginning in //a(:)//. Thus //n^ganu=a:ru-n^y//→ /n^gana:='ru-n^y/ 'I left (abandoned) him', //w_1u=abi-n^y//→ /wa:='bi-n^y/ 'It(ANA) jumped'.

The changes //au//→ /u:/ and //ua//→ /a:/, with the second input vowel quality predominating, appear to violate the generalisation above that functional factors favour retention of the quality of the first input vowel. However, if we examine the pronominal prefixes of Chapter 9, we find relatively few minimal pairs distinguished only by having final //a// vs. //u//; these are the ones threatened with surface merger, since final //i// in the prefix regularly produces output vowel /i:/. For example, we have /wu-/ ANA$_a$ and /wa-/ 1→ 2Sg$_b$, but here even if the prefix vowel is disguised by VV-Contraction we can usually identify it since /wu-/ occurs with intransitive stems and /wa-/ with transitives and since /wu-/ occurs in the 'A' series of tense-aspect-mood while /wa-/ is in the 'B' series. The remaining minimal pairs are 1Sg→ 3MSg$_{ab}$ /n^ganu-/ vs. 1→ 2Pl$_a$ /n^gana-/, 1ExPl$_b$ or 1ExPl→ ANA$_{\emptyset-b}$ /na:mbu-/ vs. 1ExPl→ 3Pl/WARA$_b$ /na:mba-/, and 1InPl$_b$ or 1InPl→ ANA$_{\emptyset-b}$ /n^ga:mbu-/ vs. 1InPl→ 3Pl/WARA$_b$ /n^ga:mba-/. These are, for the most part, highly marked and low-frequency prefixes, and the occasional surface homophony which may result when the verb begins with //a(:)// is not a major functional problem.

We now consider vocalic contractions at the boundary between a stem and a suffix. Many suffixes begin in consonants (case suffixes, postpositions, some verbal inflectional suffixes,

and some verbal derivational suffixes like Reciprocal /-n^{y}ji-/ and Causative /-jga-/). However, the following are suffixes which begin in an underlying vowel in the analysis used here:

with demonstratives:	/-ala/	Centripetal (§7.5)
	/-ali/	Centrifugal (§7.5)
	/-u/	Concrete (§7.6)
with pronouns:	/-i-/	Oblique (§6.2)
	/-a/	Predicate Genitive (§6.2)
with verbs:	/-i/	Nonpast$_2$ (A_2)
	/-i-/	Reflexive (§10.5)
	/-u/	Nonpast$_3$ (U_1, U_2, $N^{g}A_4$)
	/-u/	Past$_2$ (U_1, U_2, MA_1, MA_2)
	/-u/	Nonpast$_2$ (RA)
	/-a/	Past$_2$ (A_1, YA, $N^{g}A_3$, $N^{g}A_4$)
	/-a/	Nonpast$_2$ ($N^{g}A_1$)

For the verbs, the categorial label like "Past$_2$" is followed by a parenthesised list of verb classes for which this allomorph occurs (see tables in Chapter 11 for full paradigms).

The bisyllabic suffixes /-ala/, /-ali/, which are always preceded by a vowel, show the regular contractions seen above: //ua// and //aa// become /a:/, while //ia// becomes /i:/. Thus //du-ru-ala//→ /du-ra:-'la/ 'there(Imm) they come' but //da-ni-ala//→ /da-ni:-'la/ 'there(Imm) it(ANA) comes'. For the remaining suffixes just listed, all of which consist of a single vowel and which always follow a stem ending in a vowel, the output contracted vowel does not necessarily follow the rules given above; rather, the suffix vowel quality is always that of the output vowel. Of course, this increases the salience of the suffix category (and rarely creates homophony involving identity of preceding stem).

With demonstratives, Concrete /-u/ always gives output /u:/, hence //da-ni-u//→ /da-nu:-'/ 'that(Imm Concrete ANA)', //da-wa-u//→ /da-wu:-'/ 'that(Imm Concrete WARA)'. See §7.6.

With personal pronouns, Oblique /-i-/ and Predicate Genitive /-a/ occur after these other suffixes: MDu /-ni-/, FDu /-r-n^{g}i-/, and Pl/WARA/ANA/MANA /-ru-/. With the latter, suffix /-i-/ is seen in //nu-ru-i-//→ /nu-ri:-'-/ 'we(ExPl, Oblique stem)'. An ex. of /-a/ is //ni-ni-a//→ /ni-na:-'/ '(it is) ours(ExMDu)'. The contraction //ia//→ /a:/ does not occur in the prefix-stem contraction discussed earlier. (For personal pronouns see Table 6-1 in §6.2.)

The verbal suffixes listed above are generally each limited to a few verb classes, except for the Reflexive //-i-//. The //-u// suffixes occur with stems that already end in //u//, producing output /u:-'/. Assuming that the underlying form is //u-X// with some suffix //-X//, the output /u:-'/ can be produced easily by identifying //-X// as //-u//. However, since there is no other direct evidence as to the quality of the suffix vowel, we could also set it up conservatively as //-V// with unspecified vowel.

Similarly, the two suffixes given above as //-a// occur only after stems already ending in //a//, producing output /a:-'/. Given //a-Y//→ /a:-'/, we can identify //-Y// as //-a//, or perhaps as unspecified //-V//. Since there is a rough similarity between

the morphological distributions of the //-u// and //-a// suffixes shown above, it would not be unreasonable to regard them as the same morpheme, so we would set up a Past$_2$ //-V// now applying to eight verb classes, and other //-V// suffixes for other suffixal categories.

In any event, these //-a// and //-u// suffixes do not tell us much about how VV-Contraction works, since all of the actual combinations involve geminate vowels, which are the least interesting in helping us understand which vowel quality survives (if we set up //-V// suffixes, we would either have an early assimilation rule converting //-V// into //-u// or //-a// as appropriate, or else a slight technical modification in the VV-Contraction rule).

The more interesting verbal suffixes are thus Nonpast$_2$ //-i// and Reflexive //-i-//. The first of these occurs with the A_2 class, a verbal class ending in a somewhat variable surface vowel, but for which underlying stem-final //a// rather than //i// is the best choice (Table 11-1, Chapter 11) in the sense that the surface forms with stem-final /i/ can be plausibly explained as due to V-Fronting P-50 before a "palatal"-type consonant. Thus //=ada-// 'to call, shout' has Past$_2$ /=ada-n^{g}i/ and Evitative /=ada-n^{g}an/, but Past$_1$ /=adi-n^{y}/ with the laminoalveolar /n^{y}/ apparently affecting the stem-final vowel by P-50. If we accept the underlying representation with stem-final //a//, the Nonpast$_2$ form /=adi:-'/ would seem to require a representation //=ada-i//, with contraction of //ai// to /i:/. This is, of course, the regular output for //ai// in all other morphological positions described above. However, identifying the stem-final underlying vowel as //a// is not unambiguously dictated by the paradigm of A_2 verbs, and one could even set up base forms like //=adi-// with ablaut rules accounting for the surface form /=ada-/ in the Past$_2$ and Evitative. Moreover, there is a suspicious resemblance between the Nonpast$_2$ /=adi:-'/ and the Nonpast$_2$ form shown above as //-u// with a few verbs like /=w$_2$argu-/ 'to carry over shoulder', Nonpast$_2$ /=w$_2$argu:-'/ (the verb class is RA). If we set up //=adi-// as base for A_2-class verbs, we could get the Nonpast$_2$ of both A_2 and RA verbs by setting up a suffix //-V// which combines with a preceding vowel to give a long output vowel with the quality of the first vowel.

The Reflexive suffix //-i-// is productive and can be added to almost any transitive verb with which it is semantically compatible (except for a handful of monosyllabic verbs). The resulting vowel is always /i:/ or /i/, so the quality of the suffix vowel is decisive for the output vowel. Thus /=a:ru-/ 'to leave, abandon'→Refl /=a:ri:-'-/, /=yara-/ 'to smell'→Refl /=yari:-'-/. The contracted vowel is long when followed by a /-CV/ inflectional suffix: Past$_2$ /-ni/, Nonpast$_2$ /-na/. It is short before /-C/ and /-CVC/ inflectional suffixes. Thus /=a:ru-/ 'to leave' has this Refl paradigm:

/=a:ri-'-n^{y}/	Past$_1$
/=a:ri:-'-ni/	Past$_2$
/=a:ri-'-n^{y}/	Nonpast$_1$
/=a:ri:-'-na/	Nonpast$_2$
/=a:ri-'-ø$_{g}$/	Nonpast$_3$ (//=a:ru-i-y//)
/=a:ri-'-n^{g}un/	Evitative

We can formulate the VV-Contraction rule as shown below. In the cases we have described, the first of the two underlying vowels always happens to be short. No noun or verb root ends in an underlying long vowel (except, dubiously, some monosyllabic roots, and these do not occur in VV-Contraction situations). Among prefixes, final long vowel is common only in pronominal prefixes before verbs due to rV-Truncation P-36, and this rule applies (normally) only before a consonant (i.e., not in a combination to which VV-Contraction might apply). The exception is one of the noun-class prefixes, punctual series NA or N^gARA prefix /yi:-/, used with nouns (not verbs or personal pronouns). There are combinations of this prefix with stems starting in //a// or //a://, but VV-Contraction does not apply to these forms; instead, either w-Insertion P-7 or y-Insertion P-10 applies, putting in an epenthetic semivowel. From this discussion is it not determinable whether VV-Contraction should be formulated in such a way as explicitly to exclude application to combinations of an underlying long vowel followed by another (long or short) vowel, or whether we need not specify underlying length of the input vowels, relying instead on P-7 and P-10 (and appropriate rule ordering) to account for the data. To be safe, we will specify that the first input vowel for VV-Contraction be short.

(P-49) VV-Contraction

a. V-i- → { i:-'- // ___-CV-
           { i-'- // ___- {C-
                         {CVC-

where //-i-// is the Reflexive suffix (§10.5)

b. V_1-V_1(:) → V_1:-'

c. V_1-V_2(:)- → V_2:-'-
where //-V_2(:)-// is a suffix by itself

d.
- a-V_1(:) → V_1:-'
- u-a(:) → a:-'
- i-V_1(:) → i:-'
- u-i(:) → { u:-' when first morpheme is prefix ending in /gu/, or one of certain short prefixes ending in /nu/ or /n^gu/
           { i:-' otherwise--that is, with longer prefixes ending in /nu/ or /n^gu/, and with prefixes ending in /wu/, /ru/, /bu/

Note: parts (a) to (d) apply in the order shown; the first subrule which applies to a given underlying sequence pre-empts other subrules

3.51 V-Fronting P-50.

This is a sporadic rule by which a back vowel becomes /i/ under the influence of a following palatal semivowel /y/ or laminoalveolar /j/ or /n^y/; we may refer loosely to these consonants as "palatal-type" consonants in this context. The fronting rule is not productive, but does turn up in connection with several specific suffixes. We must therefore divide the rule up into several subrules each applying to a very specific combination type.

First, there is an inflectional suffix /-n^y/ found with several verb classes as $Past_1$ and/or $Nonpast_1$, the details depending on the inflectional class (see paradigms in the tables in Chapter 11). In addition to cases where the preceding stem-final vowel is already /i/, in some verb classes we see stem-final //a// or //u// becoming surface /i/ before this suffix. Stem-final //a// undergoes this fronting in class A_2, A_3, A_4, RA, and /=$w_2$idhi-/, as /=adi-n^y/ 'called, shouted' (A_2); however, stem-final //a// is retained as such before the same suffix in class A_1 and some other classes in which the relevant forms are really based on A_1 endings (e.g., after an intervening augment) as with YA, /=ra-/, N^gA_1, N^gA_2, and the irregular paradigms seen in Tables 11-7 and 11-8. One such example is /=maga-n^y/ 'spoke' (A_1). The number of verbs ending in //u// which can take /-n^y/ suffix is limited, but again we find variation in the forms; //u// fronts to /i/ in the case of /=rugi-n^y/ 'wept' (U_3), /=w_2i-n^y/ 'will hit' (MA_1), and further derivatives of the latter stem (MA_1, MA_2); however, /u/ is retained before /-n^y/ suffix in U_1, U_2, and N^gA_4, an ex. being /=a:ru-n^y/ 'abandoned; will abandon' (U_2). For some additional verb classes like N and U_4 the relevant suffix does not occur.

Another relevant suffix with many of these same verbs is Reciprocal /-n^yji-/, which occurs with most transitives and a few intransitives. The pattern of fronting with /-n^yji-/ is roughly the same as seen for /-n^y/, but there are some differences. The two big /a/-final classes, A_1 and A_2, are consistent with their behaviour before /-n^y/; thus A_1 resists shifting to /i/ before /-n^yji-/ or /-n^y/, while A_2 shifts to /i/ before both suffixes: A_1 /=maga-n^yji-/ 'to tell each other', A_2 /=adi-n^yji-/ 'to call out to each other'. However, this time A_3 joins A_1 instead of A_2; we have A_3 /=lharmi-n^y/ 'chased' but /=lharma-n^yji-/ 'to chase each other'. Other cases of /a/ shifting to /i/ before /-n^yji-/ are seen in classes associated morphologically with A_2, namely RA, YA, and augmented forms of /=ra-/ and N^gA_1, but also (surprisingly) with an augmented form in N^gA_3 (the augment otherwise taking A_1 endings). Retention of /a/ before /-n^yji-/ is found, in addition to the big A_1 class, in YA (where the augment is used before /-n^yji-/), but also in the N class and with some high-frequency irregular verbs (Table 11-7). As for stems which end in /u/ when followed by Reciprocal /-n^yji-/, U_2 gives /=a:ru-n^yji-/ 'abandon each other' consistent with /=a:ru-n^y/ 'abandoned', but U_1 shows /=balhi-n^yji-/ 'cut each other up' despite having /=balhu-n^y/ 'cut up'; U_3 has no Recip form, but U_4 retains /u/ in /=ragu-n^yji-/ 'look for each other'; fronting occurs in MA_1 and MA_2, hence /=w_2i-n^yji-/ 'hit each other', but fails to occur with

the other monosyllabic stems ending in /u/ (Table 11-3).

Some other possible exx. of V-Fronting at stem-suffix boundaries in inflected verbs occur if we recognise //-y// as the underlying form of a suffix found in most verb classes as the Nonpast$_3$, and with a handful also as Past$_2$. There are, however, some difficulties in determining what exactly the base form is here.

In the small number of relevant Past$_2$ exx., the suffix does seem fairly clearly to be //-y//; the verbs in question are of the classes N^gA_1 and N^gA_2 (forms, Table 11-5). Thus we have N^gA_2 stem /=yi-/ (or /=yV-/ with variable vowel, if you wish), Past$_2$ /=ya-y/ 'slept', while the closely related N^gA_2 stems /=lha-/ and /=billha-/ each have variant forms, /=lha-y/ or /=lhi-Ø/ 'stood' (the second form typical of compounds), /=bilya-y/ or /=billhi-Ø/ 'was tilted' (on the /y/-/lh/ variation see P-32). From these forms it looks as though we have underlying //a-y// which may simplify to /i-Ø/, presumably via V-Fronting to //i-y// with later application of iy-Contraction P-15. The fronting applies when the stem (including compound initials and the like, but not the regular pronominal inflectional prefix) has at least two syllables, with some restrictions and some free variation. This analysis accords well with the data from the larger N^gA_1 class, which closely approximates the N^gA_2 paradigm but consists entirely of non-monosyllabic roots, and has consistent Past$_2$ /i-Ø/, e.g., /=buri-Ø/ 'was sitting' from /=bura-/ 'to sit'. At any rate, with ordinary generative assumptions we can make a good case for setting up all of these Past$_2$ suffixes as underlying /-y/, with a V-Fronting rule applying always in N^gA_1 and sometimes in N^gA_2.

The much larger number of cases of Nonpast$_3$ /i-Ø/, occurring with all stems ending in /a/ or /i/ and some ending in /u/, can perhaps also be handled with the same //-y// base form for the suffix, though in this case V-Fronting and iy-Contraction always occur so we never see the suffix in its supposed underlying form. An ex. is A_2 /=ada-/ 'to call', Nonpast$_3$ /=adi-Ø/, which we could set up as //=ada-y//→ //=adi-y//(P-50)→ /=adi-Ø/(P-15); for similar forms see paradigms of classes A_1, A_2, A_3, A_4, U_1, U_3, U_4, I_1, I_2, N, and most of the augmented classes; even monosyllabic roots not ending in /u/ show this Nonpast$_3$ type though some of them resist V-Fronting in other inflected forms (see Table 11-7, e.g. /=na-/). The only alternative Nonpast$_3$ form is /u:-'/, attested for certain verbs ending in /u/, namely U_2, N^gA_4, MA_1, MA_2, and /=yi-/ 'to give' Table 11-7; U_1 has this as an alternative to /i-Ø/. It would seem that the suffix should be set up as //-u// here, hence //u-u//→ /u:-'/ by VV-Contraction P-49.

Since the //-y// Nonpast$_3$ suffix never shows up on the surface with the semivowel intact, and since the verbs which have /i-Ø/ as surface Nonpast$_3$ include some classes (like A_1) which resist V-Fronting in several other forms, the analysis just presented must be taken with some salt.

The regular Causative suffix with verbs, usually added to intransitive stems, may also cause fronting of stem-final /a/ or /u/. In all attested forms the preceding vowel must be /i/, so we assume that V-Fronting is rigorous in this instance. An ex. is /=w$_2$ann^{g}i-jga-/ 'to dance (totem)' from /=w$_2$ann^{g}a-/ 'to dance' (A_1);

other verb classes with similar forms are A_2, A_3, I_1, I_2, U_3, N, and some of the augment classes like N^gA_1. It would be nice to have more information on the treatment of stem-final /u/ in causatives, but since several of the relevant roots are already transitive it was not possible to elicit causatives. In any event, the available data suggest that V-Fronting of //a// and //u// to /i/ before Causative /-jga-/ is invariable and thus obligatory.

A kind of special case of the above is seen in /an^{y}baj/ 'other', /=an^{y}bij-ga-/ 'to change (something)'. Formally this is not really a causative with /-jga-/, rather a factitive with suffix //-w$_1$a-//, undergoing Hardening P-18 after a stem-final stop. Ordinarily, the Factitive suffix has no effect on the vocalism of roots (§10.9), and indeed for this stem there is an alternative /=an^{y}baj-ga-/. It would appear that /=an^{y}bij-ga-/ represents an idiosyncratic case of fronting of the vowel, perhaps by analogy to the cases with Causative /-jga-/, the analogy facilitated by the fact that /an^{y}baj/ ends in /j/.

Another suffix which can be added to a verb and which may cause fronting to apply is /-j/, which occurs with a few verbs to produce an adjectival noun, or less often an abstractive nominal; in the latter sense there is also a variant /-n^y/. Since these suffixes are not productive we cannot go through the various verb classes and pull out exx. We note, however, that in certain combinations we seem to get fronting of stem-final vowel //a// to /i/, thus /=raga-/ 'to be (going) in front', /ragi-j/ 'first one (to be somewhere or do something)'. However, observe lack of fronting in /=duma-/ 'to be black', adjective /du-duma-j/ 'black'. There are also a couple of cases where the stem-final vowel shows a variant /u/ before /-j/, as in /=n^{g}aln^{g}ala-/ 'to be white, bright' and its adjectival noun /n^{g}al-n^{g}aln^{g}alu-j/ 'white, bright'. While it is appropriate to mention the type /ragi-j/ in this section for the record, it is clear that there is no standard fronting rule before /-j/ and that each item is learned as a lexical item. See §14.15-16.

Turning now to demonstratives, we find one minor construction limited to the Proximate and Anaphoric (two of the four demonstrative roots) translatable 'this(that) kind of thing'. The forms are Proximate /yi:-jin^{y}un^g/ or /yi:-jun^g/, Anaphoric /bu-jun^{y}un^g/ (§7.25 offers discussion and additional minor variants). The Proximate root is elsewhere /ya:-/, the Anaphoric elsewhere /ba-/. The suffixes are identifiable as special uses of Relative /-yin^{y}un^g/ and Absolute /-yun^g/, which are common with nouns. It would seem that correct surface forms can be generated by assuming that the demonstrative roots in this combination end in a stop archiphoneme //G//, hence //ya:G-yin^{y}un^g//, //ya:G-yun^g//, //baG-yin^{y}un^g//. To get the correct outputs we need some special rule or rules, since the regular outputs would be incorrect */ya:-jin^{y}un^g/, */ya:-jun^g/, */ba-jin^{y}un^g/. In the case of /bu-jun^{y}un^g/, it would seem that we have double regressive V-Assimilation P-37 (part c). In the cases of /yi:-jin^{y}un^g/ and /yi:-jun^g/, however, our best bet is to assume V-Fronting of //a:// to /i:/ before /j/ (which in turn results from //G-y//); in /yi:-jun^g/ in particular, there is no possibility of V-Assimilation. The fronting could conceivably be due not to the following /j/ but to the preceding /y/. However,

the other cases of V-Fronting dealt with in the present section involve back vowels fronted to /i/ before "palatal-type" consonants without reference to the consonant preceding them. In addition, the forms /yi:-jin^{y}un^{g}/ and /yi:-jun^{g}/ can occur with noun-class prefix /ana-/, like demonstrative adverbs, and in this case we find the root-initial /y/ dropping out: /an-i:-jin^{y}un^{g}/, /an-i:-jun^{g}/. Note that the root vowel remains /i:/ even after the preceding /y/ has been lost. It seems, then, that it is the following /j/ which is causing the fronting.

The most common use of Absolute /-yun^{g}/, however, is with nouns, where it functions as Human Sg suffix and has a variant /-n^{y}un^{g}/ with a fair number of stems. There are a few instances where the /-n^{y}un^{g}/ allomorph induces shift of stem-final vowel to /i/. One ex. is /munan^{g}a/ 'white man' (loanword from an Indonesian language via Yuulngu or creole), Human Sg /munan^{g}i-n^{y}un^{g}/. Another is /manun^{g}/ 'female', Human Sg /mani-n^{y}un^{g}/ 'woman' (showing also Nasal-Deletion P-30). However, in most cases there is no change in the vowel: /ridharn^{g}u-n^{y}un^{g}/ 'Ritharngu (tribe) person', /nun^{g}-garagu-n^{y}un^{g}/ 'uncircumcised boy'. No cases of fronting occur before the /-yun^{g}/ allomorph (whether or not the suffix is hardened to /-jun^{g}/). See §4.15.

In personal pronouns we have an apparent case of V-Fronting in the forms with Relative (including genitive) suffix, which with these pronouns takes the form /-n^{y}in^{y}un^{g}/; contrast the usual form with nouns, /-yin^{y}un^{g}/. Some human categories (mostly Sg) have an Oblique suffix /-wi-/ used by itself as a predicate genitive, but also used before further suffixes like /-n^{y}in^{y}un^{g}/, hence /n^{g}aya-wi/ 'it is mine', /n^{g}aya-wi-wuy/ 'to me', /n^{g}aya-wi-n^{y}in^{y}un^{g}/ 'mine'. Since /-wi-/ already has /i/-vowel, we cannot tell whether fronting occurs before /-n^{y}in^{y}un^{g}/ in this case.

However, there are also several pronominal categories which do not use the /-wi-/ suffix, namely, those ending in /-ru/ (here Human Pl or some nonhuman noun classes), /-ni/ (MDu), or /-r-n^{g}i/ (FDu). Instead of forming a general oblique stem with suffix /-wi/, these pronouns have a suffix /-a/ giving a form used chiefly as predicate genitive as in /nu-ra:-'/ 'it is ours(ExPl)', and a suffix /-i-/ normally used before case endings, as in /nu-ri:-'-wuy/ 'to us(ExPl)'; the pronoun here is /nu-ru/ 'we'. The Relative form here is /nu-ri-n^{y}in^{y}un^{g}/, which presents some problems. One analysis would be to take this as //nu-ru-i-n^{y}in^{y}un^{g}// with Oblique suffix //-i-//; in this event we would have to specify that the normal contraction of //ui// to /i:/ does not apply, and that instead we get short /i/. (This could be by modifying VV-Contraction P-49 in this combination, or by some other device such as having a rule just delete the //u//.) This analysis is suggested by my transcriptions of the type /nu-ri-'-n^{y}in^{y}un^{g}/ in the Texts volume, where /-'-/ as usual implies an underlying morpheme consisting of a vowel lost by VV-Contraction P-49. However, an equally likely alternative is that /nu-ri-n^{y}in^{y}un^{g}/ is from //nu-ru-n^{y}in^{y}un^{g}// with no //-i-// Oblique marker, and with //u// fronted to /i/ by V-Fronting P-50; in this analysis we have no difficulty accounting for surface vowel length, and we (hesitantly) adopt it here. For the data see §6.4.

Although we have enumerated a respectable number of cases of fronting of a back vowel to /i/ (or /i:/) before a "palatal-type" consonant (laminoalveolar or /y/), it should not be concluded that this is a highly productive process. We have already shown that some of the subrules above, such as fronting before verbal inflectional suffix /-n^{y}/, apply only to certain stems (or stem classes). Moreover, there are a number of remaining combinations involving a morpheme beginning with a palatal-type consonant which has no effect on preceding vowels. For example, Relative /-yin^{y}un^{g}/ as a case suffix with nouns or as a relative-clause marker with verbs does not affect preceding vowels: //a-ran^{g}ag-yin^{y}un^{g}// → /a-ran^{g}a-jin^{y}un^{g}/ 'of the tree', //a-gu:gu-yin^{y}un^{g}// → /a:-gugu-yin^{y}un^{g}/ 'of the water' (with Length-Shift P-43).

(P-50) V-Fronting

a. V → i // ___-n^{y}-

for some verb classes, where /-n^{y}/ is an inflectional suffix ($Past_1$, $Nonpast_1$)

b. V → i // ___-n^{y}ji(:)-

for some verb classes, where /-n^{y}ji(:)-/ is the Reciprocal suffix (§10.6)

c. V → i // ___-y-

for all applicable verb classes, where /-y-/ is $Nonpast_3$; for all $N^{g}A_1$ verbs (all of at least two syllables), and under certain conditions for $N^{g}A_2$ verbs (especially in nonmonosyllabic stems or compounds), where /-y-/ is $Past_2$

d. V → i // ___-jga-

for all applicable verbs, where /-jga-/ is the Causative suffix (§10.7)

e. a → i // =an^{y}b___j-ga-

(optional); that is, in the Factitive verbalised form of /an^{y}baj/ 'other' (here presumably due to analogy with Causatives, see part f of rule)

f. V → i // ___-j-

in a handful of forms, where /-j-/ is a nominalising (adjectival or abstractive) suffix (§14.15-16)

g. a: → i: // -(y)___- {jin^{y}un^{g} / jun^{g}}

in demonstrative derivatives of type (§7.25)

h. V → i // ___-n^{y}in^{y}un^{g} (Relative suffix with pronouns, Table 6-1)

i. V → i // ___-n^{y}un^{g} (§4.15)

for a few nouns, with Absolute (Human Sg) /-n^{y}un^{g}/

3.52 Order of application.

In view of the number of rules recognised in preceding sections, sorting out the order of application is no small task. Our procedure in this section is to examine each pair of rules which interact in a fashion suggestive of ordering; starting with P-1 we discuss these rule pairs in the chronological order in which the individual rules are presented (and numbered) above. Thus all ordering problems involving P-1 are presented first, then remaining problems involving P-2 (other than its interaction with P-1), then remaining problems involving P-3 (other than interaction with P-1 and -2), etc. For any given pair of rules, if there is an ordering problem it is discussed below in connection with the rule whose number is the smaller. It should be recalled that our numbering system for the rules (P-1, P-2, etc.) is based on order of presentation above and is not necessarily related to order of application.

At the end of this chapter we present a summary of the results along with a diagram displaying ordering relations (see §3.53). Some sample derivations and further discussion are presented in §3.54.

Our discussion below will involve some new terms. P-X feeds P-Y if P-X precedes P-Y, and if some structure which would not otherwise undergo a change by P-Y is changed by P-X to such a representation that it does after all undergo P-Y. P-X bleeds P-Y if a representation which would otherwise be changed by P-Y is first changed by P-X in such a way that P-Y has no effect on it.

If P-X is a rule which would feed P-Y if ordered before it, but in fact P-X follows P-Y and so does not feed it, we say that P-X counterfeeds P-Y. If P-X is a rule which would bleed P-Y if ordered before it, but in fact follows P-Y and does not bleed it, we say that P-X counterbleeds P-Y.

There are other, less clear-cut possibilities. Two rules overlap if, in some derivations, we know that one or the other has applied but cannot determine which. For example, if underlying //gg// becomes surface /g/, we could attribute this either to Geminate-Contraction P-31 or to Stop Deletion P-29. In such cases we cannot tell what the ordering relation is, since either order would have the same output effect.

P-1 and P-2. The first pair of rules, n^gu-Epenthesis P-1 and Initial Reduplication P-2, turns out to be one of the most difficult ordering relationships. Recall that P-1 inserts /-n^gu-/ before a stem or noninitial prefix beginning in a stop, when preceded by certain (other) prefixes; recall also that P-2, the main reduplication rule, regularly produces monosyllabic reduplicative segments from stems and compounds beginning in a stop, and bisyllabic segments in other cases.

One aspect of the ordering problem can be seen from this derivation:

-Rdp-aG=bura-
P-1 -Rdp-aG-n^gu=bura-
P-2 -aGn^ga-aG-n^gu=bura-
/-an^{g}a:-'-n^gu=bura-/

In this ex. the eventual output (shown with slashes /_/) shows that the -Rdp- segment includes a partial copy of the /-n^gu-/

morpheme. Therefore it would seem that P-1 must precede P-2, as shown in the derivation.

On the other hand, consider this derivation:

n^gan-Rdp-baG=balhu-
P-1 n^gan-Rdp-baG-n^gu=balhu-
P-2 n^gan-ba-baG-n^gu=balhu-
P-1 n^gan-n^gu-ba-baG-n^gu=balhu-
... /n^ga-n^gu-ba-ba-n^gu=balhu-/ 'I (will) cut its eye'

Here we have two instances of /-n^gu-/, one inserted in front of the verb root /=balhu-/, the other inserted in front of the -Rdp- segment, which in turn is located just before the compound initial /-baG-/ 'eye'. Since the preceding ex. (previous page) shows that /-n^gu-/ at the root boundary precedes reduplication, we allow P-1 to apply at this boundary as the first rule in our second derivation (though there is no direct evidence for this in the second example). However, the other /-n^gu-/ in the second ex. precedes the -Rdp- segment itself (which begins with a stop), and as the derivation is given above this requires phonological specification of -Rdp- before P-1 can apply (again).

There are a number of possible analyses that will produce the correct outputs. First, we could have P-1 and P-2 operate in a kind of leapfrog fashion working from the root backwards to the left. Each application of P-1 would examine a given morpheme boundary to see if /-n^gu-/ should be inserted; we would then look at the leftmost of the two morphemes in question, and if it is -Rdp- we allow P-2 to specify it phonologically; then we shift one morpheme boundary to the left and try P-1, etc.

An alternative is to formulate P-1 in such a way that it can apply correctly even before P-2 spells out the phonological form of -Rdp-. In the ex. at the top of this page, for example, we could instruct P-1 to disregard an intervening (not yet specified) -Rdp- segment, looking beyond it to see what the initial consonant of the following morpheme is; in this particular derivation, P-1 could then apply twice (simultaneously) since its structural description is met in two places in the word.

The one thing we can be sure of is that P-1 does precede P-2 in some forms. The above data do not suffice definitively to indicate that P-2 may precede P-1. However, consider now the more complex derivations involving intervening Leftward Hardening P-19:

nan-Rdp=lhamungur
P-2 nan-lhama=lhamungur
P-19 nan-dhama=lhamungur
P-1 nan-n^gu-dhama=lhamungur
... /na-n^gu-dhama=lhamungur/ 'we(InDu) will be short'

For this small set of stems, the -Rdp- segment (here Pl) is bisyllabic, presupposing that the stem does not begin with a stop at the time P-2 applies (since stop-initial stems have monosyllabic -Rdp- segments). P-19 is needed as a rule following P-2 to convert the initial consonant of the stem (here including the -Rdp- segment) to a stop. This creates combinations to which P-1 can apply (P-19 feeds P-1). The sequence P-2, then P-19, then P-1 appears to mean that P-1 should follow P-2. However, we still have the alternative mentioned above of having "leapfrog" cyclical application of P-2

and P-1 moving from the verb root (here actually an adjectival noun in predicative function) leftward through the prefixes. In this analysis, the preceding ex. would be handled by having P-1 first apply vacuously at the root boundary (since it does not apply after -Rdp- and since the stem does not begin with a stop anyway), then moving left to -Rdp- we allow P-2 to specify this segment phonologically, then P-19 converts a continuant into a stop, then at the next boundary to the left P-1 does apply, inserting /-n^{g}u-/. Consideration of this ex. suggests that of the two possible ways out of the ordering problem, the analysis involving some kind of cyclical (root-to-prefix) application is more suitable. The alternative (having P-1 formulated in such a way that an intervening -Rdp- segment is disregarded) will not account for our last ex.

P-1 and P-8. Since P-1 inserts /-n^{g}u-/ at some boundaries where the following morpheme must begin with a stop, this rule can be counterfed by any rule creating morpheme-initial stops which do not require insertion of /-n^{g}u-/.

One such rule is Velar-Insertion P-8, which inserts /n^{g}/ or /g/ in morpheme-initial position before a vowel under some circumstances. We are interested only in the cases of /g/. Consider this derivation:

lhamij-ala:di
P-8 lhamij-gala:di 'bad-taste, bad-tasting'

Since this is the output form, it is apparent that P-1 does not follow P-8. If P-1 did follow P-8, /-n^{g}u-/ would have been inserted between the two morphemes and we would have ended up with */lhamin^{y}-n^{g}u-gala:di/. Thus P-8 follows and counterfeeds P-1.

P-1 and P-16. Lenition P-16 applies to a small number of roots, leniting a stop to a continuant at the beginning of the root when this is preceded by a compound initial or derivational prefix (other than -Rdp-). P-16 in these stems must precede and bleed P-1.

-aG=dhida-
P-16 -aG=lhida-
P-18 -aG=dhida-
... /-a=dhida-/ 'to block off for' (Benef)

If P-1 applied before P-16 (or after P-18), the output would be */-a-n^{g}u=dhida-/, since the environment for P-1 to apply is met at those stages. In order to make sure that P-1 does not apply, we should order it between P-16 and P-18, since at that point the root begins with a continuant rather than a stop. Although it may seem from this derivation that P-16 is just a gimmick to prevent P-1 from applying, in fact P-16 (and P-18) are quite well justified in such cases; /=lhida-/ actually appears as such after compound initials which do not trigger Hardening P-18, as in /-gari=lhida-/ 'to shut off from behind'.

P-1 and P-18. As we have just seen in the last derivation, P-18 must follow and counterfeed P-1.

P-1 and P-19. As we saw above (preceding page, bottom), Leftward Hardening P-19 precedes and feeds P-1. In the context of the earlier discussion, however, we may want to say that this ordering is part of a "leapfrog" cycle going from root to prefixes.

P-1 and P-20; P-1 and P-21. Pronominal d-Insertion P-20 and Derivational d-Insertion P-21 insert a /d/ at a boundary before a

vowel and after /n/. The inserted /d/ could, in principle, cause subsequent application of P-1, inserting /-n^{g}u-/ before the /d/. This does not happen, as the following derivation shows:

n^{g}an=abi-n^{y}
P-20 /n^{g}and=a:bi-n^{y}/ 'I will jump'

There are two ways to explain nonapplication of P-1 to this and similar derivations involving P-20 or P-21. One is to insist, as the transcription above suggests, that the /d/ is inserted at the end of the first morpheme rather than as the initial segment of the second morpheme. However, this is rather arbitrary; my transcription with the /d/ on the left of the morpheme boundary is dictated not so much by theoretical as by practical considerations (it makes it easier for readers to correctly identify the second morpheme, often the root). The second alternative is to have P-20 and P-21 follow (and counterfeed) P-1. This seems reasonable, particularly since a number of other rules like P-8 and P-18 also follow and counterfeed P-1.

P-1 and P-22. Nasalisation P-22 follows and is fed by P-1. This is because P-1 inserts /-n^{g}u-/, whose initial nasal consonant can have nasalising effect on a preceding morpheme-final stop:

-lhaj=bura-
P-1 -lhaj-n^{g}u=bura-
P-22 /-lhan^{y}-n^{g}u=bura-/ '(firewood) to sit'

P-1 and P-23. Denasalisation is a minor rule applying to the inflectional suffix complex //-n-ni//, dissimilating it to /-n-di/ (this is actually augment //-n-// plus inflectional suffix //-ni//, characteristic of verbs of the N class). At any rate, this /-n-di/ does not undergo P-1; that is, it does not become */-n-n^{g}u-di/ or */-Ø-n^{g}u-di/. Whether we need to order P-23 after P-1 (so that P-23 counterfeeds P-1), or whether P-1 just does not apply to the right of the root, is not clear. There are no exx. of P-1 applying to the right of the root, but except for /-n-di/ there are no relevant suffixes beginning with a stop at early derivational stages which can follow a morpheme ending in a nasal. To be extra safe we could possibly have P-23 follow and counterfeed P-1.

P-1 and P-26. Palatal-Deletion P-26 simplifies such clusters as //jj// and //jd// by deleting the first member. However, if the two consonants are across a boundary, and if /-n^{g}u-/ is inserted between the two morphemes by P-1, no deletion rule applies:

-lhaj=duma-
P-1 -lhaj-n^{g}u=duma-
... /-lhan^{y}-n^{g}u=duma-/

Therefore P-1 precedes and bleeds P-26.

P-1 and P-27. Nasal-Assimilation P-27 takes some underlying clusters of nasal plus stop, and has the nasal assimilate point-of-articulation features from the stop. If the two consonants occur at a boundary, and if /-n^{g}u-/ is inserted at the boundary, we need to determine whether P-27 has been allowed to apply first. It turns out that P-1 precedes and bleeds P-27.

nun=jura-n^{g}i
P-1 nun-n^{g}u=jura-n^{g}i
... /nu-n^{g}u=jura-n^{g}i/ 'You(Sg) pushed it'

If P-27 applied before P-1 we would get */nun^{y}-n^{g}u=jura-n^{g}i/.

P-1 and P-29. Stop-Deletion P-29 deletes certain stops as initial members of consonant clusters. Consider an underlying cluster like //g-b// at a boundary. If Stop-Deletion applies before P-1, this will reduce to //ø-b// and will then undergo P-1 and become /ø-n^{g}u-b/. On the other hand, if P-1 precedes P-29, we would first convert //g-b// to //g-n^{g}u-b//. The trouble is that stops like //g// which are deleted before another stop are also deleted before nasals, including /n^{g}/, so even in this second derivation the eventual output will be /ø-n^{g}u-b/. The order of application of P-1 and P-29 is thus not determinate.

P-1 and P-30. P-1 precedes and feeds Nasal-Deletion P-30, which deletes certain nasals as initial elements of consonant clusters. This is because Nasal-Deletion does not apply before stops, but does apply before another nasal, such as the initial segment of the /-n^{g}u-/ element added by P-1.

n^{g}an=bura-n^{g}a-n^{g}
P-1 n^{g}an-n^{g}u=bura-n^{g}a-n^{g}
P-30 /n^{g}a-n^{g}u=bura-n^{g}a-n^{g}/ 'I will sit'

P-1 and P-31. P-1 precedes Geminate-Contraction P-31. In some cases P-1 bleeds P-31, in others P-1 feeds P-31, showing that the technical relationship between two rules may vary from one context to another. The cases of feeding order are those where the first morpheme at the boundary ends in /n^{g}/, which would not be deleted before the second morpheme, but is deleted when /-n^{g}u-/ is interposed by P-1.

-maran^{g}=balhu-
P-1 -maran^{g}-n^{g}u=balhu-
P-31 /-mara-n^{g}u=balhu-/ 'to cut up hand'

On the other hand, bleeding occurs when the inserted /-n^{g}u-/ breaks up a geminate cluster which would otherwise have been reduced by P-31.

-lhaj=jura-
P-1 -lhaj-n^{g}u=jura-
... /-lhan^{y}-n^{g}u=jura-/ 'to push firewood'

Here the first //j// ends up as /n^{y}/ but is not deleted, as it would have been had P-31 been allowed to precede P-1.

In the feeding cases like /-mara-n^{g}u=balhu-/, above, we could technically avoid ordering P-1 and P-31 by allowing Nasal-Deletion P-30 instead of Geminate Contraction P-31 to reduce //n^{g}-n^{g}// to a single /n^{g}/. P-30 and P-31 overlap in this combination and either rule is sufficient to carry out the reduction. However, in the bleeding cases like /-lhan^{y}-n^{g}u=jura-/, we must have P-1 before P-31.

General comments about P-1. Because of the significance of n^{g}u-Epenthesis P-1, some general remarks about its place in the phonological system (summarising the preceding pair-by-pair commentary) are needed. First, we observe that P-1 follows two rules which convert stops into continuants or vice versa, P-16 and P-19. These two rules are applied to specific, marked lexical items and have the character of stem-formation rules (they specify the relationship between the "underlying" form of a root in its uncompounded and compounded environments, respectively). On the other hand, P-1 precedes several other rules which create surface stops (these rules counterfeed P-1): P-8, P-18, P-20, P-21, and

(if we assume that P-1 would be applicable to morpheme boundaries in suffix complexes) perhaps P-23. These rules (except P-21 and P-23) are productive in the sense that they apply to all stems in the form-classes specified by the rules, not just to a few lexical items. (That P-21, a much more restricted rule, follows P-1 could be reinterpreted to mean that the inserted /d/ goes to the left not right of the morpheme boundary, so that P-1 is inapplicable anyway and the two rules do not need to be relatively ordered.)

The other major generalisation is that P-1 precedes all relevant rules which handle adjustments (deletions, assimilations) in consonant clusters. P-1 inserts /-n^{g}u-/ before a stop and after whatever segment the first morpheme ends in (often a consonant). P-1 prevents any consonant-cluster interactions involving the two consonants which originally occurred at the morpheme boundary; on the other hand, it obviously can create clusters involving some consonant followed by the /n^{g}/ of the /-n^{g}u-/ morpheme, and these clusters undergo whatever adjustments are appropriate.

The final remark is a reminder that P-1 interacts with Initial Reduplication P-2 in a complex way suggestive of a root-to-prefix "leapfrog" cycle.

P-2 and P-4. There is some question whether Initial Reduplication P-2 must be specified as following Homorganic Semivowel-Deletion P-4, or whether the rules need not be ordered. The relevant exx. are reduplications of verb forms like /=u-ma-na/ 'hits', derived from /=w$_2$u-ma-na/ by P-4 (since the semivowel is followed at the relevant level by a homorganic vowel). The following is an acceptable derivation:

-Rdp=w$_2$u-ma-na
P-4 -Rdp=u-ma-na
P-2 -umu=u-ma-na
... /-umu:='-ma-na/ 'keeps hitting'

The point here is that the //w$_2$// is missing both from the root-initial and Rdp-initial positions, and a convenient way to account for this is to have P-4 precede P-2, so that the latter rule copies the initial segments of the stem with the //w$_2$// already deleted. The only alternative is to formulate P-4 in such a way that it deletes the semivowel of a phonologically specified -Rdp- segment if and only if it also deletes the initial semivowel of the following root. This seems awkward, and I prefer to adopt the ordering analysis with P-4 preceding P-2.

P-2 and P-5. There is an argument for having P-2 precede Initial Semivowel-Insertion P-5. Consider this derivation:

Rdp-uG-muwaj
P-2 uGmu-uG-muwaj
P-5 wuGmu-uG-muwaj
... /wumu:-'-muwaj/ 'named (Human Pl)'

The point is that P-5 adds a word-initial /w/ here to the -Rdp- segment, but this /w/ does not show up at the beginning of the following morpheme, here //-uG-//. If we assume that -Rdp- has no material substance prior to being fully specified by P-2, we might suspect that P-5 could apply to //Rdp-uG-muwaj//, giving */Rdp-wuG-muwaj//, and ultimately */wumu-wu-muwaj/. The alternative is to argue that -Rdp- has some skeletal material substance at

the time when it has not yet been fully specified by P-2, and this wispy entity is sufficient to block P-5 (even if P-5 precedes P-2). (It should be noted, though, that a /Ø-/ pronominal prefix does not block P-5 from affecting a following morpheme.)

P-2 and P-7. P-2 precedes w-Insertion P-7.

yi:-Rdp-ala:di
P-2 yi:-ala-ala:di
P-7 yi:-wala-ala:di
... /yi:-wala:-'la:di/ 'bad ones(NA class)'

If P-7 preceded P-2, we would presumably get the incorrect output */yi:-wala-wala:di/ with the inserted /w/ repeated in the -Rdp- pattern, at least if -Rdp- itself (not yet being phonologically specified) permits P-7 to apply over itself. On the other hand, if a not-yet-specified -Rdp- segment prevents P-7 from applying, P-7 should affect neither of the two morpheme boundaries in the derivation shown, and we would get *//yi:-ala-ala:di//, which would end up as */yi:-'la:-'la:di/. (Actually, /yi:-'la:-'la:di/ does occur, but in a different meaning and with compound initial //yi-// in place of noun-class prefix //yi:-//.)

It follows that P-7 must follow P-2 as indicated in the derivation. Of course, this analysis applies only to speakers who do apply P-7 in forms like that shown above; as noted in the earlier discussion of P-7, some speakers insert /y/ rather than /w/ in such forms and thus have y-Insertion P-10 rather than w-Insertion P-7. For such speakers the ordering of P-2 and P-7 is inapplicable.

P-2 and P-8. P-2 precedes Velar-Insertion P-8.

mun-Rdp-ala:di
P-2 mun-ala-ala:di
P-8 mun-n^{g}ala-ala:di
... /mun-n^{g}ala:-'la:di/ 'having bad feet$_{(Pl)}$'

If P-8 preceded P-2, we would expect */mun-n^{g}ala-n^{g}ala:di/.

P-2 and P-9. P-2 precedes w_1-Deletion P-9.

$w_2$uru-Rdp=$w_1$aba-na
P-2 $w_2$uru-$w_1$aba=$w_1$aba-na
P-9 $w_2$uru-$w_1$aba=(w_1)aba-na
... /wuru-waba=(w)aba-na/ 'They keep wrapping it'

Rule P-9 optionally (but often) deletes //w_1// in certain environments including //a-___a// but not //u-___a//. In the derivation shown, the deletion rule applies at the root boundary (=) but not at the beginning of the -Rdp- segment. If P-9 preceded P-2, either the intervening unspecified -Rdp- segment would block P-9 (which would, incorrectly, mean that P-9 could never delete the /w_1/ at the beginning of the root), or else P-9 would apply over the unspecified -Rdp- segment, which would then mean that -Rdp- would later be specified in this ex. as //-aba-// rather than //-$w_1$aba-//, which would result in */wura:-'ba=aba-na/. The solution is to have P-2 operate at an early stage and then have the //w_1// in the -Rdp- and root morphemes undergo (separately) whatever developments are dictated by their immediate environments. Thus P-9 follows P-2. If instead of //$w_2$uru-// the ex. above had prefix /Ø-/, the derivation would be this:

Ø-Rdp=$w_1$aba-na
P-2 Ø-$w_1$aba=$w_1$aba-na
P-9 Ø-aba=(w_1)aba-na
... /Ø-aba=(w)aba-na/

Here P-9 does apply to the //w_1// of the -Rdp- segment, but because of the local phonological environment of this morpheme and not because the rule applies also to the root.

P-2 and P-10. For speakers who apply y-Insertion P-10 instead of w-Insertion P-7 to combinations of noun-class prefix /yi:-/ and following noun root beginning in /a/, we must specify P-10 as following P-2 for the same reasons that the other speakers must have P-7 following P-2.

yi:-Rdp-ala:di
P-2 yi:-ala-ala:di
P-10 yi:-yala-ala:di
... /yi:-yala:-'la:di/

P-2 and P-13. If we are correct in arguing that /=yi-wu-/ 'to scorch' is from //=w_1i-wu-// via a minor rule applying to this lexical item, then this rule (w_1-Palatalisation P-13) should precede P-2 to account for the reduplication:

-Rdp=w_1i-wu-
P-13 -Rdp=yi-wu-
P-2 /-yiwi=yi-wu-/

The alternative would be to have P-13 apply twice in this form, once to the root and once to the -Rdp- segment. Particularly for a minor, idiosyncratic rule (essentially relating this verb to the form which it has in compounds), this seems inappropriate and inelegant, so we opt for the derivation (and ordering) shown above.

P-2 and P-16. Although Lenition P-16 would seem to interact in derivations with P-2, it turns out that the order of application is indeterminate. The small set of verb stems undergoing P-16 have initial stops with no preceding compound initial or similar derivational element, but an initial continuant in compounds and derivatives just after P-16 applies (Hardening P-18 may eventually reharden the continuant to the paired stop). When -Rdp- occurs before the uncompounded form of the root, -Rdp- will always be a monosyllabic form since this is what we get before stop-initial stems: /=dhida-/ 'to block off', Rdp /-dhi=dhida-/. Since P-16 does not apply in such uncompounded forms (simple or reduplicated), there is no evidence here for ordering P-2 vis-à-vis P-16.

Consider now the Benefactive form //-aG=dhida-// 'to block off for'. Since Benefactive //-aG-// counts as a derivational (or compounding) element for purposes of P-16, this becomes //-aG=lhida-//. Although this later becomes //-aG=dhida-// by Hardening P-18, the form must have //lh// rather than //dh// at an early level to explain the fact that n^{g}u-Epenthesis P-1 fails to apply. Let us now consider the reduplication of //-aG=dhida-//. It turns out that we get /-adha:-'=dhida-/ as our reduplication. However, we can account for this using either order of P-2 and P-16.

	-Rdp-aG=dhida-		-Rdp-aG=dhida-
P-2	-aGdha-aG=dhida-	P-16	-Rdp-aG=lhida-
P-16	-aGdha-aG=lhida-	P-2	-aGlha-aG=lhida-
...	/-adha:-'=dhida-/	...	/-adha:-'=dhida-/

The reason for the ambiguity is that, in the -Rdp- segment itself, either //Gdh// or //Glh// will end up as /dh/ after later rules (notably Hardening P-18 and Stop-Deletion P-29) apply. We therefore cannot determine the order of P-2 and P-16.

P-2 and P-17. The other lenition rule is digu-Lenition P-17. Since P-17 (a minor rule relating one adjectival noun stem to its form as a compound initial) has the lenited continuant, here /r/, in positions in verbs where it can be immediately preceded by -Rdp-, we can determine relative order vis-à-vis P-2 (unlike the case with Lenition P-16).

```
        -Rdp-digu=rabi-
P-17    -Rdp-rigu=rabi-
P-2     /-rigi-rigu=rabi-/  'to keep fainting'
```

Since the -Rdp- segment is monosyllabic with stop-initial stems, but bisyllabic with other stems, P-17 must precede P-2 as the rules are formulated here.

P-2 and P-18. P-2 precedes Hardening P-18.

```
        nun-Rdp=w2ayama-ngi
P-2     nun-w2aya=w2ayama-ngi
P-18    nun-baya=w2ayama-ngi
...     /num-baya=wayama-ngi/  'You kept going onward'
```

Note that here Hardening P-18 affects the -Rdp- segment, hardening //w_2// to /b/, but does not affect the root-initial //w_2//.

P-2 and P-19. Leftward-Hardening P-19 follows P-2. Indeed, the relationship between these two rules is the central reason for distinguishing one set of roots to which Leftward-Hardening applies (hardening a continuant to a stop in the position farthest "left" in the stem, just after inflectional prefixes if present) from a distinct set of stems to which Lenition P-16 applies (leniting stop to continuant in positions farther "right" in the stem). These two types of alternation would seem to be indistinguishable, but their reduplications are distinctive and require different analyses. For the set of stems which take P-16, see the discussion of P-2 and P-16 (preceding page). An ex. of the type with P-19 is this:

```
        Rdp-lhamungur
P-2     lhama-lhamungur
P-19    /dhama-lhamungur/  'short ones'
```

Here we want P-2 to apply before P-19 hardens //lh// to /dh/ for two reasons: this accounts for the /lh/ in the root itself in the output, and also gives us the correct bisyllabic -Rdp- segment (-Rdp- is monosyllabic when the root starts with a stop). If there is a further compound initial or the like before -Rdp- in this form, neither case of //lh// is hardened to /dh/ by P-19, hence /wurugu-lhama-lhamungur/ 'short (small) billabongs'.

The relationship between P-2 and P-19 leads to apparent difficulties in reconciling this ordering sequence with that between P-1 and P-2 and that between P-1 and P-19. This matter is discussed above (in the subsection on P-1 and P-2), where it was suggested that some kind of "leapfrog" cycle from root back through the prefixes is called for.

P-2 and P-20. P-2 precedes Pronominal d-Insertion P-20, as in this example:


```
        nun-Rdp=a:gamba-a
P-2     nun-aga=a:gamba-a
P-20    nund-a:ga=a:gamba-a
...     /nund-a:ga:='gamba:-'/  'you kept roasting it'
```

Note that the effects of P-20 are limited to the boundary between the pronominal prefix /nun-/ and the -Rdp- segment. In order to know whether the rule will apply, we must know whether -Rdp- in this case begins with a consonant or a vowel, so we must presumably have a phonologically specified -Rdp- (by P-2) at this point.

P-2 and P-37. An argument can be made that P-2 follows P-37, V-Assimilation, at least in the cases of two subrules lumped into P-37 which deal with vowel quality in verb forms. Part (a) of P-37 gives /=w_2i-ni/ 'hit, killed' from //=w_2u-ni//, while part (e) gives /=ya-ra/ 'sleeps' from //=yi-ra//. The reduplication by P-2 is in each case predictable from the output form of the simplex, hence /-$w_2$ini=w_2i-ni/, /-yara=ya-ra/. We can account for these forms readily by having P-2 follow P-37.

```
        -Rdp=w2u-ni
P-37    -Rdp=w2i-ni
P-2     /-w2ini=w2i-ni/  'kept hitting'
```

The alternative is to allow the relevant applications of P-37 to apply simultaneously to the -Rdp- and root segments. This seems awkward and unnecessary and we assume that the derivation above is correct.

P-2 and P-38. V-Ablaut P-38 precedes P-2 in those cases where the two interact (recall that P-38, like P-37, is a cover category for several alternations, each very restricted). For example, //=ngu-ng// becomes /=nga-ng/ (Nonpast$_1$ of 'to eat'), and this has a reduplication /-nga=nga-ng/. Since the suffix /-ng/ is what induces the ablaut, and since this suffix is not included in the reduplicative segment, the fact that the ablauted vowel /a/ occurs in place of the underlying vowel //u// in the reduplicative segment strongly suggests that P-38 precedes P-2.

```
        -Rdp=ngu-ng
P-38    -Rdp=nga-ng
P-2     /-nga=nga-ng/  '(never) eats'
```

P-2 and P-40. Rdp-Shortening P-40 simply insures that the first vowel of a stem is short when directly preceded by a bisyllabic -Rdp- segment; thus /=ya:-ri:/ 'goes' reduplicates as /-yara=ya-ri:/ 'keeps going'. Short vowels in the -Rdp- segment /-yara-/ are accounted for already by the formulation of P-2. If P-40 is incorporated into P-2, we can avoid having to order the two rules. As we have presented them, the two rules are distinct, and it is probably necessary to have P-2 precede P-40. This is because P-40 does not apply when the -Rdp- is monosyllabic, so /=lu:lha-/ 'to wade' reduplicates as /-lu=lu:lha-/. Therefore at the point where P-40 applies we must know, minimally, what the canonical shape of the -Rdp- segment is, and the logical way to insure this is to have P-2 precede P-40.

```
        -Rdp=ya:-ri:
P-2     -yara=ya:-ri:
P-40    /-yara=ya-ri:/  'keeps going'
```

Since in this particular ex. one might consider other possible derivations in which the root is //=ya-// all along rather than //=ya:-// (see discussion of P-45 in §3.46, above), we give another ex. confirming the derivation:

-Rdp=lha:ga-n-ni
P-2 -lhaga=lha:ga-n-ni
P-40 -lhaga=lhaga-n-ni
... /-lhaga=lhaga-n-di/ 'kept setting fire to (grass)'

P-2 and P-44. Monosyllable-Lengthening P-44, as it applies to verbs, induces such changes as //=CV//→ /=CV:/, as with /=ni:-Ø/ 'see (Nonpast$_3$). The -Rdp- segment for such forms, unlike all other -Rdp- segments, contains a long vowel copied from the stem. It is therefore reasonable to have P-44 precede P-2.

-Rdp=na-y
P-50 -Rdp=ni-y
P-15 -Rdp=ni-Ø
P-44 -Rdp=ni:-Ø
P-2 /-ni:=ni:-Ø/ '(will never) see'

P-2 and P-45. It is difficult to determine, or at least prove, relative ordering between P-2 and Verb-Lengthening P-45. This rule applies, for example, to /=ya:-ri:/ 'goes', accounting for the long /a:/; contrast /=ya-n^{g}gi/ 'went'. The reduplication of /=ya:-ri:/ has just been illustrated (preceding page, bottom). Note that the correct output is generated if the input is presented as //-Rdp=ya:-ri://, which would mean that Verb-Lengthening had already applied at an earlier stage not shown above. An alternative, however, is to formulate P-45 in such a way that //=ya-// is not lengthened to /=ya:-/ when immediately preceded by -Rdp-, in which case we would still get unreduplicated /=ya:-ri:/ but would have input //-Rdp=ya-ri:// to the reduplicative form, whereupon the output /-yara=ya-ri:/ would be generated unproblematically. The latter analysis is awkward, inelegant, and not supported by parallels in the rest of the phonology, and I feel that the first solution is correct (that is, I maintain the correctness of the derivation on the preceding page, bottom); however, the matter is not provable.

P-2 and P-49. VV-Contraction P-49 follows P-2, as we can see from any of the numerous reduplications of stems beginning with a vowel:

ni-Rdp=ala:di
P-2 ni-ala=ala:di
P-49 /ni:-'la:='la:di/ 'they(NA) are bad'

In such exx., VV-Contraction will usually apply twice, once at each boundary. However, if the prefix should end in a consonant, P-49 will operate only at the Rdp-root boundary.

P-2 and P-50. V-Fronting P-50, a set of minor subrules involving fronting of back vowel to /i/ before a "palatal-type" consonant, precedes P-2.

-Rdp=w_2u-n^y
P-50 -Rdp=w_2i-n^y
P-2 /-w_2i=w_2i-n^y/ '(never) hits'

Since the /-n^y/ suffix is causing the fronting and is not adjacent to the -Rdp- vowel, the latter must be copied from the root. This

presupposes that P-50 precedes P-2.

General comments about P-2. The basic observation summarising the preceding cases of ordering involving Initial Reduplication P-2 is that it regularly follows other rules which apply entirely within the stem or stem-sequence to the right of -Rdp-, and regularly precedes local rules applying at boundaries and which involve interactions between the morphemes on either side of the boundary. In other words, it is as though a fairly complete representation of the stem-sequence to the right of -Rdp- is given as input to P-2, which then specifies the -Rdp- segment accordingly; then various lower-level boundary rules can apply, either to the prefix-Rdp boundary or to the Rdp-stem boundary or both.

For example, P-2 follows P-37, P-38, P-44, and P-50; these are all rules which affect stem vowels in unreduplicated forms, and whose effects are also reproduced in the -Rdp- segment when the stem is reduplicated. P-2 also follows P-4, P-13, and P-17, all of which are minor rules (severely restricted lexically) affecting underlying stem-initial consonants. These three rules are affected either weakly or not at all by the phonological form of preceding morphemes and are thus largely stem-internal reshaping rules.

On the other hand, P-2 precedes several rules which apply at boundaries and crucially involve the phonological substance of the morphemes on both sides of the boundary; these include consonant-cluster adjustments, insertion of epenthetic semivowels, vowel contractions, etc. The rules are P-5, P-7, P-8, P-9, P-10, P-18, P-20, and P-49. All of these rules are reasonably productive and apply to significant numbers of stems (though a few have some restrictions on word-class or the like).

One apparent exception to the remarks above is that P-2 precedes Rdp-Shortening P-40, the latter being a rule which applies within the stem following -Rdp- rather than at the boundary. However, unlike the other stem-internal rules mentioned above which P-2 follows, P-40 applies only in reduplications, and in an intuitive sense is essentially a part of the larger reduplication process of which P-2 is the primary rule.

The only really interesting exception to the generalisation about the ordering of P-2 is that P-2 precedes rather than follows Leftward Hardening P-19, a rule applying to a specific set of lexical items, hardening a continuant to the paired stop when preceded by zero or by only an inflectional prefix (noun-class or pronominal). Since P-19 is a lexically restricted rule applying to a stem segment without reference to the specific phonological substance of the preceding morphemes, we would expect P-2 to follow rather than to precede P-19.

There is, however, a possible way to understand this ordering. For most verbs and nouns, Initial Reduplication by rule P-2 is a productive morphological process with a consistent grammatical value (durative in a broad sense for verbs, generally Pl for nouns). However, in the case of nouns the process is arguably more derivational and lexically specialised than it is for verbs, since some nouns have other pluralising processes (such as prefixation of /mij-/ or some other morpheme), since the meaning is sometimes skewed (as in reduplicative Multiple forms of topographic

nouns, like /rilji-rilji/ 'islands'), and since we can find a few irregular Pl noun forms which look vaguely like reduplications but have anomalous changes, such as /manun^{g}/ 'woman' (root), Sg //manun^{g}-yun^{g}//→ /mani-n^{y}un^{g}/, but Pl /mananun^{g}/ with an entirely anomalous quasi-reduplicated shape. Turning to the particular set of lexical items which undergo Leftward-Hardening (see list in §3.20, above), we observe that they are all adjectives like //lhamungur// 'short' or verb roots which have common adjectival derivatives like //=w$_2$ara-// 'to become bent', adjectival noun //-w$_2$ara-w$_2$aru-j// 'bent, crooked' (uncompounded forms /dhamungur/, /=bara-/, and /bara-waru-j/, respectively). Moreover, the relevant alternating verb/adjective roots here show reduplication obligatorily in the adjective (regardless of number), and commonly show the same reduplication in the verbal form regardless of number or verbal aspect. There is thus strong reason for arguing that Initial Reduplication P-2 is an early, lexically specialised, stem-formation rule for these roots, even though the same rule P-2 is a productive inflectional process for most other verbs. If the grammatical status of P-2 can vary in this way, it is not too surprising that in its more strictly derivational usage it can occasionally precede another stem-structure rule like P-19.

Our generalisation should thus be reformulated to state that in its ordinary status as a productive inflectional process, P-2 follows stem-internal rules but precedes productive boundary-adjustment rules; as a specialised derivational rule it can, on occasion, precede a stem-internal rule.

Recall our earlier discussions of the relative ordering of P-2 and n^{g}u-Epenthesis P-1, where we pointed out cases of P-1 applying twice, once before and once after P-2. We suggested that a leapfrog cycle would account for this, starting with the root and working backwards through the prefixes. This is essentially consistent with our depiction of P-2 as a rule which, in its usual function, applies after various stem-internal rules have produced a surface or near-surface representation of the following stem; if the stem happens to be complex, the morpheme /-n^{g}u-/ may have been inserted by P-1 between two morphemes constituting the stem, so this /-n^{g}u-/ may actually appear in the -Rdp- segment; moving farther to the left, /-n^{g}u-/ may be inserted by a subsequent application of P-1 involving the boundary between an inflectional prefix and the complete reduplicated stem.

P-3 and P-24. rn-Contraction P-24 converts //rn// into /n/ in a small number of rather frozen combinations. The relevant one here is MDu suffix combination //-r-ni//→ /-ni/ found in personal and demonstrative pronouns; compare FDu /-r-n^{g}i/.

Final Reduplication P-3 is a rule applying within demonstrative pronouns and is unrelated to P-2. From FDu /bi-r-n^{g}i:-'la/ 'there they(FDu) come' we get /bi-r-n^{g}i-n^{g}i:-'la/ 'they(FDu) are on that side'. The MDu counterpart is this:

ba-r-Rdp-ni-ala
P-37 bi-r-Rdp-ni-ala
P-24 bi-Rdp-ni-ala
P-3 bi-ni-ni-ala
... /bi-ni-ni:-'la/ 'they are on that side'

That is, the contraction of //rn// to /n/ is prior to the reduplication by P-3, since the reduplicative segment copies this /n/. We cannot argue that //rn// is copied in -Rdp-, with P-24 then applying to both occurrences of //rn// producing /n/, since we have just seen the FDu counterparts where the //-r-// morpheme is not included in the -Rdp- segment. Note also that in the derivation just given, -Rdp- functions as a nonentity until being specified by P-3, so P-37 applies to //r// and //n// separated by -Rdp-.

Thus P-24 precedes P-3.

P-3 and P-49. It can be shown that VV-Contraction P-49 applies before P-3. Our previous derivation (preceding page, bottom) glosses this over since P-49 is not at issue. In any event, in that particular form we will get the same output whether P-49 precedes or follows P-3, since //-ni-ala// contracts to /-ni:-'la/ with the quality of the first input vowel predominating. However, consider the corresponding Pl form:

ba-Rdp-ru-ala
P-37 bu-Rdp-ru-ala
P-49 bu-Rdp-ra:-'la
P-3 /bu-ra-ra:-'la/ 'they(Pl) are on that side'

In the case of //ua//, the output is /a:/ with the second input vowel quality dominating. Since the -Rdp- segment has /-ra-/ instead of /-ru-/, it follows that the reduplication is based on the output of the VV-Contraction rule P-49, though the -Rdp- vowel must be short. (Note also that the //-ru-// morpheme has its //u// reflected indirectly through the early assimilation of this vowel quality by the demonstrative root, which becomes /bu-/ by V-Assimilation P-37.)

General remarks on P-3. This particular reduplication rule strikes me as a curious example of a functionally derivational rule (creating a special type of "lateral" demonstrative, §7.15) which nonetheless seems to operate on surface forms. Although the formal derivations shown above start with -Rdp- in the underlying form, this segment has no effect at all on the phonology until P-3 applies, and no phonological rule seems to follow P-3. Moreover, the forms with P-3 differ from independently occurring demonstrative forms, here /bi-ni:-'la/ 'there they(MDu) come' and /bu-ra:-'la/ 'there they(Pl) come', and the way P-3 works is effectively equivalent to a surface-to-surface derivational rule linking the simple and reduplicated forms to each other.

P-4 and P-5. Homorganic Semivowel-Deletion P-4 converts //wu// to //u// and //yi// to //i// at the beginning of a small number of roots under certain conditions. It appears that this rule precedes Initial Semivowel-Insertion P-5, a rule applying in word-initial position and in this case has the effect of reversing the deletion, converting //#u// to /#wu/ and //#i// to /#yi/.

Of course, we can avoid ordering problems by restricting P-4 so that it does not apply in word-initial position. While this is technically possible, I feel that it is incorrect. In the larger context P-4 acts as an early, lexically specialised rule (or set of subrules) which makes only peripheral reference to the phonological form of preceding morphemes, while P-5 acts as an optional but freely available low-level rule directly related to

phonotactic constraints (or tendencies). I would therefore incline toward recognising derivations like the following, even though there is, technically, an alternative possibility.

Ø=w_2u-ma-na
P-4 Ø=u-ma-na
P-5 /Ø=wu-ma-na/ 'it hits/kills it'

P-4 and P-18. P-4 precedes (and bleeds) Hardening P-18 when the verb forms which lose an underlying semivowel by P-4 fail to show a stop (the hardened counterpart of the semivowel) after a prefix ending in a hardening consonant (stop, nasal). In the following example, instead of Hardening P-18 we eventually have Pronominal d-Insertion P-20, a rule which applies before vowels:

n^gan=w_2u-ma-na
P-4 n^gan=u-ma-na
P-20 /$n^g$and=u:-ma-na/ 'I will hit it(ANA$_Ø$)'

Whether or not P-18 precedes P-20, it must follow P-4 since otherwise it would have applied to this form, converting //w_2// into /b/, leading to eventual */n^gam=bu-ma-na/. In other words, P-18 follows and counterbleeds P-4.

P-4 and P-20. The derivation just given shows that P-4 precedes and feeds Pronominal d-Insertion P-20.

P-4 and P-36. rV-Contraction P-36 accounts for such optional changes as //$w_2$ara-// → /w_2a:-/ in inflectional prefixes. Except in fast or otherwise sloppy speech, P-36 applies when the morpheme following the inflectional prefix begins with a consonant but not when it begins with a vowel (at the relevant stage). Stems which have initial vowel after losing an underlying initial semivowel by P-4 are treated for this purpose like stems with underlying initial vowel, and thus prevent P-36 from applying (instead, VV-Contraction P-49 applies at the boundary).

$w_2$ara=w_2u-ma-na
P-4 $w_2$ara=u-ma-na
P-49 /$\tilde{w}$aru:='-ma-na/ 'they hit them'

Thus P-4 precedes and bleeds P-36.

P-4 and P-37; P-4 and P-38. We have seen that P-4 induces such changes as //=w_2u-// → /=u-/. However, if in such a stem some rule alters the quality of the vowel, here changing //u// to some other vowel, P-4 cannot apply since the rule specifies that the semivowel and vowel must be homorganic (/wu/, /yi/) at the time P-4 applies. V-Assimilation P-37 and V-Ablaut P-38 are cover terms for various minor changes, some of which affect vowel quality in roots which can undergo P-4. For example, /=w_2u-/ 'to hit, kill' has Past$_1$ /=w_2a-n^g/ where suffix /-n^g/ induces ablaut to /a/; also Past$_2$ /=w_2i-ni/ where it appears that V-Assimilation copies the suffixal vowel quality in the root syllable. Such forms do not undergo P-4, so they keep their underlying //w_2// (which may, for example, end up as /b/ by Hardening P-18 when preceded by a hardening consonant).

Thus P-37 and P-38 (or the relevant subrules thereof) precede P-4. See below for a similar remark on P-4 and P-50.

P-4 and P-49. We have a possible ordering paradox here. In our formulation of P-4, we specify that in the input we must have //wu// or //yi// with short //u// or //i//. Thus //=w_2u-ma-na// undergoes P-4 and becomes //=u-ma-na// at this level. However, the

Nonpast$_3$ of this verb is /=w_2u:-'/, and this form does not undergo P-4 and thus keeps its /w_2/. As for the underlying form of this Nonpast$_3$ item, either //=w_2u-Ø// (with lengthening by Monosyllable-Lengthening P-44) or //=w_2u-u// (with VV-Contraction P-49) would give the right result, but inspection of paradigms of other verbs ending in /u/ shows that the analysis with suffix //-u// is appropriate (since we get Nonpast$_3$ forms like /=a:ru:-'/ from /=a:ru-/ 'to abandon' showing long /u:/ in a nonmonosyllabic stem).

=w_2u-u
P-49 =w_2u:-'
P-4 [no change]
... /=w_2u:-'/

In this form, then, P-49 precedes and bleeds P-4 within the stem itself. On the other hand, P-4 precedes and feeds P-49 with reference to the boundary between a prefix and a verb form whose initial semivowel has been lost by P-4.

wa=w_2u-ma-na
P-4 wa=u-ma-na
P-49 /wu:='-ma-na/ 'I will hit you(Sg)'

Here we have further evidence of some kind of cycle affecting the ordering of rules, beginning within the root and working back through prefixes. If VV-Contraction P-49 can operate within the stem (here, at the root-suffix boundary) it does apply by an early stage and can thus affect whether P-4 applies to the initial segment in that stem; at a later stage P-49 can apply at the prefix-stem boundary and thus follow P-4.

P-4 and P-50. V-Fronting P-50, which fronts a back vowel to /i/ before a "palatal-type" consonant, has the same interaction with P-4 which P-37 and P-38 do (preceding page).

=w_2u-n^y
P-50 =w_2i-n^y
P-4 [no change]
... /=w_2i-n^y/ 'will hit' (Nonpast$_1$)

Here the /-n^y/ suffix induces a vowel change in a root which is otherwise subject to P-4. Since we now have a nonhomorganic semivowel-vowel sequence, with /w_2/ followed by high front /i/, P-4 does not apply. That is, P-50 precedes and bleeds P-4.

General remarks about P-4. In terms of its ordering location, P-4 is rather similar to P-1 and P-2. Like them, its own effect is at or near the beginning of a stem; it follows (is affected by) various rules which apply within the stem to the right; it affects (precedes) various rules which apply over the prefix-stem boundary.

Thus P-4 follows P-37, P-38, and P-50, which are essentially sets of minor, lexically restricted subrules which affect vowel quality within the stem. On the other hand, P-4 precedes such rules as P-5, P-18, P-20, and P-36, all of which crucially involve the phonological substance of preceding morphemes. As we have just seen, P-49 is a rule which can apply either within the stem or at the prefix-stem boundary, and depending on its location it can thus precede or follow P-4, pointing to a cyclical approach.

Our only other remark is that P-4 does precede P-2 (Initial Reduplication).

P-5 and P-12. Initial Semivowel-Insertion P-5 follows Stem w_2-Deletion P-12. The latter is a specialised rule applying to a small set of morphemes. For example, the Pl form /mij-bibi/ 'your mothers' points to a root //-$w_2$ibi//. Consider the form without Pl prefix /mij-/:

$w_2$ibi
P-12 ibi
P-5 /yibi/ 'your mother'

Since in this case the semivowel inserted by P-5 is /y/ and is thus distinct from the underlying stem-initial semivowel //w_2//, we do not have the alternative possibility of simply preventing P-12 from applying in word-initial position.

P-5 and P-49. There is a possible argument that P-5 precedes and bleeds VV-Contraction P-49 in one particular instance. This is the case where punctual-series ANA noun-class prefix /a-/ precedes a derived noun stem beginning with "inner" or derivational noun-class prefix //-uG-// (ANA class), as in //a-uG-lhan^{g}un^{y}// 'wind' (oblique case form). The output here is /a-wu-dhan^{g}un^{y}// at least as one possibility. However, in this somewhat awkward combination the /a-/ is sometimes just omitted. Moreover, we could also argue that VV-Contraction P-49 simply fails to apply to this combination, or that the inner prefix has an allomorph //-wuG-// here, in which case P-5 is not involved (elsewhere, it should be noted, P-5 is confined to word-initial position).

We will thus allow the possibility that P-5 precedes P-49, but must recognise that this depends on the particular way we have formulated these rules.

General remarks on P-5. This rule clearly follows P-2, P-4, and P-12; in the relevant derivations we are dealing with the application of P-5 in word-initial position, converting //i// and //u// into /yi/ and /wu/, respectively. Here P-5 has all the earmarks of a low-level, automatic rule closely related to surface phonotactic constraints. There is a possibility that P-5, in its rather minor use within prefix complexes, may follow P-49 (a relatively late and productive rule), but this raises the question of whether this instance of P-5 is really the same rule as the word-initial cases. In any event, P-5 never precedes any of the earlier, lexically restricted phonological rules.

P-6 and P-8. It appears that w_1-Insertion (a restricted rule applying to one or more stems in compound-final or derived forms) precedes and bleeds Velar-Insertion P-8. P-6 applies regardless of the phonological substance of the preceding morpheme, while P-8 applies after morphemes ending in stop or nasal (i.e., hardening consonants). P-6 adds a stem-initial //w_1//, which will become /g/ after a stop or nasal by Hardening P-18. However, P-8 inserts either /n^{g}/ or /g/ in the same stem-initial position, with /n^{g}/ common when the preceding morpheme ends in /n^{g}/ or /n/.

P-6 and P-8 thus have similar, but in some instances slightly distinct, effects. In ordering these two partly overlapping rules, we want to see whether P-6 or P-8 applies to compounds of the verbs which elsewhere can undergo P-6; if we get surface /g/ in stem-initial position consistently, we assume that P-6 (and P-18) have applied with P-6 bleeding P-8; if we get /n^{g}/ in this position

we recognise P-8 as applying, bleeding P-6. In fact, it is P-6 and not P-8 which applies to compounds of the best-attested such verb, /=a:yu-/ 'to cut up':

-mulun^{g}=a:yu-
P-6 -mulun^{g}=w_1a:yu-
P-18 /-mulun^{g}=ga:yu-/ 'to cut up elbow of'

Thus P-6 precedes and bleeds the competitive rule P-8.

P-6 and P-9. The //w_1// inserted by P-6 into verbs such as /=a:yu-/ 'to cut up' in compounded/derived position is subject to later rules applying to /w_1/, including w_1-Deletion P-9. The latter rule is usually optional, so cases where the /w_1/ is deleted may coexist with variants preserving this segment. Where the /w_1/ in //=w_1a:yu-// is deleted, the surface form may be /=a:yu-/ or /=ya:yu-/, the latter showing y-Insertion P-10 (where the preceding morpheme ends in /i/).

-an^{y}jabal=a:yu-
P-6 -an^{y}jabal=w_1a:yu-
P-9 /-an^{y}jabal=(w)a:yu-/ 'to cut up shoulder area of'

-$w_2$angidi=a:yu-
P-6 -$w_2$angidi=w_1a:yu-
P-9 -$w_2$angidi=a:yu-
P-10 /-$w_2$angidi=ya:yu-/ 'to cut up ray meat'

It may seem clumsy to have P-6 insert //w_1// only to have this semivowel immediately deleted by P-9. However, P-9 is independently motivated and derived //=w_1a:yu-// behaves just like roots which begin with underlying //w_1//. Moreover, if P-6 did not apply in this last derivation we would have to explain why VV-Contraction P-49 does not apply, giving output */-$w_2$angidi:='yu-/. To explain this we assume that P-49 applies between P-6 and P-9, and thus has no effect on the derivation just given.

We conclude that P-6 precedes (and feeds) P-9.

P-6 and P-18. The //w_1// inserted at the beginning of some roots in compound/derived position is also subject to Hardening P-18, becoming /g/ after stop or nasal. An ex. is given at the top of this page. P-6 precedes and feeds P-18.

P-6 and P-49. P-6 precedes and bleeds VV-Contraction P-49. As we noted in the discussion of P-6 and P-9, just above, we want P-49 to follow P-6 in derivations like that of 'to cut up ray meat' (above). Here P-49 would have contracted the two vowels across the boundary into a single long vowel were it not for the fact that P-6 has, in the meantime, broken up the vowel sequence by inserting a semivowel.

General remarks on P-6. P-6 is a sharply restricted rule affecting a small number of stems, /=a:yu-/ 'to cut up' being the clear example. It makes no reference to the precise phonological form of preceding segments, though it must "know" that there is a derivational prefix or compound initial. As is appropriate for a rule of this type, it precedes various lower-level, relatively productive rules (P-8, P-9, P-18, P-49) which involve concrete interactions among segments across the morpheme boundary.

P-7 and P-10. w-Insertion P-7 (not to be confused with w_1-Insertion P-6) applies after noun-class prefix /yi:-/, as in

//yi:-anarag//→ /yi:-wanarag/ 'goanna sp.'. Speakers who have this rule (i.e., mainly younger speakers) must have P-7 precede y-Insertion P-10, which would otherwise insert /y/ instead of /w/ at the boundary. Indeed, with stem beginning in long /a:/ my younger informants do not use P-7, so P-10 does apply, as in //yi:-a:mun^{y}//→ /yi:-ya:mun^{g}/ 'bush fly'. The most elegant analysis is to have P-7 precede P-10, bleeding it.

P-7 and P-49. P-7 likewise precedes and bleeds VV-Contraction P-49. In a form like /yi:-wanarag/ 'goanna sp.', if P-7 had not inserted /w/ at the boundary, presumably VV-Contraction P-49 would have applied, giving */yi:-'narag/. Alternatively, P-49 can be formulated in such a way that it does not apply when the vowel to the left of the boundary is long (there do not appear to be any counterexx. to this suggestion). In the second analysis there is no determinate ordering relationship between P-7 and P-49. We therefore observe that if the two rules are ordered, P-7 must precede (and bleed) P-49, but that this depends on how the rules are formulated.

P-8 and P-20; P-8 and P-21. P-8 is Velar-Insertion, adding /g/ or /n^{g}/ before root-initial vowel in some morphological environments. Rules P-20 and P-21 insert /d/ in a similar environment, and we therefore have to specify which rule applies in which specific combinations.

Of these, P-20 and P-21 are rather restricted while P-8 is more general. The simplest and most elegant solution is to have P-20 and P-21 apply first, with the more general rule P-8 following and covering those cases not affected by the earlier rules.

If so, P-20 and P-21 precede and bleed P-8.

P-8 and P-29. Stop-Deletion P-29 accounts for such boundary simplifications as //G-g//→ /Ø-g/, where //G// is a stop archiphoneme. Since a morpheme ending in //G// can trigger Velar-Insertion P-8 in the following morpheme, and the //G// is then deleted, we must have P-8 preceding and feeding P-29.

-n^{g}araG=abi-
P-8 -n^{g}araG=gabi-
P-29 /-n^{g}ara=gabi-/ 'to all jump'

However, if we decide that all cases of stop archiphoneme //G// are to be represented more specifically as //g//, on the grounds that the two cannot be distinguished morphophonemically, then we would have //g-g// simplifying to /Ø-g/ in the previous derivation, which could be handled either by P-29 or by Geminate-Contraction P-31. One of these rules would have to apply after P-8 but we could not determine which did, in this particular derivation.

P-8 and P-30; P-8 and P-31. Whether or not Geminate-Contraction P-30 applies in the derivation just given, it presumably applies in the following one:

mulun^{g}-argi
P-8 mulun^{g}-n^{g}argi
P-30 /mulun^{g}-argi/ 'others'

Here we assume that the root //-argi// becomes //-n^{g}argi// by P-8, since P-8 does apply in other compounds with similar environments (e.g., with /n/ rather than /n^{g}/ as morpheme-final consonant in the compound initial). This requires subsequent P-30 to reduce the

geminate consonant cluster. (The output transcription shows the surviving /n^{g}/ on the left of the boundary marker, but this is merely a convention to help readers identify the morphemes in question more easily.)

Actually, the reduction of //n^{g}-n^{g}// to /n^{g}/ could also be handled by Nasal-Deletion P-31, which overlaps with P-30 in the case of this underlying cluster. Thus at least one of P-30 and P-31 must follow P-8.

P-8 and P-46. V-Truncation P-46 applies at boundaries involving certain inflectional noun-class prefixes when the following morpheme begins in a vowel.

ana-uG-lhan^{g}un^{y}
P-46 an-uG-lhan^{g}un^{y}
... /an-u-dhan^{g}un^{y}/ 'wind'

Note in particular that P-8 does not apply, even though we have a boundary with one morpheme ending in /n/ and the following beginning with a vowel (the basic environment for P-8).

There are several ways to account for this. One is to have P-8 precede P-46, whereupon P-8 will apply vacuously to the underlying transcription (since there is not yet, at that point, a sequence of consonant plus vowel over the boundary). Another way is to specify, in formulating P-8, that it does not apply at the boundary after an inflectional prefix in nouns. (This could be extended to verbs as well, since Pronominal d-Insertion P-20 rather than P-8 applies at this post-inflectional-prefix boundary in verbs.) The third possibility is to account for alternations such as that between /ana-/ and /an-/ in the example above by allomorph specifications rather than by phonological rule, in which case rule P-46 would cease to exist.

The second of the three analyses seems attractive to me. However, if there is an ordering relationship between P-8 and P-46 we must have P-8 preceding P-46 (which counterfeeds it), as in the first of the three analyses.

General remarks about P-8. First, we observe that P-8 is a rule operating at particular types of boundaries, adding a segment, and that it is sensitive to the specific phonological content of the preceding and following morphemes. Like most other rules creating consonantal segments which form part of a consonant cluster, it is followed by any relevant lower-level cluster-adjustment rules. In this case the relevant rules are P-29, P-30, and P-31 (or whichever of these are determined to be operative in the reductions //Gg//→ /g/, //gg//→ /g/, //n^{g}n^{g}//→ /n^{g}/, etc.).

There are other ordering relationships involving P-8, but they should be qualified. We have suggested that P-8 may precede P-46 (counterfeeding relationship), but this is just a device to insure that P-8 fails to apply to certain boundaries, and there are other possible ways to insure this not involving rule ordering. Similarly, we have indicated that P-8 may follow P-20 and P-21 (the d-Insertion rules), but this is just a device to indicate which forms are affected by P-20 or P-21 and which are affected by the competing rule P-8, and again other mechanisms aside from rule order could be employed.

We have three remaining combinations involving P-8. First, P-8

must follow (and counterfeed) $n^{g}u$-Epenthesis P-1, since derived clusters like //g-g// due to P-8 do not trigger insertion of the epenthetic /-n^{g}u-/ morpheme, which is inserted into underlying //g-g// and similar clusters at the same kinds of boundaries. This is consistent with the general behaviour of P-1, an early rule which applies before underlying or very early stem-initial stops but not before late stem-initial stops inserted by lower-level rules or hardened from underlying continuants by P-18. Indeed, the most obvious surface function of the /-n^{g}u-/ morpheme is its indication that the following stop is a "real" stop rather than a low-level development.

Likewise, P-8 follows Initial Reduplication P-2. This is also consistent with expectations, since P-8 is a rule (as we have seen) which involves concrete phonological interaction at a boundary. P-2, on the other hand, is an early rule which refers only to the form of the following stem, and precedes a variety of rules which involve local interactions among segments across the prefix-stem boundary.

Finally, P-8 follows P-6, a specialised and highly restricted rule specifying the form of one or more particular verb roots in compound/derived form. Since P-6 makes no reference to the particular segments to the left of the prefix-stem boundary, it is expectable that P-8 should follow it.

P-9 and P-10. w_1-Deletion P-9, deleting /w_1/ but not /w_2/ after unrounded vowel or nonhardening sonorant, creates an environment which permits y-Insertion P-10 to apply:

	ni-$w_1$ara-
P-9	ni-ara-
P-10	/ni-yara-/ (3MSg/NA plus Multiple prefixes)

Thus P-9 precedes and feeds P-10, as we formulate the rules.

P-9 and P-13. w_1-Palatalisation affects the verb //=w_1i-wu-// 'to scorch, sear' in its uncompounded form /=yi-wu-/, and in some compounds. We want the //w_1// to be directly converted into /y/ in this item, and it does not appear that P-10 is the appropriate rule for this since the phonological environments are quite distinct. There is also no evidence for an intermediate stage with //=i-wu-//, and indeed allowing P-9 to operate and produce this intermediate form would create numerous difficulties since this verb does not undergo rules characteristic of vowel-initial stems. We therefore allow P-13 to precede P-9 (and bleed it).

	=w_1i-wu-
P-13	/=yi-wu-/ 'to scorch'

P-9 and P-16. Lenition P-16, a lexically restricted rule, should in principle have as one of its manifestations an alternation of /g/ with /w_1/, and it should be possible to see whether P-16 feeds P-9 by observing whether the lenited /w_1/ acts like other /w_1/ in undergoing deletion by P-9 in the appropriate environment. However, I do not have any clear exx. of verb stems with the relevant alternation and cannot determine the ordering relation (though I strongly suspect the P-16 does feed P-9).

P-9 and P-19. Leftward-Hardening P-19 is another restricted rule accounting for stop/continuant alternations, though in this case the continuant is underlying and the stop derived. We expect

alternations of /w_1/ with /g/ to occur, and we would certainly expect P-9 not to apply to such forms (i.e., deleting the //w_1// before it could be converted into /g/), on the grounds that P-19 is a restricted lexically specialised rule not related to the phonological environment while P-9 is a fairly low-level, local boundary interaction. However, once again the very limited set of stems known to undergo P-19 does not happen to include a good case of /w_1/ alternating with /g/, so we cannot prove any ordering relationship.

P-9 and P-36. rV-Truncation P-36 is an optional rule applying to certain inflectional prefixes when the following morpheme begins with a consonant. The question then is whether a following morpheme beginning in //-w_1a...// or the like permits application of P-9, P-36, or both. Consider these two outputs from the same underlying representation:

	$w_2$ara=$w_1$aba-na		$w_2$ara=$w_1$aba-na
P-9	$w_2$ara=aba-na	P-9	[no change]
...	/wara=aba-na/	P-36	w_2a:=$w_1$aba-na
	'they wrap it'	...	/wa:=waba-na/

In other words, when P-9 (which is optional here) does apply as in the lefthand derivation, P-36 normally cannot apply; however, when P-9 is not put into operation as in the righthand derivation, P-36 can apply (though it does not have to). It follows that P-9 precedes and bleeds P-36 (with perhaps the occasional exception in rapid speech).

P-9 and P-49. In the example /wara=aba-na/ just given (above, lefthand column), the vowel cluster at the = boundary is regularly pronounced as two distinct syllabic nuclei with a partial hiatus between them. This means that P-9 follows and counterfeeds P-49. In rapid speech such clusters are occasionally contracted, but this is not usual, and informants disapprove of it.

General remarks about P-9. w_1-Deletion is one of the fairly low-level rules operating at boundaries, depending on the particular phonological segments on either side of the boundary. It is appropriate that it follow the relevant rules which are restricted to particular stems and which operate without reference to particular adjoining segments (P-6, P-13), as well as Initial Reduplication P-2 (which works on underlying rather than surface stem shapes). With respect to interactions with other lower-level rules working at boundaries, P-9 follows VV-Contraction P-49, allowing some derived vowel sequences to occur, but P-9 precedes P-10 and P-36.

P-10 and P-11; P-10 and P-37; P-10 and P-48. P-10 is y-Insertion. Our problem is to make sure that this rule does not apply to certain derivations of pronominal prefixes, using the highly abstract analysis of Chapter 9 (in which several component morphemes may be recognised as underlying a given pronominal prefix).

	na-$w_2$an-w_2V-ri-
P-37	ni-$w_2$in-w_2i-ri-
P-11	ni-in-w_2i-ri-
P-48	ni-n-w_2i-ri-
...	/nimbiri-/ 2Pl→ $ANA_{wu\text{-}b}$

The point is that the intermediate representation beginning in //ni-in-// meets the environment for y-Insertion P-10, but we want to insure that P-10 does not apply here since it would create a sequence *//ni-yin-// which would be incompatible with our attested output. There are two possibilities: P-10 is followed and counterfed by P-11, or P-10 follows and is bled by P-48. The only possibility excluded is that P-10 apply between P-11 and P-48. However, it should be stressed that these considerations are relevant only to prefixal derivations of a highly abstract type such as that just given, involving at least one rule ($w_2$an-Contraction P-48) which is restricted to this morphological environment and whose precise formulation is not obvious.

P-10 and P-49. The data point to the conclusion that P-10 follows VV-Contraction P-49. The two rules are competitive, in that y-Insertion P-10 breaks up a vowel sequence by interposing a semivowel, while P-49 contracts vowel sequences into single (usually long) vowels. Consider this form:

yi:-a:mun^y
P-10 /yi:-ya:mun^y/ 'bush fly'

One reasonable analysis of why P-49 fails to apply here would be to point out that the vowel preceding the boundary is long, and to conclude that P-49 applies only when this vowel is short (though the vowel to the right of the boundary may be long or short). Since the sequence //i-a(:)// becomes /i:-'/ by P-49, we could argue that P-49 applies first, affecting //i-a(:)// but not //i:-a(:)//. Then P-10 would apply, affecting //i:-a:// as shown above (for //i:-a// see P-7). On the other hand, we could also formulate a very restricted version of P-10 which would apply just to forms like that shown above, with a following (very general) to forms which P-10 had left P-49 which would in effect apply to forms which P-10 had left untouched.

Consider now this example:

ni-$w_1$ara-
P-9 ni-ara-
P-10 /ni-yara-/ (3MSg/NA$_a$ plus Multiple prefixes)

We have already seen this above in the context of the ordering relationship of P-9 and P-10 (two pages back). Here, note that VV-Contraction P-49 might have applied just after P-9, giving an incorrect output */ni:-'ra-/. Thus, in this derivation, either P-49 precedes P-9 or it follows P-10. In our discussion of distinct derivations showing the relationship of P-9 and P-49 (preceding page), we concluded that P-9 follows P-49. Putting these observations together, we conclude that the order is P-49, then P-9, then P-10, though no single derivation shows all of these ordering relationships unambiguously.

P-49 precedes and bleeds P-10, which can apply to forms not affected by P-49 due to restrictions on the latter (and can also apply to some later vowel clusters created by deletion rules which follow P-49).

General remarks on P-10. y-Insertion P-10 appears to be a very low-level rule applying automatically at boundaries showing the relevant input sequence, and closely related to phonotactic constraints. In all clear cases of ordering P-10 follows the other

rule, even though the latter may be another lower-level boundary adjustment. The clear ordering cases are with P-2, P-7, P-9, and P-49 preceding P-10. In the one problematic case we observed that either P-10 precedes P-11 or P-10 follows P-48 (i.e., P-10 may not apply in between P-11 and P-48). In the light of the other ordering relationships, it would seem most reasonable to assume that P-10 follows P-48 rather than preceding P-11 (an irregular and highly abstract rule applying only within pronominal prefixes).

P-11 and P-48. w_2-Deletion P-11 and $w_2$an-Contraction apply in certain derivations of pronominal prefixes under the maximally abstract analysis of Chapter 9. A sample derivation showing the order of application is given two pages back (bottom of page), in discussing the relationship of P-10 to rules such as P-11. That derivation shows that P-11 precedes and feeds P-48.

General remarks on P-11. As we have just seen, the clearest relationship between P-11 and another rule is its preceding P-48. There is also a possible argument for having P-11 follow Hardening P-18. As P-11 is formulated, the deletion of //w_2// occurs (in a small number of morphemes) in environments involving a preceding vowel or word boundary (presumably nonnasal sonorants could also permit the deletion but no relevant combinations occur); the deletion does not apply to any combinations involving an immediately preceding stop or nasal. Since stops and nasals are hardening consonants (e.g., inducing hardening of following //w_2// to b), and since the same morphemes which undergo P-11 can show this hardening in the correct environment, one analysis would be to have Hardening P-18 precede (and bleed) P-11. In other words, what we have presently formulated as a restriction built into P-11 could also be taken care of indirectly by allowing P-18 to apply prior to P-11.

P-12 and P-18. Stem w_2-Deletion P-12 is similar to P-11 in that it deletes morpheme-initial (here stem-initial) //w_2// in a few specific morphemes under given conditions. A similar argument to that just given (for P-11 and P-18, preceding paragraph) can be used to suggest that P-12 follows and is bled by Hardening P-18. Thus a form like //-$w_2$ibi// 'mother' will become /-bibi/ if the environment for P-18 is met (preceding morpheme ends with stop or nasal), but if P-18 fails to apply P-12 can then delete the //w_2//. Indeed, the argument for having P-18 precede P-12 is stronger than that for having P-18 precede P-11 (since not all of the prefixes affected by P-11 occur in hardening environments).

We conclude that P-18 precedes and bleeds P-12, though it is technically possible to avoid this by building in the appropriate restrictions on the application of P-12.

P-12 and P-46. V-Truncation P-46, which accounts for such reductions of noun-class prefixes as //n^{g}ara-// → /n^{g}ar-/ before a high vowel, applies to the output of P-12:

n^{g}ara-$w_2$ibi
P-12 n^{g}ara-ibi
P-46 /n^{g}ar-ibi/ 'your mother'

Hence P-12 precedes and feeds P-46.

P-12 and P-49. P-12 likewise precedes and feeds VV-Contraction P-49, which applies instead of P-46 when the vowel which follows

the deleted //w_2// is //a// rather than a high vowel, as in this example:

na-$w_2$awan-n^yij
P-12 na-awan-n^yij
P-49 /na:-'wan-n^yij/ 'father-child pair'

If there are other speakers who maintain a partial hiatus between the two /a/-vowels and thus produce /na-awan-n^yij/, for them P-49 would be followed and counterfed by P-12.

P-13 and P-18. P-13, w_1-Palatalisation, is designed to account for the apparent alternation between //=yi-wu-// and //=w_1i-wu-// as forms of 'to scorch'. The relationship between P-13 and Hardening P-18 is problematic.

The most obvious interaction is that P-13 precedes P-18, since the initial //y// may be hardened to /j/ and the variant initial //w_1// can be hardened to /g/:

n^gan=w_1i-wu-ma-na
P-13 n^gan=yi-wu-ma-na
P-18 n^gan=ji-wu-ma-na
... /n^gan^y=ji-wu-ma-na/ 'I will scorch it(ANA$_\emptyset$)'

-lhaln^g=w_1i-wu-
P-13 [fails to apply]
P-18 /-lhaln^g=gi-wu-/ 'to scorch (with flame)'

However, a possible additional interaction between the two rules might be recognised. The available data include the uncompounded form /=yi-wu-/, and compounds /-lhaln^g=gi-wu-/ and /-jir=yi-wu-/ ('to scorch fur'). If we generalise from this that the choice between //=w_1i-wu-// and //=yi-wu-// is that the former occurs in compounds/derivatives when the preceding morpheme ends in a stop or nasal and the latter occurs in postinflectional position and in compounds/derivatives following segments other than stop or nasal, a connection with P-18 is suggested. Taking //=w_1i-wu-// as base form, we allow P-18 to apply when the preceding morpheme ends in stop or nasal (and when this preceding morpheme is a derivational or compounding element, not an inflectional prefix). This would directly affect //-lhaln^g=w_1i-wu-//, producing /-lhaln^g=gi-wu-/, but would not affect the other forms. In this analysis, P-13 would then apply to //w_1// in this stem which has not already been hardened to /g/ by P-18, converting //w_1// into /y/. A subsequent application of P-18 could apply to //=yi-wu-/, as in the example 'I will scorch it' shown above. Note that this analysis would involve another instance of cyclicity, with one instance of P-18 applying within the stem (here including compound initial and/or derivational prefix plus root, but excluding inflectional prefix), and a later instance of the same rule applying at the inflectional prefix-stem boundary, with P-13 applying in between.

While this analysis is consistent with the data and is colourful, it is not clearly indicated. There are not enough attested compounds of this root to demonstrate that the choice between //w_1// and //y// in compounds/derivatives correlated exactly with the final segment of the preceding morpheme. It is possible that /-lhaln^g=gi-wu-/ is an archaism no longer related to the other forms by productive rules, and that new compounds would all be based on //=yi-wu-//. We will therefore conclude that the only clear ordering relationship is that P-13 precedes P-18, while the possible cyclical application (P-18, P-13, P-18 again) is kept in mind as an intriguing but uncertain elaboration.

P-13 and P-31. It was possible to elicit /=yi-wu-/ 'to scorch' with compound initial /-ay-/, related to noun /a:y/ 'raft, nest'. The resulting geminate //yy// is simplified by Geminate-Contraction P-31:

-ay=w_1i-wu-
P-13 -ay=yi-wu-
P-31 /-a=yi-wu-/ 'to scorch raft (to seal it)'

Thus P-13 (as we formulate it, anyway) precedes and feeds P-31.

General remarks on P-13. Since this rule applies only to one root, and only a few relevant compounds were elicited, we are not completely confident either about how to formulate the rule or about fine details of ordering (e.g., in connection with P-18). However, if our formulation is fairly on the mark we can venture the following. P-13 is a lexically specific rule operating partly without reference to the phonological segments in the preceding morpheme (i.e., on the basis of post-inflectional vs. post-derivational location), but perhaps with some attention to preceding segments in the post-derivational case. Like other lexically specific rules paying little or no attention to precise neighbouring segments, it precedes P-2 (Initial Reduplication). It also precedes P-9, P-18 (in clear cases), and P-31, all of which appear to act as lower-level adjustments operative mainly at morpheme boundaries. There is a possible argument for cyclical ordering vs. P-18 (i.e., P-18, then P-13, then P-18 again), with the first application of P-18 inside the stem and the second applying at the boundary between stem and inflectional prefix, but this is not certain either factually or analytically.

P-14 and P-44. yr-Contraction P-14 might interact with Monosyllable-Lengthening P-44 in the (uncommon) combination of a Nonpast$_3$ verb form (mainly future negative) with Locative //-ruj//:

nu=na-y-ruj
P-50 nu=ni-y-ruj
P-14 or P-15 nu=ni-$\emptyset$-ruj
P-44 /nu=ni:-$\emptyset$-ruj/ 'where he will (not) see him'

P-44 will apply to the verb form //=ni-$\emptyset$//, lengthening it to /=ni:-$\emptyset$/, regardless of whether the form is followed by //-ruj//. Whether the deletion of //-y// in the form above is due to //yr//→ /r/ (P-14) or //iy//→ /i/ (P-15), this deletion should occur before P-44 so that the latter will in fact lengthen the stem vowel. Consider now a distinct derivation:

ni=lha-y-ruj
P-14 /ni=lha-$\emptyset$-ruj/ 'where he was standing'

This differs from the preceding derivation since the vowel preceding the //-y// (here Past$_2$) is not /i/, so there is no question of iy-Contraction P-15 applying and P-14 is definitely necessary in the derivation. In /ni=lha-$\emptyset$-ruj/, I tend to hear a partial but not full lengthening of the vowel in /=lha-/. While there may be some interspeaker variation in this respect, for speakers with unlengthened /ni=lha-$\emptyset$-ruj/ we should have P-14 apply after P-44 (in order that P-44 not apply). Turning back to

the first derivation above, /nu=ni:-Ø-ruj/ with /-Ø-/ representing earlier //y// was described as showing the operation either of P-14 or P-15, which in this instance overlap (have the same effect). In the light of our second derivation, it now appears that it was P-15 rather than P-14 applying in the first derivation. The order of application indicated by the combination of the two derivations is thus P-15, then P-44, then P-14.

So P-14 follows and counterfeeds P-44.

P-14 and P-50. In the derivation of /nu=ni:-Ø-ruj/ on the previous page, if //nu=na-y-ruj// is the correct base form we do not want P-14 to apply before V-Fronting P-50. If P-14 were the first rule to apply, we would get *//nu=na-Ø-ruj//, hence output */nu=na-Ø-ruj/ or */nu=na:-Ø-ruj/. We do not want to delete the //-y// suffix until after this element has induced V-Fronting, by which the preceding //a// in the verb root is shifted to /i/. P-14 therefore must follow P-50.

P-15 and P-44; P-15 and P-50. In the derivation of /nu=ni:-Ø-ruj/ on the previous page, we indicated that either P-14 or P-15 should apply after P-50 but before P-44. Our later discussion in the same section showed that in other contexts P-14 can follow P-44, so in /nu=ni:-Ø-ruj/ we conclude that it is P-15 and not P-14 which is at work.

Thus P-15, iy-Contraction, follows and is fed by V-Fronting P-50. Also, P-15 precedes and feeds Monosyllable-Lengthening P-44.

P-16 and P-18. Lenition P-16 is a lexically restricted rule accounting for stop/continuant alternations at an early level, depending on the position of the root in question in the word (immediate postinflectional vs. postderivational including compound-final position). Roots whose early initial segment, e.g., //dh// vs. //lh//, is determined by this rule undergo later, lower-level rules. Specifically, when a continuant like //lh// is preceded by a morpheme ending in a hardening consonant (stop or nasal), it is hardened by P-18 to a stop regardless of whether it is a true underlying //lh// or an intermediate //lh// derived from an even more abstract //dh// in our analysis:

	-wa:G=dhida-
P-16	-wa:G=lhida-
P-18	-wa:G=dhida-
...	/-wa:=dhida-/ 'to block off for' (Benefactive)

Here we get //dh// → //lh// by Lenition because Benefactive allomorph //-wa:G-// counts as a derivational prefix. However, since this prefix ends in a stop archiphoneme //G//, it induces subsequent Hardening P-18 back to /dh/. The stage with //lh// is necessary, however, since n^gu-Epenthesis P-1 does not apply, as it would to this form if we had root-initial //dh// at the appropriate stage in the derivation.

P-16 precedes and feeds P-18.

P-16 and P-31. Occasionally we get a geminate consonant cluster across a boundary because of P-16, inducing Geminate-Contraction P-31 to apply:

	-ay=jalalaga-
P-16	-ay=yalalaga-
P-31	/-a=yalalaga-/ '(nest) to stick out'

On the other hand, P-16 may temporarily alter an underlying geminate cluster, threatening to bleed P-31, but in these cases it happens that P-18 intervenes and restores the geminate so that P-31 can apply after all:

	-lhaj=jalalaga-
P-16	-lhaj=yalalaga-
P-18	-lhaj=jalalaga-
P-31	/-lha=jalalaga-/ '(firewood) to stick out'

In any event, P-16 clearly precedes P-31.

General remarks about P-16. This rule is an early, lexically specialised rule applying regardless of the specific phonological segments across the morpheme boundary. It precedes other rules with which it interacts: P-1, P-18, and P-29.

P-17 and P-18. digu-Lenition P-17, a minor rule relating the adjectival noun /digu/ 'raw, cooked' to its compound-initial form /-rigu-/ or /-rugu-/ (regardless of phonological environment), can feed Hardening P-18:

	n^gan-digu=w_2a-n^g
P-17	n^gan-rigu=w_2a-n^g
P-18	n^gan-digu=w_2a-n^g
...	/n^gan-digu=wa-n^g/ 'I will eat it raw'

P-17 and P-31. We presume that /-rigu-/ derived from //-digu-// as compound initial would, if in turn preceded by another derivational morpheme ending in //r//, undergo Geminate-Contraction P-31. However, no actual such combinations are known to occur.

General remarks on P-17. This is a lexically restricted rule not referring to preceding phonological segments. Naturally, it precedes other rules with which it interacts: P-2, P-18, and perhaps P-31.

P-18 and P-27. Hardening P-18 precedes and feeds Nasal-Assimilation P-27:

	n^gan=$w_1$aba-na
P-18	n^gan=gaba-na
P-27	/n^gan^g=gaba-na/ 'I will tie it up'

P-18 and P-28. Semivowel-Deletion P-28 is a rule applying to certain morphemes, such as postposition /-$w_2$ugij/ 'still, only' and Relative suffix /-yin^{y}un^g/. The rule deletes the initial semivowel under some circumstances. However, when such morphemes are preceded by a stop or nasal, Hardening P-18 acts to bleed P-28, with //w_2// → /b/ and //y// → /j/. It is therefore appropriate to order P-18 before P-28, though it would be technically possible to avoid an explicit ordering relationship by building some restrictions into the formulation of P-28:

	n^ganu=na-n^y-yin^{y}un^g
P-18	/n^ganu=na-n^y-jin^{y}un^g/ 'whom I saw'

P-18 and P-29. P-18 also precedes Stop-Deletion P-29, which deletes a stop followed by a consonant under certain conditions.

	-aG=$w_1$aba-
P-18	-aG=gaba-
P-29	/-a=gaba-/ 'to wrap (it) for' (Benefactive)

If P-29 preceded P-18 it would bleed P-18, since the //G// is the hardening consonant which induces //w_1// → /g/ by P-18. Thus P-29 follows and counterbleeds P-18.

P-18 and P-30. Nasal-Deletion P-30 accounts for the deletion of a nasal before certain other consonants including /l/, /l̲/, and unhardened tap /r/. However, nasals are not deleted before //lh// or approximant //r̲//, which are hardened to /dh/ and /d/ after a nasal (or stop); in lexical items whose initial tap //r// undergoes hardening to /d/ after stop or nasal, a preceding nasal is again retained. The obvious generalisation is that in a sequence //NL// with a nasal followed by a liquid, if //L// is hardened to a stop by P-18 the nasal remains, while if //L// is not hardened and thus remains a surface liquid the nasal is deleted. An example where P-18 does not apply:

-yan^{g}=la̲la̲ga-
P-18 [no change]
P-30 /-ya=la̲la̲ga-/ 'to make (it) louder'

Since /l̲/ is not paired with a counterpart stop it cannot be hardened by P-18, so P-30 deletes the nasal. A different example:

-yan^{g}=lhurba-
P-18 -yan^{g}=dhurba-
P-30 [no change]
... /-yan=dhurba-/ 'to obey'

Here P-18 does harden the liquid to a stop, whereupon P-30 cannot apply (there is nothing wrong in Nunggubuyu with a nasal-stop cluster).

Alternative analyses in which P-18 and P-30 did not have to be ordered relative to each other would require extensive and unnatural complications in formulations of the rules.

Thus P-18 precedes and bleeds P-30.

P-18 and P-31. When Hardening P-18 creates a geminate cluster over a boundary, this cluster is reduced by Geminate-Contraction P-31:

-lhud=r̲abi-
P-18 -lhud=d̲abi-
P-31 /-lhu=d̲abi-/ 'to fall heavily'

P-18 precedes and feeds P-31.

General remarks on P-18. Hardening P-18 is a rule applying mainly at boundaries (though related to more general surface sequencing constraints also applying within morphemes). It follows a number of rules which operate within roots or stems without reference to affixal environment, several of these rules also being lexically specialised: P-1, P-2, P-4, P-13, P-16, P-17. On the other hand, P-18 precedes several other boundary adjustment rules involving consonant clusters: P-27, P-28, P-29, P-30, P-31.

In the case of P-12 (Stem w_2-Deletion), we have a slight anomaly in that P-18 seems to apply first, although P-12 is a lexically restricted rule. The relevant applications of P-18 are entirely within a stem (e.g., at the boundary between root and a derivational prefix). This suggests the possibility that there might be an initial application of P-18 within a stem.

Along the same lines, we observed that while P-18 may follow P-13 (w_1-Palatalisation), there is also an (incomplete) indication that P-18 may precede this rule in some derivations. There is thus some suggestion that P-18 may have a cyclical character, applying at one point within a stem, then applying later at the boundary between stem and inflectional prefix.

General remarks on P-19. Leftward Hardening P-19 happens not to interact with very many other rules. P-19 hardens a continuant to a stop in stem-initial (postinflectional) position. The inflectional prefix usually ends in a vowel, in which case no consonant-cluster-adjustment rules apply. Even when the inflectional prefix ends in a consonant (as with $1Sg_b$ /n^{g}an-/), a potential consonant cluster over the boundary is avoided by the insertion of /-n^{g}u-/ between prefix and stem by n^{g}u-Epenthesis P-1.

The rules with which P-19 interacts in actual derivations are P-1 and Initial Reduplication P-2. As we have observed earlier, P-1 follows P-19 since the hardened (stop) resulting from P-19 is treated as a stop in the environment for P-1. (P-19 is thus unlike P-18, the other hardening rule, since P-18 follows and counterfeeds P-1.) On the other hand, P-19 follows P-2 since this reduplication rule operates as though the root in question began with a consonant other than a stop. Thus the order of application is P-2, then P-19, then P-1.

As pointed out earlier, this is apparently inconsistent with the independently established ordering P-1, then P-2. However, a cyclical approach beginning with rules applying to stems only and then allowing some rules to reapply at outer morpheme boundaries can account for the data.

General remarks on P-20 and P-21. These are the two rules inserting /d/ at a morpheme boundary where the second morpheme begins in a vowel and the first ends in /n/. We have shown earlier that both rules follow P-1 since epenthetic /-n^{g}u-/ is not added; P-20 likewise follows P-2 and P-4. On the other hand, we have indicated that P-8 follows both P-20 and P-21. On closer inspection, this simply means that P-8 is a competitive rule (inserting /g/ or /n^{g}/ rather than /d/), and the relative ordering is merely a device to insure that either P-8 or a d-Insertion rule, but not both, can apply at the same boundary. P-20 and P-21 were ordered before P-8 simply because P-20 and P-21 apply at restricted types of boundaries and it is easier to have the more general rule P-8 follow them.

P-22 and P-26. As Nasalisation P-22 and Palatal-Deletion P-26 are formulated here it may be necessary to order them:

mij-ni-wiyay
P-22 min^{y}-ni-wiyay
P-26 /mi-ni-wiyay/ 'your children'

However, it could be that P-26 can delete //j// before /n/, in which case a minor extension of P-26 can account for this derivation without assistance from P-22.

General remarks on P-22, P-23, and P-24. Nasalisation P-22 follows n^{g}u-Epenthesis P-1 since P-22 handles consonantal interactions across the boundary between /-n^{g}u-/ and the preceding morpheme, but blocks interactions between the morphemes flanking /-n^{g}u-/. The other (less clear) ordering relation involving P-22, its possibly preceding P-26, is discussed just above.

Denasalisation P-23 is a minor rule applying to one suffix combination. It follows P-1 if we assume that P-1 can in theory apply within suffix combinations (so its failure to apply is a fact which must be accounted for). No other orderings involving

P-23 are known.

rn-Contraction P-24 has been shown above to precede Final Reduplication P-3. This is apparently due to the fact that P-3 is a late rule operating on an essentially complete output word to create a reduplicated variant.

P-25 and P-31. The contraction of //rr// to /r/ (with tap /r/, not approximant /ɹ/), can be handled by either of the two overlapping rules r-Deletion P-25 (//r// deleted after a liquid) or Geminate-Contraction P-31.

ama-lhaar-ruj
P-25 or P-31 /ama-lhaa-ruj/ 'in the crossing'

Actually, to be technically correct we should transcribe the output as /ama-lhaar-uj/ if P-25 is the rule at work, but this is a trivial notational problem.

P-25 and P-31 overlap and cannot be reliably ordered relative to each other.

General remarks on P-25. There do not appear to be any rules which must be ordered relative to P-25. In principle, a rule such as Lenition P-16 or Leftward-Hardening P-19 might involve //r// → /d/ or //d// → /r/ in root-initial position, whereupon a preceding morpheme ending in a liquid could trigger deletion of /r/ or some other interaction involving P-25. However, in practice alternations of /d/ and /r/ are rare and unproductive, and I can find no clear exx. showing relative ordering with respect to other rules.

P-26 and P-50. A "palatal-type" consonant such as /j/ can condition fronting of a preceding vowel to /i/ by V-Fronting P-50 before itself being removed by Palatal-Deletion P-26:

=yama-jga-
P-50 =yami-jga-
P-26 /=yami-ga-/ 'to say (it) to (him)'

This form is the Causative of /=yama-/ 'to say', though here Causative /-jga-/ has a distinct meaning. P-26 here is optional, so /=yami-jga-/ is also a possible output.

P-26 follows and counterbleeds P-50.

P-26 and P-31. Underlying //jj// simplifies to /j/. This can be accounted for by either Palatal-Deletion P-26 or Geminate-Contraction P-31. The two rules overlap and we cannot determine the relative order.

General remarks on P-26. Palatal-Deletion P-26 is a low-level consonant-cluster simplification rule. In those cases where it interacts with another rule, P-26 follows. The relevant other rules are P-1, P-22, and P-50.

A similar remark applies to other cluster-adjustment rules including P-27, P-28, P-29, P-30, and P-31.

P-28 and P-31. Either Semivowel-Deletion P-28 or Geminate-Contraction P-31 can account for //ww// → /w/ and //yy// → /y/. The two rules overlap and relative order is indeterminate.

P-29 and P-31. Similarly, //gg// → /g/ can be handled either by Stop-Deletion P-29 or Geminate-Contraction P-31.

P-30 and P-31. The contractions of //nn// → /n/ and of //$n^g n^g$// → /n^g/ can be handled by either Nasal-Deletion P-30 or Geminate-Contraction P-31.

P-31 and P-50. Consider this derivation, admittedly involving a rather unusual combination of morphemes:

ni-$w_l$aragara=lha-y-yin^{y}un^g
P-50 ni-$w_l$aragara=lhi-y-yin^{y}un^g
P-15 or P-31 ni-$w_l$aragara=lhi-Ø-yin^{y}un^g
... /ni-$\underline{y}$aragara=lhi-Ø-yin^{y}un^g/ 'which stood (NA)'

Either iy-Contraction P-15 or Geminate-Contraction P-31 deletes the //-y-// inflectional suffix, but not until after this suffix has induced fronting of the preceding vowel.

Regardless of whether it is P-15 or P-31 which applies here (I would say P-15), the point is that both of these rules must be prevented from applying prior to P-50, since if they did P-50 could not apply and we would get the incorrect output.

P-31 follows and counterbleeds P-50.

General remarks on P-27, P-28, P-29, P-30, and P-31. These are, like P-26, all lower-level consonant-cluster adjustment rules, and as such they follow all other rules in those cases where ordering must be recognised. Thus P-1 precedes P-27, P-30, and P-31; P-18 precedes all five rules; and P-8 precedes P-29.

P-32 and P-50. lh-Delateralisation applies to one verb root, and it happens that P-50 must precede and bleed it in one form:

=billha-y
P-50 =billhi-y
P-32 [no change]
... /=billhi-Ø/ 'was tilting'

In other forms of this root, where the stem-final /a/ is retained on the surface, P-32 changes the //lh// to /y/.

P-50 precedes and bleeds P-32.

General remarks on P-32. Because this rule applies to a single verb root it is difficult to determine its ordering relative to most other rules; we can cite only the single ordering relationship just discussed. In any event, recall from our initial discussion of P-32 that, while it is possible to set it up as a phonological rule, there is some reason to think that the alternation of /lh/ and /y/ in this root may involve an ambivalent morphological analysis as either /=bil-yi-/ or /=bil-lha-/, involving the two other verb roots in this inflectional class, /=yi-/ 'to sleep' and /=lha-/ 'to stand'.

General remarks on P-33. Initial Nasal-Deletion P-33 applies to word-initial nasal-stop clusters, deleting the nasal. It interacts with no other phonological rules.

P-34 and P-36. Feminine Prefix-Truncation P-34 and rV-Truncation P-36 are rules which can apply to FSg noun-class prefix //n^gara-//. P-34 applies only before /-$\underline{r}$an^g-/, a 2nd/3rd person marker in some kin terms, and shortens /n^gara-/ to /n^ga-/. On the other hand, P-36 is a very general rule, here converting /n^gara-/ into /n^ga:-/ optionally before a consonant. If P-34 and P-36 are distinct rules, as in this analysis, it is advisable to order P-34 first so that the output in the relevant kin terms will always be /n^ga-/ without the option of showing up as /n^ga:-/.

n^gara-$\underline{r}$an^g-
P-34 n^ga-$\underline{r}$an^g-
P-36 [inapplicable]
... /n^ga-$\underline{r}$an^g-/ (FSg prefix plus 2nd/3rd marker)

We conclude that P-34 precedes and bleeds P-36. However, like some of the other ordering relationships, this is essentially a matter of analytical convenience, since P-34 and P-36 are rules applying to similar inputs and the only point of the ordering is to specify to which inputs P-34 applies and (thus) to which others P-36 applies. Indeed, it might be technically possible to replace P-34 by an alternative analysis: we would say that P-36 applies to //n^gara-ran^g-// (in this instance P-36 would have to be obligatory), and we could set up a minor later rule that would reduce the intermediate representation //n^ga:-ran^g-// to the attested /n^ga-ran^g-/. Therefore we should not make too much of the ordering relationship between P-34 and P-36.

There are no other ordering relationships involving P-34.

P-35 and P-36. Prefix-Truncation P-35 and rV-Truncation P-36 have the same outputs in the cases of FSg/N^{g}ARA //n^gara-//→ /n^ga:-/, and Pl/WARA //wara-//→ /wa:-/, though the two rules have different effects on other prefixes. In forms like /n^ga:-da-gu:-'/ 'that one (FSg/N^{g}ARA, Immediate)', either P-35 or P-36 could have been at work, technically speaking, though I feel P-35 is the correct rule here (since this rule is characteristic of Immediate demonstratives). Order of application is indeterminate.

There are no other clear ordering relationships involving P-35.

P-36 and P-37. Consider this derivation of a pronominal prefix:

w_2V-ri-
P-37 w_2i-ri-
P-36 w_2i:-
... /wi:-/ 3Pl/WARA→ ANA$_{wu-a}$

Here P-36 is a rule applying to the entire pronominal prefix, otherwise /wiri-/, optionally deleting the /rV/ syllable with compensatory lengthening; the rule can apply only when the following morpheme begins with a consonant. In the context of the abstract analysis of pronominal prefixes (Chapter 9), we claim that the quality of the first vowel in /wiri-/ is derived from the quality of the vowel in the second syllable by V-Assimilation P-37. Since the second syllable is eliminated by P-36, P-37 must have already applied in the derivation above before P-36 does.

General remarks on P-36. Though restricted to prefix-final position and unrelated to surface canonical constraints, Prefix-Truncation P-36 does seem to be a fairly low-level rule. Unlike other rules applying within pronominal prefixes, it is sensitive to the phonological segments across the boundary, and it is optional.

The following ordering relationships have been noted above. w_1-Deletion P-9 seems to precede P-36 (at least in my data on this matter; informant variation is expectable in this case); Feminine Prefix-Truncation P-34 seems to precede P-36, though this is really just a matter of specifying which representations undergo P-34 and which undergo the more general rule P-36; V-Assimilation P-37 rather clearly precedes P-36 as just seen.

P-37 and P-38. In our abstract analysis of pronominal prefixes (Chapter 9), on occasion one vowel acquires surface quality by V-Ablaut P-38, and this quality is then copied onto an earlier vowel by V-Assimilation P-37:

n^gV:-rV-N-w_2i-
P-38 n^gV:-ra-N-w_2i-
P-37 n^ga:-ra-N-w_2i-
... /n^garambi-/ 3Pl/WARA→ 1InPl$_a$

Thus P-38 precedes P-37.

P-37 and P-42. V-Assimilation P-37 includes a subrule which is involved in the derivation of one adverbial form:

yuwa:-guni
P-37 yuwu:-guni
P-42 /yu:-guni/ 'to there'

As the rules are formulated, P-37 should precede P-42. However, since the formation is quite irregular phonologically there may be alternative derivations, or else /yu:-guni/ could be taken as an independent lexical item with no relationship to Distant demonstrative stem /yuwa:-/.

P-37 and P-48; P-37 and P-49. V-Assimilation P-37 regularly handles cases of regressive assimilation of vowel quality. In some derivations this rule would seem to precede other rules which contract vowel clusters, $w_2$an-Contraction P-48 and the more general VV-Contraction P-49. Consider first this derivation:

nV:-$w_2$an-nu-
P-37 na:-$w_2$an-nu-
P-11 na:-an-nu-
P-48 na:-n-nu-
P-31 /na:nu-/ 1ExPl→ 3MSg$_b$

This is because the /a:/ in the attested form has acquired its vowel quality by V-Assimilation P-37, although the other vowel in question is later deleted by P-48.

Another ex. involving a pronominal prefix:

nV:-w_2V-ra-
P-37 na:-w_2a-ra-
P-11 na:-a-ra-
P-49 na:-'-ra-
P-41 /nara-/ 1ExPl→ 3Pl/WARA$_a$

(Here /nara-/ may optionally become /na:-/ before a consonant by rule P-36.) This ex. shows that P-37 must be applied before P-49 in the same way it applies before P-48. Another ex.:

bV-ru-ala
P-37 bu-ru-ala
P-49 /bu-ra:-'la/ 'there(Anaph) they come'

Here the problem is that the underlying //u// in //-ru-// combines with the following //a// to produce /a:/. Since the vowel of /bu-/ reflects the underlying (not surface) form of the following vowel, P-37 must precede P-49.

P-37 precedes P-48 and P-49.

General remarks on P-37. V-Assimilation P-37 is a cover term for a number of minor vocalic changes applying within tightly bound morphological units (verb and inflectional suffix, component morphemes within pronominal prefix, specialised adverbs). As such, we expect it to apply at a very early stage.

Indeed, arguments have been presented to show that P-37 precedes P-2, P-4, P-42, P-48, and P-49 (though different subrules of P-37 are involved). The one rule which can precede P-37 is

V-Ablaut P-38, which is a similar set of irregular and lexically restricted developments.

General remarks on P-38. V-Ablaut P-38, a set of distinct subrules changing vowel quality with no apparent phonetic basis at all (unlike P-37 and P-50, for example), applies to specific high-frequency combinations (verb plus inflectional suffix, component morphemes within pronominal prefix, etc.). It precedes other rules to the extent that it interacts with them. Specific rules known to follow P-38 are P-2, P-4, and P-37 (all of which are themselves rather early rules).

General remarks on P-39. Interjection formation, involving the lengthening of the final vowel with an /u/ added for good measure, is obviously a very low-level rule which takes as its input an ordinary surface word and makes slight changes in it to convert it into an exclamation. We have not discussed details of which particular phonological rules precede it since it obviously follows all of them.

General remarks on P-40. Rdp-Shortening, which specifies that the first vowel of a stem preceded by a bisyllabic -Rdp- segment must be short, does not have much opportunity to interact with other rules since it is usually flanked by consonants within the stem. As a technical matter, we have ordered P-40 after the main Initial Reduplication rule P-2 (which accounts for the form of -Rdp- itself), so that we know how many syllables are in -Rdp- at the time when P-40 applies; however, there are other analyses possible in which P-40 is incorporated into P-2, so we should not make much of the ordering here.

The only other potential interaction of P-40 would be with VV-Contraction P-49. For example, if the stem is /=a:ru-/ 'to abandon', the Rdp should be //-ara=a:ru-// after P-2 and then //-ara=aru-// after P-40, unless P-49 applied between P-2 and P-40. The trouble is that the actual output, /-ara:='ru-/, is compatible with either //-ara=a:ru-// or //-ara=aru-// as immediate input, since VV-Contraction will give a long output vowel regardless of whether the second input vowel is long or short. While I would presume that P-40 would be earlier than P-49, this cannot be demonstrated by crucial exx.

P-41 and P-49. Consider this derivation of a pronominal prefix containing three component morphemes:

$n^{g}V:-w_2V-ra-$
P-37 $n^{g}a:-w_2a-ra-$
P-11 $n^{g}a:-a-ra-$
P-49 $n^{g}a:-'-ra-$
P-41 /n^{g}ara-/ 1InPl→ 3Pl/WARA$_a$

Nonsg-Shortening P-41, which insures that the vowel before /-rV-/ in a pronominal prefix will be short no matter what its underlying or intermediate length, appears to be a late rule since we get short vowels in derivations like that just given, although we should otherwise get a preceding long vowel.

Because such interactions are limited to pronominal prefixes under the maximally abstract internal analysis of Chapter 9, one could argue that the relevant instances of P-49 are on an early cycle limited to the prefix(-complex). However, I know of no clear

evidence (such as an ordering paradox) which would compel us to identify distinct cyclical occurrences of P-49. It is true that the whole pronominal prefix, here /n^{g}ara-/, can undergo P-49 when followed by a morpheme beginning in a vowel, hence //n^{g}ara=u-ma-na// (after P-4) becoming /n^{g}aru:='-ma-na/ 'we(InPl) are hitting them'. However, it appears technically possible to have this instance of P-49 applying at the same time as its application within the pronominal prefix.

P-41 therefore follows P-49. There appear to be no other ordering relationships involving P-41.

General remarks about P-42, P-43, P-44, and P-45. These are rules (mostly minor) involving length alternations; only P-44 (Monosyllable-Lengthening) has any productivity.

Adverb-Shortening P-42 follows V-Assimilation P-37 under the analysis proposed here (where P-37 is assumed to be part of the derivation); however, the analysis is debatable.

Length-Shift P-43 applies to one noun root (and its noun-class prefix) and interacts with no other rule.

Monosyllable-Lengthening P-44 precedes Initial Reduplication P-2 and follows iy-Contraction P-15 in the analysis presented here.

Verb-Lengthening P-45 does not appear to interact with any other rule.

P-46 and P-49. V-Truncation P-46 deletes the final vowel of a bisyllabic noun-class prefix before a morpheme beginning with a high vowel. Since VV-Contraction P-49 does not apply here (creating a long output vowel), we order P-46 before P-49 (bleeding order):

ana-uG-lhan^{g}un^{y}
P-46 an-uG-lhan^{g}un^{y}
P-49 [inapplicable]
... /an-u-dhan^{g}un^{y}/ 'wind'

General remarks on P-46. V-Truncation P-46 appears to follow Stem w_2-Deletion P-12 and Velar-Insertion P-8 and to precede VV-Contraction P-49.

General remarks on P-47. yi-Elision P-47, a rule applying only to certain forms of one verb root, has the appearance of being a fairly low-level (though lexically specific) simplification of a haplological character. However, no specific ordering relationships have been established since the verb form in question does not undergo any other rules which would have an overt surface effect.

P-48 and P-49. $w_2$an-Contraction P-48 reduces //-an-// to //-n-// after a vowel, where //-an-// (from earlier //-$w_2$an-//) is the "B" morpheme in pronominal prefixes.

$n^{g}a-w_2an-$
P-11 $n^{g}a-an-$
P-48 /n^{g}an-/ 1Sg$_b$

P-48 is essentially a rival for P-49 (which would have given */n^{g}a:n-/ with long vowel). We order P-48 before P-49 to insure that P-49 (the more general rule) does not apply. P-48 bleeds P-49.

General remarks on P-48. This is a rule applying only within pronominal prefixes, and the specific formulation of the rule is debatable since the relevant output forms show the cumulative effect of several rules. It appears that P-48 as formulated here follows P-11 and V-Assimilation P-37, and precedes y-Insertion P-10 and P-49.

General remarks on P-49. VV-Contraction P-49 precedes a few rules in our formulation. First, it precedes Final Reduplication P-3, a somewhat surface-oriented reduplication applying to some demonstratives. The other rules which follow P-49 are Nonsg-Shortening P-41, which may shorten a long vowel created by P-49; w_1-Deletion P-9, which creates surface vowel sequences which do not consistently contract by P-49; and y-Insertion P-10, a rule which competes with P-49.

Rules which precede P-49 are Initial Reduplication P-2 (which often creates vowel sequences amenable to P-49); V-Assimilation P-37 (which may involve an underlying vowel in its conditioning environment which is later lost by P-49); Stem w_2-Deletion (which feeds P-49); and a number of rules which essentially compete with P-49 and are represented here as bleeding it (P-5, P-6, P-7, P-46, P-48).

We have discussed ordering "paradoxes" involving P-4 and P-49 earlier, and suggested a possible cyclical solution.

General remarks on P-50. V-Fronting P-50 is a rubric for a number of minor, highly lexicalised shifts of a vowel to /i/ next to a "palatal-type" consonant. It precedes the other rules with which it interacts: P-2, P-4, P-14, P-15, P-26, P-32.

3.53 Diagrams of rule ordering.

In the two following pages we summarise the rule orderings just described in tabular form.

On the first following page, we present a diagram in which each numbered rule is given in sequence in the central column. For each such rule, the other rules which precede it are listed by number to the left, and the rules which follow it are listed on the right. (If more than one rule is given on the left or right side, these rules are listed in numerical order without reference to the relative order of the rules in the set.)

It must be emphasised again that some instances of possible rule ordering depend on the particular way in which the rules are identified (as separate entities) and formulated. For example, a number of instances of ordering relations involving Hardening P-18 can be handled either by having P-18 precede the second rule, or by building in a restriction on the second rule (leaving rule ordering indeterminate). In the diagram, some of the more questionable rule orderings are indicated with parentheses () to warn readers of this.

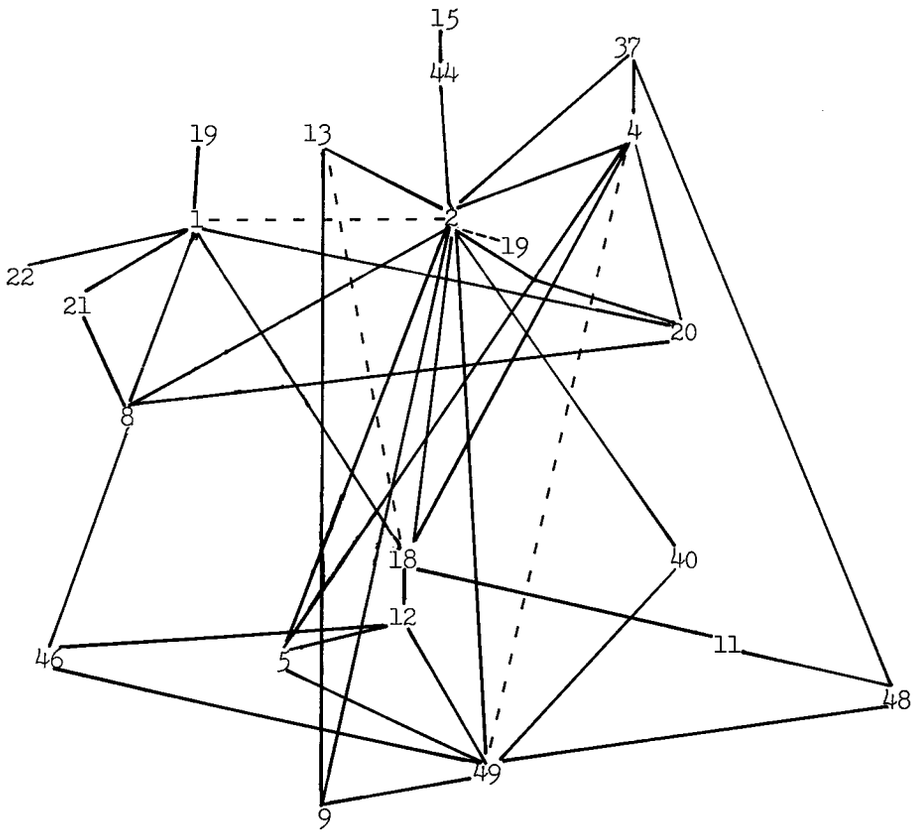
On the next page, we show schematically rule ordering involving those rules which, in the first diagram, are indicated as following one or more other rules and as preceding one or more other rules. The second diagram omits orderings involving rules which do not follow any other rule, and rules which do not precede any other rule (as well as rules which neither precede nor follow another rule). The purpose of the second diagram is to demonstrate the extent to which the orderings in the first diagram are consistent with each other (so that if rule A precedes rule B, and B precedes C, C does not precede A). Obviously, rules which only precede or only follow other rules will not cause ordering problems and can be omitted from the second diagram.

	[2] 16 19	P-1 [2] 8 18 20 21 22 (23) 26 27 30 31
[1] 4 13 17 [19] (37)	38 44 50	P-2 [1] 5 7 8 9 10 18 [19] 20 40 49
	24 49	P-3
	37 38 [49] 50	P-4 2 5 18 20 36 [49]
	2 4 12	P-5 (49)
		P-6 8 9 18 49
		P-7 10 49
	1 2 6 20 21	P-8 29 30 31 (46)
	2 6 13 49	P-9 10 (36)
	2 7 9 48 49	P-10
	(18)	P-11 48
	(18)	P-12 5 46 49
	[(18)]	P-13 2 9 [18] 31
	44 50	P-14
	50	P-15 44
		P-16 18 31
		P-17 2 18 (31)
1 2 4 6 [13]	16 17	P-18 (11) (12) [(13)] 27 28 29 30 31
	[2]	P-19 1 [2]
	1 2 4	P-20 8
	1	P-21 8
	1	P-22 (26)
	(1)	P-23
		P-24 3
		P-25
	1 (22) 50	P-26
	1 18	P-27
	18	P-28
	8 18	P-29
	1 8 18	P-30
1 8 13 16 (17)	18 50	P-31
	50	P-32
		P-33
		P-34 (36)
		P-35
	4 (9) (34) 37	P-36
	38	P-37 (2) 4 36 (42) 48
		P-38 2 4 37
		P-39
	2	P-40 (49)
	49	P-41
	(37)	P-42
		P-43
	15	P-44 2 14
		P-45
	(8) 12	P-46 49
		P-47
	11 37	P-48 10 49
2 [4] (5) 6 7 12 (40)	46 48	P-49 3 [4] 9 10 41
		P-50 2 4 14 15 26 31 32

Explanation: rules on left (right) precede (follow) rule in central column; () means doubtful ordering; [] indicates cyclical ordering.

FIGURE 3-1

Selected Rule Orderings



Explanation: solid lines indicate simple linear ordering with rule higher in vertical axis preceding other rule; broken lines indicate more complex (cyclical) ordering relationship. Figure includes only rules which, in preceding diagram, both precede and follow at least one other rule.

- -

Figure 3-1 (above) indicates that, except for instances of variable (cyclical) ordering identified earlier, there are no ordering paradoxes of the type A precedes B, B precedes C, and C precedes A. That is, to a considerable extent we can analyse phonological outputs as involving the sequential application of all the rules in a given order on one cycle.

3.54 Final remarks on phonology.

Obviously there are a number of alternative ways to analyse some phonological alternations, and various ways to present the

FIGURE 3-2

Model of Word Structure (Verb)

slots	1 (1_a,...)	2	3	4	5	6	7	(8)
morphemes	[[PRON]	[[[[RDP	[[[DER_1	[[CPD	[ROOT-DER_2-INFL]]]]			(X)
submorphemes	CM_1	CM_2...						
boundaries	P_1...	L_4	L_3	L_2	L_1	R_1	R_2	(R_3)

note: obligatorily filled slots are 1, 5, 7

- -

overall system in one theoretical/notational format or other. One general remark is that the rules can be (at least roughly) grouped into categories based on morphological context.

We begin by distinguishing morphophonemic (morphologically restricted) rules from low-level rules which apply to any relevant combinations. We now consider types of morphophonemic rule, using the schema in Figure 3-2, above, for verbs (other word classes show a generally simpler pattern).

To begin with, some rules apply specifically within the "core" sequence ROOT-DER_2-INFL, where DER_2 is a derivational suffix (Refl, Recip, Caus, see Chapter 10), and INFL is an inflectional suffix expressing tense/aspect/mood/negativity (Chapter 11). For example, many idiosyncratic minor rules listed as subrules of V-Assimilation P-36, V-Ablaut P-38, and V-Fronting P-50 apply at R_1 and/or R_2 boundaries.

We would presume that a further bracketing might be made, with ROOT-DER_2 an "inner core" sequence and INFL coming in at the next cycle. However, there is no convincing evidence for this. The major reason is that these core morphophonemic rules operate in such a way that if there is a nonzero DER_2 morpheme, rules triggered by INFL do not undo (previous?) rules triggered by DER_2 (affecting ROOT). The possible counterexample is //=n^gawa-'-n^g// 'will die', if taken as //=n^gawa-i-n^g// → /=n^gawi-'-n^g//(VV-Contraction P-49 on ROOT-DER_2 cycle) → /=n^gawa-'-n^g/(V-Ablaut P-38 on next cycle). However, regular Refl forms in //=ROOT-i-// normally take Nonpast$_1$ /-n^y/ without ablaut instead of /-n^g/ with ablaut (i.e., belong to I_1 rather than I_2 verb class), and /=n^gawi-'-/ 'to die' might be thought of as a synchronically unsegmentable root rather than as the Refl of /=n^gawa-/ 'to cover up'.

One feature of the core morphophonemic rules is that they are contact rules (as opposed to 'blind' rules, cf. below), in the sense that they appear to involve interactions among actual phonological segments across the boundary. Though morphologically restricted, they are in most cases motivated (assimilatory, etc.).

A quite different set of rules, blind L_{1-2} rules, apply to the initial segment of ROOT when one or more of slots 3 and 4 are filled by a nonzero morpheme, but not if slots 1 or 2 are directly adjacent to ROOT. These rules, which are morphophonemic and restricted to lexically specified roots, are 'blind' in the sense that the specific phonological segments across the boundary are irrelevant.

These rules are w_1-Insertion P-6, Stem w_2-Deletion P-12, and Lenition P-16. There are also some very similar rules, which however are not totally 'blind', since they may be affected or blocked when the preceding morpheme ends in certain segments; these are Homorganic-Semivowel Deletion P-4 and w_1-Palatalisation P-13. We may call these one-eyed L_1-2 rules, and regard them as intermediate between contact and blind rules. Another similar rule, Leftward-Hardening P-20, is a blind L_1-3 rule; it makes no reference to specific phonological segments over the boundary to the left from the root, but applies only to a root (or reduplicative segment) occurring at the L_4 boundary (so that slots 3 and 4 must be empty). (Figure 3-2 does not show the alternative "internal" reduplication with RDP directly adjacent to root; in this pattern, Leftward-Hardening does not apply even to the reduplicative segment if this is preceded in turn by DER_1 or CPD.)

Another rule which requires mention here is $n^g u$-Epenthesis P-1, which can apply locally at L_1, L_2, and/or L_4 (not L_3) in the figure. Except for the L_4 application, P-1 resembles a blind L_1-2 rule in the sense that it is triggered by a specific initial segment at the beginning of the morpheme to the right of the boundary, which must be a stop, but only by the grammatical status (not segmental composition) of the morpheme left of the boundary. It differs from the blind L_1-2 rules mentioned above in that it does not apply only at the ROOT boundary; it may also apply, say, between DER_1 and CPD. In its application at the L_4 boundary (between PRON and any following morpheme, including ROOT if no intervening morpheme occurs), it is sensitive to whether the PRON morpheme ends in a vowel or nasal. We might say, then, that P-1 is both an iterative blind L_1-2 rule and a half-blind L_4 rule, though even in the latter context it is not a contact rule in any obvious sense. Because of its iterative nature it provides interesting evidence on cyclicity, especially vis-à-vis Initial Reduplication P-2.

These morphophonemic rules produce intermediate representations which will later be affected by low-level rules (see below) which apply without morphological restrictions. However, there may be some transitional rules, namely contact rules applying at boundaries L_1 to L_2 with a limited amount of morphological specialisation. Here I am thinking principally of the rule Velar-Insertion P-8, which insert consonants before otherwise morpheme-initial vowels when the preceding morpheme ends in certain consonants. This is thus an L_1-2 contact rule (morphophonemic).

Assuming for the moment that PRON is fully specified phonologically at the time rules apply at the L_4 boundary, we now observe that there are some special rules which apply only at this boundary. The most striking is Pronominal d-Insertion P-20, which inserts /d/ and lengthens a following vowel (when PRON ends in /n/ and the next morpheme begins in a vowel); there is no productive counterpart to this at other boundaries (see P-21 for a couple of quite frozen, minor instances). It is also notable that the reduplicative segment (by P-2) is located just after PRON in the most productive pattern. We may refer to P-20 at least as an L_4 contact rule (morphophonemic), being roughly the L_4 counterpart of Velar-Insertion P-8 at L_1/L_2. There are likewise a number of special rules for nouns and demonstratives affecting noun-class prefixes (inflectional type), which structurally and semantically resemble PRON in the verbal schema of Figure 3-2; some such rules are Feminine Prefix-Truncation P-34 and V-Truncation P-46. Moreover, rV-Truncation P-36, an optional rule, applies both to verbal and nominal prefixes. These rules collectively constitute a set of L_4 contact rules (morphophonemic).

In addition to the morphophonemic rules we have considered, there are also many low-level rules which apply later, generally converting unacceptable segmental sequences into acceptable ones (cf. the clustering possibilities dealt with in Chapter 2). Most of these affect consonant combinations occurring over boundaries, including regressive assimilation (Nasalisation P-22, Nasal-Assimilation P-27), deletion of pre-boundary segment (yr-Contraction P-14, Palatal-Deletion P-26, Stop-Deletion P-29, Nasal-Deletion P-30, and perhaps Geminate-Contraction P-31), and deletion of post-boundary segment (Semivowel-Deletion P-28, r-Deletion P-25). The important Hardening rule P-18 also belongs here. These are contact rules with strong surface motivations.

VV-Contraction P-49 is another important rule, but difficult to categorise in this framework. It applies to a wide variety of vowel sequences across boundaries, including all of L_1 to L_4 in the figure with substantially the same details. It also applies to later boundaries like R_1 (with Refl //-i-//) and R_2 (several exx. in Chapter 11), as well as to numerous other suffixal boundaries with personal pronouns and demonstratives, but in the suffixal instances the details for the output vowel are somewhat different. Although P-49 has some affinities with other low-level rules, since it restructures bad sequences of segments at boundaries, the specific version which applies depends on morphological location (and appears to have been affected by functional factors in the suffixal exx.).

As the analysis in Chapter 9 shows, it is possible to argue that PRON in Figure 3-2 is actually a complex of component morphemes (CM_1, CM_2, etc., in the figure), ranging from zero to several such components. The abstract analysis in that chapter requires a number of purely morphological, pre-phonological morpheme rules (additions, deletions, reorderings, substitutions), plus early allomorph specification rules for the CMs, to which phonological rules then apply. Some of these phonological rules are identical to regular low-level rules like Hardening P-18, but there are also some fairly early morphophonemic rules which apply only within PRON. These include some subrules listed above under V-Assimilation P-37 and V-Ablaut P-38, but also Prefixal w_2-Deletion P-11 and $w_2$an-Contraction P-48. These rules have the same general appearance, though differing in precise form, as core morphophonemic rules described above. It is reasonable to conclude that PRON undergoes a reasonably complex internal cycle of early morphophonemic rules, and then at a later stage undergoes rules applying at its boundary (L_4) with the next following nonpronominal morpheme. For this reason, I represent PRON in Figure 3-2 with its own brackets, indicating that early rules apply to the CMs within its scope. We may refer to these as CM morphophonemic rules.

In the figure, the optional (X) in slot 8 represents a case-suffix subordinator or postposition (see Chapter 16, also §12.21). These

elements are rather peripheral for verbs, and the rules which apply to them are the low-level rules like Hardening P-18.

This framework accounts for most of the phonological rules in this chapter. The main exceptions are Final Reduplication P-3, an unusual rule used in some demonstrative derivations, applying to surface input word forms to create new derived words (contrast the more common Initial Reduplication P-2, a fairly early phonological rule whose output is often sharply reshaped by later rules such as VV-Contraction P-49). In addition, there are a few rules affecting vowel length which do not fit neatly into the above categories, since they involve vaguely metrical considerations at word or stem level (Rdp-Shortening P-40, Adverb-Shortening P-42, Length-Shift P-43, Monosyllable-Lengthening P-43), cf. also the more strictly morphophonemic length rules (Nonsg-Shortening P-41, Verb-Lengthening P-45).

The analysis just presented will work fairly well for nouns, pronouns, and demonstratives (as well as verbs) with some adjustments. For nouns, we equate inflectional noun-class prefixes (§4.7) with PRON, consider Pl prefix allomorph /-mij-/ (§4.15) and Multiple /-$w_1$ara(G)-/ (§4.17) among others to belong in the area of slots 3 and 4 (DER_1-CPD), recognise Human Sg /-yun^g/ or /-n^{y}un^g/ and perhaps Dual /-w_2a:/ (§4.15) to correspond in location to INFL (slot 7), and case suffixes and postpositions to belong with X (slot 8) in Figure 3-2.

All of this, of course, rests on acceptance of the synchronic reality of the various phonological rules we have formulated. Because of the opacity of the underlying representations and the complexity of our derivations, it could reasonably be objected that a more surface-oriented analysis might be called for. In such an analysis, we would probably take the pronominal prefixes (PRON) as ready-made, without internal structure, or at least with less abstract representations than in Chapter 9. We would also take combinations involving DER_2 and/or INFL in Figure 3-2 as "given" by the lexicon, perhaps with some form of inflectional-class paradigm component, rather than having DER_2 and INFL just added to ROOT with rules then accounting for outputs. The 'blind' L_{1-2} and L_{1-3} rules would also be relegated to the lexicon. The surviving phonological rules would be basically the low-level rules along with some other rules affecting the relatively transparent boundaries like L_1 to L_4 and R_3.

Thus, a word like /nambambi-yaragara:='ru-ni/ 'they[Pl] will cut us[InDu]', instead of being set up as

[[na-N-$w_2$an-w_2i-] [-$w_1$aragara-[=a:ru-ni]]

with early cycles of rules applying within the PRON brackets at the beginning and the inner-bracketed ROOT-INFL sequence at the end, with later rules applying at the remaining boundaries, would come in as

[[nambambi-] [-$w_1$aragara-[=a:runi]]

with most of the work already done by the lexicon and the paradigm component, leaving the remainder to the relatively transparent phonological rules still recognised. Similarly, /n^{g}and=a:di-jgi-∅/ 'I will not make it call out', will not be put in as

[[n^{g}a-$w_2$an-][=ada-jga-y]]

with a number of irregular CM morphophonemic rules in the first bracket (PRON) and two distinct occurrences of V-Fronting P-50 in the following complex (ROOT plus CAUSATIVE plus INFL), rather it will enter in the form

[[n^{g}an-][=adijgi]]

with just Pronominal d-Insertion P-20 at the boundary.

I am rather sympathetic to such a surface analysis, but perhaps it would be better to say that I think the forced choice between abstract and surface analyses does not adequately reflect the probable simultaneous "psychological" reality of both to Nunggubuyu speakers. In any event, I emphasise the abstract analysis in my formal presentation, since it is easier for readers to develop more surface-oriented alternatives to an explicit abstract analysis than it would be to work out their own abstract analyses from a compilation of hundreds of surface forms.

Chapter 4

Noun morphology

4.1 General.

In this chapter we deal with basic nominal morphology. We exclude information about kinship terms, which have many special features and are treated separately in the next chapter. Some demonstrative constructions discussed in Chapter 7 function as derived nouns, but their special features are dealt with in that chapter, not here. Compounds and other derivational formations are handled in Chapter 14 but the present chapter includes treatment of noun-class and number-marking even when derivational (as opposed to inflectional) affixes are involved.

A typical noun in Nunggubuyu might consist of a stem preceded by a noun-class (NC) prefix and followed by a case suffix. Thus /a-wu̲rugu-wuy/ 'to the pond' consists of noun /wu̲rugu/, with a NC prefix /a-/ of the ANA class (punctual prefix series), and Allative-Dative case suffix /-$w_1$uy/, here in allative sense. Neither the prefix nor suffix slot is obligatorily filled; the simple form /wu̲rugu/ 'pond, billabong' can also occur, though one might say that there is really a /-Ø/ Nominative suffix here. We refer to the regular NC prefixes (including punctual and continuous series for nonhuman categories) and to the case suffixes as (outer) inflectional. There is also a series of inner or derivational NC prefixes which take a noun root and convert it into a derived noun with the NC category specified by the derivational NC prefix, which can thus be preceded by the regular inflectional NC prefix. The noun /wu̲rugu/ happens to have one such derivative, //maG-w_2u̲rugu//→ /ma-bu̲rugu/ 'billabong'. The Allative-Dative form of this would then be /ama-ma-bu̲rugu-wuy/, with /ama-/ instead of /a-/ since the derived noun is of MANA class. The other important morphological features are number markers. These include Human Sg /-yun^g/ and allomorphs, Dual /-w_2a:/, and a variety of Pl markers depending on the root (including Initial Reduplication by rule P-2). Number markers can be considered formally derivational since they occur directly next to the root, are often lexically specialised, and are flanked by inflectional prefixes and suffixes. (These terms are used differently for verbs.)

There are also a number of postpositions (or postpositional suffixes) which go on at the very end of the word (after inflectional suffixes, if present). Phonologically these are suffixes rather than enclitics and interact with the preceding morpheme by phonological rules; however, they are outside of the scope of reduplication (by P-2) and are, in some cases, functionally related to the whole clause and just happen to be pegged onto a noun in a given case. See §4.32.

Please note that inflectional and derivational noun-class markers are abbreviated NC_{infl} and NC_{der}, respectively. At various points in the grammar we will refer to the former as NC markers, it being understood that unless specified to the contrary we are talking about the regular inflectional prefixes.

Beginning with this chapter we will be making numerous textual cross-references. Readers may wish to review the notation for such references provided at the beginning of the volume.

4.2 Common and adjectival nouns.

In the published dictionary I mark some nouns as "NAdj" and others with notations beginning with "Nc" ("NcNa" or the like). These designate adjectival and common nouns, respectively.

Nouns functioning as adjectives do not constitute a sharply distinct word class in Nunggubuyu, but they do have derivational and syntactic possibilities not permitted with common nouns and must be set off as a subclass of nouns. Both types of noun can take the same basic inflectional affixes; one can say, for example, /a-wu̲rugu-wuy a-ru̲n^{g}gal-wuy/ 'to the big pond', where both the common noun /wu̲rugu/ 'pond' and the adjectival noun /ru̲n^{g}gal/ 'big' have the same NC_{infl} and case affixes. Both types of nouns also have Pl forms (at least with human reference).

However, a NAdj can also occur in special predicative forms, while a Nc cannot. (Note that we are talking about forms, not functions--a Nc can occasionally show up as a nonverbal predicate, but does not have a special predicative form in this case.) The predicative form requires, minimally, that the usual NC_{infl} prefix be replaced by an intransitive pronominal prefix of the sort used with verbs, as in /wu=ru̲n^{g}gal/ 'it (e.g., pond) is/was big' with ANA class prefix. One cannot say */wu=wu̲rugu/ 'it is/was a pond'. In the predicative form, one has the option (and in some contexts the obligation) to fully verbalise the NAdj by adding Inchoative suffix /-ma-/ (or functional equivalent) plus a verbal inflectional ending, as in /wu=ru̲n^{g}gal-ma-n^{y}/ 'it(ANA) became/has become big'. Again, one cannot say */wu=wu̲rugu-ma-n^{y}/ 'it(ANA) became/has become a billabong'. A NAdj usually also has a corresponding transitive (Factitive) derivation with suffix /-w$_1$a-/, requiring transitive pronominal prefix: /niwu=ru̲n^{g}gal-wa-n^{y}/ 'he made it(ANA) big, he enlarged it'. See §10.8-9.

In terms of how they map onto the lexicon, NAdj and Nc in Nunggubuyu are somewhat distinct from English adjectives and nouns. Specifically, terms for humans (excluding kin terms and personal names) are normally NAdj in Nunggubuyu; thus /wa̲lyi-n^{y}un^{g}/ 'man' is merely a form of the NAdj /wa̲lya/ 'male' which can also be applied to nonhumans, and which can occur in predicative form as

in /n^{g}a=wa̲lya/ 'I am male, I am a man'. Actually, nouns of primarily human reference tend to be used mainly in nonpredicative forms, so the difference between them and common nouns is not very salient in texts, but it is there in principle.

Common nouns (Nc) are therefore mainly terms designating flora and fauna spp., implements, natural features, and abstractives. (Personal names, see §4.4, and kin terms, next chapter, are arguably subtypes of common noun, however, and in §4.3 we consider adverbial nouns which also share some features with Nc.)

In examining texts, it becomes apparent that a single English sentence or clause may correspond to more than one Nunggubuyu clause. We will see in Chapter 7 that an English demonstrative pronoun or adverb may correspond to a predicative demonstrative in Nunggubuyu, so that 'This man hit me' becomes '(He is) this, he hit me' (though there need be no pause between the two predications). This is also true of many NAdj. A fair number of these can function either as adjectives or as adverbs, and where syntactically appropriate (i.e., in positive rather than negative senses) we often find them in predicative NAdj form:

(4.i)	ni=ya:-ri: he goes	ni=n^{g}u̲lun^{g}u̲lug he (is) fast	'He goes fast'
(4.ii)	ni=ya-n^{g}gi he goes	ni=n^{g}u̲lun^{g}u̲lug he (was) fast	'He went fast'
(4.iii)	ani=ya:-ri: he will go	ani=n^{g}u̲lun^{g}u̲lug he (will be) fast	'He will go fast'

Note that in this set of exx., the intransitive pronominal prefixes (which distinguish the present positive from the future positive continuous) are the same on both verb and NAdj. However, the NAdj can also be without prefixes, or can take an ANA class prefix (this class being characteristic of adverbial nouns, see below). In positive contexts the unprefixed form is common:

(4.iv) ni=ya:-ri: n^{g}u̲lun^{g}u̲lug 'He goes fast'

On the other hand, in negative contexts the only form which can be used is the form with /ana-/ prefix (in adverbial sense):

(4.v) wa:-'ri ani=ru̲ma-n^{g} ana-n^{g}u̲lun^{g}u̲lug
not he (not) go ANA-fast
'He is not going fast'

Some nouns which behave more or less like /n^{g}u̲lun^{g}u̲lug/ 'fast' in this fashion are /balhabalha/ 'fast', /ma:la̲mburg/ 'proper(ly)', /lhalga/ 'alone', /w$_2$iri̲wiri̲/ 'alone', /dhan^{g}ga:burg/ 'stationary', /w$_2$urugurij/ 'slow', and /w$_1$un^{y}ugun^{y}ig/ 'slow'. But see §15.6, end.

There are some NAdj which occur almost always in predicative form (with intransitive pronominal prefixes). These include /marbuy/ 'know(ing)', /ma̲la̲la:di/ 'not know(ing), ignorant', /ambadhi/ 'unaware', and /w$_1$/w$_2$u̲rag/ 'left behind, left alone'. Thus /n^{g}a=marbuy/ 'I know', /ni=wu̲rag/ 'He is/was left alone'. Note that these usually translate into English with verbs.

Numerals, particularly those based on the root /w$_2$ula-/ 'two' (hence including /w$_2$ulan^{y}baj/ 'three' and /w$_2$ulal-wulal/ 'four'),

are also very often in predicative form when they are simple adjectival modifiers in English:

(4.vi) wini=wula-wa: na-walya-wa: 'two men'
they(MDu) are two men(Du) NMET 14.12.4

Here one could also say /na-wula-wa:/ with NC_{infl} prefix (masculine /na-/), and textual occurrences of this form can be cited, but it is usually more idiomatic to use the predicative form with intransitive pronominal prefix, here $3MDu_a$ /wini-/. (In some combinations the //w_2// of the stem is dropped with resulting VV-Contraction P-49 in these numeral predicates; see rule P-4, part d, in Chapter 3.) For numerals in general see §14.25.

In dictionary entries for NAdj, each cited textual cross-reference includes the notation "pred" if the ex. in question is in predicative form (with intransitive pronominal prefix rather than NC_{infl} prefix or zero). Inchoative and Factitive derivatives are given separately at the end of the NAdj entry, if attested in the data.

4.3 Adverbial nouns.

The dictionary lists a fair number of stems with the label "NcAna(Adv)," which means a common noun of ANA noun class which can function as an adverb. Adverbs are thus not a special word class in this language, but are rather merely a subtype of common noun, taking regular NC_{infl} prefixes.

Some exx. of adverbial nouns, as we may call them (with abbreviation NAdv), are temporal adverbs /agalgi/ 'yesterday', /agaray/ 'tomorrow', /yimbaj/ 'today, nowadays', /adharwara/ '(at) dusk', and /min^{y}n^{g}u/ '(at) night', and spatial adverbs /bandhara/ '(in the) middle', /adha:dhari/ 'behind', and /bi:lu/ 'windward'. There are also some others such as /an^{g}udu/ 'forcefully' and /balanu/ 'permanent(ly)'. As we have seen in the previous section, some stems are either NAdj or NAdv. In Chapter 7 we will discuss several types of demonstrative adverb which can also be regarded as NAdv.

The category of NAdv is essentially designed to capture the fact that nouns of this type tend to avoid inflectional affixes, though they are capable of taking them. Whereas ordinary Nc (common nouns) take NC_{infl} prefixes quite often (omitting them mainly in contexts involving some degree of focus, see §4.8), NAdv usually avoid the prefix. Many NAdv also avoid case suffixes, even though they often correspond to prepositional phrases in English; one says /min^{y}n^{g}u/ 'night' instead of a case form ('at night', 'in the night'), at least in general. That they are common nouns of ANA class, however, is shown by the fact that they must take the NC_{infl} prefix (continuous series) in negative contexts (§15.6).

(4.vii) n^{g}an^{y}=ja:-ri: agaray 'I will go tomorrow'
I will go tomorrow

(4.viii) yagi n^{g}a=rumi-ø ana:-'garay
not I will (not) go ANA-tomorrow
'I will not go tomorrow'

Adverb-like elements which never take a NC_{infl} prefix, even in negative contexts, are analysed as particles (labeled as "Part" in dictionary entries). However, aside from interjections and verbal root forms (on which see §12.2), there are only a small number of particles in this sense and most of these are not functionally adverbial. (Some particles are yes/no interrogative /yu:ga/, /ari/ 'maybe', /yagu/ 'but', /mari/ 'and', /n^{g}a/ 'and so'.) However, /adaba/ and reduced variant /aba/ 'now; (just) then' are particles which translate as adverbs (but demonstrative adverbs meaning 'here' and 'there' are definitely NAdv). The NAdv /arbidi/ 'anyhow, in any way' is attested a number of times (especially in negative clauses) with NC_{infl} prefix as /ana:-'rbidi/, but is is also attested once or twice without prefix in negative context, suggesting that its nominal status is somewhat fuzzy. See Chapter 12.

4.4 Personal names, including necronyms.

Traditional personal names of Aboriginals were totemic names, usually belonging to clan ancestors and also functioning as totemic epithets in clan camp songs (/wun^{g}ubal/) or ritual songs. Some personal names in current use also happen to be ordinary terms for a totemic sp., but most personal names are totemic epithets otherwise used only in clan songs or rituals. Some dogs belonging to Aboriginals also have names. For some background information see texts 80 through 89 in NMET.

Personal names take regular human NC_{infl} prefixes (§4.7, §4.8), namely M (masculine) /na-/ and F (feminine) /n^{g}ara-/. The prefix may be omitted under essentially the same conditions as it is with other human nouns (§4.8). The original noun class category of the totemic object is not carried over to the personal name. In the case of a name of a domestic dog, the NC_{infl} prefix may be either /na-/ or /n^{g}ara-/ for male or female, or less often /wara-/ (the prefix for the WARA class, of which the generic term /landhurg/ 'dog' is a member).

Some exx. of personal names are in NMET 163.1.2-3 and text 164.

The primary difference between personal names and other human nouns (most of which are NAdj, see §4.2, or kin terms, Chapter 5) is that personal names normally avoid number-markers. Since the names are individualised it is not surprising that Du and Pl elements are not found (for exceptions involving necronyms see below). However, personal names also tend very strongly to avoid HumSg (Human Singular) suffix /-yun^{g}/ or /-n^{y}un^{g}/, which is regularly used with human NAdj. Thus contrast /(na-)walyi-n^{y}un^{g}/ 'man' with /(na-)ma:di/ 'Maadi' (man's n.).

There are only a tiny number of cases in a large textual corpus in which HumSg suffixes occur with personal names. One myth protagonist is commonly referred to as /(na-)waljuri-jun^{g}/ (NMET 15.4.5, 16.1.2, 16.23.4), where HumSg suffix //-yun^{g}// is a frozen part of the name, which is based on the common fauna term /(wara-)waljurig/ 'frilled lizard'. In this instance the HumSg suffix may be used to make it clear that the protagonist is not overtly identified with the species in question. Another myth protagonist is usually called /(na-)wuruyambi/ (or /wuriyambi/), but

at one point in the myth it is necessary to distinguish this being from a place n. also called /wuruyambi/, and in this context HumSg /-yun^{g}/ is added to the personal name to ensure clarity, hence /na-wuruyambi-yun^{g}/ (NMET 15.6.4). There is one other text in which the narrator gave the name of a myth protagonist incorrectly, then repaired the error and gave the correct name, which he reinforced by adding HumSg //-yun^{g}//, hence /na-jajabun-jun^{g}/ 'Jajabun' (NMET 29.12.6). Ordinarily this name does not take the HumSg suffix (see remainder of NMET text 29).

Necronyms are expressions used to refer to deceased persons in contexts where direct use of the deceased's personal name would be socially indelicate or improper. Some expressions used in this way are ordinary forms which can also be used to refer to living persons, such as a kin term ('my father', for ex.). However, two types of specifically necronymic expression have turned up.

The first is to take the name of an immediate (focal) kinsman of the deceased, and add Dual suffix /-wa:/ to this. Thus /na-wurajuju-wa:/ (NMET 161.6.1), lit. 'two Wurajuju-s' but in context designating the deceased father of Wurajuju.

The other is to designate the deceased by referring to the location of his or her death. This is becoming less useful now that the Nunggubuyu people are relatively settled at Numbulwar, so that many persons deceased in the last thirty years cannot be uniquely specified by such an expression, but the device is still used in cases where it is clear. Nowadays the usual expression involves Creole la 'at, to', pronounced /lha/ in Nunggubuyu. We get a kind of nominal compound of the form /lha-/ plus place n., the whole functioning as a personal name so that M /na-/ or F /n^{g}ara-/ can precede. Thus /na-lha-n^{g}uludji/ 'he who died at N^{g}uludji' (NMET 161.6.3; for another ex. see 167.17.2). I believe that the NC_{infl} prefix /na-/ or /n^{g}ara-/ must be used with such forms, which would otherwise be understood as (creolised) case forms of the place n.

One final comment about personal names. A suffix /-w$_{1}$an^{g}/ with Pl meaning is used almost exclusively with a) personal names; and b) kin terms (with 1st person propositus). With a personal name it means 'X and his bunch', 'X and his close relatives', or the like. The NC_{infl} prefix is that required by the (singular) name, rather than that of the larger group: /na-jubiyan^{g}ga-wan^{g}/ 'J and his bunch' (NMET 163.11.4). Other exx. are NMET 82.1.2-3 and 139.14.2 (with following case suffix); in NMET 18.12.2 we have a totemic being (Catfish), perhaps really here also a personal name, with /-w$_{1}$an^{g}/ as well. See §4.16, below.

4.5 Place names (toponyms).

A representative list of the very large number of local Nunggubuyu toponyms is given in Appendix 6 of the dictionary. A few have an obvious literal meaning, and one or two of them are verbal in form: /n^{g}ibagalharin^{y}/ from /n^{g}i-ba=galhari-'-n^{y}/ 'she stabbed herself in the eyes' (referring to a mythical event). Most, however, are synchronically unanalysable.

The unanalysable terms, and even most of the analysable or

partly analysable terms, are syntactically very similar to adverbial nouns (NAdv). That is, they are in principle nouns of the ANA class (specifically, the ANA_{wu} subclass), but frequently omit the NC_{infl} prefix. They are not quite the same as the NAdv terms, since the place names are regularly found in a variety of case contexts (Ablative, Allative, etc.), and since they can occur readily as direct objects and occasionally even as (intransitive or transitive) subjects; it is very difficult to get a NAdv in these functions.

NMET contains hundreds of occurrences of place names, so it is possible to study the syntax of these words carefully. In the majority of occurrences, the place name (naturally) is semantically locative, allative ('to'), or ablative ('from').

In locative sense, the overwhelming majority of place names show no case suffix. (By contrast, ordinary nouns would have Locative /-ruj/ or, in some contexts, a Pergressive suffix.) There are only a handful of instances of Locative /-ruj/ with a place name (NMET 35.3.4, 54.2.3, 54.4.5), when we factor out a number of place names containing /-ruj/ as a fused part of the stem (kept even when a distinct case suffix is added). There are also only a small number of cases of Pergressive /-w$_{2}$aj/ or Retrospective Pergressive /-w$_{1}$aj/ (NMET 19.8.5, 113.9.4ff., 125.13.2, 166.7.3, possibly 35.7.3).

Since no case suffix is present ordinarily when location (rather than motion) is involved, the only question is what NC_{infl} prefix is used. As we will see below (§4.7-8), ANA class nouns have punctual /a-/ and continuous /ana-/ as NC_{infl} prefixes, with omission of the prefix the third option. Eliminating negative contexts (which require continuous /ana-/), we find that omission is the most common pattern; a few exx. are NMET 1.7.5, 2.6.4, 3.1.1/2, 5.14.2/3, 7.2.3, 7.5.4, 8.4.3, and 18.8.6. It is not uncommon to find a prefixless place n. in apposition to the noun /ana-lha:l/ 'place, country' with the latter showing the NC_{infl} prefix, as in /balamu ana-lha:l/ 'the place Balamu' (NMET 28.4.7).

However, a sizable number of cases involving continuous /ana-/ with place n. are also recorded: NMET 1.6.3, 7.8.5, 9.2.3, 9.9.3, 13.7.4, 14.1.1, 17.11.2, etc. (about fifty such cases in NMET, not counting some repeats and counting some strings as one item). Now and then the place n. is repeated once or twice, with the repeat showing /ana-/ after it was omitted the first time.

On the other hand, forms with punctual /a-/ in basically locative contexts (with zero case suffix) are not common. A fairly complete list from NMET is 7.1.1, 9.2.2, 9.12.1, 9.13.3, 12.9.3, 13.41.2, 14.2.3, 23.3.5, 35.3.2, 35.8.2, 35.10.2, 35.13.4, 161.33.8-9, 167.2.4, 167.5.2, and 167.12.3. Punctual /a-/ normally implies that a spatial case category is present although no overt case suffix is observed. The rarity of /a-/ with non-case-marked place names shows that the typical locative sense of these nouns does not induce the punctual form of the NC_{infl} prefix, except rarely. In some of the above exx., the place n. is adjacent to a coreferential demonstrative or other appositive form marked for case (and usually with punctual NC_{infl} prefix), so a minor tendency toward having the same affix frame on appositives may be at work.

If we look at forms of the NC_{infl} prefix when the place n. is followed by a nonzero case marker, some unusual figures result. The only two case categories for which a statistically satisfactory number of instances occurs are Ablative and Allative-Dative (the latter in allative sense here). A survey of forms in NMET (with some omission of repeated words, and of some forms of place names beginning with /a/ where the difference between punctual NC_{infl} prefix /a-/ and lack of prefix might be hard to hear) shows the following results:

Allative-Dative	Ablative	
17	48	percent with /ana-/
0	7	percent with /a-/
83	45	percent without prefix
100	100	total

These figures (based on 41 Allative-Dative and 82 Ablative instances) show two things. First, in contrast to ordinary nouns (Nc and NAdj), place names make only occasional use of the punctual series even in positive contexts (we have omitted the small number of negative exx.) in these case categories. As we will see, for ordinary nouns the punctual prefix series is normal with such overt case markers. Second, the Ablative differs quite significantly from the Allative-Dative in the percentage of forms with continuous ANA class prefix /ana-/, the Ablative showing much more frequent use than the Allative-Dative.

The second observation, however, turns out under analysis to be predictable from discourse factors rather than being an independent morphological oddity. As we will see below (§4.8), continuous NC_{infl} forms have a tendency to be used in highly definite or "given" nouns, while absence of a NC_{infl} prefix is common in highly foregrounded or focused nouns. The statistics shown above, from narrative texts in NMET, are distorted by the fact that on many occasions a particular place n. is first mentioned in reporting that a protagonist arrives at the location (with Allative-Dative case), and is then mentioned a second time when the protagonist goes away from it (Ablative). Since the place n. has become contextually definite by the time of the Ablative occurrence, it is appropriate that the continuous form of the NC_{infl} prefix be relatively common with the Ablative.

Allative-Dative exx. from NMET: /ana-/ 14.16.2, 55.10.2, 161.20.1, 164.3.2, and with an English place n. 55.10.3 and 55.12.3; /a-/ apparently unattested; no prefix 15.2.2, 16.7.1, 16.19.5, 18.2.4, and many others. Ablative exx.: /ana-/ 21.2.4, 21.10.1, 23.4.5, etc.; /a-/ 21.3.2, 21.9.5 (twice), 21.9.6, 35.2.1, and with irregularity 20.8.1.

With Relative suffix /-yin^{y}un^{g}/ we have many fewer exx., but they suggest that a nonzero NC_{infl} prefix is usual in this case: continuous /ana-/ 19.1.4, 47.3.3, 72.6.3, 73.6.6-8 (several), 97.5.4, 161.2.2, 162.5.1, and 166.24.3; punctual /a-/ 30.1.3, 71.4.3, 72.7.1, and 161.34.5; without prefix 164.2.6.

We mentioned briefly that some place names contain an old case suffix which is now fused to the stem and no longer has case-marking value (being retained even when a real case suffix is added). Exx. including /-ruj/ (Locative) are /ban^{g}ganaruj/ and

/yinin^{g}uga<u>r</u>aruj/ 21.10.3-4, /amawurwurduj/ 40.2.4, /magandaruj/ 59.9.4, and /yimadha:luj/ 114.1.3. Some of these cases can be analysed etymologically; for the fourth ex. above cf. /magandar/ 'a paperbark tree sp.', while /amawurwurduj/ looks like it could be analysed as */ama-wurwurg/ with unattested */wurwurg/ as a MANA class noun of unknown meaning. There are also some place names apparently ending in fused Pergressive suffix /-w$_1$aj/ or /-w$_2$aj/ (see §4.23), as with /gu:ndiwaj/ 166.3.4.

4.6 Inflection and derivation.

As noted in §4.1, we recognise as inflectional the NC_{infl} prefixes and the case suffixes (the latter, in turn, can be followed by postinflectional suffixes which we here call postpositions).

Morphological structures which occur between the NC_{infl} prefix and the case suffix are considered derivational, though the distinction between inflectional and derivational (as in many languages) is fuzzy at times. We treat the primary number-markers (aside from NC_{infl} prefixes, which include some number-marking) in the derivational domain, since the formal devices used tend to be lexically idiosyncratic (e.g., some nouns have a reduplicative Pl, others have prefix /-mij-/, and others have some other less common number-marker). By contrast, the forms of NC_{infl} prefixes and case suffixes are not part of lexically specialised paradigms.

A few other derivational processes may be briefly mentioned here; for a fuller treatment see Chapter 14.

There are some compounds with a nuclear noun root followed by an incorporated NAdj, as with /mulun-<u>d</u>un^{g}gal/ 'big group' from /mulun^{g}/ 'group' and NAdj /<u>r</u>un^{g}gal/ 'big'. There are also a few other minor compounding patterns. A Gentilic derivation, used especially in clan names, involves derivational prefix /nuN-/ §14.11 followed by a noun (which in some cases does not occur elsewhere and cannot be glossed), as in /num-barwar/ 'inland subclan of Numamu<u>d</u>i<u>d</u>i clan'. There are a few instances of a noun or NAdj being derived from or at least derivationally related to a verb; the most common type involves suffix /-j/, often with obligatory reduplication: /=n^{g}aln^{g}ala-/ 'to be white, bright-coloured', NAdj /n^{g}al-n^{g}aln^{g}alu-j/ 'white, bright'. See §14.15-16.

Some nouns can occur commonly as compound initials with a following verb (the whole word functioning as a verb with incorporated noun). Some nouns retain their usual phonological form in this function, others show phonological irregularities, others are replaced by a suppletive compound initial. See §14.2, §14.19. In such noun-verb compounds only the root of the noun is present (i.e., there are no nominal affixes brought in with it).

4.7 NC (noun-class) prefixes: forms.

The usual NC prefixes used with nouns are labeled NC_{infl} (inflectional). Two distinct series, called <u>continuous</u> and <u>punctual</u>, must be recognised for the nonhuman categories; there are also some lower-level phonological variations. There is also a set of derivational NC prefixes, labeled NC_{der}, which are used with roots to create derived nouns with the NC indicated.

TABLE 4-1

Forms of Noun-Class Prefixes

a) NC_{infl}

human:	na-	M (MSg and MDu)	
	n^{g}ara-	F (FSg and FDu)	
	wara-	Pl (three or more)	
nonhuman:	continuous	punctual	
	na-	yi:-	NA class
	n^{g}ara-	yi:-	N^{g}ARA class
	wara-	wa:- (wara- before vowel)	WARA class
	ana-	a-	ANA class
	mana-	ama-	MANA class

b) NC_{der}

niG-	M/NA
n^{g}ariG-	F/N^{g}ARA
uG-	Pl/WARA/ANA (with Rdp for Pl)
maG-	MANA

The NC_{der} prefixes, whose functions are described in §4.9, produce ordinary common nouns which are preceded by NC_{infl} prefixes in the usual manner. While the NC_{der} prefixes by themselves show several syncretisms (M and NA the same, Pl the same as WARA and ANA), these are often differentiated in complete word forms when the NC_{infl} prefixes are added. For example, /uG-/ may be preceded by an unambiguously ANA class prefix //ana-//, giving /an-uG-/, or in another case may be preceded by WARA or Pl prefix //wara-//, producing surface /war-uG-/.

Although these NC prefixes show some number-marking, in full nominal words it is also necessary to consider number-marking affixes (and suppletion or reduplication where appropriate); see §4.14 to §4.16. In particular, Dual is marked by a suffix /-w_2a:/ for humans and nonhumans alike, while humans also have special Sg and Pl markers. Since NC_{infl} prefixes are frequently omitted (§4.8), these other number-markers are more reliable than the partial number-marking in the NC prefixes.

Observe that the three human NC_{infl} prefixes (/na-/, /n^{g}ara-/, /wara-/) are formally identical to the first three nonhuman prefixes, but only in the continuous series. The same syncretisms occur in the corresponding NC_{der} prefixes. In the complete word forms these human/nonhuman syncretisms are usually differentiated by the co-occurrence of specifically human number-markers.

We may briefly mention some phonological rules which can produce surface forms slightly different from the ones shown in Table 4-1. First, consider the NC_{infl} prefixes, all of which end in a vowel. If the following morpheme begins with a consonant, the NC_{infl} prefixes of shape //Cara-// optionally undergo rV-Truncation P-36, becoming /Ca:-/. Thus /n^{g}ara-wa:yin/ or /n^{g}a:-wa:yin/ 'emu', /wara-gagil/ or /wa:-gagil/ 'wild onion'. Note that this partially blurs the distinction between punctual and continuous forms of the NC_{infl} prefix for the WARA class. The table shows /wara-/ as the continuous form, and /wa:-/ as the punctual one (except that /wa:-/ is replaced by /wara-/ before a vowel). Because of P-36, continuous /wara-/ optionally becomes /wa:-/ before a consonant, so with consonant-initial noun stems the distinction between continuous and punctual WARA forms is optionally made on the surface.

When the NC_{infl} prefix is followed by a morpheme beginning in a vowel, either VV-Contraction P-49 or V-Truncation P-46 applies, depending on the morpheme-initial vowel. If this vowel is a high one, /i/ or /u/, the prefix-final vowel is dropped by P-46 if the prefix has two syllables (/n^{g}ara-/, /wara-/, /ana-/, /mana-/, /ama-/). Thus //ana-uG-lhan^{g}un^{y}//→ /an-u-dhan^{g}un^{y}/ 'wind, breeze' (the /-uG-/ here happens to be the NC_{der} prefix). If the morpheme-initial vowel is /a/ and the prefix ends in /a/ (as most prefixes here do), we get contraction by P-49, producing a long vowel, hence /ana:-'ban/ 'ground' from //ana-aban//. This does not apply in the case of /yi:-/ prefix (punctual series for NA or N^{g}ARA); instead, epenthetic /w/ is inserted by w-Insertion P-7. Thus //yi:-anarag//→ /yi:-wanarag/ 'goanna sp.'.

An idiosyncratic phonological rule applying only to forms of the noun /gu:gu/ 'water' shifts vowel-length from the noun to the prefix: /ana:-gugu/, /a:-gugu/. See Length-Shift P-43.

There are other idiosyncratic changes affecting NC_{infl} prefixes, but they apply in morphological contexts not dealt with in this chapter. For reduction of /n^{g}ara-/ to /n^{g}a-/ in some female kin terms see §5.1 and rule P-34. For conversion of the human NC_{infl} and the nonhuman continuous NC_{infl} prefixes to uniform /CV:-/ shape in one type of demonstrative construction, see §7.3 and rule P-35.

The NC_{der} prefixes in Table 4-1 are shown as having a final segment represented as /G/; that is, as a stop archiphoneme (§2.4). This is necessary because these prefixes have a hardening effect on the following root. For example, from /lhan^{g}gu/ 'meat, flesh', which can occur by itself as an ordinary noun, we can optionally produce derivatives with NC_{der} prefixes. These show up as /ni-dhan^{g}gu/, /n^{g}ari-dhan^{g}gu/, /u-dhan^{g}gu/, and /ma-dhan^{g}gu/, where //lh//→ /dh/ by Hardening P-18. There are many other exx. involving //r//→ /d/, //w_1//→ /g/, //w_2//→ /b/, and //y//→ /j/ after NC_{der} prefixes. In the general context of Nunggubuyu phonology (see discussion of P-18 in §3.19), this requires us to posit a stop as prefix-final segment. Before /l l/ and nasals the /G/ disappears without leaving a trace (by Stop-Deletion P-29). In the Dictionary and occasionally here, we use representations like /NC_{der}-dhan^{g}gu/ as abbreviations for the complete series of

NC_{der} derivatives, such as the series of forms just presented for 'meat, flesh'.

When a NC_{der} prefix precedes a stem beginning in an underlying stop, the meaningless epenthetic morpheme /-n^gu-/ is put between them by rule P-1. Thus from /gulmun^g/ 'belly' we get a series /ni-n^gu-gulmun^g/, /n^gari-n^gu-gulmun^g/, /u-n^gu-gulmun^g/, and /ma-n^gu-gulmun^g/, which we can abbreviate as /NC_{der}-n^gu-gulmun^g/. The //G// in the NC_{der} is lost by Stop-Deletion P-29.

There is a small number of idiosyncratic phonological phenomena affecting certain noun roots in NC_{der} form, though the patterns just described apply to the large majority of forms (several dozen roots involved). First, there is one root whose NC_{der} forms are incompatible with the underlying //G// posited for the prefixes. This is /ma-ṟaga/ 'fish net' (MANA class), a stable noun form that does not have other NC_{der} forms (*/ni-ṟaga/, etc.), but which is analysable as bimorphemic /ma-ṟaga/ since we get /-ṟaga-/ as compound initial (most noun roots which can occur with NC_{der} prefixes can also be used as compound initials). If the form were *//maG-ṟaga// we would have gotten */ma-ḏaga/ with Hardening P-18.

Second, there are two roots which take the /-n^gu-/ augment even though they do not begin with stops. From /n^guṟudhu/ 'bird; game animal' there is a derivative type /NC_{der}-n^gu-n^guṟudhu/ 'chick (young bird); end (of object)'; here there is a significant and unpredictable semantic (as well as formal) shift which makes the synchronic relationships tenuous. The other case is /maṟan^g/ 'hand' becoming /NC_{der}-n^gu-maṟan^g/ 'hand- or finger-like appendage' (claw; root tuber), where the semantic derivation is quite normal.

In a small number of cases, n^gu-Epenthesis P-1 fails to apply although the noun root does begin with a stop (in independent forms). Thus /dhan^{g}ara/ 'flower', derivative /NC_{der}-dhan^{g}ara/ instead of */NC_{der}-n^gu-dhan^{g}ara/. We could specify that P-1 just happens not to apply here, but in the context of Nunggubuyu phonology there is another, more reasonable solution: to assume that /dhan^{g}ara/ undergoes (along with a few other specific lexical items) Lenition P-16 when preceded by a derivational (not inflectional) element. Such a rule is clearly justified in the case of some verbs, such as //=dhida-//→ /=lhida-/ 'to block off', in this postderivational environment. The other possible cases like /dhan^{g}ara/ are /dhawan^g/ 'door' (where both regular /NC_{der}-n^gu--dhawan^g/ and irregular /NC_{der}-dhawan^g/ occur as derivatives, and /dhagarijgaba:ban^{y}juj/, deriv. /NC_{der}-dhagarijgaba:ban^{y}juj/ 'tracks'.

There are some cases where the segmentability of a form involving NC_{der} prefix is unclear or ambivalent. The transparent cases are those where the root occurs independently as well as in derived form, and/or where the root occurs with several distinct NC_{der} prefixes for distinct noun classes. A case like that of /ma-ṟaga/ 'fish net' (see above) is more difficult because the underived root does not occur as a noun and because the MANA class form is always used (we segment the form only because /-ṟaga-/ occurs as a related compound initial). Another problem ex. is /man^{g}aj/ 'liquid fat' (MANA class). Since this is the normal form, segmentability of the first syllable as /maG-/ is not obvious.

In the infrequent cases where a derivative is used to put the form in another noun class, we can get either /NC_{der}-man^{g}aj/ (implying that /-man^{g}aj/ is an unsegmentable root) or /NC_{der}-n^gaj/ (which implies that /man^{g}aj/ as noun form is just the MANA form of this /NC_{der}-n^gaj/). Some other cases of ambivalent or at least fairly opaque segmentability (see dictionary entries for details) are /maguj/ 'pandanus' and /maguḻag/ 'skin'.

Related to this, there are a few instances where a form used as root with NC_{der} prefixes already contains what is (historically) an old NC_{der} prefix. For example, the noun /lha:ṟ/ 'outer bark of stringybark tree' is associated with a derived type /NC_{der}-gulhaṟ/ 'bark; inner bark of eucalypts' which presupposes a root /-(w_1)ulhaṟ/ (we cannot tell whether the surface /g/ is from //w_1// by Hardening P-18 or by Velar-Insertion P-8). It looks as though the derived form of the root was once *wu-lhaṟ or the like, with a prefix related with the present-day /uG-/ NC_{der} prefix. Other roots used in NC_{der} derivatives which are represented in the dictionary as beginning in /(w_1u).../ can be suspected as having similar origins. There are also some noun doublets (/mu:rn^g/ 'shell' and /wumurn^g/ 'house, shell'; /wanḏa/ 'branch' and /wubanḏa/ 'branch'; possibly /wujiyar/ 'leaf' and compound initial /-yir-/ 'leaves') suggesting similar reinterpretations and fusions; several of these roots are common in NC_{der} forms.

4.8 Uses of NC_{infl} prefixes.

One aspect of the function of NC_{infl} prefixes is, of course, the oppositional value of one NC category vs. another. However, in the present section we are concerned rather with the syntactic and discourse significance of presence vs. absence of the NC_{infl} prefix for a given noun, and (for nonhuman classes) the choice between continuous and punctual series.

It is necessary to begin with a distinction between negative contexts and other (ordinary) contexts. This term has a specific technical sense in this grammar. With respect to sentential constituents such as nouns or NPs, the constituent is in a negative context if it is directly in the scope of a negative element, usually /wa:='ṟi/ 'not' or /yagi/ 'not' (used in different tense-aspect categories). Negative contexts also include some other environments, such as constituents within the scope of a conditional protasis ('if'-clause). For a discussion of the larger syntax of negation, and of the syntax of semantically "negative" verbs and NAdj like /maḻaḻa:di/ 'not knowing, ignorant', see §15.6.

A noun within a negative context in this sense obligatorily takes NC_{infl} prefix, and for nonhumans this must be the continuous series. This rule overrides others to be mentioned below, and thus applies to nouns in any case category, and to all types of nouns including place names.

(4.ix) wa:='ṟi ana-wun^{g}a:ri 'There is/was no fighting'
not exist ANA_c-fight NMET 17.2.7

(4.x) wa:='ṟi ana:-'ban-guy ambara=wurdha-n^gi
not ANA_c-earth-to they (not) buried them
'They did not bury them in the ground' NMET 51.1.3

(4.xi) wa:='ri ambu:-lhawu=rabala-n^{g}i ana-lha:wu
not they-speech-come out-Pa$_2$ ANA$_c$-speech
'They did not blurt out the words' NMET 47.7.4

Having factored out this particular case (negative contexts), it remains to consider the choice between omission of prefix (zero), continuous prefix (indexed with subscript $_c$, as in ANA$_c$), and punctual prefix (subscript $_p$), recalling that for human categories the latter two are indistinguishable.

These distinctions are tricky, and cannot be correlated in any simple fashion with presence/absence of other particular morphological features. Basically, there are two principal factors affecting choices: a) an imperfect but strong correlation with case-suffix categories, and b) discourse factors.

The predominant correlations with case categories are shown in Table 4-2, below, which also includes the most important postpositional (postinflectional) suffix /-w$_2$ugij/.

The correlations shown are not perfect and it is necessary to elaborate. Let us begin with the essentially spatial case suffixes. For Allative-Dative /-w$_1$uy/, a count was made using the texts in NMET, excluding place names, demonstratives, and personal pronouns. Negative-context nouns are also omitted since they always have continuous NC$_{infl}$, as just noted. The syntactically allative (not dative) instances show NC$_{infl}$ prefix invariably present for human nouns (nine instances including 12.8.3, 13.36.3, and 41.22.3). For nonhuman allative instances we have 104 exx. excluding repeats and some ambiguous forms (e.g., with WARA class nouns), of which 75 show punctual prefix, 26 continuous prefix, and only 2 omission of prefix (these two, moreover, are instances of adverbial /lhiribala-wuy/ 'downward' 161.5.4 and 162.16.1, which probably ought to be treated separately). Some exx. of the punctual are 5.10.2, 10.3.2, and 14.5.2. A complete (more or less) list of the uncommon continuous exx. is this: 33.4.1, 47.2.1, 55.6.2,

TABLE 4-2

Correlation of NC$_{infl}$ Form with Case Category

NC$_{infl}$ prefix	case category
punctual	/-yi:/ Similative ('like')
"	/-ruj^{g}/ Locative
"	/-yun^{g}guyun^{g}/ Purposive
"	/-w$_1$uy/ Allative-Dative
"	/-w$_1$ala/ Ablative
"	/-w$_1$aj/, /-w$_2$aj/ Pergressive
continuous	/-yin^{y}un^{g}/ Relative (incl. genitive)
zero or continuous	/-Ø/ Nominative (subject/object)
zero	/-miri/ Instrumental
zero	/-w$_2$ugij/ 'still, only' (postposition)

57.2.1, 58.3.1, 59.10.2, 95.8.4, 98.7.2, 98.7.3, 108.4.5, 108.7.3, 113.8.3, 113.8.5, 113.8.6, 115.6.5, 125.2.3 (twice), 132.8.7, 142.1.1 (three), 142.3.3/5, 142.6.7, 143.5.6, 143.6.5. The syntactically dative exx. of /-w$_1$uy/ are harder to treat since there are far fewer of them, and many are human (so that the punctual/continuous prefix opposition is merged). However, as with the allative instances, the dative ones with nonhuman noun do seem to prefer punctual prefix: 6.2.3, 7.12.3, 37.4.4, and perhaps the WARA class form 36.3.5. All of these statistics exclude negative contexts--for (continuous) prefix in such contexts see, for example, 51.1.3, 65.13.3, 67.3.2, 90.2.7, 106.4.3, 120.1.6.

Consider now Ablative /-w$_1$ala/ 'from'. In the normal ablative meaning, with nonhuman nouns of the sort delimited above I have noted 9 cases of continuous prefix in NMET, 23 of punctual prefix, and 4 with prefix omitted. The percentages are consistent with those for /-w$_1$uy/. Some exx. of the dominant punctual type are 13.41.2, 17.7.5, and 29.6.1. The continuous exx. are 10.18.2, 13.29.3, 21.1.5, 59.8.2, 73.5.1, 84.1.4, 113.4.4, 115.1.5, 115.1.6, 115.6.1. The infrequent Ablative forms without prefix are 9.8.1, 17.8.5 (adverb), 115.6.2 (with numeral), and 163.4.1 (special reduplicated noun functioning as adverb).

There are also some other functions of Ablative /-w$_1$ala/ which may have different prefixal implications. The Ablative is used with names of languages in contexts like 'He is speaking <u>in (language) X</u>'. We find continuous prefix /ana-/ in 9.1.3 and 169.1.5; punctual /a-/ is not recorded; omission of prefix is found in 7.21.6, 64.9.8, and 161.35.1, but in these cases the noun is the loanword <u>English</u> itself and this may have a built-in tendency to use NC$_{infl}$ prefixes less often than native nouns. Overall, there are not enough exx. for statistical purposes, but it may be that the punctual series is less common in this situation than in the usual ablative sense.

The other special Ablative function is as a highly-marked subject case marker, usually contrasted with an Allative-Dative NP in the same clause (see §4.22). The available exx. suggest a preference for continuous prefix or for omission of prefix, in contrast to the preference for punctual prefix in ablative sense. Note continuous prefix in 6.2.4, 36.3.4, and also 42.4.7; and omission of prefix in 36.4.4, 45.1.4, 51.5.2 (twice), and 166.26.4 (three). In 36.4.3 the prefix /wa:-/ could be punctual but could also be continuous /wara-/ after optional rV-Truncation P-36.

Use of continuous prefix with Ablative in negative context is seen in 85.1.4/7 and 79.1.5. Ablative with human NC$_{infl}$ prefix is found in 16.13.8, 47.3.1/2, 80.w.4ff., and 168.1.2.

We now consider Pergressive /-w$_2$aj/ and Retrospective Pergressive /-w$_1$aj/, pooling the two together. The nonhuman exx. which can be accurately coded show 27 instances with punctual prefix, 21 with continuous, and 2 without prefix (total 52). Some exx. of the punctual type are 13.1.1, 15.9.6, 37.4.6, and 45.6.5; exx. of the continuous are 13.18.4, 97.4.3, 113.1.3, and 105.5.4 (twice). The exx. without prefix are 13.40.2 and 166.28.3. Obligatory continuous prefix in negative context: 121.3.7. As usual, in the forms with human noun we normally get the NC$_{infl}$

prefix: 41.4.3, 42.1.2, 47.7.5 (several), 47.22.4, etc. There are, however, two attestations of human Ablative form without prefix: 47.12.4, 113.2.5.

In the exx. in NMET of Locative /-ruj/, with nonhuman noun in nonnegative contexts I count 47 with punctual prefix, 13 with continuous, and 2 without prefix. Exx. of the punctual type are 2.1.3, 3.4.5, 5.4.3, and 6.3.3; exx. of the continuous (actually a fairly complete list) are 10.9.5 (adverb), 21.1.3 (adverb), 27.3.5, 47.15.2, 57.2.4, 57.3.3, 57.4.1, 63.1.3, 99.4.1, 108.8.3 (adverb), 110.2.7, 115.1.5, 115.6.3. No prefix: 43.7.4, 166.28.3. I cannot find exx. of negative contexts in the texts, but the requirement of continuous prefix in this environment is also true of Locative /-ruj/. Human exx. with NC_{infl} prefix: 35.8.3, 74.2.6.

Similative /-yi:/ 'like, similar to', excluding negative contexts and human forms, is found in NMET 26 times with punctual prefix, 5 times with continuous, and 0 times without prefix. Some punctual exx. are 10.15.7, 13.8.2, and 53.1.2. The continuous exx. are 45.7.3/4, 97.6.3, 113.2.2, 139.8.1, 140.2.5. Human exx. with prefix are 71.30.2, 71.32.4 (as it happens these are in negative contexts).

Purposive /-yun^gguyun^g/ is not terribly common with nouns, so our statistics are less clearcut. I count 18 instances in NMET, 16 with punctual prefix and one each with continuous prefix and without prefix. Some punctual exx. are 47.18.1, 47.18.2, 122.1.4 (twice), and 122.2.3; the continuous ex. is 157.3.4; the unprefixed ex. is 65.15.1.

One infrequent case suffix not shown in Table 4-2 is Originative /-mira:dhu/. In the one ex. with a noun in NMET we have continuous prefix (152.2.1), but it is entirely unclear from one ex. how this category behaves more generally.

Let us now consider Relative /-yin^yun^g/, which is used as a genitive marker but can also mean 'about, concerning'. The suffix is very common in the texts in NMET. Of a total of 158 instances, I count a majority of 97 with continuous prefix, 58 with punctual prefix, and 3 without prefix (as usual this count is limited to nonhuman noun classes in nonnegative contexts). Some punctual exx. are 7.18.2, 13.1.1, and 14.15.2; some continuous exx. are 7.16.1/2, 30.2.3, and 43.10.5/6. Absence of NC_{infl} prefix: 66.1.2, 132.11.4 (w. English loanword), and 143.3.6. We omit instances in which /-yin^yun^g/ is added to a noun which already has another nonzero case suffix, since in such cases it appears to be the first case suffix which determines prefixal behaviour. Exx. of continuous prefix with /-yin^yun^g/ in negative contexts: 71.10.5, 73.4.2, 79.1.5, 82.1.7, 86.1.3, 88.3.4ff., 120.5.1, 120.5.2. Most of the numerous exx. with human noun show the NC_{infl} prefix; exx. are 7.21.1, 9.1.4, 19.1.2, and 30.2.3. We apparently get absence of prefix with human noun in 65.11.5, if this is not a mistranscription. In general, we observe that with /-yin^yun^g/ the preponderance of punctual prefix forms with nonhuman nouns seen with other case categories is not confirmed; the continuous is in the majority, though there is still a respectable minority of instances with punctual prefix.

Instrumental /-miri/ differs quite sharply from all of the other nonzero case suffixes in strongly preferring absence of NC_{infl} prefix. I count 70 instances, all with nonhuman noun in nonnegative context, and of these fully 68 are without prefix, the other two having continuous prefix form. These two continuous exx. are 98.4.1 and 125.3.6. Some exx. without prefix are 10.2.2, 13.9.4, 17.3.5, and 31.3.3.

The remaining case form is the zero Nominative, used for subject and object. The vast majority of subject and object nouns have zero case-marking, though a small number of subjects take Ablative /-$w_1$ala/ and occasionally a direct object takes Allative-Dative /-$w_1$uy/.

I do not have complete statistics on prefix type with the Nominative. However, it appears that (excluding negative contexts), both the unprefixed form and that with continuous prefix are very common. There are a fair number of textual attestations of punctual prefixes, but many of these seem to have specific motivations.

One basic problem in analysing the Nominative is that we frequently find nouns without case suffix functioning not as subject or direct object, rather as a simplified version of a distinct case form (Locative, Instrumental, or whatever). Sometimes this is because the noun is part of a larger NP in which the other case suffix is attached to another component (such as a personal or demonstrative pronoun, or a modifying NAdj), and the speaker does not bother to repeat the case-marker. However, even without co-occurring with case-marked modifiers, nouns sometimes omit a case-marking suffix when it is assumed that addressees will guess the case function from the context. For more details see §4.19. In general, we observe that when a nonzero case suffix is dropped in this fashion, the form of the NC_{infl} prefix is nevertheless usually that which we would get were the case suffix present. That is, with a spatial case category like Locative, Ablative, Allative(-Dative), or Pergressive, the simplified form still usually has punctual prefix (in contrast to true Nominatives for subject or object); the simplified form of the Instrumental is often unprefixed (though in this case continuous prefix forms are much more common than they are with the regular case-marked form).

A detailed consideration of the apparent Nominative forms with punctual prefix is called for, since this is a somewhat abnormal combination. Although a precise classification of the "real" case category is sometimes tricky, I would venture an approximate classification as follows. Cases where Locative /-ruj/ seems to have been omitted are 1.1.8, 3.4.6, 9.1.1, 10.1.2, 11.11.3, 14.2.2, 14.19.2, 15.9.4, 28.11.3, 43.2.3, 95.2.5, 114.1.2, 115.5.5, 161.1.1, 161.33.7, 162.21.4 (twice), 167.12.3. A few of these might actually be Pergressive. I would specify Pergressive as probable in these additional cases: 7.16.5, 139.12.1, and 162.10.1. The Allative-Dative (usually allative in sense) appears to have been omitted in 2.2.6, 12.1.4, 13.21.1/2, 15.1.1/3, 28.6.2, 34.4.2, 41.5.5, 48.1.5 (dative), 95.8.5, 109.4.5, 114.3.5, 119.3.3, 131.2.3, 131.2.3, 143.6.3. Ablative instances with case suffix omitted are 161.35.3 (with language name), 166.1.4. Similative ('like') seems to be

the omitted suffix in 62.2.4/6, 71.11.4, 127.5.2. Omission of the Purposive suffix may have occurred in 161.3.1, 161.20.4, 170.3.6 (three exx. in the later section).

Forms of this type with omitted nonzero case suffix inducing punctual prefix form are also common with instances where the probable identity of the omitted suffix is Relative /-yin^{y}un^{g}/, despite the fact that (as noted above) in the fully affixed nouns with this suffix the continuous prefixes are a little more common than the punctual prefixes. Arguably, the tendency to use punctual prefixes when the case suffix is omitted may be to leave a hint that a nonzero case suffix has been dropped (so that the noun is not incorrectly taken for a true Nominative--that is, subject or object). Many texts about particular totemic beings, for example, begin with a sort of "title" consisting of the noun designating the animal with punctual NC_{infl} prefix, with Relative /-yin^{y}un^{g}/ present or absent. The exx. where NC_{infl} prefix seems to have been induced by a deleted Relative case suffix are 7.1.2 (twice), 13.2.3, 19.1.2 (twice), 19.1.4, 21.1.2, 37.1.1, 63.1.3, 100.5.2, 103.1.2, 128.3.1, 131.3.1/2, 143.4.3, 167.1.1.

Even after factoring out all of these cases where the punctual prefix seems to reflect a real (nonzero) case suffix which has been omitted by a low-level simplification process, there still remains a residue of instances which seem to involve direct object nouns. The vast majority of such direct objects take continuous prefix or are unprefixed, but enough cases with punctual prefix have been found in the texts in NMET to warrant identifying this as a grammatical, though minor, pattern. Apparent exx. of direct object with punctual prefix are: 7.14.3, 15.3.2 (two examples), 15.7.4, 36.5.1, 47.1.6, 48.2.1, 52.7.2, 92.4.3, 93.1.6, 92.2.1-3, 94.1.5, 101.3.3, 113.9.4, 113.10.4, possibly 132.2.1, 142.6.4/5, 151.1.2, 157.3.4, 157.7.6 (twice), 157.8.4/6 (three), 157.9.1, 166.1.3, 166.29.2. A reasonably broad range of verbs is involved and it does not appear that clear correlations between verb and prefix type of direct object can be sustained (verb glosses are 'catch fish', 'look for', 'crave', 'cut', 'eat', 'wait for', 'send', 'put in', 'eat', 'get', and 'kill'). There is a tendency for these instances to involve nouns functioning syntactically as direct object (and thus indexed in most cases by object-markers in the verb), but with a semantic role function roughly describable as 'goal'.

There are some other instances which I prefer to keep apart from those discussed above. These are instances where a direct object or similar noun in one clause has punctual NC_{infl} prefix, but where this is possibly attributable to the fact that this clause is subordinated to another clause. In the cases I am thinking of, the subordinated clause has a case suffix (usually attached to the predicate), so in a sense the whole clause functions like a NP in the higher clause. Most often these are (functionally) relative clauses whose head noun is in a nonzero case category in the main clause, so that the relative clause agrees with it in case (see §16.4). There seems to be a tendency for nouns within the subordinated clause either to take a copy of this case-marker which originates with the head noun, or at least to take the

punctual prefix form (which implies the presence of a nonzero case marker in most instances). Some exx. of direct objects in this construction type are 8.6.2, 46.2.1, 69.5.2, 161.33.7.

There are two possible instances involving transitive subjects with punctual prefix, which is most unusual. In 13.3.3 it would seem that the subordinated clause (with Locative /-ruj/) is involved in much the same way as case-marked subordinated clauses induce punctual prefixes with direct objects, as just mentioned. In 162.18.5-6 it appears that a Nominative noun with punctual prefix acts as transitive subject of the following verb, but since there is a clear pause between the two it is possible that the noun is, at the time of its being uttered, not yet clearly associated with a predication to follow (it might be an instance of omission of Relative /-yin^{y}un^{g}/ or the like).

To summarise what we have said about the Nominative (and pseudo-Nominative, where a real case suffix has been omitted by a low-level simplification): for subject and direct object the usual pattern is either continuous prefix or omission of prefix, but there is a small minority of instances where direct object shows punctual prefix. We might speculate that there is a limited covert association of direct object with marked case forms such as Allative-Dative or Purposive, and that this association can induce parallels in prefix treatment now and then.

We have not yet considered the postposition /-w$_2$ugij/ 'still; only'. In a few cases, this suffix follows a case suffix, and in this event the prefix form is determined by the case suffix rather than by /-w$_2$ugij/ (it is thus usually in punctual form, since most nonzero case suffixes induce this prefix form). However, most of the time /-w$_2$ugij/ is added to a simple (Nominative) noun. In this context we have 38 textual exx. in NMET, and all show omission of NC_{infl} prefix. Exx. are 9.8.4, 9.11.4, 10.10.3, and 18.2.2.

We have now described the basic facts, mostly in rough statistical form, concerning correlations between case categories (overt and covert) and form of prefix (continuous, punctual, or omitted). We have clear differences from one case category to another; that is, we have documented and elaborated on the schema in Table 4-2. However, in nonnegative contexts we have in some cases got only statistical information up to now, and in some categories two prefix possibilities are both common (e.g., continuous prefix vs. omission of prefix in the true Nominative).

The main missing ingredient is the discourse function of the choice of prefix type. The major opposition here is between the continuous prefix and omission of prefix (for nonhumans), or between presence and absence of the single prefix form (for humans). In the Nominative, where this opposition is most significant, we can make this general point: presence of (continuous) prefix is correlated with definiteness or givenness, and its absence is correlated with focus and foregrounding.

These concepts (definiteness, givenness, focus, foregrounding) are intended here to be used in an informal sense, since prefix usage is somewhat free and depends on what may be slight nuances of the speaker's feeling at a given moment. We may briefly summarise the evidence for the statement above as follows.

Unprefixed noun forms are commonly found at the beginning of texts, or at the moment of initial introduction of a particular noun into the text. Often such unprefixed noun forms are repeated several times, clearly indicating that the semantic content of the noun is foregrounded. Some repetitions of this type are found in 3.2.3, 5.2.4, 5.18.4/5, 6.1.2/3, 12.2.3, 12.7.4, and 26.2.5 (a great many others could be cited). This list, incidentally, includes exx. of unprefixed Nominatives functioning as transitive and intransitive subject and as direct object.

Unprefixed noun forms are common in nouns functioning as nonverbal predicates:

(4.xii)	n^{g}a:<u>l</u>ig	ana:-'-ni	'This is /n^{g}a:<u>l</u>ig/ bush'
	bush sp.	this (ANA)	NMET 5.2.4

Similarly, interrogative WH pronouns in Nominative function usually lack the NC_{infl} prefix although they are morphologically capable of taking them; this remark applies to nonhuman /yan^{g}i/ 'what?' and to human /yan^{g}i-n^{y}un^{g}/ 'who(m)?' and its number variants, in subject and direct object function. See Chapter 13.

When a demonstrative pronoun, especially one based on Anaphoric root /(-u)ba-/, occurs as a modifier in a NP with a noun, the noun regularly occurs in the form with (continuous) prefix: /an-uba-ni ana-lha:l/ 'that(Anaph) country'. This comment applies to Nominative case. It does not apply to constructions like that in (4.xii), above, where the demonstrative is not a modifier of the noun (i.e., is not in the same NP) but is rather the subject of a nonverbal predicate.

Further evidence in favour of our position on the discourse status of the prefix opposition (continuous prefix vs. absence) can perhaps be gleaned from distributional facts about NC_{infl} prefixes presented above. First, recall that omission of prefix is characteristic when postposition /-$w_2$ugij/ 'still, only' is added to an unsuffixed (Nominative) noun. This postposition seems to have a strong foregrounding effect on the noun (e.g., 'We have been eating <u>fish only</u>'). Similarly, the Instrumental case suffix /-miri/ is distinct from other nonzero case suffixes in strongly preferring absence of NC_{infl} prefix in nonnegative contexts. The Instrumental case foregrounds the specific material or implement being used.

With respect to the nonzero cases other than Instrumental, the rule given above for when to use the (continuous) prefix must be significantly modified, since in these contexts we have a third possibility (for nonhuman nouns), namely use of the punctual prefix (which is rare for Nominative nouns). Indeed, the punctual form is clearly preferred (except in negative contexts) with the basic spatial case categories, and with the Purposive and Similative. Since the unprefixed type is very rare with these case categories, the major question is whether the continuous/punctual opposition here has anything to do with the continuous/zero opposition in the Nominative.

We have already noted in our discussion of place names (§4.5) that these nouns show the continuous ANA class prefix /ana-/ rather often in the NMET texts with the Ablative but only occasionally with the Allative-Dative. We noted there that in the myth texts, many place names are mentioned initially in the Allative-Dative and then once again in the Ablative, as a protagonist arrives at the location and then leaves it. This is consistent with the view that the continuous prefix has an association with contextual definiteness/givenness. However, place names have a much stronger tendency than other nouns to have an unprefixed form even in marked case categories (except in negative contexts), and they are not frequently attested with punctual prefix /a-/.

To examine this question with reference to other (nonhuman) nouns, I have looked at all exx. in NMET of <u>continuous NC_{infl} prefix with Allative-Dative</u> suffix /-$w_1$uy/ in its allative (not dative) sense, since there are a reasonable number of exx. and since we can take this case as representative of most of the nonzero case categories (except perhaps the Relative). A complete list of textual cross-references was given above.

It is noteworthy that of 26 or so attestations, only one (33.4.1) occurs in the myth texts (texts 1 to 45), although the myths take up more than 40% of the NMET volume. I suggest that this is due to the fact that the myth texts are primarily event-oriented narrations, while a great many of the later ethnographic texts describe habitual activities (how to hunt kangaroos, how to prepare cycad damper, how to use bush medicine, how rituals were announced to neighboring clans, etc.). Many of these texts are given in a consistent past continuous verbal tense-aspect; others describing continuing activities are in the present tense (in its habitual or "gnomic" usage). The habitual or repetitive feature of the activities is often emphasised by reduplication of a verb adjacent to or near the Allative-Dative noun with continuous prefix (see 55.6.2, 95.8.4, 132.8.7, 142.3.3/5, 143.5.6, 143.6.5). What seems to be happening with the NC_{infl} prefixes is that the strongly habitual aspect of the texts is contagious, affecting not only the verbs (which are regularly in past continuous or present form), but also the nominal constituents (including many adverbs). Many of the Allative-Dative exx. with continuous NC_{infl} prefix co-occur not only with past continuous or present verbs but also with other case-marked nouns or adverbs which also take continuous NC_{infl} prefixes even though this is a highly marked prefix type. For example, demonstrative adverbs like Directional /yu:-guni/ 'to there, that way' which usually avoid NC_{infl} prefix may show up in the marked continuous form, here /an-u-guni/ 'to there' in these passages (see 47.2.1, 57.2.1, 59.10.2, 113.8.5, 115.6.5).

There is thus a kind of limited <u>aspect-harmony</u> by which nouns in marked cases like Allative-Dative /-$w_1$uy/ optionally override the normal association of these cases with punctual NC_{infl} prefix, and instead use the continuous NC_{infl} prefix. This harmony is very far from being absolute, as in shown by the relatively small number of Allative-Dative exx. with continuous prefix (as opposed to the vast number of past continuous and present verbs, many of which which co-occur with punctual-series nouns in the same clause. Rather, <u>the harmony is optional</u> and is characteristic mainly of <u>strongly habitual, backgrounded contexts</u>. (For a distinct "negative harmony" with aspectual ramifications see §15.6.)

Incidentally, the one occurrence of continuous prefix with Allative-Dative in a myth text (33.4.1) involves this context: during a tremendous massacre of dreamtime people by Mosquito people, the former "all-jumped into-river [continuous] to-there [continuous], Yarara [continuous]." Although dealing with a specific myth event, this particular segment of the text involves frantic, excited activity by many individuals, a type of action which commonly calls for continuous verbal aspect (as in "all-jumped"). In this discourse fragment it looks as though aspect-harmony is at work (note that the demonstrative adverb and the place name take marked continuous prefix, as does the Allative-Dative noun).

In summary, we seem to have a few basic principles underlying choice between continuous prefix, punctual prefix, and omission of prefix. First, negative contexts as defined here require continuous prefix for all nouns directly under the scope of the negative element. Second, in nonnegative contexts, a broad distinction is made between focused/foregrounded and definite/given NPs, the former favouring omission of prefix and the latter favouring the continuous prefix series (this generalisation accounts for the true Nominative forms, with or without postposition /-$w_2$ugij/, and for the Instrumental). Third, again in nonnegative contexts, the spatial (nonzero) case suffixes and certain others favour the punctual series, and even when the suffix is omitted from the surface (giving a pseudo-Nominative) we tend to get the punctual prefix anyway. Fourth, the latter principle is occasionally overriden by aspect-harmony, an optional spreading of habitual/backgrounded continuous aspect from predicates into nominal constituents.

The terms "continuous" and "punctual" for the two nonhuman prefix series do not encapsulate all of this information, but they do capture some important features of the system. Obviously, the use of essentially aspectual labels is consistent with the fourth principle in the list above (aspect-harmony). It is also, however, consistent with the first, since verbs as well as nouns show morphological neutralisations in negative contexts (the details are messy, and it is not always the continuous-aspect form in the positive which is retained in the neutralised negative, but this is what happens in the past negative). One might even argue that there is some parallel between nouns and verbs in connection with the second principle just listed; continuous aspect in verbs in Nunggubuyu is roughly similar to "imperfective" forms in many languages, often serving as background clauses framing new events put in the punctual, and often used in repetitions of clauses which may have been introduced initially in punctual aspect. We are thus not unjustified in referring to the NC_{infl} system as involving nominal aspect in addition to the (semantic?) oppositions among the noun classes.

Functionally, we should also remember that punctual forms are often used when a nonzero case suffix has been omitted by a low-level, optional simplification. The use of the punctual prefix can thus serve as an index or trace, indicating that there is an implied nonzero case. The NC_{infl} prefix may therefore serve, in functional terms, as a partial case marker; Nunggubuyu approaches

but does not attain a system (seen in Mara, for example) where choice of NC prefix series is rigorously connected with cases (in which case we should speak of "Nominative" and "Oblique" rather than continuous and punctual). In Nunggubuyu, however, the prefixal-series oppositions have a complicated set of partly overlapping functions: marking case indirectly, suggesting the scope of a negative (which may extend into a second clause), maintaining cross-reference within and across clauses (though the indexical value of the various noun classes), and reinforcing the marking of strongly habitual aspect.

4.9 Uses of NC_{der} prefixes; defective (bound) roots.

The prototypical usage of a NC_{der} prefix (see bottom of Table 4-1 and discussion in §4.7 for the forms) is to take a noun root (of any noun class, or without predetermined noun class) and to convert it into a derived noun of a specific target noun class. For example, the noun /gulmun^g/ 'belly' happens to be in the MANA noun class. If we wish to create a set of derived nouns which have overtly specified noun classes, we can add the various NC_{der} prefixes. Since /gulmun^g/ begins with a stop, phonological rule P-1 applies to the derivatives, inserting a meaningless morpheme /-n^{g}u-/. The forms are thus (for nonhuman categories) /ni-n^{g}u-gulmun^g/ (NA class), /n^{g}ari-n^{g}u-gulmun^g/ (N^{g}ARA), /u-n^{g}u-gulmun^g/ (ANA or WARA class), and /ma-n^{g}u-gulmun^g/ (MANA class). Note that the derivative may end up with the same NC as the simple root. In any event, the resulting derived noun can then receive the usual nominal inflections for common nouns (Nc), including case suffixes and NC_{infl} prefixes. For example, the NA class form may appear as /na-ni-n^{g}u-gulmun^g/ (with continuous NA prefix /na-/), or as /yi:-ni-n^{g}u-gulmun^g-guy/ 'to the belly' with Allative-Dative suffix //-$w_1$uy// and (thus) with punctual NA prefix /yi:-/.

NC_{der} formations are used to make the noun class of the derived noun match that of an independently occurring noun (which may or not appear overtly in the same clause or discourse section). If we take our example with /gulmun^g/ 'belly', the NC_{der} pattern would be used when we want to specify 'belly of X', where X is some noun. It happens that 'belly' is the root used for roughly globular or convex parts of many objects, such as the roundish fruits and nuts of many plants. The term for the plant (or other object) has a given NC value, and to indicate the 'belly' (e.g., fruit) of that particular object, we put 'belly' in the appropriate NC_{der} form.

Although many details about usage of NC_{der} patterns are lexical idiosyncracies, we should give a rough outline of the system here. Our first observation is that NC_{der} forms are most common to refer to parts of inanimate objects (such as implements), plants, and (to a lesser extent) animals. Most of the relevant noun roots do not take NC_{der} prefixes to agree with the noun class of a human referent. Thus, most body-part terms have a lexically specified inherent noun class which appears as such when designating a part of a human being, as with /gulmun^g/ (MANA class), but take derived form showing whole-to-part noun-class harmony when designating corresponding parts of objects and plants (and sometimes animals).

However, some human body parts are treated as parts of parts (cf. English 'roof of the mouth', 'back of the tongue'), and in this event the more precise term may take NC_{der} form to agree in NC with the noun designating the more inclusive body part.

There are also some noun roots which do take NC_{der} form even when the whole is a human being (or beings). Such noun roots have more elaborate NC_{der} paradigms than do the majority of roots which only have nonhuman derivatives. This is because the human NC_{der} forms show other derivational morphology, such as presence of Human Singular (HumSg) /-yun^{g}/ or /-n^{y}un^{g}/ and Pl reduplication.

A maximal paradigm is exemplified in Table 4-3, which is based on the noun /muwaj/, whose underived noun class is ANA_{wu} (a subclass of the ANA class). As the cross-references in the dictionary entry will indicate, this root is found now and then in underived form, but most often in NC_{der} form (for human or nonhuman referent).

A few other roots which can have NC_{der} forms may be briefly mentioned. /w$_{1}$ubulu/ 'body, torso' is common as /NC_{der}-gubulu/ (see dictionary entry) with nonhumans, and an ex. with human reference has turned up now in MT 25: in my transcription /n^{g}ara-n^{g}ari-gubulu-yun^{g}/ 'her body (corpse)'. Similar exx. involving root /n^{g}agara/ are cited in the dictionary entry; the root means 'bone(s)' but the human NC_{der} form is used in the sense 'skeleton'. I do not know if /ajulu/ 'skeleton' has similar forms (my data show it in underived form with human reference). However, /mabunu/ 'decomposed body' does take human NC_{der} forms (see entry). Some others which may have human forms are /mawur/ 'spirit', /-lharin^{y}-/ 'boss' (different meaning with nonhuman reference), /yinag/ 'head' (found once with NC_{der} referring to dreamtime being), /-mandag-/ 'group, gang' (used in Pl), /w$_{1}$anburg/ 'exact likeness, spitting image', /gadhuwa/ 'young, new', and

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TABLE 4-3

NC_{der} Paradigm of /muwaj/ 'name'

	NC_{der} form	same with NC_{infl} added	
human:			
	/ni-muwa-jun^{g}/	/na-ni-muwa-jun^{g}/	MSg
	/n^{g}ari-muwa-jun^{g}/	/n^{g}ara-n^{g}ari-muwa-jun^{g}/	FSg
	/ni-muwaj-ba:/	/na-ni-muwaj-ba:/	MDu
	/n^{g}ari-muwaj-ba:/	/n^{g}ara-n^{g}ari-muwaj-ba:/	FDu
	/umu:-'-muwaj/	/war-umu:-'-muwaj/	Pl
nonhuman:			
	/ni-muwaj/	/na-ni-muwaj/	NA
	/n^{g}ari-muwaj/	/n^{g}ara-n^{g}ari-muwaj/	N^{g}ARA
	/u-muwaj/	/an-u-muwaj/	ANA
	/ma-muwaj/	/mana-ma-muwaj/	MANA
	/u-muwaj/	/war-u-muwaj/	WARA

/man^{g}aj/ 'fat (one)'. There are also a handful of NAdj which take NC_{der} prefix to create a feminine counterpart from an underived stem which is used with masculine sense; these are the patrilineal moiety terms /yirija/ and /miniguya/ and the stem /n^{g}ambara/ 'eldest, elder (e.g., sibling)'. In the cases of the two moiety terms, the regular Pl (for either sex) is not a NC_{der} form, but for /n^{g}ambara/ we can get a Pl based specifically on the derived FSg form (see dictionary entries for details).

We have seen that there are differences among types of referent (human, animal, plant, object) regarding applicability of NC_{der} formations to nouns designating parts or other intrinsic features. There are also differences among nouns designating parts or other inalienable features, regarding their own propensity to show up in derived or underived form.

In addition to nouns like /gulmun^{g}/ 'belly; spherical or convex part' which occur productively both as simple stems and with NC_{der} prefixes, there is a set of defective (bound) roots which cannot be used as simple noun stems. If used as nouns, they require NC_{der} prefixes. (Most of them can also be used as compound initials.) They are labeled "Nc/Pref" at the head of lexical entries.

Ideally, in each textual occurrence, a defective root should have a derived NC value based on the lexical NC of an associated referent. I believe that this pattern is at least approximated with some of the bound roots, such as /-lhag-/ 'end, tip' and /-lhawir-/ 'scraps'. However, we must analyse this point more closely, since many defective roots appear to have an unmarked noun-class value.

This is the case with three bound roots designating entrails: /-lhan^{g}aj-/ 'entrails', /-(w$_{1}$)uwanima-/ 'large intestine', and /-(w$_{1}$)ugulhanun^{y}-/ 'small intestines'. These all have an unmarked MANA form, e.g., /(mana-)ma-dhan^{g}an^{y}/, regardless of referent, and are used in this form referring to humans as well. Probably the independent nouns /da:n/ and /n^{g}udan/ 'guts, internal organs', both in MANA class, are the relevant influences here. Other defective roots preferring the MANA class include /-dharan^{g}-/ and /-w$_{1}$aran^{g}gay-/ 'spear shaft' and /-n^{g}ulha-/ and (presumably) /-n^{g}ulyir-/ 'spear blade' (the generic term for 'spear' is MANA class /larda/, although more specific types of spear show other class values as well); /-w$_{1}$alar-/ 'stem' (applied mainly to a few sedges and similar plants, most of which have MANA class); and /-w$_{2}$iril-/ 'water lily leaf' (about half of the terms for water lily spp. and their parts are in MANA class, see p. 312 of dictionary, section 1.B.xix).

Many defective roots, however, prefer ANA class, either $ANA_{\emptyset}$ or ANA_{wu} subclass. $ANA_{\emptyset}$ is found with words associated with wild honey bees (Trigona spp.) and their products: /-galg-/ 'honey bee', /-n^{g}arag-/ 'honey', etc. (see dictionary entry for the generic term /lagu/ 'honey and honey bees' for further information). $ANA_{\emptyset}$ is also favoured with /-dhanbarj-/ 'fishtail', because the general term /n^{g}ujija/ 'fish' is $ANA_{\emptyset}$. ANA_{wu} is the unmarked NC_{der} form in these cases: /-ban-/ 'smoke' (cf. ANA_{wu} /n^{g}ura/ 'fire'); /-lhaj-/ 'chopped wood, firewood' (cf. 'fire', also ANA_{wu} /ran^{g}ag/ 'tree, wood'); /-lhawal-/ 'splinter, thorn' (cf. 'wood');

/-n^{g}arg-/ 'shore, beach' (cf. perhaps /lha:l/ 'country', ANA$_{wu}$); /-lhan^{g}urg-/ 'disease' (functions as most general term; more specific terms for disease/injury are mostly also ANA$_{wu}$; see pp. 334-35 of dictionary); /-mala-/ 'sky' and /-malg-/ 'night sky' (a number of other terms for weather and time of day are ANA$_{wu}$, see p. 326 of dictionary [in section 5.D.i emend "Mana" to "AnaWu" as noun class for /min^{y}n^{g}u/ 'night']), and /-lhamig-/ 'taste' (nouns for 'smell' are also ANA$_{wu}$, though not defective roots).

I know of no bound roots for which WARA is the unmarked NC value. NA is the preferred class in a small number of cases closely associated with a NA referent: /-n^{g}aln^{g}-/ 'woomera hook' (cf. /wandag/ and near-synonyms 'woomera', all NA class); /nidhamun^{g}/ 'clitoris' may be a frozen NA class NC$_{der}$ form */ni-dhamun^{g}/ (root */-lhamun^{g}-/) with NC value based on /ri:g/ 'vagina', cf. synonymous /ni-dhan^{y}/ 'clitoris' derived from /lha:n^{y}/ 'tongue'. N^{g}ARA is rare as unmarked NC of derived nouns, but there are one or two terms for parts of dugong (/n^{g}arugalij/, N^{g}ARA class) like /n^{g}ari-mawaru/ which naturally show up in N^{g}ARA class form.

Overall, we can say that these "unmarked" NC assignments for bound noun roots are usually not lexically arbitrary. Usually they are either a reflection of the fact that a particular bound root may happen to be prototypically associated with referent nouns of a particular NC, or else that they belong to a semantic domain (e.g., disease/injury) whose members are predominantly in a single noun class.

The nouns which can take NC$_{der}$ forms, including both ordinary and defective (bound) roots, are primarily in these categories:

a) habitat ('nest', 'hive', 'burrow');
b) external parts ('face', 'tip', 'blade', 'stem', etc.);
c) internal parts ('intestine', etc.);
d) bodily substance or secretion ('skin', 'excrement', etc.);
e) entire body ('body', 'corpse', 'skeleton', 'sprout', 'baby');
f) incorporeal attribute ('name', 'spirit');
g) sensory emission ('taste', 'smell', 'image', 'trace');
h) collectivity ('group', 'multitude').

As we have seen, there are also a handful of nouns functioning much like NAdj ('boss', 'new, young', 'elder') which can occur in NC$_{der}$ form, at least under certain conditions. In the following chapter we will see further exx. of NC$_{der}$ forms with kin terms, both to mark referent gender (with the usual human senses) and to mark nonhuman NC referent on those occasions where kin terms like 'mother' are applied to animals, or even inanimate objects.

It would be interesting to do a complete
the semantic extensions of basic body-part terms in NC$_{der}$ forms, particularly as applied to parts of plants and objects. We do not yet have adequate data for such a study. However, we may mention a few basic points (see dictionary entries for more details and textual citations). A basic opposition 'front'/'back' applied to many objects is made using derived forms of the body parts /yinag/ 'face' and /bira/ 'anus', respectively. For erect objects such as trees, derivatives of /ambal/ 'top of head' are used for 'top' (for 'bottom' we usually have just the NAdv /lhiribala/ 'under, inside').

Some referents use /rulbu/ 'back, backbone' in the sense 'back' or 'base' (of object), and in ANA$_{wu}$ form this root can mean 'mainland' (as opposed to 'sea'). A similar term /malan^{y}/ 'backbone' is used in NC$_{der}$ form to mean 'dorsal fin' (of fish), while /an^{y}jabal/ 'armpit' in underived or derived form can be extended to 'pectoral fin'. Derived forms of /n^{g}agara/ 'bone' can mean 'hard part' (e.g., tough membrane), as well as 'skeleton' (already exemplified). From /lhan^{g}gu/ 'flesh' we can get NC$_{der}$ forms for 'flesh, meat' of particular animals (but 'flesh' of nut or shellfish is expressed by a special term /-w$_{1}$in-/ in its derived forms). /w$_{1}$ubulu/ 'body' has straightforward applications to animals, plants, and objects, but can also mean 'true identity as referent' or the like (though this is most clearly seen elsewhere in a compound involving this root). From /bagalan^{g}/ 'eye' we can get derivatives meaning 'seed, nut' of certain plants, as in nearby languages, but in Nunggubuyu this usage is somewhat limited due to competition with derivatives of /gulmun^{g}/ 'belly'. From /lha:n^{y}/ 'tongue' we get NC$_{der}$ forms meaning 'blade of spear' and 'clitoris' (i.e., tongue of vagina). From /dhalbar/ 'upper leg' we get the extensions 'hind leg' (of quadruped) and '(tree) branch', either in derived or underived form; /w$_{2}$anja/ 'arm' has derivatives meaning 'wing' and 'sleeve of shirt'. From /maran^{g}/ 'fingers, hand' we get a slightly irregular /NC$_{der}$-n^{g}u-maran^{g}/ (/-n^{g}u-/ is usually inserted before stops, not nasals) which can mean, among other things, 'root tuber' (of one type of swamp plant), while forms of /la:n/ 'knee' are used to designate the smaller root corms of certain sedges. It is not clear whether /mala/, a simple noun meaning 'navel', is related in some way to either of two derivative types /NC$_{der}$-mala/ (listed separately in the dictionary), meaning respectively 'clear sky' (there is also one usage of derivatives of /n^{g}agara/ 'bone' with this extended meaning) and 'thick honey (honeycomb)'.

Clearly a more thorough semantic investigation would be worthwhile. (We would have to consider uses of these roots, or their suppletive replacements, in compounds as well.) However, we should not exaggerate the extent of these human-to-nonhuman body-part extensions and metaphors. As can be seen from the list on pp. 322-23 of the dictionary, there are many terms for parts of plants, objects, and animals which are not special uses of terms also applied to human parts ('gill', 'juice/sap', 'spear shaft', etc.), even though it might have been possible to find a human term which could appropriately have these as secondary meanings.

4.10 Semantics of NC categories: human.

As applied to humans, the basic NC categories are M (masculine), F (feminine), and Pl. M and F usually apply only to Sg and Du with sex merged in the Pl (for three or more entities), although in a few cases involving NC$_{der}$ markers gender distinctions are maintained in the Pl.

As we would expect, the categories M, F, and Pl are essentially given automatically by the real-life sex of the referents. Duals referring to the combination of one M and one F referent are treated as M.

The only important point to be made in this section, then, concerns instances where the boundary between human and nonhuman referents becomes fuzzy. Where "nonhuman" NC markers are used with human referents, we may speak of impersonalisation. Where "human" NC markers are used with nonhuman referents, we may speak of personification.

The important instances of impersonalisation are those where the nonhuman WARA class is used instead of Pl. As indicated in Table 4-1 (above), the basic NC_{infl} prefix in both Pl and WARA is /wara-/, so there is a partial formal syncretism anyway. However, the two are clearly distinguished in demonstrative pronouns (Chapter 7), and within nominal morphology itself Pl normally differs from WARA in that the former involves reduplication or other derivational pluralisation (see §4.11, §4.12).

Use of WARA instead of Pl is moderately common when referring collectively to whites (/dhurabada/) or other groups in contexts where the group is not thought of as a set of identifiable individuals but rather as an abstract collectivity. WARA is also often used to refer to groups of what we might call marginally human referents: babies (/gujuju/), ghosts of deceased humans (/badirin^{y}a/), and perhaps others. WARA forms are also used most of the time to cross-reference the human interrogative pronoun /yan^{g}i-n^{y}un^{g}/ 'who?'. This is somewhat odd, since the interrogative pronoun itself is marked as human singular by HumSg suffix /-n^{y}un^{g}/, but we may explain this as a device to differentiate 'who?' from nonhuman 'what?' (/yan^{g}i/) and by pointing out that real-life referent number is often ambiguous in such interrogatives, so that number neutralisation in favour of the Sg is not unreasonable. An ex. showing WARA concord with /yan^{g}i-n^{y}un^{g}/ is this:

(4.xiii)	yan^{g}i-n^{y}un^{g}	wara:-'-wa	'Who is this?'
	who?	this(WARA)	

(The Pl form of this demonstrative pronoun would be /wara:-'-wu-ru/.)

The marginally human nouns like 'baby' and 'ghost' (just cited above), when designating specific (singular) referents, have the option of showing complete human morphology, e.g., /na-gujuju-n^{y}un^{g}/ '(male) baby' with M prefix /na-/ (NC_{infl}) and HumSg suffix. However, they often omit human morphology and instead are treated as members of the nonhuman ANA class ($ANA_{\emptyset}$ subclass for purposes of verbal concord): /ana-gujuju/ 'baby', /ana-badirin^{y}a/ 'ghost'. Fluctuation between human and nonhuman forms may occur in the same text referring to the same being.

Personification is present when the referent is clearly nonhuman but is presented with human morphology, usually NC_{infl} prefix and/or HumSg suffix /-yun^{g}/ or /-n^{y}un^{g}/. One special case of this is in myths where a protagonist is identified with a given animal species but shows human-like behaviour (whether the being is thought of by Nunggubuyu narrators as having had human form, animal form, or some mixture of the two is usually not specified in the narrations and is perhaps not a culturally relevant question). Again, fluctuation in morphological treatment of the same noun at different points in the text is often found.

Outside of special myth contexts, this phenomenon is also

frequently found with the noun /landhurg/ 'dog'. When treated as a nonhuman noun, the noun-class category is WARA, thus /wara-landhurg/ with NC_{infl} prefix (for singular or plural). However, in referring to a particular dog (say, one's own pet) it is not uncommon to find human forms showing actual gender: /na-landhur-jun^{g}/ 'male dog', /n^{g}ara-landhur-jun^{g}/ 'bitch'. An ex. of the M form is in NMET 162.5.3, a line which also shows M prefix /na-/ with the dog's personal name. See also 29.7.4, 43.1.1, 43.14.2.

Since dogs were the only traditional domestic animal, this treatment is not usual for nouns designating other fauna spp. However, in the right context, human forms can be added to other fauna terms. Text 45 in NMET is instructive in this respect; it is about a (male) crocodile who abducted an Aboriginal woman and was described by the narrator as an actual historical episode which occurred within the memory of the oldest men (though not the narrator himself). 'Crocodile' is normally the N^{g}ARA class noun /lharagula/, without reference to actual sex of a given animal, and this is the noun-class treatment of the noun in this text in its initial occurrence and several times later on; e.g., 45.1.1, 45.9.2). However, since the crocodile rapes the woman, fathers her (crocodile) children, and in general shows normal male human behaviour(!), at one point there is a shift to MSg human form: /na-lharagula-yun^{g}/ 45.6.4. There is also a kind of compromise form /n^{g}a:-lharagula-yun^{g}/ 45.9.1, with HumSg suffix as in the MSg form, but with F rather than M NC_{infl} prefix (this is because human F and nonhuman N^{g}ARA are closely associated formally and share the prefix /n^{g}ara-/, variant /n^{g}a:-/).

Other instances of human MSg morphology (including HumSg suffix) with a normally nonhuman fauna term are in NMET 20.10.1 (king brown snake, as mythical figure), and 34.6.1 (native cat, also as mythical figure).

If we leave aside dogs, devils (ghosts), and babies, we can say that the human/nonhuman division is rather consistently maintained, the main exceptions being the quite reasonable personification of myth figures, and the occasional use of WARA forms for abstract human collectivities.

4.11 Semantics of nonhuman NC categories: NA, N^{g}ARA.

If we are looking for simple rules of thumb for explaining why each nonhuman noun stem is assigned a particular NC category, we are going to be disappointed. There are five nonhuman classes (NA, N^{g}ARA, WARA, ANA, MANA), and the ANA class has ANA_{wu} and $ANA_{\emptyset}$ subclasses with different direct-object concord in verbs. None of the classes is particularly unitary semantically. If we look at sets of nouns in semantically natural lexical domains (spear types, Trigona honey bees, paperbark trees, body parts, eel-tailed catfish, edible roots), some of which are explicitly recognised as Nunggubuyu domains by the occurrence of a superordinate term, we find that the specific terms are scattered across several noun classes. In the neighbouring Ngandi language, a similar noun-class prefix system shows reasonably close correlations of particular domains with specific noun classes, but such correlations are much weaker in Nunggubuyu.

Let us consider some exx. of tightly defined lexical domains or subdomains and observe the NC distribution of the component terms:

paperbark trees: NA (4), MANA (3), ANA_{wu} (2).
kangaroos/wallabies: $ANA_{\emptyset}$ (3), MANA (1), $N^{g}ARA$ (1).
goanna lizards: WARA (3), $N^{g}ARA$ (2), MANA (1).
marine turtles: $ANA_{\emptyset}$ (2), NA (2), $N^{g}ARA$ (1).
freshwater tortoises: WARA (2), ANA_{wu} (1), MANA (1).
body parts (head): ANA_{wu} (12), MANA (5), NA (2).
spear types: ANA_{wu} (5), MANA (4), NA (1).
ants: $N^{g}ARA$ (2), NA (1), WARA (1), MANA (1), ANA_{wu} (1).

While these data may suggest associations between NC categories and semantic domains, the correlations are at best statistical, suggesting unmarked or "wastebasket" classification patterns for those stems which lack a contextually marked NC.

In this and the following section we try to squeeze out any discernible semantic patterning we can find. However, we should observe immediately that the NC system has important linguistic functions regardless of the semantic motivation of the system. Provided that all speakers agree on how a given noun is classified, the NC marker by itself (e.g., attached to a modifying adjective or part of the concord markers in the verb) has indexical value in discourse. Specifying, for example, that the direct object (not overtly mentioned) in a given clause is MANA class severely limits the range of contextually possible referents. In texts, it is not unusual for a referent to be thus "pronominalised" even in its initial introduction into the discourse, so that the full NP is never pronounced; this is done when the speaker feels that the combination of the NC marker and the context is sufficient to identify the referent (when addressing a competent native speaker).

The first two classes we consider are NA and $N^{g}ARA$. As nonhuman NCs, these are relatively marked (as is WARA). On the other hand, they are reasonably widely distributed across semantic domains, suggesting that they might tend to occur with terms designating salient or unusual species and objects. Also, since NA is partly identical to the human M (masculine) category, and $N^{g}ARA$ to the human F category, we might suspect some tendency for NA and $N^{g}ARA$ to be used with terms for spp. and objects with gender associations within this culture.

Indeed, there are a number of terms for salient and mythologically important spp. which have these NCs. For example:

a) /l̲abama/ 'moon' NA vs. /a l̲ir/ 'sun' $N^{g}ARA$ (cf. /miyi r̲i/ 'star' $N^{g}ARA$)
b) /yamin^{y}ji/ 'gecko' NA vs. /wa:yin/ 'emu' $N^{g}ARA$
c) /n^{g}ala:ligi/ 'green turtle' NA vs. /n^{g}arugal̲ij/ 'dugong' $N^{g}ARA$
d) /wulid̲a/ and /lhalbij/ (two fan-palms) NA vs. /n^{g}abann^{g}a/ (palm sp.) $N^{g}ARA$
e) /war̲barg/ 'crow' NA ---
f) --- /gud̲argu/ 'brolga' $N^{g}ARA$
g) --- /anji/ 'jabiru' $N^{g}ARA$

In (a) and (b) we have spp. or natural entities which are directly opposed to each other; (a) for obvious and universally

valid reasons, (b) because the gecko lizard and emu (large flightless bird) are major husband-and-wife protagonists in an important myth (NMET texts 3, 4, and 5). Moon (in (a)) is also a mythical protagonist, but is not opposed to sun in that context (NMET text 34). NC assignment in (e-g) is related to these facts: crow is a male figure in an important myth (NMET texts 11, 12, 13); brolga is depicted as a female character in a squabble with emu (NMET texts 6, 7); and jabiru appears in a myth as a voracious figure with possible feminine attributes (NMET text 10).

The sets in (c) and (d) involve spp. which form natural oppositions, turtle and dugong being the two major marine food sources, the palms in (d) being the ones whose shoots are eaten. However, in these cases the specific choice of NA and $N^{g}ARA$ classes seems more arbitrary. I would venture the suggestion that these NCs are used here not because of any specific association of green turtles or Livistona palms with masculinity, or of dugong or Ptychosperma with femininity, but rather because NA and $N^{g}ARA$ (being modeled, as it were, on the M/F opposition among humans) are a convenient device for expressing or dramatising low-level but highly salient spp. oppositions, and are here appropriated for this purpose. (Turtle and dugong do occur together in myth (text 42 in NMET), but their gender does not appear to be highly material in the myth, which is in any event associated with Warndarang rather than Nunggubuyu territory.)

In those cases where we are explaining NC assignment by pointing to a specific gender identity in myth (gecko, emu, etc.), there is still the question why these spp. have such a gender identity in the first place. This is perhaps not a matter for a grammar to deal with, but we might drop a few hints. First, a set of three large and conspicuous birds found around swamps (emu, brolga, jabiru) are all treated as feminine in myths, exhibiting a range of personality types but principally negative (trickster, greedy, etc.), especially when directly opposed to male figures. Second, ritual swallowing is associated with female characters (the imagery being sexual at bottom), so it is not surprising that several python terms are $N^{g}ARA$, including /majbarwar/ 'olive python' (see NMET texts 1, 2); jabiru and emu also engage in swallowing (and regurgitating) in their myths, and in the myth of crow and the two women (NMET texts 11-13), crow is metaphorically swallowed (being tricked into jumping into a hole filled with excrement and covered with grass), is subsequently partially devoured by voracious meat ants (/ya:g/, $N^{g}ARA$ class), and then obtains his revenge in a manner involving clearly phallic symbolism.

However, specific mythical associations cannot explain more than a small number of NC assignments (at least, not synchronically), since only a small number of spp. and few or no objects turn up in the myths (of which Hughes and I have, between us, published comprehensive collections, to which may be added van der Leeden's work). We will therefore now proceed to identify some particular lexical domains which seem to have relative concentrations of NA and/or $N^{g}ARA$ stems.

For the NA class we may be able to identify the following:

a) paperbark trees with abundant loose bark: /lhulwu/, /midi/, /rijbar/, /warjara/.
b) smooth-barked eucalypts: /wilin/, /arlhag/, /n^{g}alan^{g}ga/.
c) some palms: /wulida/, /lhalbij/, /yalumbu/.
d) other trees whose roots are eaten: /lhi:rj/, /yan^{y}jug/.
e) trees whose nectar is sucked: /rilidili/, /(w)adbar/.
f) some mullets: /yibadun^{g}gu/, /nigimilharma/, /lambalamba:dhu/.
g) rainbowfish: /yimurgu/, /buyal/.
h) shells, especially oysters and mussels: /ma:mbal/, /la:dhani/, /lharmin^{y}/, /n^{g}abarn^{g}abar/, /nun^{g}ga:ri/, /rawurgajana/, /walgurg/, /yinun^{g}garba/, /yimarmba/.
i) whales: /yan^{g}gawu/, /yira:bidhi/.
j) very large fish (except rock-cods): /yin^{g}gulbandi/, /warmin/. Also several trevallies and similar marine fish: /ma:landhurg/, /winjidu/, /malawuru/, /lhabiyada/, /walbalg/, /yagari/, /yimawuru/.
k) flies: /a:mun^{y}/, /waran^{g}alwaran^{g}al/, /wargadjiga/, /ma:d/, /walar/. Also 'gnat' (/milwin/).
j) other biting or parasitic insects/invertebrates: /mararan^{y}/ 'green tree ant', /mala/ 'centipede, scorpion', /n^{g}arambali/ 'centipede', /mi:j/ 'louse' (and /mirar/ 'louse eggs'), /madhal/ 'leech'.
k) some hawks: /wadanawadana/, /lan^{g}galan^{g}ga:bijug/, /gurujujurg/, /n^{g}agan^{g}aga/, /nigarga/. Also /nayimar/ 'frigatebird'.
l) "passive" genital organs: /garan^{g}/ 'scrotum/testicles', /ri:g/ 'vagina' (contrast /n^{g}uyi/ 'penis' MANA). Also genital covers: /madamada/, /wuln^{y}in/.
m) bones used as tools or for sorcery: /malibi/ 'shoulder blade' (cutting tool), /malganan^{g}/ (for sorcery). Possibly /la:n/ 'knee' and /raja/ 'canine tooth' belong here.
n) wooden pipes: /ma:da/, /yila:ri/. Also /nimamindi/ 'pipe bowl'.
o) other useful wood or tree bark: /miljir/, /lha:r/, /du:l/.
p) woomeras: /wandag/, /albug/, /murugu/. Cf. also /-n^{g}aln^{g}-/.
q) armbands: /ra:n/ (plant), /manba/, /wa:guru/.

Some of these domains include items from other classes; see domain lists at the end of the dictionary.

In addition to the items just listed, there are many other NA nouns which do not belong to obvious domains in which this class is conspicuous. Among body parts, other than those in (l-m), we have /wi:g/ 'grey hair', /w$_{l}$urij/ 'chest' (in compounds used to indicate emotional centre), /yambiya/ 'throat', /yara/ 'nail', /rulul/ 'boil'. Also /n^{g}anandharg/ 'crest' (especially of white cockatoo, /raln^{g}ar/, WARA class).

Among birds other than hawks we have /banan^{g}garg/ 'nightjar', /dindir/ 'burdekin duck', /jadagag/ 'jungle-fowl', /jarag/ 'gull', /malgalha:lhir/ 'black duck', /nunma/ 'magpie goose', /warag/

'black cockatoo', /waraywaray/ 'lorikeet', /yiriwirwir/ 'swallow', /wulan^{g}an^{g}ag/ 'babbler'. These do not seem to form tight semantic clusters within the context of Nunggubuyu bird terminology.

Fish other than those in (f, g, j) are /balwal/ 'flounder', /guyalira/ 'butterfish', /lan^{g}ij/ 'shovel-nose ray sp.' (the other sp. is MANA class), /yirdhi/ 'fork-tailed catfish sp.', /marbunan^{g}/ 'perch sp.', /mujulu/ '?', /nun^{g}ula:gurlhan^{g}u/ 'spinefoot', /nan^{g}uru/ 'fork-tailed catfish sp.', /rabarayala/ 'large ray sp.', /ramurlhumurlhu/ 'stonefish' (deadly), /rilmin^{y}ji/ 'perch sp.', /warga/ 'sawshark', /yimida:ri/ 'milkfish', /yambirgu/ 'parrotfish', /yarbidhi/ 'tuskfish(?)', and /yiwunbina/ 'sea-bream'.

Trees and shrubs: /dumburumbu/ 'sandalwood', /miliba/ 'shrub sp.', /munn^{g}u/ 'shrub sp.', /nidhun^{g}/ 'tree sp.', /ladag/ 'milkwood', /anara/ 'mangrove sp.', /(w)ariyar/ 'wattle sp.', /ya:lhin^{g}a/ 'wild apple', /yimbid/ 'cypress', /yindi/ 'sandpaper fig', /yu:min^{y}/ 'tree sp. near mangroves'.

Other plants: /daran^{g}gi/ 'reedlike plant', /lhawulgulg/ 'sharp grass sp.', /larawal/ 'sedge sp.', /mudun^{g}/ 'swamp plant with edible tubers', /(w)andhardharg/ 'herb sp. near swamps', /warmurn^{g}/ 'wild cucumber (melon)', /yalgurg/ 'tree orchid', /yambubug/ 'clover-like herb'.

Insects and larvae other than in (k-j): /balbalma/ 'butterfly, moth', /jaramumu/ 'beetle sp.', /nilanila/ 'cicada', /wunbun/ 'paper wasp'.

Direction-specified winds: /ba:ra/ 'NW wind' and some near-synonyms like /balman/; /wurun^{g}urini/ 'cold S/SE wind'.

Other fauna: /n^{g}uda-lhardharg/ 'king brown snake', /dha:riba/ 'trepang', /jawann^{g}awann^{g}al/ 'sigar glider', /malban^{g}gari/ 'red flying fox', /yamin^{y}ji/ 'gecko lizard' (major myth figure), /n^{g}ala:ligi/ 'green turtle', /n^{g}uway/ 'worm', /n^{y}aran/ (one of two hermit crab spp., the other being ANA$_{wu}$ class).

Other NA class items are /bajbara/ 'pandanus mat', /birbiru/ 'spinning top', /burumburun^{g}a/ 'galaxy', /lhalar/ 'lightweight limestone', /lhanda/ 'antmound', /lhan^{g}alan^{y}/ 'parasitic worm', /lhan^{g}anig/ 'salt', /lhular/ 'fish-catching basket', /labama/ 'moon; small white grubs', /lawawa/ 'Gunabibi ritual headband', /lirin/ 'shellfish sp.', /madban^{g}ga/ 'grass head ornament', /maddhan^{g}ga/ 'mortar (for grinding)', /armann^{g}al/ 'yellow clay', /warwar/ 'stringybark scrubland', /wiyidu/ 'whirlwind', /yadbuwa/ 'cuttlefish shell', /yinibi/ 'bits inside nose', and /yinin^{g}ira/ 'sandbar'.

The N^{g}ARA class, on the other hand, tends to cluster in the following domains or subdomains:

a) very large birds: /wa:yin/ 'emu', /anji/ 'jabiru', /gudargu/ 'brolga', /margij/ 'eaglehawk (wedge-tailed eagle)'.
b) celestial bodies: /alir/ 'sun', /miyiri/ 'star', /banumbil/ 'morning/evening star'.
c) specifically female kangaroos terms: /bayir/, /yarudu/, /anda:lburu/ (terms for males and juveniles of same spp. are ANA$_{\emptyset}$).
d) several pythons: /majbarwar/, /alja/, /bubunara/, /dhuma:muguna:muru/.

e) rock-cods and similar coral-dwelling fish: /maldhana/ 'groper' (most prominent), /gabiliwili/, /mulugumba/, /dhuma:bina/, /adag/.
f) dolphins and dugong (mid-sized marine mammals): /n^{g}arugalij/, /n^{g}an^{y}jabana/, /yuluman^{g}ani/.
g) metallic objects: /bajilan/ 'fishhook', /ja:rug/ 'needle', /yi:li/ 'shiny metal'.
h) cloth: /n^{g}ardhan^{g}ara/ 'thread, wool', /dhumbala/ 'sail', /arara/, /galiwuru/. (But 'canvass' and modern clothing items are MANA.)
i) some grunters (perch) and similar fish: /mandag/, /ridhid/, /ya:nug/, /(w)adag/; perhaps /yimbiri/ 'mangrove jack' belongs here.

We now list other N^{g}ARA nouns which do not belong to tight semantic clusters with others of the same class.

Birds: aside from (a) above, see /ba:lmi/ 'pelican', /bilyug/ 'cuckoo-shrike', /birn^{g}gilg/ 'lotusbird/swamphen', /dhilibay/ 'bowerbird', /dharawurugugug/ 'dove, chicken', /yililij/ 'duck', /gadhirgadhirg/ 'oyster-catcher', /gara:lag/ 'white ibis', /gula:bijbij/ 'beach stone curlew', /guruwilag/ 'eastern curlew, etc.', /guwilu/ 'bush curlew', /lhawuya/ 'spoonbill', /labarg/ 'dove', /arawuwarg/ 'cormorant', /wuralg/ 'kookaburra', /yidjid/ 'osprey'.

Snakes: aside from pythons, (d) above, we have /laran^{g}ana/ 'sea-snake', /wulundharg/ ''brown tree snake', /n^{g}arimarjga/.

Goanna lizards: /galamu/, /gabayayag/.

Fish: (e) and (i), also /gumba:miri/ 'batfish sp.', /lharada/ 'sea-bream', /mili/ 'mullet sp.', /n^{g}ajiwalhuwa/ 'trevally sp.', /n^{g}ara:ma/ 'butterfish', /dhiriri/ '?', /yimalmi/ 'cuttlefish'. Rays: /du:mbi/, /wariyil/, /dhumirin^{y}ji/.

Trees and shrubs: /mangayan^{g}a/, /n^{g}abann^{g}a/ (palm), /jirijirig/, /n^{g}a:dhiyarin^{y}a/, /yiwujun^{g}/.

Insects: /mi:r/ 'wasp', /ya:g/ 'meat ant', /yindin^{g}argi/ 'ant sp.' (also a plant sp.), /mula/ 'mosquito', /ganabura/ 'large mosquito sp.'.

Plants: /aran^{g}ay/ 'tall grass (Sorghum)'.

Other fauna: /yurman^{g}a/ 'echidna', /lharagula/ 'crocodile', /gandawul/ 'rock wallaby', /n^{g}alhuwa/ 'hawksbill turtle'. Also one introduced quadruped: /jaran^{g}u/ 'horse', /walbalgi/ 'horse and rider'.

Human body parts: none.

Implement: /raragal/ 'sharp stick' (usually from /yiwujun^{g}/ tree, see above).

Comparison of the NA and N^{g}ARA classes does not lead to any simple semantic analysis. Obviously, many noun-class assignments may have reflected some semantic principle at one time, but may now be more or less arbitrary. Many lexical items were borrowed from other languages, and some may have carried over a noun-class assignment from the other language. For example, quite a few NA nouns beginning with /yi/ or /y/ can be suspected of being of Anindilyakwa origin, along with N^{g}ARA nouns beginning with /dhu/ or similar sequence, since Anindilyakwa has noun classes with prefixes of this type (when converted into Nunggubuyu pronunciation).

My basic position on the semantic structure of these classes is that there is no overall, global principle, rather a number of independent lexical items or small clusters of associated lexical items which make up each class. In a few cases we can "motivate" the assignments by noting the morphological connection between these nonhuman classes and the human M and F categories, as noted above. Female kangaroo/wallaby terms should be mentioned here, in addition to N^{g}ARA and NA spp. associated with gender-specified myth protagonists. In some cases, naturally opposed lexical items like 'green turtle' and 'dugong' take advantage of the polar status of NA and N^{g}ARA to emphasise the lexical opposition, without a particularly cogent reason why NA goes with one term instead of the other. One can always try to speculate; in the case of 'green turtle' (NA) vs. 'dugong' (N^{g}ARA) we would observe that turtles have good vision but poor hearing while dugong have sensitive ears but no vision (important features in hunting, and emphasised in the relevant myth), and then try to connect this with deep-seated cultural stereotypes about men and women. However, there is a real danger of arbitrary, post hoc rationalisation here, and we should be cautious.

4.12 Semantics of nonhuman NC categories: WARA.

The number of attested WARA nouns is smaller than that for any other nonhuman class, but is not much lower than the figure for N^{g}ARA. We have mentioned in §4.10 that there is a pattern by which WARA instead of human Pl is used for unindividuated human collectivities of some types, as well as for marginal humans (ghosts) and for Man's Best Friend (dogs). There are quite a few other WARA nouns, but it is a marked class, typically used with relatively distinctive and salient spp. or objects. The following are the most significant semantic clusters:

a) ghost: /badirin^{y}a/, /mu:gar/. (Also ANA$_{\emptyset}$.)
b) dog/dingo: /landhurg/, /wun^{g}gan/.
c) freshwater tortoises: /dalma:ran^{g}/, /madalaj/.
d) rat: /lhudin^{y}/, /wun^{g}ujan^{g}/.
e) goanna lizards: /wada:bir/, /rulbu-n^{g}aln^{g}alu/, /wuguj/, /jurgubadu/.
f) bat: /miliwarwar/, /wadun^{g}gu/.
g) frog: /dhabararag/. [Note: dictionary has noun class correct in regular entry p. 15, but incorrect in appendix section 1.F.vi, p. 318.] Tadpole: /wulwul/.
h) mud-whelk shell: /lha:du/, /madaduwaba/.
i) small fish found chiefly among mangroves: /dimbulg/, /lhawaran^{g}gay/, /mababili/, /wilwigilwi/, /wulmun^{g}gurag/.
j) water lily (especially round seed pods): /dhagalirig/, /yan^{g}guri/, /ayag/.
k) toadfish: /dhamurgungun/, /yilgu/.
l) snails: /ga:gag/, /lhumbuyu/, /mu:dhun^{g}/, /midhun/.
m) set of closely related swamp plants with edible tubers: /windar/, /ja:mulu/, /n^{g}armuda/.
n) a possible loose group of plants with large round root

swellings: /lhajbag/ 'bush lily' (Crinum, with bulbous root), /wulburu/ 'round yam' (Dioscorea), /gagil/ 'wild onion' (apparently Tacca); note possible connection with terms in (j) and perhaps (m) on grounds of spherical shape.

There may be some further semantic patterning here regarding a predilection for spp. associated with swampy environments ranging from freshwater billabongs to coastal and riverine mangroves (tortoises, frogs, mud-whelks, mangrove-dwelling fish, water lilies, snails, tuberous swamp plants, bush lily, one rat sp.).

Aside from the terms listed above we have a number of other WARA items.

Birds: /warbarg/ 'masked plover', /madiwaj/ 'green pygmy-goose', /gandawadjirig/ 'night-heron', /guruguruwalbalg/ 'mudlark, peewee', /jirin^{g}aljirin^{g}al/ 'wren', /munjirg/ 'sandpiper', /raln^{g}ar(g)/ 'white cockatoo', /rumurumu/ 'pigeon', /wuramagu/ '?'.

Fish: /mulujbi/ 'marine herring', /julurbi/ 'salmon sp.' (other salmon is ANA$_{wu}$), /lhulurj/ 'whiting', /midhurun^{g}u/ 'fork-tailed catfish sp.', /lhu:ru/ 'sleepy cod', /ran^{g}gu/ 'eel', /wurabadji/ 'parrotfish', /yaluwa/ 'fantail ray', /yarba/ 'ray sp.'.

Lizard: /lirag/ 'blue-tongued', /waljurig/ 'frilled', /alaj/ 'skink'.

Snake: /wulin^{y}miri/ 'green tree snake'.

Insects: /milbun/ 'firefly', /mundig/ 'dog flea/tick', /n^{g}umij/ 'ants'. Larva: /lhuguray/ 'caterpillar'. Bee: /n^{g}a:nig/.

Invertebrate: /ayij/ 'jellyfish'.

Shellfish: /n^{g}adhin^{g}an^{g}gu/ 'cowry', /n^{g}anji/ 'baler'.

Other fauna: /n^{y}a:lig/ 'native cat'.

Tree/plant: /wunbarg/ (one of the mangroves), /wu:n^{g}/ 'black plum', /wurulambilambi/ 'beach grass sp.', /(w)andalal/ 'swamp plant sp.', /n^{g}arn^{g}ar/ 'roly-poly', /miliyirwirig/ 'bush sp.'.

Body parts: /lhi:n/ 'wart', /mala/ 'navel'.

Some of the items in the lists just given might be correlated with the more productive semantic patterns alluded to earlier (spherical shape, swampy environment), but most of the items just listed do not fit obviously into these categories.

Observe the absence of implements and topographic units from these lists for the WARA class.

4.13 Semantics of nonhuman NC categories: ANA$_{\emptyset}$, ANA$_{wu}$, and MANA.

We now turn to the three categories which have no morphological relationship to any human NC. There are two classes marked in noun morphology itself: ANA and MANA. The former may be divided into ANA$_{\emptyset}$ and ANA$_{wu}$ subclasses, since the two have different object concord in the pronominal prefixes attached to verbs:

(4.xiv)	ana-n^{g}ujija	n^{g}a=na-n^{y}	'I saw the fish'
	ANA$_{c}$-fish	I saw it(ANA$_{\emptyset}$)	[prefix: Table 9-1]
(4.xv)	ana-mada	n^{g}awu=na-n^{y}	'I saw the grass'
	ANA$_{c}$-grass	I saw it(ANA$_{wu}$)	[prefix: Table 9-14]

Because of the large number of nouns in these categories, it would require considerable space to list all of them with commentary.

Since the dictionary includes appendices with lexical lists by semantic domain, with noun-class specified for each noun, readers interested in fine details can find much of what they need there. We will concentrate on general patterns here.

First, an opposition between ANA$_{\emptyset}$ and ANA$_{wu}$ appears in biological terminology. There are a number of terms for the highest taxonomic levels of flora and fauna, which I have elsewhere called "generic" but which is called "life-form" in recent cognitive anthropological studies. The generalisation is that life-form terms are ANA$_{\emptyset}$ for fauna and ANA$_{wu}$ for flora. We have just seen 'fish' in (4.xiv); other fauna life-forms are /wugalij/ 'turtles (marine) and dugong', /ma:rn^{y}/ 'snake', /n^{g}urudhu/ 'bird; game animal (terrestrial)', /lagu/ 'honey and honey bees', /maran^{g}ara/ 'shell, shellfish', /nun^{g}gariyiwuj/ 'freshwater game', and a few intermediate taxa under 'fish' like /maln^{g}ar/ 'small rays' and /lan^{g}galu/ 'freshwater fish at time of first rains'. The basic ANA$_{wu}$ flora terms are /mada/ 'grass, herb' (non-woody terrestrial plant) and /ran^{g}ag/ 'wood, tree, shrub'.

In the case of ANA$_{\emptyset}$, the pattern shown by the life-form terms is continued (though in a statistical manner rather than an absolute one) in lower orders of taxonomy. That is, ANA$_{\emptyset}$ is the most common NC overall for specific fauna terms, but is uncommon in other lexical domains. Birds show a scattering of noun classes, but ANA$_{\emptyset}$ is found for several owls, bitterns, and terns and for many other individual spp. like glossy ibis, gannet, quail, egret, butcherbird, koel, kingfisher, friarbird, cuckoo, chestnut rail, etc. Other NCs are favoured for the largest birds and for parrots, ducks, and geese. ANA$_{\emptyset}$ is common for mammals including three out of five kangaroo/wallaby terms (except for specifically female terms), possum, and introduced spp. (buffalo, domestic cat, bullock) except horse (N^{g}ARA class). ANA$_{\emptyset}$ is common with fish terms, and is particularly dominant among eel-tailed catfish, large jumping fish such as tuna, and (along with NA) mullets. Three of five terms for marine turtle spp. are ANA$_{\emptyset}$, as is a juvenile term for one other. Four of five Trigona honey bee spp. have ANA$_{\emptyset}$ at least as a variant NC, and most terms for honey and parts of beehives are ANA$_{\emptyset}$. However, ANA$_{\emptyset}$ is uncommon or unattested with some other fauna categories: lizards, freshwater tortoises, snakes, shellfish. It is found with a few insects/invertebrates (aside from honey bees) but is not dominant there.

The ANA$_{\emptyset}$ class is conspicuously rare in a number of important domains in which ANA$_{wu}$ and MANA are co-dominant: topography, time of day, flora, body parts, implements. Some instances where ANA$_{\emptyset}$ does occur: /lhan^{g}gu/ 'meat, flesh', /dhan^{g}ara/ 'flower', three terms for sections of fat in rays (/mu:n/, /minha:ri/, /midhiginda/), /mangimangi/ 'sharp animal bone', /dha:mbulg/ 'feathered stick', /babiligan/ 'iron, steel'. Flora terms with ANA$_{\emptyset}$ include a few terms for types of water lily root corms (/wudan/, /jirigilil/, /yiwujun^{g}/), and the following: /mun^{y}juj/ 'green plum', /n^{g}uru(n^{g})/ 'fruit-bearing tree sp.', /lhawumag/ 'long yam', /wugalan^{g}anda/ 'wild onion', /dhagarijgaba:ban^{y}juj/ '(unimportant) climbing vine spp.', and /n^{g}urji/ 'grass sp.' (also 'loose possessions'). ANA$_{\emptyset}$ is also used for some "semi-human" terms when a human

NC is not used: /gujuju/ 'baby', /badirin^{y}a/ 'ghost, devil'. It is also the ANA$_{\emptyset}$ class which is used to cross-reference the nonhuman WH interrogative /yan^{g}i/ 'what?', and the term /ga:n^{g}gan^{y}un^{g}/ '(indefinite) monster, something terrible'.

The remaining classes, ANA$_{wu}$ and MANA, are most often opposed most prominently to each other, and the two are co-dominant in a number of important nominal domains.

Let us begin with a few important nouns which occur in both of these classes but with different senses:

noun	ANA$_{wu}$ sense	MANA sense
gara	(any) hole	burrow (of animal)
ran^{g}ag	wood, tree	dugout canoe
walag	hollow tree	hollow-tree coffin
mun^{g}gala	top of tree-trunk	tree platform for corpse

In these instances, the ANA$_{wu}$ sense is that of a naturally occurring object, while the MANA sense takes the same object and makes it into a container or vehicle put to actual use. A somewhat similar opposition, this time involving NA instead of ANA$_{wu}$, is seen with /lhanda/, which means a) 'termite mound' (NA class) or b) 'native oven' (MANA class). Since a native oven is made in the ground with termite-mound chunks (or stones), we again have an opposition between a natural substance on the one hand and its practically useful appropriation on the other. However, this type of lexical opposition made by NC categories is confined to a small number of nouns and is not freely productive. [A few other nouns which are attested with two NCs but which are either cases of random fluctuation or cases of two unrelated meanings: /balwal/, /dhirwig/, /dhururun^{g}gi/, /ganguluguluu/, /gabigabi/, /miyaja/, /wulmuwari/, /wuwalulu/, /yiwujun^{g}/. A case showing NA vs. MANA but with a distinct semantic relationship than that just exemplified is /lhambilbilg/. With /anbana/ 'rain, raincloud' both ANA$_{wu}$ and N^{g}ARA are multiply attested, but no clear semantic difference has emerged. The body-part term /waran^{g}/ 'ear' is usually MANA but has turned up in TNT 31 as ANA$_{wu}$ in a list of otherwise ANA$_{wu}$ body parts; this kind of low-level, discourse-bound NC-shift is not surprising.]

We have seen that ANA$_{wu}$ but not MANA is found in life-form flora terms. ANA$_{wu}$ is also the class of (uncommon) abstractive nominalisations from verbs: /n^{g}awa-n^{g}awi-j/ 'dying, death' (§14.16). There is a large class of basically adverbial elements which are morphologically nouns of ANA class (though often appearing without nominal affixes), and which are probably all ANA$_{wu}$ rather than ANA$_{\emptyset}$ (though for most of them it is difficult to get them in object position in the sentence, where the opposition ANA$_{wu}$ vs. ANA$_{\emptyset}$ is manifested by verbal concord). This suggests that ANA$_{wu}$ but not MANA is favoured in a range of lexical items which we might label "abstract" in a loose sense (to include life-form terms and adverbial nouns as well as nominalisations).

This still leaves us with the series of semantic domains, each containing numerous fairly specific terms, in which ANA$_{wu}$ and MANA are both common. Let us begin with the general area of inanimate natural phenomena (topography, time of day, weather, wind). Here we find ANA$_{wu}$ in the majority, but with a distinct minority of MANA

items which seem to form natural clusters (there are very few NA or N^{g}ARA items).

In topography, the basic generalisation is that MANA is associated with the coast and sea, ANA$_{wu}$ with the interior. MANA items are /lhagayag/ 'saltwater, sea', /lhan^{g}ada/ 'coastal rainforest, jungle', /madhalag/ 'beach, coast', /man^{g}arag/ 'sand, sandy soil', and /magaban^{g}/ 'dune'. ANA$_{wu}$ items are /gu:gu/ 'freshwater', /yu:l/ 'interior bushland' (e.g., stringybark forest, but excluding areas on basically sandy soil), /lhaganar/ 'forest', /abala/ 'plain', etc. That ANA$_{wu}$ is the unmarked topographic NC is suggested by its covering such terms as /rilji/ 'island' and /ala/ 'river'. For '(freshwater) pond, billabong' we get /wurugu/ ANA$_{wu}$, but there is a derivative /ma-burugu/ with NC$_{der}$ prefix creating a derived MANA noun (§4.9); I am fuzzy on the semantic distinction but it may be that /ma-burugu/ designates a brackish swamp.

Terms for wind and weather tend to be ANA$_{wu}$ more than MANA (there are also some other NCs involved). ANA$_{wu}$ exx. are /anbana/ 'rain, raincloud' (also N^{g}ARA), /n^{g}ubunun^{g}/ 'cloud', /wu:ji/ 'fog', /wumin^{y}iriri/ 'drizzle', and /durmala/ 'NE wind', and the unmarked NC of the defective root /-lhan^{g}un^{y}-/ 'wind' is ANA$_{wu}$ (§4.9). MANA items are /mariga/ 'SE wind' (presumably MANA because the Nunggubuyu inhabit the west side of the Gulf and thus easterly winds, especially the strong SE wind of the dry season, come in off the coast), /maguwa:duj/ 'cold wind' (usually SE wind), and /maragu/ 'twister'. At least a general connection between MANA and coastal environment seems present here, as with topographic terms.

Terms for time of day are mostly adverbial nouns of ANA$_{wu}$ class (or at least ANA class if not found as objects): /adharwara/ '(late) afternoon', /n^{g}amugijgaj/ '(early) morning', etc. [For /min^{y}n^{g}u/ 'night' the NC is given correctly as ANA$_{wu}$ in the dictionary entry p. 109, but incorrectly as MANA in the domains list p. 326.] Possible exceptions are /min^{y}n^{g}an^{g}a/ MANA 'night (as unit of passage of time)' and /wu:n/ MANA **'night'**, but the former really means 'sleep, sleeping' and the latter is uncommon and of unclear sense.

We now consider flora. Both ANA$_{wu}$ and MANA are very common here, and although the life-forms are ANA$_{wu}$, the more specific terms show considerably more MANA than ANA$_{wu}$ assignments. Semantic patterns, such as there are, are tricky. Among the paperbarks (clearly a native semantic subgroup), /liwa/ and /lhabara/ are ANA$_{wu}$; the former is the prototypical source for the papery bark used for various purposes, also called /liwa/, while the latter is the main source for coolamons (containers), also called /lhabara/; the focus in both cases is thus on the bark (/magulag/ or /warigulag/ ANA$_{wu}$). However, MANA is found with the paperbarks /ragala/, /magandar/, and /wuluru/, which are only secondary sources of useful bark (/magandar/ is excellent for dugout canoes). (Some other paperbarks are NA class; these have abundant loose bark, and are perhaps generally more massive than the ANA$_{wu}$ spp.)

Eucalypts show ANA$_{wu}$ and MANA with no clear overall pattern. Stringybark /lhu:n^{y}/ ANA$_{wu}$ and a rust-leaved type /gurjada/ MANA are closely associated, as are the two coolibah-type spp. /walan/ MANA and /wumudju/ ANA$_{wu}$, but the class assignments in each pair

diverge. Others include bloodwood /lhumulug/ ANA_{wu} and woollybutt /wun^{g}urug/ MANA. A focus on bark might explain the assignment of stringybark, but not the others (and the species-specific term for the bark of stringybark tree is /lha:r/ NA).

Of the two pandanus spp., the important spiral type is /maguj/ MANA, the inland riverine type is /wulja/ ANA_{wu}. Among the palms, /gadara/ 'coconut' is MANA, as is the cycad tree (not a real palm) /n^{g}adhu/. Palms with edible shoots, however, are NA or N^{g}ARA.

A number of wattles (Acacia spp.) are MANA. There are two in the ANA_{wu} class: /anan^{y}/ (prototypical source of wood for yamsticks, also called /anan^{y}/), and /wugaralala/. Most figs are likewise MANA, though one, /yijbunun^{g}/, is ANA_{wu}. Of the eight or so mangroves or closely associated spp. (a class defined by habitat rather than by obvious morphological affinities), four (including the prototypical mangrove /ana/) are MANA and none is ANA_{wu} (though the term for the seed pod of /ana/ is ANA_{wu}). Of several terms for spp. whose main cultural importance is providing wood for spear shafts, the clear majority are MANA (cf. the term /larda/ MANA 'spear'), except for one wattle and stringybark (the latter is used mainly for other purposes, though). Similarly, a set of terms for a group of spp. (closely related botanically) whose main usage is providing wood for firedrills (the terms in some cases being identical with the term 'firedrill') are also MANA: /buduga/, /(w)alburun^{g}gu/, /lhuruman/, /arara/.

Of two kurrajongs and one closely associated sp., /adija/ 'kurrajong$_1$' is ANA_{wu} while /yarawug/ 'kurrajong$_2$' and /balbi/ are MANA. All three can be used for string fibre (cf. /mabur/ MANA 'string'), but /adija/ is the least useful for this purpose and also has the least desirable (though still edible) nuts, and these factors may favour the attested class assignments. (For the close association between /adija/ and /yarawug/, which is quite obvious perceptually, see text 42 in NMET, a myth in which the two are in parallel opposition.) Another case of NC opposition of two closely-related spp. is seen with /aragin^{y}/ MANA 'coastal whistling tree' and /wun^{g}garar/ 'riverine whistling tree', where the habitat may be involved in the class opposition. Another case is that of the two Excoecaria spp. (gutta percha type, with dangerous latex which can cause problems if rubbed into the eyes); the one found with mangroves is /dugudugu/, while an inland type is called /wulibulu/ (MANA and ANA_{wu} respectively, consistent with the usual coastal/inland NC pattern). Another pair of very similar spp. is /lhunga/ MANA and /lhun^{g}gala:lur/ ANA_{wu}, which have very similar soft white fruits.

This still leaves [no pun intended] several other trees and shrubs. One apparent cluster of ANA_{wu} terms is the set /wun^{g}aragaga/, /ganda:n^{g}ililigi/, /n^{g}arguran^{y}/, which are said to be very similar spp. with edible fruits (but not all have been identified). Another is a set of minor scrub trees: /galawarwar/, /n^{g}anan^{g}anin^{y}ji/, /marmin^{y}/, /yurumu/. However, two more general (and much more commonly used) terms for scrub trees, /madin^{y}jar/ (various spp.) and /mudidi/ (a wattle), are MANA.

Among climbing vines, we have a pair of important edible spp. of ANA_{wu} class, wild banana /wun^{g}urudin/ and wild grape

/wuyaran^{g}al/, while the unutilised sp. /magunalu/ is MANA.

Among grasses and other herbs (non-woody plants), MANA is predominant though ANA_{wu} is also well-represented. A class opposition like some seen earlier is /larwad/ 'coastal cane grass' (MANA) vs. /wubinday/ 'riverine cane grass' (ANA_{wu}).

The only ANA_{wu} items here forming clusters are these: two wild potatoes /wudun^{y}manji/ and /wun^{g}ambinn^{g}ambin/; and two gooseberries /n^{g}a:lig/ and /wurun^{g}alijun^{g}/. (The latter pair seems to involve a derivation of the last from the penultimate, but the pattern is not synchronically regular.) Other ANA_{wu} grasses/herbs are isolated individual terms: /dhun^{y}jira/ '?fern', /giriba/ 'wild passionfruit' (early English loan from creeper), a yam-like root /marwa/, grass potato /miral/, a minor grass sp. /amburuyuwuruyuj/, cattail /wuran^{g}guran^{g}/, a minor water plant /wunargunarg/, and pond algae /wirn^{g}gil/.

The MANA class is very well represented. Of six yams of the genus Ipomoea (one or two not securely identified), five are MANA and only one, /warda/, is ANA_{wu}. Other MANA clusters are these: the closely associated swamp plants /lala/, /marbuy/, /mun^{y}ugu/; the important sedge /madiga/ and a similar sp. or variant /mandhabi/; several terms for Nymphaea water lilies or their parts and the associated sp. Aponogeton /wundhumug/, /man^{g}gawuja/, /nindan/, /yambiri/, /wubun^{y}ul/, and the unmarked form of bound root /-w$_2$iril-/; several terms for (mostly floating) aquatic plants /maja/, /liriyil/, /mun^{g}ulu/, /wadag/, /winbin/, /wururi/. Other more isolated spp. of MANA class are a beach grass /manun^{g}gu/, the spinifex grasses /arn^{y}al/ and /ya:ln^{g}/, the grass /arigari/ used in eating honey, a grass used for ornamentation /mijgaran^{g}gij/, an edible root /jaladi/, a yam-like root /ri:ja/, a swamp plant with hard edible root /ya:gun^{y}/, a tuberous swamp plant /miral/, bloodroot /dhu:nda/, a sharp-fruited crawler /mida:buruburu/, a vine eaten by emus /wurunburun/, and a chenopod /yulyul/. For some of these spp. or groups, the most serious competing NC is WARA (water lilies, swamp plants, beach grasses and chenopods) rather than ANA_{wu}, while other classes like NA show up with a small number of items.

In the various fauna domains, ANA_{wu} and MANA are fairly uncommon, often showing up for one or two spp. each in a set of five to fifteen lexical items, hence with little possibility of forming semantic clusters. For the marsupials we can cite only /muluyurug/ 'nail-tailed wallaby' and /wangurag/ 'bandicoot', both MANA. Among the fish we have about 15 ANA_{wu} terms and half as many MANA terms in a large list, including a few sharks, perch, and long-toms/garfish plus a few conspicuous (ANA_{wu}) isolates like archer fish, barracuda, and bony bream. Among reptiles, we have a few instances of MANA and three of ANA_{wu}, but no clustering. A scattering of ANA_{wu} and MANA terms occur with shellfish and insects, but with no real clustering except for some MANA grub terms. The only real concentration occurs with crabs and other crustaceans, which show several ANA_{wu} and MANA terms (dictionary, p. 318).

Among body parts for humans, ANA_{wu} is most common and can be taken as unmarked, as is the general term /wubulu/ 'body'. The only

other important NC is MANA; the others are a handful of NA terms and two WARA terms. It seems best to characterise the MANA terms and assume that the remainder is mainly ANA_{wu}.

Among general (unlocalised) terms, MANA is found with 'blood', 'semen', 'excrement', and 'fat' (vs. ANA_{wu} for 'skin', 'saliva', 'bone', 'urine', 'tears', 'vomit', 'sweat', and $ANA_{\emptyset}$ for 'flesh, meat'). This would seem to suggest that MANA is found with more powerful or dangerous substances than ANA_{wu}. Other terms with MANA for external body parts are: 'eye', 'ear', 'head hair', 'nape', 'back', 'belly', 'abdomen', 'rear end/anus', 'penis', 'thigh'. No single generalisation can be drawn (some ANA_{wu} items are 'pubic hair', 'groin', 'hip', and 'nose'), but we do note that the extreme parts of the limbs are not included, and that there is some concentration in what we might again consider the more potent organs (of sex and perception) and in the central torso. Among internal organs, MANA is found with 'stomach' and the various intestines (but ANA_{wu} is used for 'heart', 'liver', 'kidney', 'spleen', 'womb').

Special body-part terms used with nonhuman fauna show a greater tendency to be MANA (see p. 322 of dictionary). Part terms used specifically with flora and inanimate objects are difficult to generalise about since most such terms are bound roots which acquire derived NC by whole-part NC harmony, with NC_{der} prefixes (§4.9).

Implements and weapons are diverse in terms of NC. The general term /larda/ 'spear' is regularly MANA, but terms for particular types show ANA_{wu} outnumbering MANA. ANA_{wu} is used for most boomerangs, but the (particularly vicious) hook boomerang is MANA. (It could be that this helps explain the NC assignment of spear types; those with many jagged barbs are MANA.) Terms for axes are ANA_{wu}, but the old stone tomahawk is MANA. Harpoons are ANA_{wu}, but clubs and fighting sticks are MANA. Most containers, and terms for dwellings and shelters (for humans) are ANA_{wu}, while string/rope and a number of items used in hunting fish or turtles/dugong are MANA. Aside from the old stringybark canoe /lhamugu/ ANA_{wu}, terms for boats and other vehicles (including modern ones) are MANA, as are a good number of relevant components ('paddle', 'rudder', etc.).

There are four major collective rituals. The two least secret ones, involving rites de passage for specific individuals, are circumcision /mandiwala/ and mortuary /ya:di/, both MANA. Of the two major secret rituals, /gunabibi/ is MANA while /ru:l/ is ANA_{wu}. The three MANA rituals involve, or can involve, singing with boomerang accompaniment and are associated with clan groups south of the Nunggubuyu (though didjeridu-accompanied clan songs are now usual in the /ya:di/ and fairly common in the /mandiwala/). The /ru:l/ (or /madayin/) is based on a different type of singing with tapsticks only, and is usually considered the most advanced and serious ritual.

Relatively abstract terms connected with rituals or clan songs are mainly ANA_{wu}, as with /wun^{g}ubal/ 'clan song', /$wuyun^{g}$guwan/ 'ritual performance', /lirbi/ 'fooling around', /galij/ 'having fun'. The same is true of other general terms for types of activity: /bari/ or /lharug/ 'walkabout, hike', /wungali/ 'exchange', /wun^{g}a:ri/ 'fight', /$wuman^{g}uman^{g}$u/ '(illicit) sex', though these

are typically used as adverbial nouns.

In general, then, the NC system as applied to nonhuman nouns is semantically opaque in many cases, though there are some visible patterns (absolute or statistical). For a large part of the nonhuman nominal lexicon, it is probable that the NC category is learned as part of the lexical entry, rather than being predicted automatically from a few general principles. A fairly trivial exception to this is the fact that true synonyms almost always have the same NC, and the fact that whole-part relationships expressed by NC_{der} prefixes (§4.9) involve NC harmony.

In the preceding sections on NC semantics (§4.11 to §4.13), we have generally given simplified glosses for nonhuman nouns (e.g., without scientific species identifications). For further information on such matters the dictionary should be consulted.

4.14 Types of reduplication.

In Chapter 3 we discussed Initial Reduplication (rule P-2) and Final Reduplication (P-3). Only P-2 is relevant to nouns. As explained in §3.3, the basic generalisation is that monosyllables and stems beginning with a stop have monosyllabic reduplication /C_1V_1-/, while polysyllabic stems beginning with something other than a stop have a bisyllabic reduplication /$C_1V_1C_2V_2$-/. Further complications are discussed in that section.

For nouns, the regular grammatical function of reduplication by P-2 is (3+) plural marking. This function is found with a large number of adjectival nouns (NAdj), and hence with translation equivalents of many English human nouns (other than kin terms and personal names). However, many such nouns take a Pl prefix such as /mij-/ instead of reduplicating, so the Pl must normally be specified in dictionary entries. Reduplicative NAdj may be used for nonhuman Pl reference. However, (nonadjectival) nonhuman nouns themselves have no plural marking (except for collectives, see below).

Some exx. of regular Pl reduplication by P-2 for NAdj with plural (more than three) sense are these:

Sg	Pl	gloss
badirin^{y}a	ba-badirin^{y}a	ghost
dhudabada	dhu-dhudabada	white man
lhalmar	lhalma-lhalmar	foreigner
n^{g}ajiwan^{g}gu	n^{g}aja-n^{g}ajiwan^{g}gu	old woman

(In nonpredicative use, the Sg forms shown would be modified by adding the relevant HumSg suffix, except that this is only optional for 'ghost'.)

There are also some high-frequency irregular plurals which in some cases look like irregular reduplications:

Sg	Pl	gloss
manun^{g}	mananun^{g}	woman
$w_2$irig	$w_2$ura:yun^{g}	small
$w_2$in^{y}ig	$w_2$un^{y}a:n^{y}un^{g}	small

(The same remark about use of HumSg suffix made above applies to these items as well.) The two Pl forms for 'small' are also unusual in that, with human reference, Pl prefix /mij-/ is added, hence /mij-bura:yun^{g}/ and /mij-bun^{y}a:n^{y}un^{g}/ 'children'.

The two stems for 'small' consistently use the irregular Pl form for plural sense with nonhuman as well as human nouns. Since nonhuman nouns (except for a handful of collectives, see below) do not mark plural, either in their own affixes or in cross-referencing pronominals in the verb, the Pl form of a modifying adjective like 'small' may be the only evidence of (cryptotypic) plurality of such nouns. For example, /mada/ 'grass' has no direct Pl form, and since the English counterpart is usually a mass noun we might assume this is also true of the Nunggubuyu word. However, /mada/ may co-occur with a NAdj like 'small', and in this case we may get /$w_2$un^{y}a:n^{y}un^g/, suggesting a (usually hidden) underlying plurality.

Some other NAdj with similar high-frequency Pl forms used with nonhuman as well as human referent are these:

Sg	Pl	gloss
lhamungur	lhama-lhamungur	short
ala:di	ala:-'la:dj	bad
run^{g}gal	run^{g}gu-run^{g}gal	big

On the other hand, for many of the less common NAdj which take a reduplicative Pl, the reduplication is sometimes or even frequently omitted. (For //lh//→ /dh/ in 'short', see P-19.)

In addition to the Pl reduplication just illustrated, we have at least two other types of nominal reduplication using essentially the same phonological rule (P-2): collective and adjectival. The term 'collective' is applied to a few topographic nouns which reduplicate to indicate a substantial but indefinite number of instances:

Sg	Collective	gloss
ala	ala:-'la	river
wurugu	wuru-wurugu	billabong
rilji	rilji-rilji	island

The adjectival type involves reduplication along with a suffix /-j/ which may ablaut the preceding vowel to /u/. The reduplication is obligatory in most or all of the stems I have in mind, but there is often a cognate verb which may fluctuate between simple and reduplicated form. In any event, the reduplication is not specifically plural or collective in the noun forms (and need not be specifically repetitive or prolonged in the verbs). See §14.15.

Verb	NAdj
=$w_2$ara- 'be crooked'	$w_2$ara-waru-j 'crooked' (cf. P-19)
=$w_2$ilwila- 'be pliant'	$w_2$il-wilwilu-j 'pliant' (" ")
=duma- 'be black'	du-duma-j 'black'
=n^{g}aln^{g}ala- 'be white'	n^{g}al-n^{g}aln^{g}alu-j 'white'

There are also a number of frozen formations of this type for which a synchronic segmentation is questionable, as with /jarmayarmaj/ 'long, tall'. There are also some cases where a noun or NAdj is derived from a simple noun root by reduplication and addition of /-yij/, as in /mada/ 'grass', derivative /mada-mada-yij/ 'having lots of grass'. For more details and exx. see §14.14.

It should be noted that in the exx. 'crooked' and 'pliant' just given, the //w_2// becomes /b/ by Leftward-Hardening P-19 in some contexts, just as //lh// in 'short' (above, this page) becomes /dh/.

In addition to plural, collective, and adjectival reduplications, there are a few other possibly distinct minor types. The time-of-day

adverbial nouns /n^{g}amugijgaj/ 'morning' and /adharwara/ 'dusk' are often found in reduplicated form with no specifically repetitive or plural sense: /n^{g}ama-n^{g}amugijgaj/, /adha:-'dharwara/. This may be related to the tendency of cardinal-direction adverbs to take special reduplicative forms (§7.29).

From /mu:n/ 'foot' a form /mu-mu(:)n-gala/ 'on foot' is recorded (NMET 161.19.4). The suffix is Ablative /-$w_1$ala/, but it looks as though a special reduplicative form is used here.

Alongside adverbial noun /ragij/ 'first (in place)' we have a more or less equivalent form /raga-ragi-j/ which has no specific Pl meaning. Perhaps this is related to the isolated reduplications of other adverbial forms just mentioned.

From /rang^{g}ag/ 'tree' (ANA$_{wu}$ class) or 'dugout canoe' (MANA), we have /rang^{g}a-rang^{g}ag/ 'wooden seats in canoe' (ANA$_{wu}$). Here the reduplication has an idiosyncratic derivational function.

The various nominal reduplications we have seen occur at the beginning of the root or stem, and do not include the NC$_{infl}$ prefix. Even with monosyllabic roots, suffixes such as case markers cannot be copied in the reduplicative segment. NC$_{der}$ prefixes are part of the stem and thus are affected by reduplication, so that //Rdp-uG-muwaj// shows up as //uGmu-uG-muwaj//→ /(w)umu:-'-muwaj/ 'named (human Pl)', with //-uG-// as Pl NC$_{der}$ prefix.

4.15 Regular number-marking.

For nonhuman nouns, there is no Sg/Pl opposition, except that as noted in the preceding section some NAdj use their Pl form with nonhuman as well as human referents. A minor collective reduplication used with topographic nouns is also mentioned in the preceding section. However, nonhuman nouns often do take Du suffix /-w_2a:/, hence /arjambal-wa:/ 'two kangaroos', /nuga-wa:/ 'two stones', etc. (This is an apparent counterex. to the frequently-repeated claim that duals are more highly marked than plurals and that an explicit dual marking presupposes explicit plural marking.) Whether or not Du /-w_2a:/ is present, the noun may take its usual NC$_{infl}$ suffix (§4.8), which for nonhumans does not mark number. There is also no marking of plurality for nonhuman subject or object in the verb. However, a covert Sg/Pl opposition for nonhuman nouns is revealed by adding a modifying NAdj which obligatorily distinguishes Sg from Pl, like /$w_2$irig/ 'small', (3+ Pl) /$w_2$ura:yun^g/ (§4.14). Only a few NAdj, however, reliably make this distinction. For the nonhuman nouns themselves (e.g., flora-fauna terms, names of implements, names of body parts), the number-marking is this:

Nonhuman nouns:	(NC$_{infl}$)-ROOT-∅	Sg
	(NC$_{infl}$)-ROOT-w_2a:	Du
	(NC$_{infl}$)-ROOT-∅	Pl

A verb containing subject- or object-agreement for a dual nonhuman noun, however, disregards the dual marking.

For human nouns (leaving aside personal names, see §4.4, and kin terms, Chapter 5), number-marking is considerably more complex and rigorous. To begin with, except in predicative position, human singular nouns regularly take HumSg suffix /-yun^g/ or /-n^{y}un^g/.

In the dual, this suffix is replaced by Du /-w_2a:/, as with the nonhuman nouns. In both singular and dual forms, the NC_{infl} prefix, if present, is M /na-/ or F /n^gara-/. On the other hand, in the plural we change this prefix to Pl /wara-/ (if present), and the stem usually has a Pl marker as well--usually Initial Reduplication by rule P-2 (see §4.14) or prefix /mij-/, occasionally some other Pl marker or else stem-suppletion.

The basic pattern is therefore this (for a masculine noun):

Human nouns:	(na-)ROOT-yun^g	Sg
	(na-)ROOT-w_2a:	Du
or	(wara-)Rdp-ROOT (wara-)mij-ROOT	Pl

Our most important task here is to describe the distribution of HumSg allomorphs /-yun^g/ and /-n^yun^g/, and to indicate under what circumstances a noun takes plural -Rdp- or /-mij-/, as well as listing the minor and irregular plural types.

HumSg allomorph /-yun^g/, which becomes /-jun^g/ after stop or nasal by Hardening P-18, is now the more productive of the two HumSg allomorphs. It is therefore used with a large number of noun roots, including most of the less common ones. The other form, in /-n^yun^g/, is less productive in this sense but is found with a respectable number of roots, including some high-frequency ones. A few exx. of /-n^yun^g/ are /$w_2$iri-n^yun^g/ 'child' (/$w_2$irig/), /walyi-n^yun^g/ 'man' (/walya/), /gujuju-n^yun^g/ 'baby', and /jun^{g}gayi-n^yun^g/ 'ritual manager'. Preceding /a/ becomes /i/ before /-n^yun^g/ (but not /-yun^g/) by V-Fronting P-50. For other exx. of /-n^yun^g/ see the following dictionary entries: /maln^{g}ari/, /yiwan^{g}gu/, /mamba:li/, /manajgari/, /gadhuwa/, /jawulba/, /mulun^{g}uwa/, /munan^{g}a/, /nu-magala:ba/, /nun^{g}guda:ba/, /adiya/, /yabada/, /lamabu/, /man^{g}andayayagu/, /mulguru/, /mulugu/, /murun^{g}un/, /mu:gar/, /manun^g/, /nun^g-garagu/, /ridharn^{g}u/, /algur/, /n^{g}alan^{y}ji/, /an^{y}ja:bugij/, /$w_2$in^{y}ig/, and /$w_1$ulmur/. Phonological irregularities include dropping the final root syllable in /an^{y}ja:bugij/ 'one' (/an^{y}ja:bu-n^yun^g/) and addition of an epenthetic vowel in two cases: /mu:gari-n^yun^g/ 'ghost', /wulmuri-n^yun^g/ 'circumcised boy'.

A few exx. of /-yun^g/, the productive allomorph, are /radhar-yun^g/ 'good harpooner', /buga-jun^g/ 'old' (/bugag/), and /badijan-jun^g/ 'quarrelsome'. Some roots normally ending in a consonant have an extension consisting of an (epenthetic?) /i/ and the archiphoneme //G// (whose sole effect is to induce Hardening P-18 in the suffix), hence /mala:mar/ 'eldest', HumSg /mala:mari-jun^g/; see also dictionary entries for /lhamugar/, /abal/, and /mirabal/.

Because the HumSg suffix is restricted to (grammatically) human referents, it can be used to make the human/nonhuman distinction. Thus an adjectival noun like /$w_2$irig/ 'small' can occur as such for nonhuman referent, but is /$w_2$iri-n^yun^g/ 'child' with human referent. Aside from NAdj, there are fairly few human/nonhuman distinctions made this way; one is /radhar/ 'harpoon' vs. human /radhar-yun^g/ 'good harpooner'. Addition of HumSg suffix to a normally nonhuman noun is used as a device for personification,

especially in myths. These human/nonhuman doublets can, in addition, be distinguished by using nonhuman vs. human NC_{infl} prefixes (cf. discussion of personification in §4.8). Conversely, nouns which are (grammatically) of only marginally human status may omit the HumSg suffix, as often with /gujuju/ 'baby'.

A special case of human/nonhuman doublets is /n^{g}alan^{y}ji/ 'young female dugong' and /n^{g}alan^{y}ji-n^yun^g/ 'girl'. A parallel, but formally more complex, doublet is /aragu/ 'young male dugong' and /nun^g-garagu-n^yun^g/ '(uncircumcised) boy'.

Turning to plurals, the most productive marker is reduplication (§4.14). As noted above, the reduplication may be omitted, particularly with the less frequently used nouns, though for some important nouns the reduplication is obligatory with plural reference (even for nonhumans). For those nouns which only sporadically reduplicate in the plural, NC_{infl} marking may be the most reliable number indicator (recall that human Pl /wara-/ is distinct from M /na-/ and F /n^gara-/, used with human Sg and Du numbers).

For some nouns, instead of a reduplicative Pl we get addition of prefix /mij-/ just before the root. The prefix is normally incompatible with reduplication (some nouns have either reduplication or /mij-/, but not both at the same time). The dubious exception to this is that /$w_2$irig/ 'small' and /$w_2$in^{y}ig/ 'small' have human Pl forms /mij-bura:yun^g/ and /mij-bun^{y}a:n^yun^g/ 'children' (vs. nonhuman Pl /$w_2$ura:yun^g/ and /$w_2$un^{y}a:n^yun^g/); however, the stems to which /mij-/ is added are highly irregular and only marginally associated with regular reduplication.

Pl prefix /mij-/ is common with kin terms, except those with 1st person propositus (see Chapter 5). Prefix /mij-/ is also used with human nouns beginning with F NC_{der} prefix /n^{g}ari-/, hence /n^{g}ari-n^{g}ambari-n^yun^g/ 'adult woman', Pl /min^y-n^{g}ari-n^{g}ambara/. The other exx. with /mij-/ are these: /min^y-n^{g}alan^{y}ji/ 'girls' (alongside /n^{g}ala-n^{g}alan^{y}ji/), /mi-jiwan^{g}gu/ 'old men' (/yiwan^{g}gu/), /min^y-n^{g}ajiwan^{g}gu/ 'old women' (/n^{g}ajiwan^{g}gu/, the other Pl being /n^{g}aja-n^{g}ajiwan^{g}gu/), and /mij-gulmur/ 'circumcised boys' (/$w_1$ulmur/). It also occurs in frozen form in /mijburuyag/ 'children' (no Sg form).

Exx. of Pl by reduplication are given in §4.14, above, and in dictionary entries. Rarely, a reduplicated Pl form retains the HumSg ending /-yun^g/ or /-n^yun^g/, suggesting a weak tendency to reinterpret the latter as part of the noun stem. (We will see later that /-yun^g/ with demonstratives and /-ayun^g/ with personal pronouns are not specifically Sg in function.) From /algur/ 'kinsman' I recorded Pl /alga:-'lgur/, with NC_{infl} prefix /wara:-'lga:-'lgur/; however, in TNT 10 we find a form which (in my transcription) would be /wara:-'lga:-'lgur-yun^g/. Similarly, I recorded /man^{g}ga-man^{g}gura/ as Pl of the clan name /man^{g}gura/, but MT 10 has /man^{g}ga-man^{g}gura-yun^g/.

4.16 Minor plural markers: /man-/, /mulun^g-/, /-$w_1$an^g/, /-yun^g/, and /-yin^{y}un^g/.

The prefix /man-/ occurs as a pluraliser with the patrimoiety term /yirija/, Pl /mand-irija/ (see Derivational d-Insertion P-21). It

is also found in frozen form in the other moiety term /mandha:yun^{g}/, which is commonly plural in sense and is normally replaced by a form of the stem /miniguya/ in Sg and Du forms. Prefix /man-/ also occurs as a derivational prefix (marking plurality) with certain verbs (§14.20).

Prefix /mulun^{g}-/ occurs as a nominal Pl marker with /argi/ 'some (other)', Pl /mulun^{g}-argi/, and /an^{y}baj/ 'other, different', Pl /mulun^{g}-an^{y}baj/. In the case of /mulun^{g}-argi/, suffix /-yun^{g}/ is gratuitously added in about 50% of text occurrences, without any change in meaning (specifically, without HumSg meaning). This suffix is not otherwise used in Pl forms except as noted at the end of the preceding section.

Suffix /-w$_1$an^{g}/ serves as a Pl marker for kin terms with first person proposítus (Chapter 5). It can also be used with personal names (end of §4.4), and rarely with other nouns, in the sense 'X and his bunch'. The preceding noun form is always Sg, thus /na-yiwan^{g}gu-n^{y}un^{g}-gan^{g}/ 'the old man and his bunch' with HumSg ending.

As noted just above, suffix /-yun^{g}/ is added gratuitously to Pl forms of /argi/ 'some (other)'. A similar gratuitous addition is /-yin^{y}un^{g}/ (normally the Relative case suffix, §4.30), often added to Pl /run^{g}gu-run^{g}gal/ 'big (Pl)', hence /run^{g}gu-run^{g}gal-in^{y}un^{g}/. A variant /run^{g}gal-in^{y}un^{g}/ without reduplication is also attested in the same Pl usage. (Suffix /-yin^{y}un^{g}/ is also added gratuitously to some compound NAdj forms with intensive sense, e.g., /-yiriwu/ 'huge'.)

See also the morphemes discussed in the following section.

4.17 Multiple /-w$_1$ara(G)-/, Pl intensifier /-lhan^{g}u/.

As we will see, in verbal morphology there are a number of productive and not-so-productive derivational prefixes which we may collectively refer to as Multiple, of which /-w$_1$ara-/ and /-n^{g}araG-/ are the most common (§10.4).

In nominal morphology, much less use of Multiple markers is found, but /-w$_1$ara-/ and a variant /-w$_1$araG-/ (the latter inducing Hardening P-18 in the following consonant) do occur with a few stems, immediately before the root (i.e., following NC$_{infl}$ prefix if present). First, /-w$_1$ara-/ can occur with life-form zoological terms, in the sense 'lots of' or 'all sorts of'. Thus /n^{g}ujija/ 'fish', /ana:-'ra-n^{g}ujija/ 'all kinds of fish' (with ANA NC$_{infl}$ prefix). Other nouns which can be used this way are /maln^{g}ar/ 'small rays', /n^{g}urudhu/ 'bird, terrestrial game animal', and perhaps a few others. Ordinary fauna terms like /yambirgu/ 'parrotfish' do not occur with the Multiple prefix.

A similar use of /-w$_1$ara-/ is found with /algur-yan^{g}i/ 'all kinds of', as in the textual ex. /ara-algur-yan^{g}i/ NMET 167.21.3. (See w$_1$-Deletion P-9.)

Multiple /-w$_1$ara-/ or /-w$_1$araG-/ is also used with some NAdj. Since these nouns can occur in verb-like predicative form, it is not surprising that Multiple prefixes (which are freely used with verbs) can also show up in nominal forms of the same stems. The contextual meaning can be 'all over', as with NAdj denoting illnesses: /-w$_1$ara-n^{g}u-ji:ji/ 'having sores/illness all over' (with

/-n^{g}u-/ by P-1), see also /bujurbujur/ 'having sores' and /maji/ 'healed' in dictionary. Multiple /-w$_1$ara(G)-/ is not much more than a general intensifier in such forms. It is also attested with some other NAdj, including /lharan^{g}/ 'ripe, cooked', /ambalaman/ 'good', /w$_1$urag/ 'left alone', /jarmayarmaj/ 'long, tall', and /wadawadad/ 'strong, firm'. The minor variant /-w$_1$araG-/ is found in the case of /w$_1$urag/, hence /-w$_1$ara-gurag/ instead of */-w$_1$ara-wurag/.

A somewhat different morpheme of roughly similar sense is the suffix (formally perhaps a postposition like /-w$_2$ugij/ 'still, only') /-lhan^{g}u/, becoming /-dhan^{g}u/ by Hardening P-18 after stop or nasal. It is most common with /garn^{y}irimba/ 'large group (of people)' and /arawindi/ 'many, much', and merely intensifies the plurality which is already expressed by these lexical items. It is also attested with /algur-yan^{g}i/ 'all kinds (of)', /lha:l/ 'place, country', and /w$_2$uruj/ 'people'.

Textual exx. of /-w$_1$ara(G)-/ and /-lhan^{g}u/ are given in dictionary entries of the lexical items cited, and in TNT 23.

Rdp. is attested: /ana:-'ra:-'ra-n^{g}ujija/ 'all sorts of fish'.

4.18 Case system: general.

The following suffixes are here classified as case markers:

-Ø	Nominative
-w$_1$uy	Allative-Dative
-w$_1$ala	Ablative
-w$_2$aj	(Simple) Pergressive
-w$_1$aj	Retrospective Pergressive
-yun^{g}guyun^{g}	Purposive
-ruj	Locative
-miri	Instrumental
-mira:dhu	Originative
-yi:	Similative
-yin^{y}un^{g}	Relative

The suffixes beginning in /w$_1$ w$_2$ r y/ undergo Hardening P-18 after a stop or nasal, and therefore have surface allomorphs beginning with /g b d j/. Note that the two Pergressive endings are most clearly distinguishable in hardened forms, /-baj/ for the Simple Pergressive and /-gaj/ for the Retrospective Pergressive.

Some combinations of more than one of these suffixes are possible. The sequence /-w$_1$ala-waj/ is a compound case suffix, which however functions somewhat like a simple case ending; see §4.26.

The more important combinations involve Relative /-yin^{y}un^{g}/ added to a full noun which already includes a case marker; see §4.30. On semantic grounds, it is possible that Similative /-yi:/ 'like' might on occasion follow a full noun with another case ending, but all textual exx. have /-yi:/ added directly to a noun lacking other case marking.

Many of these suffixes, though prototypically nominal case endings, are used with other word classes. Not surprisingly, most of them can be used with independent pronouns and demonstratives with essentially the same meaning. However, some important semantic skewings occur with personal pronouns and especially demonstrative

pronouns and adverbs. Moreover, some of these suffixes have special uses as clause subordinators (e.g., in the formation of temporal clauses of the type 'at the time when...', 'while...', or 'as soon as...', see §4.34).

Case suffixes follow the noun stem (including Du /-w_2a:/, HumSg /-yun^g/ or /-n^{y}un^g/). They may in turn be followed by postpositions such as /-$w_2$indi:yun^g/ 'really, very' (§4.32).

Nominative /-∅/ is usually not indicated in transcriptions.

In following sections we go over the case categories one by one. The cases which express nuclear syntactic relations are the Nominative in /-∅/ (usual for subject and direct object), Allative-Dative /-$w_1$uy/ in its dative function (for indirect object), and Ablative /-$w_1$ala/ in its relatively uncommon subject-marking function. On these uses of /-$w_1$uy/ and /-$w_1$ala/ see §4.22.

Some pairs of case suffixes whose semantic boundaries overlap to some extent, making a precise semantic analysis important, are these: a) Allative-Dative (in dative function) and Purposive; b) Locative and Pergressive; c) Ablative and Originative. The difference between the Simple Pergressive and Retrospective Pergressive is also interesting, in that it requires speakers to contextualise case marking within a specific type of temporal perspective. The semantics of Relative /-yin^{y}un^g/ is also tricky.

There are no passive or antipassive constructions in this language, so there is no special case category for "demoted" nouns and no case-marking rearrangements for nouns which remain after another noun is demoted. The only (possible) exception is that transitive verbs have Reflexive and Reciprocal intransitive derivatives (the Reflexive type sometimes resembling the English agentless passive in meaning), while intransitives can be transitivised by the Causative suffix (see Chapter 10). However, since normal case-marking for intransitive subject, transitive subject, and direct object is Nominative /-∅/, even if we recognise Reflexive and Causative as relation-changing processes, they have no immediate effect on case-marking.

Some special features of NAdv (adverbial nouns) regarding case marking were made in §4.3; remarks on place names (which usually avoid Locative /-ruj/) are likewise given in §4.5.

4.19 Nominative /-∅/.

The unmarked Nominative case form is the normal category for intransitive or transitive subject and transitive object; it is also the citation form, and the form of nominal subject (topic) and/or nominal predicate in nonverbal sentences. In these functions, the noun stem is preceded by the continuous form of the NC_{infl} prefix if nonhuman, by the (only) form of the NC_{infl} prefix if human; or (for either human or nonhuman nouns) the NC_{infl} prefix may be omitted. Basically, presence of the prefix indicates discourse definiteness, and absence of the prefix indicates newness or focus. However, in direct object function it is also possible for nonhuman nouns to use punctual NC_{infl} prefixes. For more details on these matters see §4.8, above. (Note that in negative contexts the NC_{infl} prefix is required and must be continuous.)

Some textual exx. from NMET are these: a) intransitive subject 1.1.3 ('blood'), 1.1.4 ('water'), and 1.4.5 ('snake'); b) transitive subject 1.6.4 ('dirty water'), 2.1.5 ('python'), and 12.7.4 ('wind'); c) transitive direct object 1.10.4 ('guts'), 3.3.5 ('bush'), and 5.12.8 ('ground'). An ex. of a Nominative noun as subject (topic) of an adjectival (NAdj) predicate is 'eye' in 20.7.2. An ex. of a Nominative noun as nonverbal predicate is the place name /amalibil/ in 1.7.6 (with demonstrative pronoun as subject). Hundreds of other exx. of these functions occur in texts. A detailed list of textual occurrences of real direct objects with punctual form of NC_{infl} prefix was given in §4.8.

In that section we also noted that the unmarked "Nominative" form of nouns (i.e., a form with no nonzero case suffix) is often found as a kind of abbreviated form of a real case-marked noun. The omitted case suffix in this pseudo-Nominative form may be Allative-Dative, Locative, Pergressive, Ablative, Similative, Purposive, or Relative, and in these instances there is usually a hint of what is going on through the use of the punctual form of the NC_{infl} prefix (which is correlated with these case categories, except in negative contexts). Lists of exx. are given in §4.8. On the other hand, since Instrumental /-miri/ regularly takes zero instead of NC_{infl} prefix, if the case suffix is omitted the resulting form may lack this prefix, as in 50.1.4 ('paperbark'), 70.1.4 ('hook spear'), and 88.3.6/7 ('shovel spear', 'knife'); alternatively, when /-miri/ is dropped the resulting form may be treated morphologically like other Nominatives, with the (continuous) NC_{infl} prefix added, as in 105.2.3 ('wire spear', if Instrumental).

For place names (§4.5) and many adverbial nouns (NAdv, §4.3), the "Nominative" form is used as the regular adverbial case (hence instead of Locative for place names).

In sentences where a noun is closely juxtaposed to a modifying element such as a coreferential demonstrative pronoun, a nonzero case category applying to the entire NP might be marked (§15.2) only on one of the words, often the modifying element. An ex. is /nu:-'ba-gi-wuy na-wiri-n^{y}un^g/ 'to/for that boy' (NMET 5.20.5).

For the occasional use of Ablative /-$w_1$ala/ for subject and of Allative-Dative /-$w_1$uy/ for direct or indirect object, see §4.22.

4.20 Allative-Dative /-$w_1$uy/; direct vs. indirect object.

This suffix becomes /-guy/ after stop or nasal; see Hardening P-18 (§3.19).

The Allative-Dative in allative sense is 'onto, into, to, in the direction of'. Except in negative contexts, it most commonly takes the punctual form of the NC_{infl} prefix for nonhumans, and the only form of this prefix for humans (for exx. see §4.8). The prefix is usually omitted with place names (§4.5). Many textual exx. are cited in the sections just mentioned.

In dative function, the suffix marks a noun which is already cross-referenced by a pronominal object marker in the verb (this is not true of allative uses), and corresponds semantically to dative or benefactive object in other languages.

Because case-marking of independent nouns does not always

correspond precisely to cross-referencing pronominals in verbs, some terminological problems should be mentioned here. From the viewpoint of verbal morphology, at most two NPs can be cross-referenced by pronominal prefixes. Intransitive verbs have just a subject pronominal, transitive verbs have pronominals marking subject and object. However, the object in this sense may be either what we would consider (on other grounds) the direct or indirect (including Benefactive) object. If the sentence has a direct object but no indirect object, of course the object marked in the verb is the direct object. However, if the sentence has an indirect object (whether or not there is also a direct object), it is the indirect object which is marked as object in the verb.

For some verbs, like /=yi-/ 'to give', an indirect object is part of the obligatory case frame. For such verbs, the transitive pronominal prefix marks category of subject (giver) and indirect object (recipient), as in /n^{g}anu=ya-n^{y}/ 'I gave (something) to him'. There is no derivational affix between pronominal prefix and root. However, for many other verbs an indirect object is an optional addition (whether the verb would otherwise be transitive or intransitive). If an indirect object is present, the pronominal prefix in the verb marks this as the morphological object (bumping out a direct object, if present), but the fact that this is an indirect (not direct) object is overtly specified by adding Benefactive prefix /-aG-/ or /-wa:G-/ between pronominal prefix and verb root. Thus //wara-aG=na-n^{g}a-a//→ /wara:-'=na-n^{g}a:-'/ 'they burned (it) for them' (NMET 55.4.1). See §10.2.

The morphological object in the verb is therefore related in a complex way to cases and grammatical relations of the non-subject NPs in the sentence. With regard to these independent NPs, we define direct object to be an object NP which normally appears in Nominative case, and indirect object as an object which normally appears in Allative-Dative case with suffix /-w$_1$uy/. Moreover, it is understood that the indirect object must be cross-referenced in the verb (except possibly when tossed in as an afterthought). As we have seen, the direct object need not be cross-referenced in the verb, since it is bumped out by an indirect object. We may also wish to consider as direct objects some NPs which appear as part of the syntactic case frame of certain morphologically intransitive verbs, such as 'water' or the like as an object of the intransitive verb /-w$_1$al(a)=n^{g}u-/ 'to drink'.

Unfortunately, relational categories like direct and indirect object are not always rigidly distinctive. For example, what we would normally consider direct objects occasionally adopt (as independent NPs) morphological trappings of indirect objects. We will see (§4.22, below) instances of Allative-Dative /-w$_1$uy/ with such NPs (though this is not common), and we have already observed (§4.8) that in a minority of instances direct objects take punctual rather than continuous (nonhuman) NC$_{infl}$ prefixes (the punctual series is characteristic of several marked case categories including Allative-Dative). In addition, there are instances in which what we might otherwise consider direct objects (not cross-referenced in the verb) seem to be really Instrumental in Nunggubuyu. Thus the "direct object" (gift) with 'to give' is

usually in Nominative form, but shows up in NMET 75.2.5 with Instrumental suffix /-miri/ (see §4.27, below). This suggests the possibility that for 'to give' this category may be thought of as a nonnuclear case (cf. English to furnish someone with), and that the apparent Nominative case of most textual occurrences is really an Instrumental with the case suffix omitted. Similar remarks might be made about the "direct object" (the liquid) with the formally intransitive verb 'to drink', and with similar verbs. Since there are no foolproof syntactic tests for distinguishing direct object from Instrumental NP (with case suffix omitted), we may have to recognise some ambiguities in the relational structure. See §15.9.

We conclude this section by mentioning textual exx. of the dative (indirect object) function of Allative-Dative /-w$_1$uy/. In NMET I have found three instances of Benefactive indirect objects with /-w$_1$uy/: 6.2.3 ('brolga'), 40.10.2 ('bachelors'), and 79.1.3 ('his brother'). The verbs in these exx. are 'to steal from', 'to take to/for', and 'to seize from' (note that the Benefactive includes adversative senses translated with English from).

An ex. of an indirect object which is part of the obligatory case frame of a verb (hence does not take Benefactive derivational prefix in the verb) is 'boy' in NMET 80.1.6 ('to give name to'). It is also reasonable to regard 'emu' in 7.12.3 as an indirect object, the verb being 'to tell', 'to say [quotation] to'.

Both in allative and dative senses (and even in the uncommon usage with direct objects, §4.22), nouns with /-w$_1$uy/ are often accompanied (usually preceded) by an Allative or Directional demonstrative adverb such as /yu:-guni/ 'to there' (a more contextual gloss here would be 'to/for that one'. See, for example, dative exx. in NMET 6.2.2/3, 40.10.1/2, 79.1.3, and 80.1.6.

As with other nonzero case suffixes, occasionally /-w$_1$uy/ is added to a nuclear NP in a clause which is itself subordinated to another clause with /-w$_1$uy/ added to the verb as a temporal adverbial subordinator (or as a relative clause marker when the head noun has this case). Such instances of case-spreading (§16.4) are uncommon with /-w$_1$uy/ but should be distinguished from normal uses of the suffix.

4.21 Ablative /-w$_1$ala/.

This becomes /-gala/ after stop or nasal; in other contexts the /w$_1$/ may be dropped, and surface /y/ may be inserted in its place after /i/-vowel. See rules P-9, -10, -18.

The primary sense is 'from' in the literal, physical sense. There are many exx. involving place names in the myth texts in NMET. (As noted in §4.5, there is a tendency to use continuous NC$_{infl}$ prefixes if the prefix is present in such textual occurrences, since place names are commonly given first in locative or allative contexts, then repeated in the Ablative form, which means that the latter tend to involve contextual definiteness.)

Exx. involving other nouns include NMET 10.18.1 ('mud'), 13.29.3 ('beach'), 13.41.2 ('sandhill'). Exx. with human nouns can often be glossed contextually 'from X's place', 'from the place where X is (or lives)': 16.13.8, 47.3.1/2 (clan name), 168.1.2.

Although the majority of instances of /-$w_1$ala/ are concerned with literal point of departure, there are also some more or less figurative extended uses. For example, in a context like 'My name is from a song' or 'They named me after my FaFa', Ablative /-$w_1$ala/ is used: 80.2.4ff., 81.1.3/5, 82.1.4/5, 84.1.4, 88.2.1ff.

Another use is with language names, as in 'He is speaking English' or 'He is speaking Nunggubuyu'. Here the construction involves an intransitive verb like /=yambi-/ 'to speak', with the language name in the Ablative: 7.21.6, 9.1.3, 64.9.8, 161.35.1, 169.1.5. The Instrumental can also be used in this context.

Some other textual exx. showing semantic twists are 10.6.1, 17.7.5 ('through nose'), 59.8.2, 71.16.4, 79.1.4, 95.4.2, 101.2.1 (burying egg in ground), 115.1.5 (alternating with Locative), 115.6.1, 120.3.5. The occasional use of the Ablative meaning 'through' or 'along' (e.g., body part or material) is connected with the frequent use of demonstrative adverbs like /ya:-ji:-'li/ '(from) along here' (§7.16) in similar contexts; note also the combination /-$w_1$ala-waj/ with a Pergressive suffix (§4.26).

Suffix /-$w_1$ala/ can be used with verbs or some other predications as a temporal subordinator meaning 'after' (§16.6). Because of case-spreading, this suffix can be extended to a (semantically non-Ablative) nuclear NP in the temporal clause: 98.2.4. An ex. of this adverbial usage in which a NAdj is the predicate is 115.6.2.

The Ablative suffix is occasionally used with the grammatical subject (otherwise Nominative); see §4.22. In this usage, it appears that the NC_{infl} prefix is ordinarily in continuous rather than punctual form (in other words, the prefixes behave as though the noun were really Nominative instead of Ablative).

4.22 Special nuclear uses of /-$w_1$uy/ and /-$w_1$ala/.

In the great majority of instances, /-$w_1$uy/ is either allative or dative (indirect object) in sense, and /-$w_1$ala/ is ablative in meaning ('from'). Subjects and direct objects are regularly in Nominative form.

However, there are exceptional cases in the texts where /-$w_1$ala/ is used for what functions grammatically as the subject, and/or where /-$w_1$uy/ occurs with a direct object. There are enough exx. in the corpus to indicate that this is a real fact about Nunggubuyu, even though as a percentage of all instances of subjects and direct objects we are here dealing with a very minor type.

In NMET 36.3.4 we have a passage 'Dragonfly burned (covered with fire) Blue-Tongued Lizard'. The verb is a simple transitive, in other contexts used as a verb for one type of cooking. The actual verb form used is /ø=buddha-n^gi/ 'it burned it', with /ø-/ pronominal prefix specifying nonhuman subject and nonhuman object. Since the prefix does not specify whether Dragonfly or Blue-Tongue is the agent and since it might not be clear from context, the narrator put Dragonfly in the Ablative (but with continuous NC_{infl} prefix) and Blue-Tongue in the Allative-Dative. In other words, the logically opposed 'from' and 'to/for' case markers are here being used to explicitly differentiate subject from direct object in a context where confusion might otherwise result.

A similar passage is 36.4.3/5 (i.e., in the same text). Here, however, the syntax is problematic since the sequence includes intransitive 'it (Dragonfly) got mad' and transitive 'it (Dragonfly) hit it (Blue-Tongue)', as well as a noun /wun^{g}a:ri/ 'fighting' with verb-like meaning, and it is not easy to assign the independent NPs uniquely to one verb each. Filling in some ellipses, we might reconstruct the passage thus: 'Fighting! Blue-Tongue-ABL [hit Dragonfly], Dragonfly-ABL got-mad [and] hit Blue-Tongue-ALL/DAT'. If this reconstruction is correct, and if 'got-mad' is really a parenthetical insertion, it looks as though the Ablative (ABL) is here again being used to overtly mark subject, and Allative-Dative to overtly mark direct object, the complication being that we really have two clauses with the roles inverted. (Again, the verb 'hit' merely indicates nonhuman subject and object and would be ambiguous without some additional marking of case roles.)

A somewhat similar ex., but this time involving a subject and a true dative object, is 6.2.2-4: 'She[Emu]-stole-from-her[Brolga] Emu-NOM, Brolga-ALL/DAT she-stole-from-her, then she[Emu]-ate-from-her stone-NOM, she-ate-from-her [i.e., swallowed her stone], she Emu-ABL'. Because both actors have the same noun class, pronominals in the verb are ambiguous. The use of Allative-Dative suffix with 'Brolga' is normal, but the speaker takes pains to put 'Emu' in the Ablative in the second occurrence (vs. Nominative in the first) to make sure that it is very clear that 'Emu' is the subject.

Other instances of the Ablative in subject function (but with no Allative-Dative noun in the same sentence) are 42.4.7 (simple transitive with direct object in Nominative case) and 45.1.4 (simple transitive with no independent direct object). There are also some possible instances of Allative-Dative for direct object (with no contrasted Ablative subject). This seems to be the case in 34.8.4. In 37.4.4 we have another possible case, but the syntax is difficult since the verb form given ('to chase') is formally Reciprocal (hence intransitive), though it tends to be used in passages suggesting transitive sentential structure.

Problematic instances of the Ablative which I cannot fully account for are 108.6.3 and 166.26.4.

In general, the data just presented indicate that the Ablative is occasionally used to specify transitive subject when there might otherwise be some confusion, so that sharp case contrasts are needed. As noted in §4.8, this special use of the Ablative usually involves zero prefix or continuous NC_{infl} (typical of the Nominative), rather than punctual NC_{infl} prefix (typical of true ablative uses of /-$w_1$ala/). Our data suggest, second, that Allative-Dative /-$w_1$uy/ can be used for direct object, again mainly in contexts requiring careful contrasts. Here, however, there seems to be real formal merger of direct and indirect object, since we seem to get punctual NC_{infl} prefix in most instances of /-$w_1$uy/ with direct object.

4.23 Pergressive /-$w_2$aj/ and Retrospective Pergressive /-$w_1$aj/.

These two suffixes are most clearly distinguishable after a stop or nasal, becoming respectively /-baj/ and /-gaj/ by Hardening P-18.

In other positions (i.e., following vowel or nonnasal sonorant), it would be possible in principle to keep them distinct by rigorous application of w_1-Deletion P-9, giving surface /-aj/ (or /-yaj/ after /i/ by P-10) for the Retrospective Pergressive. This would not work after /u/, and even in the other environments I have found it difficult to keep the two apart phonologically. P-9 is an optional rule in any event. It is best to think of the two as tending to remain distinct after most vowels and nonnasal sonorants, but since the opposition is not grammatically essential there is no rigorous maintenance of the opposition.

The distinction between /-$w_2$aj/ and /-$w_1$aj/ is one of perspective. Both have a basic pergressive meaning (cf. below), but /-$w_1$aj/ adds a retrospective nuance, roughly like that added in English by back, as in back at the ranch vs. simple at the ranch. That is, /-$w_1$aj/ implies an association of the location specified with some earlier situation, while /-$w_2$aj/ makes no such implication.

The opposition is kept in the uses of these case suffixes as temporal adverbial subordinators with verbs or other predicates: /-$w_1$aj/ means 'back when...', /-$w_2$aj/ means 'while...'. Thus /-$w_1$aj/ is regular in such expressions as /n^ga=wiri-gaj/ '(back) when I was a child (/$w_2$irig/)'. See §16.6.

With nouns, /-$w_2$aj/ is much more common than /-$w_1$aj/. Taking surface forms /-baj/ and /-gaj/ as initial basis of comparison, in NMET I count 22 instances of /-baj/, excluding forms with place names and counting a series of /-baj/ nouns as one instance. In the same corpus I count 7 instances of /-gaj/ on the same basis. Both counts exclude uses as subordinators with adjectival predicates.

The exx. of /-gaj/ bear the closest scrutiny. In 13.24.3 we seem to have a frozen adverbial construction. In 19.8.4 the 'whatchamacallit' noun takes /-gaj/, anticipating a place name (given immediately after) with /-waj/; the context is '(totemic being) left rituals behind at (place)'. In 47.12.3 the noun is 'grey hair', here meaning 'old people', the context being '(young people) were not brought close to where the old people sat' (in the old days). In 94.4.4 /ana-bush-gaj/ with English loanword means 'back in the bush [pre-settlement] days'; contrast /-baj/ with the same stem, /ana-bush-baj/ 121.3.7 or /a-bush-baj/ 161.33.8, where physical location (interior bushland) rather than time period is being indicated. In 109.6.3, the context for /-gaj/ is 'it was abandoned (left) back in the sea'. In 139.8.3 the NAdv /yimbaj/, which in simple forms usually means 'today', becomes /yimbaj-gaj/ in the past tense meaning 'on the same day'. Finally, in 163.3.5 the context is 'they left it by the cypresses'. Note the retrospective nuances in these exx.--distant past tense, leaving things behind.

The exx. of /-baj/ with nonpredicative nouns (other than place names) are 28.16.2, 43.15.8, 45.6.5, 47.7.5 (three), 54.1.6, 71.12.5, 97.2.2, 97.3.4, 98.7.2, 98.8.4, 98.9.4, 100.5.3, 105.2.4, 109.1.4, 113.9.3, 114.5.4, 121.3.7, 143.4.3, 156.4.6, 161.33.8, 166.23.2, and 166.24.1.

Exx. with unhardened /-waj/, /-yaj/, or /-aj/ are 13.1.1, 13.18.4, 13.40.2, 15.9.6, 35.6.4, 37.4.6, 41.4.3, 42.1.2, 47.12.4, 47.22.4, 55.12.1, 97.4.3, 97.8.3, 98.11.4, 100.7.7, 105.5.4,

107.1.1, 108.1.6, 109.4.5, 112.6.2, 112.8.1, 113.1.3, 113.2.4/5, 113.3.3, 113.4.3, 113.5.2, 113.9.2, 114.5.1, 114.8.4, 114.11.2, 116.12.3, 126.3.4, 132.8.5, 139.10.3, 140.3.4, 140.4.4, 142.6.5, 143.7.2, 143.12.1, 144.1.2, 144.2.2/3, 149.2.1, 152.1.3, 163.9.4, 166.8.4, 166.25.3, 166.28.3. Although /-$w_1$aj/ and /-$w_2$aj/ are not easily distinguished phonologically in this list, in most instances we can be fairly sure which one is present. The context for /-$w_1$aj/ is distant past time reference, as in the very common form /wara-min^y-n^{g}ambara-(w)aj/ 'back at the time of the old people (now dead)', e.g., 139.10.3, or else contexts involving leaving something behind. The context for /-$w_2$aj/ is nontemporal, indicating a location or zone.

The semantics of "Pergressive" (leaving aside the temporal dimension) is somewhat tricky. Competing categories include the allative usage of the Allative-Dative, the Locative, and to some extent the Ablative (see also the Ablative-Pergressive combination discussed in §4.26, below).

Basically, Pergressive forms of a noun should be thought of as constituting a zone or field in which or through which some entity is located or in motion. Pergressive forms are therefore very common with nouns which denote ecological (topographic or vegetative) zones, or at least nouns which (like cypress trees) may characterise a zone even if their referents do not physically fill the zone. Some nouns which occur frequently with /-$w_2$aj/ are /madhalag/ 'beach' (by extension, 'coastal region' as opposed to interior) as in 98.7.2, /yu:l/ 'bushland' (e.g., stringybark forest) as in 142.6.5, /mada/ 'grass' as in 97.4.3, /gu:gu/ 'fresh water' as in 109.4.5, and /aban/ 'ground, earth' as in 156.4.6. With a noun denoting a linear natural phenomenon, such as /ala/ 'river' or /adi/ 'road, path', the sense can be either 'in, through' or simply 'alongside, by', so that the linear phenomenon is taken as defining a sphere of influence (as it were) somewhat larger than its own physical boundaries.

The zone may actually be rather tightly restricted in other cases. For example, in 97.2.2 /a-ran^{g}a-baj/ (from /ran^{g}ag/) means '(dog chased goanna lizard up) into the tree' (not merely 'in the trees, in a zone defined by trees'). Similarly, in 166.8.4 we have 'along the edges', and in 37.4.6 we find '(it entered) in the hole (burrow)'.

A common way of saying 'He is out hunting X' is to say, 'He went among the X' or the like, with a Pergressive form. Exx. are 28.16.2 (dugong), 45.6.5 (small fish), and in a slightly different context 97.8.3 (goannas). In the related context of gathering, note /ana-marya-waj/ 'among the (vegetable) food' in 13.18.4, here meaning 'at the food-gathering place'.

The Pergressive is attested with a human body-part term, /a-waraga-waj/ '(brush was) up to (his) upper back' 15.9.6. However, to indicate motion along a part of the body, we are more likely to get the Ablative.

In some contexts the Pergressive and Locative are more or less interchangeable, as in 'He was standing in the water' (Pergressive /a:-gugu-waj/, Locative /a:-gugu-ruj/). The Locative is not used, however, in the sense 'along' or 'through'. The choice between

Pergressive and Allative-Dative when the context involves motion in or near a zone depends on whether the motion is conceptualised as beginning outside the zone and entering it (Allative-Dative), or as being entirely contained within the zone (Pergressive).

As with other nonzero case suffixes, we should look out for the occasional instance, especially of /-w$_1$aj/, involving secondary case-spreading based on a subordinated predicate with the same suffix.

As noted in §4.8, the Pergressive suffixes tend to co-occur with punctual rather than continuous NC$_{infl}$ prefix for nonhuman nouns (excluding place names, negative contexts, etc.). However, since the continuous forms are associated with contextual definiteness, certain recurrent forms involving topographic zones which might be thought of as being inherently definite seem to show a tendency to use continuous forms. Thus observe continuous prefix /mana-/ 7 times in NMET with /madhalag/ 'beach, coastal region' (98.7.2, 98.8.4, 98.9.4, 100.5.3, 105.2.4, 109.1.4, 166.24.1) vs. just 2 with prefix /ama-/ (punctual series)(113.9.3, 114.5.4).

4.24 Purposive /-yun^{g}guyun^g/.

This suffix is somewhat more common with verbs and other predicates, creating purposive clauses ('in order to...'), but does occur moderately often with nouns in similar senses.

In 47.18.1/2 we have both Purposive nouns and a Purposive verb form as parallel complements of 'to fear', 'to be afraid of'. The other textual exx. in NMET specify an object to which some implement, material, or activity will be applied. Giving somewhat simplified glosses the exx. are these: 122.1.4 (making rope for [hunting] dugong); 122.2.3 (making rope for spears); 135.1.1 (medicinal herbs for skin rash); 151.3.2 (cutting down tree [to get bark fibres] for rope); 152.1.1 (using string for spears); 152.2.5 (using string for [catching] fish); 157.3.4 (making mats for [i.e., in which to soak] yams); 157.7.5/6 (type of basket for [carrying] grapes, etc.); 157.8.4 (making dillybags for [carrying] roots of a sedge sp.); and 166.22.4 (they visited us for food). In some of these instances we might want to consider the purposive NPs as the surface vestige of some fuller complement clause, as hinted by the bracketed interpolations given above. Thus 'for rope' might be conceptualised as representing 'for (us) to make rope', where in Nunggubuyu 'make' would be a regular verb form with Purposive suffix added as complementiser. We could argue that case-spreading applies, adding a copy of the Purposive suffix to the underlying direct object of the purposive clause, and that the verb of this clause is then omitted. However, there are no strong syntactic arguments for this analysis, and it is doubtful that it could be justified for all of the exx. mentioned (e.g., the 'to fear' exx.).

As usual, /y/ becomes /j/ after stop or nasal by P-18. The NC$_{infl}$ prefix is usually punctual except in negative contexts.

4.25 Locative /-ruj/.

This suffix becomes /-duj/ after stop or nasal by P-18, and loses its /r/ after /l l̲ r r̲/ by P-25.

The Locative basically means 'in, at, on'. In Nunggubuyu it is not used for 'into, onto', which instead is Allative-Dative. Thus a verb like /=yaba-/ 'to put X (direct object) in Y (container, substance, etc.)' has Instrumental or Allative-Dative (not Locative) for Y. Other verbs which take in or on in English may likewise take Allative-Dative case in Nunggubuyu if they involve a change in location, as in 'it put her on its back' (NMET 44.3.1), 'it carried her on its shoulder' (45.2.1), and 'they soaked (yams) in water' (125.1.4).

The Locative, then, is more strictly static in Nunggubuyu than are its counterparts in English. It also competes with the Pergressive when the NP in question specifies a zone or field in which something is located or moving (§4.23). However, there is some interchangeability between Locative and Pergressive in some such contexts.

Despite the competition, the Locative is high in text frequency with ordinary nouns (i.e., not with NAdv or place names). A few exx. are 1.10.7 (they dried them off on the ground), 2.1.3 (they were sitting in a tree), 5.4.3 (he picked up spear at [i.e., at the base of] the bush), 7.9.6 (the stone [having been swallowed] was resting in [her] belly), 17.6.4 (he went in the water; an instance where Locative was preferred to Allative-Locative despite our generalisation above). Additional exx. involving body-part nouns are 6.3.3, 7.12.5, 7.15.1, 11.12.4, 112.4.4/5, and 162.15.3. Exx. with human noun are not very common, but do occur, usually in the sense 'at X's place' or 'in X's country': 35.8.3, 74.2.6. One could possibly argue that these involve surface elisions of a noun like /lha:l/ 'country' or /an^{g}a/ 'camp (of someone)', so that the human noun X is really an underlying possessor (with Relative suffix replaced by a copy of the case marker on the underlying possessed noun). An ex. of the full construction is /na-balaman-duj adaba a-lha:l/ 'at Balaman's, now, at the country' (NMET 35.5.4). Here, leaving aside /adaba/ 'now', we have a possessor NP (the personal name) in the Locative, copied from the presumable underlying case of the possessed noun 'country'; the latter, as it happens, omits this case marker (as is possible in such NPs), though retaining the punctual form of the NC$_{infl}$ prefix (hinting at an underlying nonzero case category). See §15.8.

Other exx. of the Locative are: 3.4.5, 10.1.2, 10.9.5, 10.15.2, 10.15.5, 11.3.1/2, 12.8.5, 13.3.2, 13.16.4/5, 13.18.2, 14.3.4, 14.10.2, 15.12.5, 21.1.3, 25.6.3, 27.3.5, 28.11.3, 29.9.2, 37.2.3, 40.4.2, 41.14.7, 41.14.8, 41.24.5, 42.3.1, 43.2.3, 43.5.1, 43.7.4, 43.8.4, 47.15.2, 51.1.5, 52.1.2, 57.2.4, 57.2.5, 57.4.1, 63.1.3, 63.2.4, 63.2.6, 63.4.4, 65.14.3, 71.34.1, 99.3.6, 99.4.1, 100.1.4, 101.3.6, 108.6.5, 108.8.3, 110.2.7, 115.1.5, 115.2.5, 115.5.5, 115.6.3, 155.1.4, 161.34.2, 162.1.3, 163.2.1, 163.7.6, 163.13.5, 163.21.5, 163.25.2, and 166.25.4.

The Locative is rarely used with place names, which normally take the zero (Nominative) form in this (static) sense (§4.5). It is also uncommon with temporal or spatial adverbial nouns (NAdv), hence /ana-min^{y}n^{g}u/ 98.1.5 '(at) night'. There are, however, a few fixed expressions with /-ruj/, hence /ana-mal-jimba-duj/ 108.8.3 'these days, nowadays'.

Some special meanings with /-ruj/ occur in connection with demonstratives; see §7.18.

With verbs, /-ruj/ either forms locative clauses ('at the place where...'), or relative clauses where the head noun happens to be Locative in its own clause. In either case, a nuclear NP in the subordinated clause may show up with /-ruj/ by case-spreading. Also, some "simple" Locative nouns are possibly analysable as reflecting partial elision of such an underlying clause. Thus in 14.10.2/3, it may be that /yi:-n^{g}ala:ligi-ruj/ 'at the turtle, where the turtle was' should be thought of as the residue of a clause like 'where they had cut up the turtle' (in the context of this narration). See §16.6.

4.26 Ablative-Pergressive /-w$_{1}$ala-waj/.

This is a special combination of Ablative /-w$_{1}$ala/ and one of the Pergressive suffixes, though functioning semantically like a unit. The second element may be pronounced /-aj/, /-yaj/, or /-waj/ depending on the speaker.

The meaning is '(going) along X', and implies considerable extent of motion. It is most common with certain specialised demonstrative formations to be discussed in Chapter 7, as in the high-frequency forms /da-ni:-'la-yun^{g}-gala-waj/ 'all those' (expression uttered after a list of things) and /o:-'ba-ni:-'la-yun^{g}-gala-waj/ 'long ago, in the old days' (lit., 'all along those').

The suffix sequence is also common with some adverbial nouns (NAdv). For textual exx. with /lhiribala/ 'below, under, on the coast' and /arwagarwar/ 'on top, above, inland'; see §7.29 and dictionary entries. A similar case is /bandhara-wala-yaj/ 'going along the coast (out at sea)' 29.4.1/3. The ex. in 13.30.4, /a:-'n^{y}baj-gan^{y}baj-gala-waj/ 'along the various ones' (a strange derivative of /an^{y}baj/ 'other') is used in connection with a long list of objects and thus resembles the usage in one of the demonstrative forms cited above. See §14.17.

More clearly nominal instances of /-w$_{1}$ala-waj/ and its variants are two exx. in 45.10.1; the context is 'it tracked her [by going] along [her] foot[-prints], along [her] scent' (i.e., it was tracking her as a dog would). In MT, we can cite an instance of /wu-jamar-wala-waj/ '(it went) along the side' (MT 1, root /-yamar-/), and one of /ama-lhagaya-gala-waj-bugij/ 'still along the sea' (MT 3, /lhagayag/), both presented here in my transcription.

Considering the size of the textual corpus, this is a small number of exx. with nonadverbial nouns. Clearly the Pergressive is much more common, and /-w$_{1}$ala-waj/ involves considerable emphasis on the extension of the motion described (at least with simple nouns).

4.27 Instrumental /-miri/.

This case category differs from others in that it strongly prefers absence of NC$_{infl}$ prefix (except in negative contexts), as shown in §4.8.

For the most part, /-miri/ is as straightforward semantically as it is phonologically. It is specifically instrumental in sense,

and in particular is not comitative. The latter category is expressed by a derivational prefix /-an^{y}ji-/ in the verb (not affecting transitivity); see §10.3.

Prototypical exx. of the Instrumental involve implements or materials which are used in performing some physical operation on an object. Exx. are 'to cover X with Y' (13.9.4, 125.3.2), 'to decorate X with Y' (53.4.2), 'to paint or smear X with Y' (52.2.3, 150.1.1, 154.1.4, 170.4.3), 'to wrap X in Y' (71.17.2, 116.12.1, 116.12.4/5, 153.1.1), 'to tie X (up) with Y' (108.3.4), 'to collect X in Y' (117.1.5), 'to catch X in Y' (31.3.3), 'to roast X in Y[oven]' (116.8.5, 117.2.2, 117.4.2, 125.14.4), 'to roast it [wrapped] in Y[paperbark, inside oven]' (117.2.3), 'to soak X in Y[dillybags]' (116.11.2), 'to douse X with Y' (118.3.1, 133.2.4, usual Nunggubuyu syntax for English 'to pour Y on/over X'), 'to mix X with Y' (143.4.2), 'to boil X in Y' (138.5.9), 'to burn X with Y[fire]' (17.3.6, 17.4.6, 17.6.3, 116.13.4), 'to pound X with Y' (121.2.4, 122.4.4, 126.2.3, 139.11.1), 'to scrape X with Y' (60.1.4), 'to crush X with Y' (114.3.4), 'to spear X with Y' (17.3.5, 73.3.3, 104.2.1), 'to cut X (up) with Y' (45.11.7, 104.4.3, 143.10.2, 149.2.2), 'to jab or stab X with Y' (125.3.6, 161.25.5), 'to slice X with Y' (125.7.2, 125.10.3/4). Note that in comparison with English, Nunggubuyu often uses the Instrumental rather than Locative when the action involves a container.

The verb /=yaba-/ 'to put X[dir. obj.] in Y' can use either Instrumental (117.3.3) or Allative-Dative for Y.

Body parts are not often in Instrumental form, but /maran^{g}/ 'hand, fingers' is an exception; see 109.3.5 ('to open up the entrails of X by hand').

In the exx. given above, the instrumental sense is quite literal. In 157.12.6 we have 'to kill X with sorcery', which might be thought of as nonliteral, but in Nunggubuyu thought it is probably best to consider this in a nearly literal sense.

The Instrumental can be used for the "direct object" of 'to give'. In 75.2.5 we have a Reciprocal verb, the passage being translated literally as 'They furnish each other with their backs' (i.e., 'They turn their backs to each other'). Note that 'furnish' rather than 'give' is syntactically the best translation in this instance.

The exx. we have been giving involve chiefly transitive verbs. Instrumental nouns are also attested with intransitives, even leaving Reflexives/Reciprocals out. To begin with, there are some verbs which are morphologically intransitive, but which involve complex activities which might well have been expressed by a transitive verb: 'to collect-water in shell' (61.2.3, 63.2.1), 'to drug-fish with tree sp.' (107.1.2, i.e., stun fish in ponds with wood or bark of chemically potent tree), 'to make-sparks with firedrill' (166.16.1). In two instances, the Instrumental seems semantically very close to the implied direct object of these formally intransitive verbs: 'to collect-water with saltwater' (119.4.5), 'to drink [medicine from] green plum tree' (128.1.5).

Other intransitive instances: 'to walk with walking-stick' (10.2.2, 40.2.2, but both exx. with 'to walk' missing), 'to go paddling in canoe' (29.3.2), 'to get warm with smoke [from fire]'

(65.14.6), and 'to speak with words/language' (60.2.4, cf. 64.9.2). In the last ex., when the noun is the name of a language, the Ablative is often used (§4.21).

The remaining exx. in NMET of the Instrumental are problematic. In 98.4.1 we seem to have a false start (incomplete sentence). In 138.5.9 the syntax is also possibly distorted; perhaps we might repair it by using a Comitative verb form instead of Instrumental noun. In 156.4.1 a verb such as 'they make dye' seems to be missing.

For the increasingly frequent use of creole English borrowing /gari X/ (with unaffixed noun X) as an alternative to /X-miri/ (and also as a new comitative form), see Appendix A.

4.28 Originative /-mira:dhu/.

This is a rare case suffix meaning 'provided by', 'originating from', indicating the source of something. The only textual ex. in 554 pp. of texts in NMET with a noun is /mana-mabur-mira:dhu/ '(they made two-pronged spears) from string'. The suffix can also be used in a more figurative sense, as in speaking (nowadays) about money obtained from work.

However, the suffix is nowhere near as productive as semantically similar case markers in some neighboring languages (e.g., Ngandi).

4.29 Similative /-yi:/.

This suffix becomes /-ji:/ after stop or nasal by P-18.

It means 'like X, similar to X'. It is customarily added as an appositive modifier to another noun, for example in isolation forms as a kind of gloss when mentioning an unfamiliar species.

We should note that there is a particle /$n^{g}un^{y}ju$/ (which can also be NAdj) of similar meaning. This particle and /-yi:/ may co-occur, giving a maximal phrase /$n^{g}un^{y}ju$ NC_{infl}-X-yi:/ 'like X'. However, /$n^{g}un^{y}ju$/ may be omitted, hence the simple form /NC_{infl}-X-yi:/. Or the /-yi:/ may be omitted, hence /$n^{g}un^{y}ju$ NC_{infl}-X/. However, /$n^{g}un^{y}ju$/ also has some slightly different uses not shared by /-yi:/, see §12.13.

There is also a NAdj /guburg/ which may follow a noun X, meaning 'exact likeness of X, spitting image of X. Only two textual occurrences in NMET are found (12.3.3, 155.3.7). A semantically similar stem is /-w_{1}anburg-/, a compound initial or defective noun requiring NC_{der} prefix (§4.9). There is also an uncommon NAdj /dhagij/ 'same (as before)'.

Similative /-yi:/ normally takes punctual NC_{infl} prefix (§4.8), whether or not preceded by particle /$n^{g}un^{y}ju$/.

Exx. of /-yi:/ are the following, with asterisks indicating co-occurrence of /$n^{g}un^{y}ju$/: *10.15.7, *13.8.2, *45.7.3/4, 53.1.2, *62.2.4/6, *64.6.1, 71.30.2, 71.32.4, *88.1.3, 97.6.3, *112.6.3, *113.2.2, *113.6.3, *113.8.1, 120.1.3, 120.3.4, 121.1.3, *122.1.6, *122.4.2, 125.12.1, 125.12.2, *138.4.5, 139.8.1, 140.2.3/4/5, 140.4.1, 144.2.5, 155.3.6, 155.4.2, *156.2.2, 156.3.3/4, *162.22.4, and 166.12.5. In this list, exx. with human noun are 71.30.2 and 71.32.4. The context 'to taste like X' is found in 113.6.3, 113.8.1.

It might be possible, in principle, for /-yi:/ to be added to a noun which already has a case marker; cf. English like or as in as in the garden or like John's. Direct elicitation produced /a:-gugu-wa-ji:/ 'like in the (fresh) water', but I do not find such elicitation reliable on matters of this type. The list of textual exx. given above (more than fifty) includes no instances of /-yi:/ following another nonzero case marker. My assumption is that such combinations are not always completely ungrammatical, but that they are ordinarily avoided.

4.30 Relative /-$yin^{y}un^{g}$/.

As expected, this suffix becomes /-$jin^{y}un^{g}$/ after stop or nasal by Hardening P-18. A variant allomorph /-$n^{y}in^{y}un^{g}$/ is used with personal pronouns (§6.2).

This suffix is one of the most important ones in the language. It is used with verbs and other predicates as a subordinator, forming Nunggubuyu parallels to English relative clauses but actually having a more extensive syntactic range (not requiring a coreferential head noun in the matrix clause). In relative clauses it is necessary to recognise a process by which /-$yin^{y}un^{g}$/ is bumped out if a nonzero case category is copied onto the relativised verb from the head noun. See §16.4.

The meaning and behaviour of /-$yin^{y}un^{g}$/ with nouns is rather similar. Frequently it functions as a genitive marker (i.e., semantically similar to a restrictive relative clause), but is bumped out if a nonzero case marker on the possessed noun is copied onto the possessor (Relative) noun. However, /-$yin^{y}un^{g}$/ with nouns need not be interpreted in all cases as a genitive marker, as we will see.

Concerning the genitive reading of /-$yin^{y}un^{g}$/, it is advisable to mention briefly other grammatical mechanisms which can correspond in part to genitive forms in other languages. The main point here is that many inalienable possessor-possessed phrases are handled in Nunggubuyu by other mechanisms. Thus, many whole-part relationships are expressed by noun-class harmony, in which terms for parts are put in derivatives with appropriate NC_{der} prefixes as indicated in §4.9, above. This applies particularly to parts of plants and inanimate objects. With humans and many animals this procedure is not used, but it is still rare to see an overt possessor form with /-$yin^{y}un^{g}$/. Instead of saying my foot hurts, for example, we usually get a Nunggubuyu form like 'I-hurt here [pointing to foot]' or a compound 'I-foot-hurt'. Another important type of inalienable is kin terms (Chapter 5), but with these nouns a special set of affixes is used to mark pronominal person of "possessor" (i.e., propositus), making separate expression of this NP unnecessary, and when the propositus is overtly mentioned it is usually in (formally) appositive form, in the same case category as the kin term. See §15.8.

Predicate genitives ('X is Y's', 'X belongs to Y') are regularly expressed by personal pronouns (not nouns) in predicate genitive form (oblique stem with suffix /-wi/ or /-a/, see §6.5). Nouns with or without /-$yin^{y}un^{g}$/ may be added as further specifiers.

Before citing exx. of /-yin^{y}un^{g}/, we should make the further point that even in the genitive reading, the noun-class marking of the /-yin^{y}un^{g}/ (possessor) noun is that noun's own regular NC, rather than the NC of the possessed noun. Thus 'of the wallaby' will always be /a-n^{g}argu-yin^{y}un^{g}/ or /ana-n^{g}argu-yin^{y}un^{g}/ (with /a-/ and /ana-/ being ANA class markers), regardless of the NC of whatever other noun this may modify.

We now cite instances of /-yin^{y}un^{g}/ with nouns in the texts in NMET, broken down into subcategories. First, there is a sense 'about X, concerning X' used in such contexts as 'to speak about X', 'the story of X', 'the song about X', or 'to enquire about X'. This includes /-yin^{y}un^{g}/ forms given in isolation at the beginning of texts as quasi-titles to the text (we may supply an implicit 'story of'). Exx. are 7.16.1, 7.18.1/2, 13.1.1, 33.1.2, 34.8.5, 42.1.1, 43.17.5, 49.2.2/3, 55.1.1, 59.1.1, 64.9.6, 66.1.2, 66.2.1, 69.1.2, 73.1.1, 97.1.1, 100.1.2, 109.1.1, 114.1.2, 116.1.1, 161.12.1, 162.1.1, 164.1.1, 169.1.1 (perhaps also 57.1.2, 68.3.6, 120.3.1, 154.1.2).

The sense 'Y of X' where X is the possessor/owner of a material substance or dwelling is found in 29.11.3/4 (dog), 36.5.4 (burrow), 119.8.5 and 121.3.6 and 126.4.1 (food of white men), 127.5.3 and 139.13.5 (medicine of white men or of new generation), 162.5.2 (dog), and 166.15.2 (fishline of white men). The sense 'land of X' occurs in 29.6.2.

The sense 'Y of X' where Y is an immaterial phenomenon is found in 7.21.1 (story), 9.1.4 and 47.23.4 and 73.3.6 and 73.6.6 and 73.8.1 and 113.1.2 and 168.1.4 and 168.4.3 ('words', including extended sense 'customs'), 13.30.3 (name), 41.19.3 (song), and 54.3.2 (law, i.e., customs).

The sense 'of X[material]' or 'made with X', indicating a substance out of which some object is made, or a plant or animal whose substance is used to make something, is seen in 14.15.2, 41.3.1, 71.4.2, 116.13.1/2, 137.1.5, 139.12.3, 141.1.3, 142.1.6, 142.6.4, 148.1.5, 151.3.4, 166.8.2, 170.3.5. Note that there are many more exx. of this function with /-yin^{y}un^{g}/ than with the Originative suffix /-mira:dhu/ (§4.28, one ex. in NMET).

A number of exx. which can be glossed 'associated with X', 'characterised by X', or 'having X' can be cited: 30.2.3 (boomerang used in Gunabibi [ritual]), 43.10.5/6 (having sores, [then] being healed), 47.17.4 (using/having dangerous words), 54.1.4 (man of tribal law), 55.6.4 (having painted emu down), 57.2.3 and 57.3.5 (place of forked sticks used in ritual), 59.6.3 and 95.10.6 (hunting method or game hunted with fires), 73.4.2 and 73.8.4 (bestowed one), 120.5.1 (having smoke), 128.1.3 (leg having sores), 131.3.1 and 132.5.4 and 132.11.4 and 133.2.5 and 139.3.2 and 139.7.1 (medicine for eyes/sores/diarrhoea), 139.6.1 (medicine for sick people), 161.17.2 (children of school), perhaps 167.11.4 (unclear). Note that /-yin^{y}un^{g}/ sometimes corresponds to the 'having X' (or "Proprietive") construction of many Australian languages. For some other (not very productive) derivational patterns of this general type see also §14.14 (and §14.5 and §14.13).

The sense 'of X[habitat]' is seen in 59.8.7 and 116.9.6. We will mention other instances of this meaning in cases where /-yin^{y}un^{g}/

is added to a noun form already containing a case suffix like Pergressive /-w$_{2}$aj/ (this section, below). A similar locational sense is found in 71.1.4 and 71.2.1 (tribes of the interior). The sense 'of X[clan or country]' is found in 19.1.2 (totem of clan), 41.12.3 (place or ghosts of Balamumu people), 47.21.4 (myths of the south), 49.1.1 and 49.2.4 and 76.1.5/6 and 76.2.4 (ritual manager or country of MoMo or other kin category), 64.8.6 (totem of clan), 68.2.6 (song of clan), 157.13.1 (people of whatchamacallit place). See also §4.5 for exx. with place names.

The sense 'having the name of', 'named from' is found in 82.1.4, 84.1.1, 84.1.3, 85.1.1, 86.1.3, 87.1.6, and 88.3.4ff. The noun here is usually the name of a ritual or song type, referring to the practise of bestowing personal names from ritual or clan songs.

A form 'of X[body part]', meaning effectively 'full (kinsman)' in juxtaposition to a kin term connected with the body part, is found in 78.1.4 ('of the belly', specifying actual genealogical Mo instead of mere classificatory Mo). See also §5.10.

As mentioned earlier, many instances of whole/part relationship are handled by the NC$_{der}$ derivation (§4.9). However, some terms for parts of objects, plants, or animals do not have this derivative, and for such body parts it is necessary to use /-yin^{y}un^{g}/ with the name of the source object or species. This construction is favoured with body parts which are commonly detached from the original object or species (e.g., animal bones used as cutting implements or for sorcery). Exx. are 30.5.1 (cutting off tongue of crocodile), 53.3.1-3 (decorative tooth of animals), 71.16.5/6 (paperbark from tree spp.), 71.22.2/3 (shinbone of animal), 114.2.2 (roots of water lily), 114.4.5 (stem of water lily), 117.5.2-4 (edible portion of top or bottom of palm), 119.1.3 (edible fruits), 123.1.2 (edible gum of wattle), 125.6.1/2 (shoulder blade of kangaroo used as tool), 140.1.3 (nectar on flowers), 144.4.1ff. (flower of tree spp.), 166.11.2 (spike of ray), perhaps 109.3.4 (guts of belly area?).

Parallel to English owner of X, where the possessed noun (not the possessor) takes genitive form, Nunggubuyu has constructions with a form of /abal/ 'owner' and a /-yin^{y}un^{g}/ form of the object possessed: 89.1.1/2 (owner of dog), 90.1.1 ('owner' omitted), perhaps 90.1.3 (apparently needs emendations).

Occasionally, a verbal action is described with a noun like /wun^{g}a:ri/ 'fight' or the loanword trouble, and the agent may then appear in /-yin^{y}un^{g}/ form: 69.6.2, 89.1.8.

Occasionally, /-yin^{y}un^{g}/ is added more or less gratuitously to an adverbial noun (NAdv) which indicates time of day or season of year: 71.4.1 (daytime), 98.9.2 and 98.11.1 (rainy season), 125.15.3 (dusk).

The suffix is also added gratuitously to /run^{g}gu-run^{g}gal/ 'big' (Rdp plural) most of the time (see dictionary entry for exx.). It is similarly often added to compounds with /-yiriwu/ 'huge' and to some other multisyllabic noun-NAdj compounds, as in /a-wala-ba-wawalhu-Ø-jin^{y}un^{g}/ 'wide open hollow log' 52.2.3 and /ana-magula-garwagarwar-in^{y}un^{g}/ 'top part of skin' 53.1.5.

Suffix /-yin^{y}un^{g}/ is also found in a moderate number of textual exx. gratuitously added to a NAdj or body-part noun. The NAdj exx. which we are talking about cannot be analysed as relative clauses since they show nominal NC$_{infl}$ prefixes rather than verbal pronominal prefixes. The exx. listed below in some instances can also be thought of as instances of the preceding category (with multisyllabic compound NAdj, often with intensive sense): 47.7.1, 47.14.6, 68.2.3, 71.10.5, 73.8.3, 100.3.1, 112.2.4, 115.2.2, 116.12.2, 117.1.1-3, 120.5.2, 122.3.2, 122.4.3, 123.2.1/2, 123.3.2/3, 126.3.1/2, 143.3.6, 143.15.4, 156.2.5, 161.26.1, 165.1.8, 170.2.2. Some NAdj which occur more than once in this form are /ninig/ 'soft', /w$_2$adawadad/ 'strong, firm', /lharan^{g}/ 'ripe, cooked', and intensive /jarwariwari/ 'long, tall'. Body-part exx. include 120.5.2 (outer shell), 143.3.6 and 143.15.4 (fat), and 156.2.5 (back). It is difficult to summarise the functions of /-yin^{y}un^{g}/ in these exx. (and those of the preceding paragraph), but it seems to involve definiteness (cf. English the X one, with X some adjective), and is also favoured by intensiveness and multisyllabicity of the stem.

Unclear instances of /-yin^{y}un^{g}/, possibly reflecting broken syntax or loss of unintelligible material, are 116.12.4, 170.3.3.

Since /-yin^{y}un^{g}/ is very common in relative clauses, it may occasionally spread from a relativised verb to a nuclear NP in the relative clause; this may be going on in 112.5.5. However, many instances of /-yin^{y}un^{g}/ with nouns cited above could be paraphrased by longer expressions involving a relative clause, and it is not always easy to differentiate direct addition of /-yin^{y}un^{g}/ from indirect addition due to case-spreading.

In addition to simple forms with /-yin^{y}un^{g}/ added to the noun stem, there are several exx. in which /-yin^{y}un^{g}/ is added to a noun which already has a nonzero case marker. The majority of these expressions indicate the typical habitat of some plant or other species, and involve Pergressive /-w$_2$aj/ plus /-yin^{y}un^{g}/, forming /-w$_2$a-jin^{y}un^{g}/: 114.11.2 (in habitat associated with another plant sp.), 116.12.3 (in freshwater habitat), 142.6.5 (in bushland), 166.24.1 (beach/coastal habitat). There are also a few exx. with Retrospective Pergressive /-w$_1$aj/, indicating the association of something with tribal elders (now dead), hence with a former time period: 47.12.3, 47.12.4, 139.15.4. There is one textual ex. in NMET of Locative /-ruj/ followed by /-yin^{y}un^{g}/: 47.15.2 (people [who are] in another country). There are two exx. with /-w$_1$ala/ (Ablative), the whole expression indicating someone who comes from (lives in) a particular location: 47.20.4 (with place n.), 79.1.4/5 (from other country). [For semantically similar constructions see also clan names and other derivatives with Gentilic /nuN-/, §14.11.] There are no textual exx. of Allative-Dative /-w$_1$uy/ followed by /-yin^{y}un^{g}/ after a noun stem, but there is one such ex. involving a personal pronoun: 139.13.6. Presumably a nominal counterpart is possible. I elicited one ex. with Similative /-yi:/, namely /a-mada-yi:-yin^{y}un^{g}/ 'the one (which is) like grass'.

Similar exx. of /-yin^{y}un^{g}/ are found with irregular "case" forms of cardinal-direction terms (§7.29): 46.1.4 ('from the south'), 113.4.6 ('to the west').

4.31 Vocatives.

Nouns commonly used as vocatives are personal names, kin terms, and less often other nouns such as 'man'.

There is no Vocative suffix. Regarding endings, therefore, a Vocative noun is like the corresponding Nominative. However, a Vocative noun may take Interjection-Formation P-39, lengthening the final vowel and adding a rounded trail-off.

Unlike Nominative nouns, Vocatives strictly avoid NC$_{infl}$ prefixes (Nominatives can occur with or without them).

An ex. of a Vocative with a personal name is NMET 171.1.1. For exx. of Vocative kin terms see Chapter 5. An ex. of a Sg NAdj is /yiwan^{g}gu-n^{y}un^{g}!/ 'old man!' (with HumSg suffix).

4.32 Postpositions: /-w$_2$ugij/, /-maji:/, /-w$_2$indi:yun^{g}/, /-maga:/, /-magi/.

In this section we introduce a somewhat heterogeneous set of suffixes which follow all other suffixes, are in some instances elements with sentential rather than single-constituent scope, and are here referred to as postpositions or postpositional suffixes. Some of them occur much more commonly with verbs, see §12.21.

With nouns, by far the most common is /-w$_2$ugij/ 'still, only, nothing but'. Its most common use is with Nominative (or caseless) noun. In this usage, the NC$_{infl}$ prefix slot is unfilled, except in negative contexts (there may be rare cases involving a NC$_{infl}$ prefix, but no such exx. occur in NMET texts). The absence of this prefix is probably to be explained by the necessarily focal nature of a noun with this suffix. The textual exx. are 7.5.3 (place name), 9.8.4, 9.11.4, 10.10.3, 15.1.4ff., 16.2.8ff., 18.2.2, 18.16.4, 19.6.1, 29.7.3 (preceded by English only), 40.1.8 (with cardinal direction NAdv), 40.14.3, 41.13.3/4, 43.7.2, 45.3.3, 45.5.6, 45.10.3, 45.11.5, 50.2.5, 53.1.3, 57.1.4/5, 64.8.1, 71.27.5, 71.34.2/3, 72.1.3, 72.2.5, 73.8.2, 76.2.3, 85.1.7, 95.9.4, 109.3.2, 109.6.3/4, 112.3.1, 112.6.4, 115.3.1, 116.6.1, 117.5.5, 117.6.1, 118.2.4. The suffix may follow other suffixes such as HumSg /-yun^{g}/ or /-n^{y}un^{g}/ (43.7.2). It may also follow a case suffix, though the number of exx. is not large (if we exclude Nominative /-∅/): Retrospective Pergressive /-w$_1$aj-bugij/ 13.24.3, Similative /-yi:-wugij/ 27.5.2, Locative /-ruj-bugij/ 37.2.3 and 115.5.5, Allative-Dative /-w$_1$uy-(w)ugij/ 109.3.3, and Ablative-Pergressive /-w$_1$ala-waj-bugij/ 29.4.1 (and MT 3). Postposition /-w$_2$ugij/ rarely co-occurs with another postposition, but we can cite /-w$_2$ugij-maga:/ NMET 164.3.5. The suffix /-w$_2$ugij/ is very common with verbs, where the sense 'still' is common, and thus is of course common with intransitive predicate forms of NAdj, as in /ni=wiri-wugij/ 'He is still alive'. In general, /-w$_2$ugij/ is logically related to the constituent it modifies if not the predicate, and may be thought of as modifying the entire clause when attached to the predicate.

The postposition /-maji:/ is conditional and is usually added to the predicate, but can occasionally show up on a noun: 42.6.1, 62.1.7, 77.1.4, 83.1.2, 84.1.4, 103.2.5/6, and 165.1.2. In some exx. it may be that /-maji:/ is added to the noun because this noun

is emphasised in the condition ('if it is X that...'), but in other cases it seems that the noun is merely a convenient prop for a postposition which can be added to any suitable constituent in the conditional clause. The suffix often co-occurs with continuous NC_{infl} prefix. See §16.7.

Postposition /-$w_2$indi:yun^g/ 'really, very' is an intensifier which is logically bound to the constituent it modifies (noun, predicate, etc.). The exx. with nouns in NMET are 87.1.2, 98.3.6, 134.1.3, and 161.4.2. The continuous NC_{infl} prefix occurs in some of these exx. but not all of them.

The postposition /-maga:/ is difficult to analyse semantically. One well-defined usage is as an obligatory suffix with present tense negation of predicative NAdj, co-occurring with negative element /wa:='ri/ and with the B form of the intransitive pronominal prefix: /ni=wiri/ 'He is alive', /wa:='ri ani=wiri-maga:/ 'he is not alive'; see §15.6. The suffix may also be added with nouns other than NAdj as negative predicate: /wa:='ri an-u-gubulu-maga:/ '(it is) not truth' (NMET 87.1.5, with a NC_{der} form of /-$w_1$ubulu-/). However, /-maga:/ is also used in a looser and more problematic way in some types of conditionals, and occasionally as a reinforcer of backgrounded continuous verbs in some narrative contexts (§12.21). In such functions, /-maga:/ may occasionally be added to some constituent other than the predicate of the clause, and this may be happening in 37.4.6. As noted above, there is an ex. of the double postposition /-$w_2$ugij-maga:/ (164.3.5).

The postposition /-magi/ is used with Evitative ('lest') verb forms. In the exx. I have, it is attached to the predicate, or (in a negative Evitative) to a negative particle (/yagi/); see §8.7. I have no exx. of /-magi/ directly added to a (nonpredicative) noun, but the combination is probably possible.

4.33 Nouns used as abstractives: /wun^{g}a:ri/, /wuman^{g}uman^{g}u/, /wungali/, /bari/, /lharug/, /wun^{g}ubal/, /wuyun^{g}guwan/, /galij/.

Leaving aside the uncommon abstractive (verbal noun) form in which /-j/ or /-n^y/ is added to a verb (§14.16), there is a set of morphologically simple nouns which nonetheless seem to have senses similar to those of verbal nouns in other languages. Their basic inflectional morphology is that of ANA_{wu} class nouns, but with affixes commonly omitted (in nonnegative contexts) much as with (other) adverbial nouns (§4.3). However, they often function as (nonverbal) predicates (or rather, as complete clauses since there are usually no other constituents). Commonly they are closely juxtaposed as a kind of apposition or specifier to another predicate.

The main ones are /wun^{g}a:ri/ 'fight(ing)', /wuman^{g}uman^{g}u/ '(illicit) sexual affair', /wungali/ 'exchange, trade', /bari/ and /lharug/ 'walkabout, hike', /wun^{g}ubal/ '(public clan) song', /wuyun^{g}guwan/ 'ritual performance', and /galij/ 'fun, (a) good time'. The set is not entirely homogeneous; for example, /lharug/ and /galij/ occur in derivatives or as compound initials in ways which most of the others do not. For textual exx. see the dictionary entries.

4.34 Nominal affixes used with other word classes.

NC_{infl} prefixes (§4.7, §4.8) are also used with kin terms (Chapter 5), though with minor phonological changes in some instances due rule P-34. They are used with demonstrative pronouns and adverbs, with another phonological reshaping in some cases due to P-35 (in Immediate demonstrative forms). Personal pronouns have a distinct set of NC markers. Both personal pronouns and demonstrative pronouns, in addition, have special sets of NC suffixes (N.B.) not used with nouns. Verbs have pronominal prefixes, marking pronominal category of subject and (if relevant) object, and in a fashion these occupy the same inflectional-prefix slot as the NC_{infl} prefixes do with nouns, but the forms are quite different.

The inner or derivational NC prefixes (§4.7, §4.8), here abbreviated NC_{der}, display substantial but not exact formal similarity to intransitive verbal pronominal prefixes and to the NC prefixes of personal pronouns. Some kin terms involve gender doublets with M prefix /niG-/ vs. F prefix /n^{g}ari-/, partly matching regular NC_{der} forms /niG-/ and /n^{g}ariG-/, but with no /G/ (stop archiphoneme accounting for Hardening P-18 of following continuant) in the F kin form.

Reduplication by rule P-2 is found not only with nouns (mostly for Pl), but also with verbs (continuous, prolonged, or repetitive aspect). It is more clearly productive and inflectional with verbs, though phonologically the two differ only in that nominal reduplications involve occasional lexical irregularities. This reduplication is not used with personal pronouns or demonstratives (but demonstratives, and rarely personal pronouns, have a distinct reduplication by P-3).

HumSg /-yun^g/ and /-n^{y}un^g/ have no close formal/functional parallels elsewhere. However, a suffix /-yun^g/ is used with demonstratives in Absolute function (regardless of gender/number, §7.7), and another similar suffix /-ayun^g/ occurs with pronouns (§6.8) in Contrastive function. In kin terms, /-yun^g/ indicates 3rd person propositus ('his/her/their ...') without reference to number (§5.2).

Du suffix /-w_2a:/ is replaced by /-w_2i:yun^g/ in kin terms (§5.3) after this /-yun^g/ suffix, but is used with other kin terms. With personal and demonstrative pronouns, nonhuman dual is not marked and human dual is marked by a different set of MDu and FDu endings. Verbs mark dual subject in pronominal prefixes (except for some neutralisations in transitive combinations).

Pl prefix /-mij-/ is used with kin terms (except those with 1st person propositus, which use suffix /-$w_1$an^g/). Minor Pl prefixes /-man-/ and /-mulun^g-/ are elsewhere used as compound initials with plural meaning with a few verbs. These elements are not used as regular pluralisers with pronouns or demonstratives. See §14.20.

Multiple /-$w_1$ara-/ (§4.17) is very common with verbs, which also have other (lexically specialised) Multiple prefixes not used with nouns. See §10.4.

Case suffixes (§4.18ff.) are also used with kin terms, personal pronouns, and demonstrative pronouns. Relative /-yin^{y}un^g/ becomes /-n^{y}in^{y}un^g/ with personal pronouns. Demonstratives, particularly adverbs and predicative demonstrative pronouns, show some semantic

shifts of case markers such as Locative /-ruj/ and Instrumental /-miri/. Demonstrative adverbs, and cardinal-direction adverbs (which are treated in the same chapter), each have various case-like forms (Locative, Ablative, etc.), but the relevant affixes are often unrelated to those used with nouns.

Several case suffixes are also used with verbs, either by copying the case of the head noun onto the verb of the relative clause, or as special clause subordinators (Pergressive = 'while', Ablative = 'after', etc.). See Chapter 16.

Postpositional suffixes (§4.33) occur with various word classes and are especially common with verbs; see §6.13, §7.30, §12.21.

Some affixes which are not used with nouns are: a) various suffixes with discourse functions used only with personal pronouns, indicating contrastive focus and the like (Chapter 6); b) Centripetal and other relative-motion markers used in demonstrative morphology (Chapter 7). Concerning the case system, it should be emphasised that nominal morphology does not systematically distinguish subject from (direct) object, so pronominal prefixes in verbs are an essential device for keeping case roles clear. Verbs also have a Comitative derivational prefix /-an^{y}ji-/ which compensates for the absence of nominal case-marking of this category. The frequent use of Multiple derivational affixes in verbs, compared to their severely limited use with nouns (§4.17), means that this category is marked more clearly in verbs than in nouns; this is especially important for nonhuman nouns, which have no Sg/Pl marking. Finally, we observe that kin terms (Chapter 5) have various special affixal forms (e.g., for marking pronominal person of propositus) which are not used with the nouns dealt with in the present chapter.

Chapter 5

Kin terms

5.1 General.

A separate chapter is reserved for kin terms because of their relatively substantial number of special morphological features.

The differences are essentially in stem-formation, including number-marking and a type of NC_{der} prefixation. Kin terms take the same inflectional noun-class (NC_{infl}) suffixes used by other nouns (§4.7, §4.8), with minor variations in form due to specialised phonological rules (P-34, P-35). They also take regular nominal case suffixes (§4.18ff.) and postpositional suffixes (§4.32).

In this chapter we are therefore mainly concerned with stem morphology. Paradigms for the various kin categories are presented. In comparison with the preceding chapter, fewer textual cross-references are given, since textual occurrences in NMET are given in dictionary entries.

The kinship system is classificatory, which means that every Aboriginal person is in a specific kinship relationship to every other Aboriginal, even if the precise genealogical connection is not known. Thus each term like 'father' ('Fa') applies not only to one's actual (i.e., presumed biological) father, but also by simple extensions to father's brother (FaBr), by more complex extensions to FaFaBrSo, and to many other persons including some in lower generations and some noncolineal relatives. Abbreviations used are Fa(ther), Br(other), Mo(ther), Si(ster), So(n), Da(ughter), Ch(ild), Pa(rent), Hu(sband), Wi(fe), Sp(ouse), and Sb (Sibling). Compounds like FaFaSi indicate relational products: father's father's sister. The symbols ♂ and ♀ specify male and female, respectively, and are used to distinguish, for example, ♂So (man's son) from ♀So (woman's son).

One important structural feature of Nunggubuyu terminology is that siblings call all other kinsmen by the same terms. In English this is true of ascending kinsmen but not of descending kinsmen (if X is the sibling of Y, the child of X is the nephew or niece of Y). In Nunggubuyu this is true not only of ascending but also of descending and "affinal" or "spouse" categories. Another impor-

shifts of case markers such as Locative /-ruj/ and Instrumental /-miri/. Demonstrative adverbs, and cardinal-direction adverbs (which are treated in the same chapter), each have various case-like forms (Locative, Ablative, etc.), but the relevant affixes are often unrelated to those used with nouns.

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tant feature is that "affinal" and "spouse" kin categories are not a separate set or subset of the terminology. Rather, since choice of spouse (and hence of affines) is sharply delimited by the genealogical kinship system, terms for affines and spouses are identical to existing genealogical terms. Thus the term for 'MoMoBrDaDa' (and similar second cross-cousins) is also used for ♂Wi (and anyone's BrWi), and the term for 'MoMoBrDa' is applied to the Mo of one's Wi. Ordinarily, one marries "correctly" with the result that no change in preexisting applications of kin terms is needed. "Incorrect" marriages (there is actually a range of acceptability going from mildly incorrect to absolutely taboo), which have always occurred and which are more common nowadays under settlement conditions, normally result in a change in terminology so that 'MoMoBrDaDa' is applied to Wi, with corresponding changes for certain important affines.

In an expression like 'Fa of X', we describe X (grammatically possessive in English) as the propositus (i.e., reference point), and X's father as the referent. This terminology is applicable to ordinary (linear) kin terms which define the referent in terms of his/her relationship to a given propositus. However, the language also has dyadic kin terms of the type 'a Fa-and-Ch pair' (§5.6), where we can only speak of $referent_1$ and $referent_2$ whose mutual relationship is specified (but whose relationship to any external propositus is unspecified).

The basic system of categories is indicated in Figure 5-1. The actual forms shown are Vocatives, equivalent to referential forms with 1st person propositus (in the latter function, 'my/our...', NC_{infl} prefixes and other nominal affixes may be present, often making distinctions between male/female referent which are not specified lexically). Referential forms with 2nd and with 3rd person propositus differ in form from the items shown in the figure. The 2nd and 3rd person forms usually display the same categorial oppositions of kin terms indicated in the figure, but there are some differences in terms for siblings and for second cross-cousins.

Abbreviations used are: VOC = Vocative
$PROP_1$ = 1st person propositus
$PROP_2$ = 2nd person propositus
$PROP_3$ = 3rd person propositus

The pronominal categories of propositus marked in the kin term are person only. $PROP_1$ is for 'my/our...', $PROP_2$ for 'your...', $PROP_3$ for 'his/her/their...'. $PROP_1$ includes exclusive as well as inclusive first person, and all persons include all numbers. Finer pronominal specification of propositus requires a modifying independent pronoun (usually in the same case as the kin term).

In Figure 5-1, kinsmen in the same generation linked by a horizontal line over them are siblings, and kinsmen linked by a horizontal line under them are (real or classificatory) spouses (equivalent to second cross cousins). Looked at in terms of patrilineal "lines," there are four, each with completely distinctive terminology. Collapsing of 2A and 2D generations occurs in terms within Ego's own patrilineal line. Omaha-type skewing of terms down through contiguous generations in a patriline occurs in Mo's and MoMo's lines (1A = 0 = 1D generations).

FIGURE 5-1
Kinship System

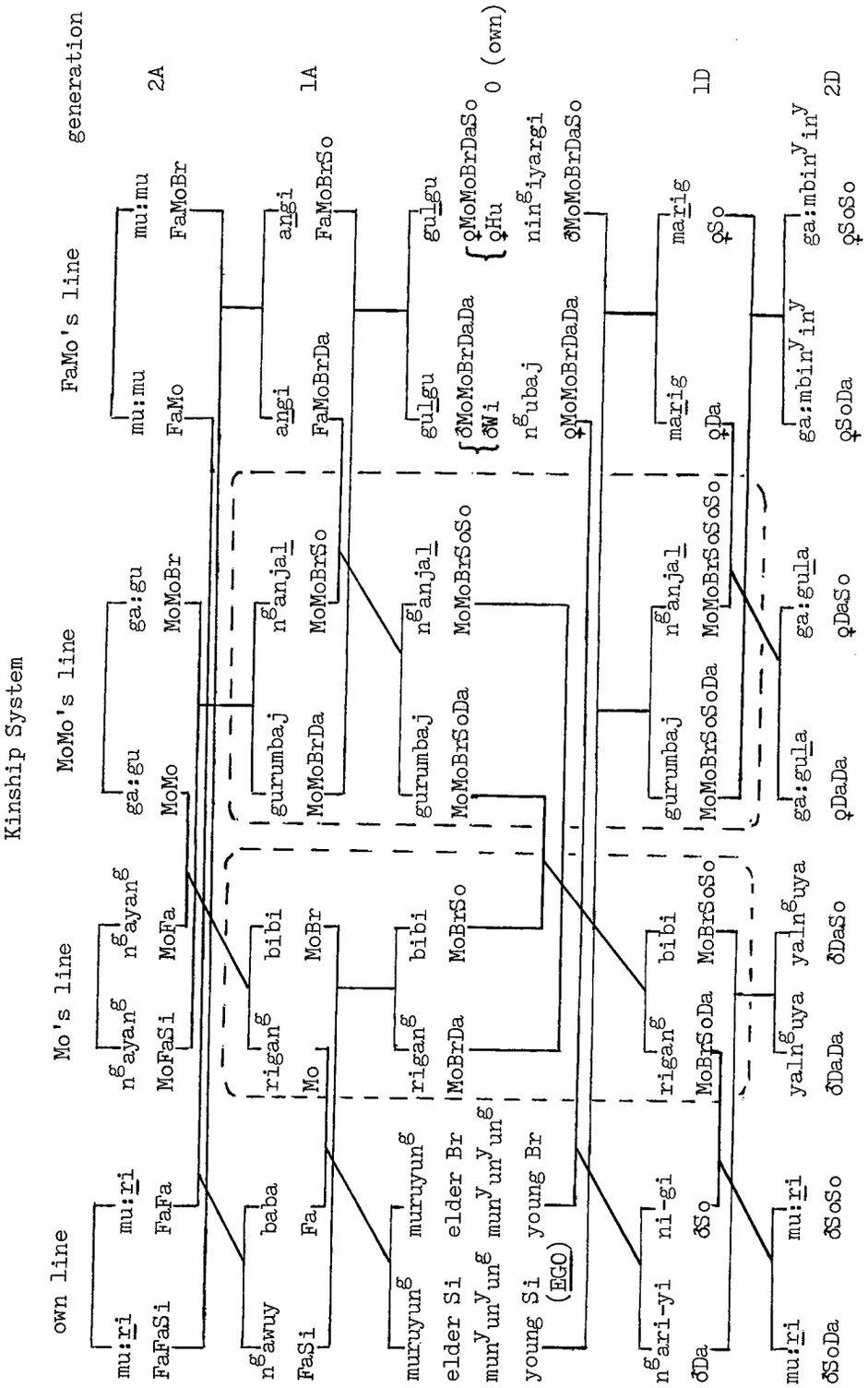


Figure 5-1

Aside from this Omaha-type skewing (which occurs also in some other nearby languages such as Mara and Anindilyakwa), the system is of the "Aranda type" as this term is used in Australian ethnography.

The patrilineal moieties are called /yirija/ and /mandha:yun^{g}/ (see dictionary entry for forms; /mandha:yun^{g}/ is replaced in human Sg and Du by forms of the stem /miniguya/). There are no named sections or subsections, though the Nunggubuyu are aware of subsections in neighboring groups. There are no named generation moieties like the harmonic/disharmonic generation-moieties in many Australian groups (note that the kinship terminology would not articulate with such a system well). On the other hand, it could be argued that Nunggubuyu does have a virtual semimoiety system in which each patrilineal moiety is divided into two distinct patrilineal divisions, as with Mara to the south. Not only does the kinship terminology conform to this pattern; in addition, the rituals are organised largely around a four-way grouping of clans into sets of "brother" clans. Some Nunggubuyu clan terms, especially /murun^{g}un/, can be applied to any "brother" clan of the focal Nunggubuyu clan(s) of this name, and thus function like Mara semimoiety terms. For more information on clan names and the like, see pp. 5-6 of NMET and pp. 327-29 of the dictionary.

There are no matrilineal moieties, semimoieties, or clans. Individual matrifiliative sequences (a woman X, her Da Y, and Y's Da Z) are important in defining specific marital claims (if a man A married X back two generations, A's SiDaSo has a specific right to claim Z, thus renewing the intermarriage pattern among these lines of women (including their brothers) every second generation. However, these concrete matrifiliative sequences are not expanded culturally into large-scale matrilineal moieties or clans.

An adult man of a clan C_1 may be considered the /abal/ 'boss' of the clan, its rituals, and its estate (territory); the compound /lhal-abal/ 'country-boss' is also used. He also has a special relationship called /jun^{g}gayi/, conventionally glossed 'manager', to his Mo's clan C_2; this involves specific ritual duties such as painting clan designs on dancers, but also a general overseeing for the men of C_2 with special reference to ritual life. A similar but minor relationship of a man to his MoMo's clan C_3 is called /nigararij/.

5.2 Stem morphology.

Table 5-1, below, gives the basic stem forms for each kin category.

Some recurrent features are these: a) prefix /ran^{g}-/ or less often /an^{g}-/ as a characteristic marker of $PROP_2$ and $PROP_3$ forms; b) suffix /-yun^{g}/, or after nasal /-n^{y}un^{g}/, distinguishing $PROP_3$ from unsuffixed $PROP_2$ in several forms; c) Dyadic forms commonly with a suffix like /-j/ or /-yij/; d) Pl prefix /mij-/ with Dyadic forms and with $PROP_2$/$PROP_3$ forms; e) some instances of male/female doublets with M /niG-/ vs. F /n^{g}ari-/.

Pl forms of $PROP_1$ kin terms, not shown in the table, are always made by adding suffix /-w$_1$an^{g}/ to a complete Sg noun: /na-baba-wan^{g}/ 'my Fa-s', 'my Fa and his bunch', or the like.

TABLE 5-1

Kin-Term Stems

A. Ego's own patriline

i. FaFa, FaFaSi, ♂ScCh

VOC/PROP$_1$	/mu:ri/
PROP$_2$	/a-muri/ Pl: /mi-da-muri/
PROP$_3$	/a-muru-yun^{g}/ Pl: /mi-da-muru-yun^{g}/
Dyadic	/a-muri-j/ Pl: /mi-da-muri-j/

ii. Fa, FaBr

VOC/PROP$_1$	/baba/ or less often /gala:-baba/
PROP$_2$	/ni-n^{y}ara/ Pl: /mi-ni-n^{y}ara/
PROP$_3$	/ni-n^{y}ara-yun^{g}/ Pl: /mi-ni-n^{y}ara-yun^{g}/
Dyadic	/an-n^{y}ij/ or /awan-n^{y}ij/ Pl: /mij-ban-n^{y}ij/, /mij-bawan-n^{y}ij/, /mij-gan-n^{y}ij/, or /mij-gawan-n^{y}ij/ [root /-w$_1$awan-/ or /-w$_2$awan-/, see rule P-12]

iii. FaSi

VOC/PROP$_1$	/n^{g}awuy/
PROP$_2$	/n^{g}ari-n^{y}ina/ Pl: /min^{y}-n^{g}ari-n^{y}ina/
PROP$_3$	/n^{g}ari-n^{y}ina-yun^{g}/ Pl: /min^{y}-n^{g}ari-n^{y}ina-yun^{g}/
Dyadic	/n^{g}awu-yij/ Pl: /min^{y}-n^{g}awu-yij/

iv. Br

VOC/PROP$_1$	elder: /muruyun^{g}/ [prefix /na:-/ by P-35]
	younger: /mun^{y}un^{y}un^{g}/ [" "]
PROP$_2$	/ni-lhari/ Pl: /mi-ni-lhari/
PROP$_3$	/ni-lhari-yun^{g}/ Pl: /mi-ni-lhari-yun^{g}/
Dyadic	/ni-gama-n^{y}ij/ ('Br and Br' or 'Br and Si') Pl: /mi-ni-gama-n^{y}ij/

v. Si

VOC/PROP$_1$	same as for 'Br' (above) [prefix /n^{g}a:-/ by P-35]
PROP$_2$	/n^{g}ari-lhari/ Pl: /min^{y}-n^{g}ari-lhari/
PROP$_3$	/n^{g}ari-lhari-yun^{g}/ Pl: /min^{y}-n^{g}ari-lhari-yun^{g}/
Dyadic	/n^{g}ari-yama-n^{y}ij/ ('Si and Si') Pl: /min^{y}-n^{g}ari-yama-n^{y}ij/

vi. ♂So, BrSo

VOC/PROP$_1$	/ni-gi/
PROP$_2$	/ni-wiyay/ Pl: /mi-ni-wiyay/
PROP$_3$	/ni-wiya-yun^{g}/ Pl: /mi-ni-wiya-yun^{g}/
Dyadic	same as for 'Fa' (above)

vii. ♂Da, BrDa

VOC/PROP$_1$	/n^{g}ari-yi/
PROP$_2$	/n^{g}ari-wiyay/ Pl: /min^{y}-n^{g}ari-wiyay/
PROP$_3$	/n^{g}ari-wiya-yun^{g}/ Pl: /min^{y}-n^{g}ari-wiya-yun^{g}/
Dyadic	same as for 'Fa' (above)

B. Ego's Mo's patriline

i. MoFa, MoFaSi

VOC/PROP$_1$	/n^{g}ayan^{g}/
PROP$_2$	/ra-n^{g}ayan^{g}/ Pl: /mi-da-n^{g}ayan^{g}/
PROP$_3$	/ra-n^{g}aya-n^{y}un^{g}/ Pl: /mi-da-n^{g}aya-n^{y}un^{g}/
Dyadic	/n^{g}aya-n^{y}ij/ Pl: /mi-da-n^{g}aya-n^{y}ij/

ii. Mo, MoBrDa, MoBrSoDa

VOC/PROP$_1$	/rigan^{g}/ [inflected /n^{g}a:-rigan^{g}/, see P-35]
PROP$_2$	/ibi/ Pl: /mij-bibi/ [/-w$_2$ibi-/, see P-12]
PROP$_3$	/ibi-yun^{g}/ Pl: /mij-bibi-yun^{g}/ [/-w$_2$ibi-/]
Dyadic	/rigi-j/ Pl: /mi-digi-j/

iii. MoBr, MoBrSo, MoBrSoSo

VOC/PROP$_1$	/bibi/
PROP$_2$	/nuran^{g}i/ Pl: /mi-nuran^{g}i/
PROP$_3$	/nuran^{g}a-yun^{g}/ Pl: /mi-nuran^{g}a-yun^{g}/
Dyadic	/n^{g}ali-j/ Pl: /min^{y}-n^{g}ali-j/

iv. ♂DaCh, BrDaCh

VOC/PROP$_1$	/yaln^{g}uya/
PROP$_2$	/ran^{g}-aln^{g}uyaj/ Pl: /mi-dan^{g}-aln^{g}uyaj/
PROP$_3$	/ran^{g}-aln^{g}uya-yun^{g}/ Pl: /mi-dan^{g}-aln^{g}uya-yun^{g}/
Dyadic	same as for 'MoFa' (above)

C. Ego's MoMo's patriline

i. MoMo, MoMoBr

VOC/PROP$_1$	/ga:gu/
PROP$_2$	/a-n^{g}an^{g}gur/ Pl: /mi-da-n^{g}an^{g}gur/
PROP$_3$	/a-n^{g}an^{g}gur-yun^{g}/ Pl: /mi-da-n^{g}an^{g}gur-yun^{g}/
Dyadic	/an^{g}gur-yij/ Pl: /min^{y}-n^{g}an^{g}gur-yij/

ii. MoMoBrSo, MoMoBrSoSo, MoMoBrSoSoSo, WiMoBr (& reciprocals)

VOC/PROP$_1$	/n^{g}anjal/
PROP$_2$	/ra-n^{g}anjaj/ Pl: /mi-da-n^{g}anjaj/
PROP$_3$	/ra-n^{g}anja-yun^{g}/ Pl: /mi-da-n^{g}anja-yun^{g}/
Dyadic	/n^{g}anjal-yij/ Pl: /min^{y}-n^{g}anjal-yij/

iii. MoMoBrDa, MoMoBrSoDa, MoMoBrSoSoDa, WiMo (& reciprocals)

VOC/PROP$_1$	neutral style: /gurumbaj/ avoidance style: /gaja:li/
PROP$_2$	/ran^{g}-gurun^{g}/ Pl: /mi-dan^{g}-gurun^{g}/
PROP$_3$	/ran^{g}-gurumba-yun^{g}/ Pl: /mi-dan^{g}-gurumba-yun^{g}/
Dyadic	/wuruman^{y}ji/ [Pl not recorded]

iv. optional term for C.ii or C.iii for actual or definitely prospective WiMo(Br) and reciprocal

VOC/PROP$_1$	/n^{g}ann^{g}alha/
PROP$_2$	/ra-n^{g}ann^{g}araj/ Pl: /mi-da-n^{g}ann^{g}araj/
PROP$_3$	/ra-n^{g}ann^{g}ari-yun^{g}/ Pl: /mi-da-n^{g}ann^{g}ari-yun^{g}/
Dyadic	/n^{g}ann^{g}alhi-j/ Pl: /min^{y}-n^{g}ann^{g}alhi-j/

v. ♀DaCh, SiDaCh

VOC/PROP$_1$	either sex: /ga:gula/ ♀DaSo also: /ni-ga:n^{g}gura/ ♀DaDa also: /n^{g}ari-ya:n^{g}gura/
PROP$_2$	/an^{g}-a:n^{g}guraj/ Pl: /mi-dan^{g}-a:n^{g}guraj/
PROP$_3$	/an^{g}-a:n^{g}gura-yun^{g}/ Pl: /mi-dan^{g}-a:n^{g}gura-yun^{g}/
Dyadic	same as for 'MoMo' (above)

D. Ego's FaMo's patriline

i. FaMo, FaMoBr

VOC/PROP$_1$	/mu:mu/
PROP$_2$	/angamun^{y}/ Pl: /mi-dangamun^{y}/
PROP$_3$	/angamu-n^{y}un^{g}/ Pl: /mi-dangamu-n^{y}un^{g}/
Dyadic	/ramu-n^{y}ij/ [with tap /r/] Pl: /mi-damu-n^{y}ij/

ii. FaMoBrCh (including WiFa, WiFaSi)

VOC/PROP$_1$	/angi/
PROP$_2$	/angiyaj/ Pl: /mi-dangiyaj/
PROP$_3$	/angi-yun^{g}/ Pl: /mi-dangi-yun^{g}/
Dyadic	/angi-j/ Pl: /mi-dangi-j/

iii. ♂MoMoBrDaDa, Wi

VOC/PROP$_1$	/gulgu/
PROP$_2$	/ra-n^{g}arinaj/ Pl: /mi-da-n^{g}arinaj/
PROP$_3$	/ra-n^{g}arina-yun^{g}/ Pl: /mi-da-n^{g}arina-yun^{g}/
Dyadic	/ali-jij/ Pl: /mij-gali-jij/

iv. ♀MoFaSiDaSo, Hu

VOC/PROP$_1$	same as '♂MoMoBrDaDa' (above)
PROP$_2$	/ann^{g}inaj/ Pl: /mi-dann^{g}inaj/
PROP$_3$	/ann^{g}ina-yun^{g}/ Pl: /mi-dann^{g}ina-yun^{g}/
Dyadic	same as for '♂MoMoBrDaDa' (above)

v. ♀MoMoBrDaDa, ♀BrWi, HuSi

VOC/PROP$_1$	/n^{g}ubaj/ [sic, with no /j/ before the /b/]
PROP$_2$	/ra-n^{g}ujbaj/ Pl: /mi-da-n^{g}ujbaj/
PROP$_3$	/ra-n^{g}ujba-yun^{g}/ Pl: /mi-da-n^{g}ujba-yun^{g}/
Dyadic	/ra-n^{g}un^{y}manji/ Pl: /mi-da-n^{g}un^{y}manji/

vi. ♂MoFaSiDaSo, ♂SiHu, WiBr

VOC/PROP$_1$	/nin^{g}iyargi/
PROP$_2$	same as for '♀MoMoBrDaDa' (above)
PROP$_3$	" "
Dyadic	" "

vii. ♀So, SiSo

VOC/PROP$_1$	/marig/
PROP$_2$	/ni-marig/ Pl: /mi-ni-marig/
PROP$_3$	/ni-mara-yun^{g}/ Pl: /mi-ni-mara-yun^{g}/
Dyadic	same as for 'Mo' or 'MoBr' (above, B.ii, B.iii)

(Table 5-1, cont.)

viii. ♀Da, SiDa

VOC/PROP$_1$	same as '♀So' (above)
PROP$_2$	/n^{g}ari-ma̲rig/ Pl: /min^y-n^{g}ari-ma̲rig/
PROP$_3$	/n^{g}ari-ma̲ra-yun^g/ Pl: /min^y-n^{g}ari-ma̲ra-yun^g/
Dyadic	same as for 'Mo' or 'MoBr' (above, B.ii, B.iii)

ix. ♀SoCh, SiSoCh

VOC/PROP$_1$	/ga:mbin^{y}in^y/
PROP$_2$	♀SoSo: /ni-ga:mbin^{y}in^y/ Pl: /mi-ni-ga:mbin^{y}in^y/ ♀SoDa: /n^{g}ari-ya:mbin^{y}in^y/ Pl: /min^y-n^{g}ari-ya:mbin^{y}in^y/
PROP$_3$	/ra̲n^g-ga:mbin^{y}a-yun^g/ Pl: /mi-da̲n^g-ga:mbin^{y}a-yun^g/
Dyadic	same as for 'FaMo' (above)

- -

Textual exx. of /-w$_1$an^g/ with PROP$_1$ kin terms are NMET 72.7.1, 157.4.3 (two exx.). Exx. involving borrowed creole kin terms are 72.7.1, 72.7.1/3/6, 157.4.2/3, 157.15.2.

5.3 Dual /-w$_2$a:/ and /-w$_2$i:yun^g/.

Dual kin terms are of the type 'his two Fa-s', as opposed to Dyadic forms of the type 'Fa-and-Ch pair'.

The regular Du suffix for nouns is /-w$_2$a:/ (§4.15), and this is used with VOC/PROP$_1$ and PROP$_2$ kin terms:

/na-baba-wa:/ 'my/our two Fa-s'
/na-ni-n^{y}ara-wa:/ 'your two Fa-s'

However, a special suffix /-w$_2$i:yun^g/ is used in PROP$_3$ forms (i.e., following suffix /-yun^g/ or /-n^{y}un^g/):

/na-ni-n^{y}ara-yum-bi:yun^g/ 'his/her/their two Fa-s'

These exx. show M NC$_{infl}$ prefix /na-/.

5.4 Further analysis of stem forms.

The major formal split in the paradigms (leaving out the Dyadic forms, which are treated separately in §5.6) is between VOC/PROP$_1$ forms and PROP$_2$/PROP$_3$ forms.

This is seen, to begin with, in suppletion patterns, where entirely distinct roots are used for VOC/PROP$_1$ and PROP$_2$/PROP$_3$. The categories affected by suppletion are 'Fa', 'FaSi', 'Br/Si', 'Mo', 'MoBr', and (classificatory) 'Wi/Hu'. Categories where there is only a faint phonological similarity between the roots are 'ðSo/ðDa' and 'FaMo'. PROP$_2$ and PROP$_3$ forms are always based on the same root, with or without minor phonological variations.

For several categories, a prefix /-(r̲)an^g-/ is used with PROP$_2$ and PROP$_3$ forms only. The /n^g/ is deleted before another nasal by rule P-30. The kin categories with this prefix cluster in grandparental/grandchild generations, and in categories in MoMo's and FaMo's patrilines which are most important to Ego as spouses and affines: 'FaFa', 'MoFa', 'ðDaCh', 'MoMo', 'MoMoBrSo', 'MoMoBrDa' (including optional variant C.iv), '♀DaCh', 'Wi', and '♀MoMoBrDaDa/ðMoFaSiDaSo'. However, in '♀SoCh' (above, this page)

it seems that /-r̲an^g-/ is confined to the PROP$_3$ form.

PROP$_3$ is normally distinguished from PROP$_2$ by adding suffix /-yun^g/, or allomorph /-n^{y}un^g/ after a nasal. In form, these endings resemble HumSg suffix with non-kin nouns (§4.15) and the Absolute suffix used with demonstratives (§7.7). However, while the PROP$_2$ form in some instances has zero corresponding to PROP$_3$ /-yun^g/ (with 'Fa', 'FaSi', 'Br/Si', 'Mo', 'MoMo', and allowing for regular phonological rules deleting consonants also with 'ðSo/ðDa', 'MoFa', and 'FaMo'), in other instances the PROP$_2$ form ends in a possibly segmentable /j/ ('ðDaCh', 'MoMoBrSo', C.iv form for 'WiMo(Br)', '♀DaCh', 'Wi', 'Hu', '♀MoMoBrDaDa/ðMoFaSiDaSo') or /yaj/ ('FaMoBrCh'). In 'MoMoBrDa' (C.iii) is looks as though the paradigm has been scrambled: PROP$_3$ /r̲an^g-gurumba-yun^g/ might suggest */r̲an^g-gurumbaj/ as a possible PROP$_2$ form by analogy to other paradigms, but in fact we get /r̲an^g-gurun^g/, while the form /gurumbaj/ shows up unexpectedly as the VOC/PROP$_1$ form! Other cases where PROP$_2$ shows some kind of extension involving a consonant are '♀So/♀Da' and '♀SoCh' (but in these two instances the extension is shared with the VOC/PROP$_1$ form).

There are also some minor phonological variations which cannot be accounted for by regular rules, such as differences in final vowel in 'FaFa' (PROP$_2$ /a-mur̲i/ vs. PROP$_3$ /a-mur̲u-yun^g/, perhaps with a minor assimilation process in the PROP$_3$), medial /b/ vs. /jb/ in '♀MoMoBrDaDa', and /r/ vs. /lh/ in the C.iv variant for 'WiMo(Br)'.

Gender prefixes /niG-/ (once /ni-/) and /n^{g}ari-/, for M and F respectively, produce doublets in 'Br' vs. 'Si', '♀So' vs. '♀Da', 'ðSo' vs. 'ðDa', '♀DaSo' vs. '♀DaDa', and '♀SoSo' vs. '♀SoDa'. Usually only a part of the paradigm is affected, but 'ðSo' vs. 'ðDa' shows this opposition in all forms. It is possible that initial /ni-/ in /ni-n^{y}ara/ 'your Fa' and /nin^{g}iyargi/ (/ni-n^{g}iyargi/) 'my/our WiBr' (D.vi) is the same /niG-/, and that /n^{g}ari-/ in /n^{g}ari-n^{y}in̲a/ 'your FaSi' is /n^{g}ari-/.

These gender prefixes resemble the regular M and F NC$_{der}$ prefixes /niG-/ and /n^{g}ariG-/ (§4.7, §4.9). However, the NC$_{der}$ prefixes end in /G/, the effect of which is to harden a following continuant to a stop by P-18. In the kin terms, the M form is clearly /niG-/ or is at least consistent with it in most cases, but is /ni-/ in /ni-lhari/ 'your Br' (not */ni-dhari/) and in /ni-wiyay/ 'your (Br)So'. On the other hand, the F form is always /n^{g}ari-/ in kin terms, hence such doublets as //niG-w$_1$i//→ /ni-gi/ 'my/our (Br)So' and //n^{g}ari-w$_1$i//→ /n^{g}ari-yi/ 'my/our (Br)Da' (see also Dyadic forms for 'Br' vs. 'Si', the VOC/PROP$_1$ forms for '♀DaCh', and PROP$_2$ forms for '♀SoCh').

A few remarks are in order concerning the phonology of Pl forms with prefix /mij-/ of PROP$_2$ and PROP$_3$ kin terms. Before /ni(G)-/, /mij-/ shows up as /mi-/ by rule P-26, and before /n^g/ it shows up as /min^y-/ by P-22. In C.i ('MoMo') we find Dyadic /an^{g}gur̲-yij/ vs. Pl Dyadic /min^y-n^{g}an^{g}gur̲-yij/, suggesting that this root has two slightly distinct forms, the one with initial /n^g/ being used with the Pl prefix.

Similar slight allomorphic variations in roots may help explain other aberrant Pl forms of kin terms. A phonologically regular

Sg/Pl alternation is /ra-n^{g}ayan^{g}/ 'your MoFa' from //ran^{g}-n^{g}ayan^{g}//, Pl //mij-ran^{g}-n^{g}ayan^{g}// → //mij-dan^{g}-n^{g}ayan^{g}//(P-18)→ /mi-da-n^{g}ayan^{g}/(P-26, P-31). However, the pattern shown by Sg /a-n^{g}an^{g}gur/ 'your MoMo', Pl /mi-da-n^{g}an^{g}gur/ is not regular, since *//mij-an^{g}-n^{g}an^{g}gur// should result in */mi(j)-ga-n^{g}an^{g}gur/ (involving P-8). It would seem that the PROP$_2$/PROP$_3$ prefix in this paradigm has the short allomorph /an^{g}-/ in the Sg, but the full form //-ran^{g}-// in the Pl with preceding /mij-/. It is possible, however, that these Pl kin terms are being reanalysed as involving a prefix allomorph /mid-/, or else a rule inserting underlying //r// after /mij-/ when the following root or stem begins in /a/; thus note /angamun^{y}/ 'your FaMo', Pl /mi-dangamun^{y}/ and /angiyaj/ 'your FaMoBrCh', Pl /mi-dangiyaj/. In the case of /n^{g}aya-n^{y}ij/ 'MoFa and reciprocal' (Dyadic), Pl /mi-da-n^{g}aya-n^{y}ij/, it looks as though /-ran^{g}-/ has been added between Pl /mij-/ and the root.

Some other alternations associated with /mij-/ can be handled by phonological rules, though admittedly not very productive ones in some instances. In Dyadic forms for 'Fa' (A.ii in Table 5-1), forms with /b/ after /mij-/ suggest an underlying form for the root beginning with //w$_2$//, deleted in other forms by P-12. The same analysis applies to PROP$_2$/PROP$_3$ forms of 'Mo' (B.ii). However, the variants with /g/ in Dyadic forms for 'Fa' can be accounted for either by positing root-initial //w$_1$// which is hardened to /g/ by P-18, or by assuming a root without initial consonant, with /g/ inserted by P-8. This ambiguity is also present with Dyadic form /ali-jij/ 'Hu and Wi' (D.iii in Table 5-1), Pl /mij-gali-jij/, suggesting root //-w$_1$aliG-// or //-aliG-//.

The alternation of Dyadic /rigi-j/ 'Mo and Ch' with Pl /mi-digi-j/ (B.ii in table) shows //r//→ /d/ by Hardening P-18. On the other hand, Dyadic /ramu-n^{y}ij/ 'FaMo and reciprocal' (D.i) has Pl /mi-damu-n^{y}ij/. Since //r// (tap) should harden to /d/, not /d/, we assume that /mi-damu-n^{y}ij/ involves analogies from cases of /mi-da(n^{g})-.../ elsewhere in the kin-term system.

The alternation of intervocalic /b/, /jb/, and /n^{y}m/ in D.v of the table has no parallels elsewhere and has no apparent phonological basis, except possibly the influence of a following nasal consonant in the (Dyadic) form with /n^{y}m/.

Finally, we might mention some partial resemblances among forms listed in the table under different kin categories. First, while 'Mo' and 'MoBr' have a completely different set of forms, there is a similarity between the stem /bibi/ used as VOC/PROP$_1$ form of 'MoBr', and the root /-w$_2$ibi/ used in PROP$_2$/PROP$_3$ forms of 'Mo'. Similarly, while the only actual terminological mergers of categories in 2A and 2D generations are 'FaFa(Si)' = 'ðSoCh' (/mu:ri/), there are similarities between 2A and 2D forms in other patrilines also, e.g., /ga:gu/ 'MoMo(Br)' vs. /ga:gula/ 'ǫDaCh', and possibly /n^{g}ayan^{g}/ 'MoFa(Si)' and /yaln^{g}uya/ 'ðDaCh'.

5.5 NPs with separate expression of propositus.

As noted earlier, the propositus ("possessor") of a kin expression, though in part pronominally specified by the regular kin terms, may be separately expressed. Most of the time, this propositus noun

or pronoun has the same case as the kin term (Nk). This is not only true when the Nk is in a nonzero case, but also when it is in the zero Nominative (see §15.8):

(5.i) a-ji-ga nagan^{g} na-ni-n^{y}ara
where is? (MSg) you(Sg) (your) Fa
'Where is your Fa?'

However, when the Nk is in the zero case, the propositus can also appear (though less often) in Relative form:

(5.ii) a-ji-ga nu-ga-wi-n^{y}in^{y}un^{g} na-ni-n^{y}ara
your(Sg)
'Where is your Fa?'

5.6 Dyadic kin terms.

The Dyadic terms are given in Table 5-1 along with the simple (linear) kin terms. Some comments on the phonology and morphology of Dyadic terms were mixed in with the commentary on Table 5-1 in §5.4.

Although the Dyadic forms present, on the whole, an archaic and irregular aspect, it appears possible to identify a primary Dyadic suffix /-yij/, with variants /-n^{y}ij/ (often, and perhaps only, after nasal) and /-j/.

Exx. pointing to /-yij/ are /an^{g}gur-yij/ (C.i), /n^{g}anjal-yij/ (C.ii), most likely /ali-jij/ (D.iii) if from //(w$_1$)aliG-yij// (the root does not otherwise occur, and the Dyadic form might also be segmented as /aliji-j/), and /n^{g}awu-yij/ (A.iii, from /n^{g}awuy/). Exx. with /-n^{y}ij/ are /an-n^{y}ij/ and variants (A.ii), /ni-gama-n^{y}ij/ and /n^{g}ari-yama-n^{y}ij/ (A.iv/A.v; the root does not otherwise occur and might be set up as /-w$_1$ama-/ or /-w$_1$amaN-/), /n^{g}aya-n^{y}ij/ (B.i, from /n^{g}ayan^{g}/), and /ramu-n^{y}ij/ (D.i; root not otherwise occurring, perhaps /ramu-/ or /ramuN-/). The form /-j/ is seen in /a-muri-j/ (A.i), /rigi-j/ (B.ii), probably /n^{g}ali-j/ (B.iii, root not otherwise occurring), /n^{g}ann^{g}alhi-j/ (C.iv), and /angi-j/ (D.ii). The citations (e.g., "C.i"), of course, refer to entries in Table 5-1. The form /ra-n^{g}un^{y}manji/ (D.v) could possibly be analysed as having an idiosyncratic ending /-nji/ if the sequence /ra-n^{g}un^{y}ma.../ is regarded as a nasalised variant of /ra-n^{g}ujba-/ in the same paradigm.

The several Dyadic forms (excluding those with unique, suppletive roots) have differing relationships to the VOC/PROP$_1$, PROP$_2$, and PROP$_3$ linear kin terms. In some cases the Dyadic form is closely related to the PROP$_2$/PROP$_3$ forms and contains the prefix /-(r)an^{g}-/ which is connected with these categories: /a-muri-j/, /ra-n^{g}un^{y}manji/. In some others, however, the connection is with the VOC/PROP$_1$ form: /n^{g}awu-n^{y}ij/, /n^{g}aya-n^{y}ij/, /rigi-j/, /n^{g}anjal-yij/, /n^{g}ann^{g}alhi-j/. In the case of /angi-j/ we have basically the same root in all forms so no decision can be made. In the paradigm of 'MoMo' (C.i in Table 5-1), Dyadic /an^{g}gur-yij/ (after Pl prefix /-n^{g}an^{g}gur-yij/) shows a stem form similar to /a-n^{g}an^{g}gur-/ (used in PROP$_2$ and PROP$_3$, the latter with further suffix /-yun^{g}/) rather than to VOC/PROP$_1$ /ga:gu/, but the Dyadic form lacks prefix /a-/ (from //an^{g}-//).

The Dyadic stems without further number marking have dual meaning (e.g., 'Fa and Ch pair'). With Pl prefix /mij-/ (surface variants /mi-/, /min^{y}-/ by phonological rules as described in §5.4), we get a Pl Dyadic form referring to three or more persons.

One topic which arises in connection with Dyadic kin terms is the choice of root, given that the dyad consists of two persons who often call each other by different kin terms (e.g., 'Fa and So'). This is not a problem in the case of self-reciprocal kin terms ('FaFa' = 'ŏSoCh', etc.), but most terms are not self-reciprocal. For these categories, the structurally senior member of the dyad furnishes the root on which the Dyadic term is constructed, as in /rigi-j/ 'Mo and Ch', based on /rigan^{g}/ 'Mo' rather than on terms for '♀Ch'. This specific notion of structural seniority does not depend on the actual relative age of the two referents, nor even on their relative generations. As shown in Figure 5-1, for example, persons called 'Mo' occur in the 1A, 0, and 1D generations. Rather, structural seniority in the formation of Dyadic terms is based on telescoping all instances of a kinship category into a single prototypical dyadic relationship; in the case of 'Mo', the prototypical case is of course in the 1A generation, so 'Mo' is structurally senior to its reciprocal '♀Ch', and the Dyadic term /rigi-j/ is used for all dyads in which one person is /rigan^{g}/ 'Mo' to the other.

In Nunggubuyu, this patterning is not especially clear due to the large number of suppletive Dyadic terms. However, even these suppletive cases are structurally consistent with our notion of structural seniority, since although the root is suppletive the categories distinguished are based on senior rather than junior categories. Thus, in the 1A generation 'Mo' and 'MoBr' are distinguished as simple (linear) kin terms /rigan^{g}/ and /bibi/, but have the same reciprocals based on the root /marig/ '♀Ch, SiCh'. The Dyadic terms are /rigi-j/ 'Mo and Ch' and /n^{g}ali-j/ 'MoBr and SiCh'. Here /n^{g}ali-j/ is suppletive (unlike /rigi-j/), but the mere fact that a special term for 'MoBr and SiCh' is used shows that the senior category is decisive.

The Dyadic terms have much lower text frequency in Nunggubuyu than in other nearby languages (e.g., Dhuwal, Mara). Some informants characterise them as "old people's language" (i.e., as archaicising), though I think that one or two of them such as /n^{g}anjal-yij/ are still in moderately common use.

The principal usage of Dyadic terms is as appositive interpolation or other predication, specifying the mutual relationship among two persons, typically at the first occurrence of these two persons in the discourse (see /n^{g}anjal-yij/ NMET 76.1.1/2 and MT 9). However, even when functioning effectively as a predicate, these forms do not function formally as NAdj and thus cannot take intransitive pronominal prefixes: */wini=n^{g}anjal-yij/ 'They(MDu) are male avoidance relatives'. Instead, regular nominal form is used: /(na-)n^{g}anjal-yij/ '(they are) male avoidance relatives'.

The low text frequency of Dyadic forms reflects competition from functionally similar constructions. One, nowadays, is the borrowing of creole forms with Dyadic /-gija/ [together] like /father-gija/ 'Fa and Ch'; indeed, this suffix may replace /-yij/

as Dyadic suffix with Nunggubuyu kin terms: /na-n^{g}anjal-gija/ (NMET 76.1.2). Second, in some narratives where two protagonists are introduced and their kinship relationship specified, this is done not by a single Dyadic form, rather by juxtaposing two PROP$_3$ linear kin terms. Thus in NMET 10.2.1 we find /ni-wiya-yun^{g}/ 'his So' and then /ni-n^{y}ara-yun^{g}/ 'his Fa' juxtaposed; a free English translation would be 'a boy and his Fa' (or 'a man and his So'), requiring that one referent be identified absolutely before the second can be identified relatively (i.e., by a kin term). In Nunggubuyu, it is usual to identify both referents by kin terms, even though this means that the first kin term will have a propositus which has not yet appeared in the discourse. A third, somewhat uncommon, functional alternative to Dyadic terms is the use of a Reciprocal form of a kin-term verb (§5.12, below), e.g., /wuru=muruyun^{g}-ga-n^{y}ji:-na/ 'They(MDu) call each other "Br"'.

The Pl Dyadic terms are even less common. As noted above, they require a minimum of three referents. Although there are several logical possibilities for such terms, in practise they are largely confined to cases like 'a father and his children' in which two or more persons are related in the same way to the same referent. It is conceivable that such a Pl Dyadic form might turn up in a more complex context of the type 'two or more men [of arbitrary kinship relationships to each other] and their respective children', but this is not the usual meaning and I have no such exx.

5.7 Bereavement terms and avoidance style.

Nunggubuyu is weak in bereavement kin terms of the type 'widow', 'widower', 'orphan', specifying the kinship status of living persons to someone who has died.

The term /n^{g}ayi/ (HumSg /n^{g}ayi-n^{y}un^{g}/) can be used to mean 'widow' or 'widower' (with F and M NC$_{infl}$ prefixes, respectively). However, it is also used, especially in the Pl /n^{g}aya-n^{g}ayi/, to refer collectively to bereaved relatives of the deceased (e.g., in the context of mortuary activities, see NMET 52.6.5), and in this usage does not specify particular kinship relationships.

The term /majiyan/ 'orphan' indicates that the person's natural parents are both deceased. No term was recorded meaning 'person whose son/daughter has died' (terms of this sort occur, for example, in Mara). Some Australian languages, especially in the Cape York area, have much more elaborate systems of bereavement kin terms.

There are no special formations of the sort 'my late Hu', in which the propositus is a living person and the referent is deceased. Ordinary kin terms can be used in this context. For non-kinship necronyms see §4.4.

There is likewise no developed set of kin terms used in avoidance style. However, in the VOC/PROP$_1$ of 'MoMoBrDa, WiMo' (the most intense respect/avoidance relationship) we have a neutral form /gurumbaj/ (related, though irregularly, to PROP$_2$ and PROP$_3$ forms, see C.iii in Table 5-1), vs. an avoidance-style form /gaja:li/. The latter is used, for example, as a cry of surprise and anguish by a man who inadvertently approaches his MoMoBrDa and then recognises this error. (It is less often applied to male avoidance relatives like MoMoBrSo and ♀DaHu.)

5.8 Markedness relations; choice of propositus.

The form shown in the paradigms of Table 5-1 as VOC/$PROP_1$ is occasionally extended to contexts which would normally call for $PROP_2$ or $PROP_3$. This is especially the case when the propositus is separately specified (by independent pronoun or noun), so that the kin term itself need not specify pronominal category of propositus. Thus, alongside (5.ii), above, we get:

(5.iii) a-ji-ga nu-ga-wi-n^{y}in^{y}un^{g} baba
where is? (MSg) your(Sg) Fa
'Where is your Fa?'

Note that here the VOC/$PROP_1$ form /baba/ is used instead of the $PROP_2$ form /ni-n^{y}ara/ '(your) Fa'.

A somewhat similar ex. occurs in NMET 5.6.3/4. Here the female myth character Emu, impersonating the Mo of Little Boy, tells him 'It's me, [your] Mo!'. The form for 'Mo' is /n^{g}a:-rigan^{g}/, the $PROP_1$ form (including NC_{infl} prefix) rather than the $PROP_2$ form /ibi/. As this indicates, VOC/$PROP_1$ forms can be generalised to $PROP_2$ contexts when addressing a child, the adult essentially adopting the child's perspective for kinship reference. For a detailed study of this problem in another Australian language see Merlan (1982).

There are also some suggestions from the forms of VOC/$PROP_1$, $PROP_2$, and $PROP_3$ terms that the former may be unmarked. Recall that $PROP_2$ and $PROP_3$, in several paradigms, take a prefix /-(r)an^{g}-/ which is absent from corresponding VOC/$PROP_1$ forms. Since $PROP_3$ is characterised by a further suffix /-yun^{g}/, often corresponding to zero in $PROP_2$, we can rank the forms according to markedness values as such:

least marked → most marked
VOC/$PROP_1$ → $PROP_2$ → $PROP_3$

However, these markedness patterns are often obscured by suppletion and other irregularities within paradigms.

5.9 Suffix sequence /-lhara-yun^{g}/.

A problematic form /n^{g}a:-rigan-dhara-yun^{g}/ 'Mo' occurs in NMET 3.6.2/3 in a distinct version of the myth of Emu than the one just mentioned (§5.8, above). This is based on /n^{g}a:-rigan^{g}/ 'Mo' (VOC/$PROP_1$), with suffixes which should have the underlying form /-lhara-yun^{g}/ (//lh//→ /dh/ after nasal by P-18). As we have just seen, the simpler form /n^{g}a:-rigan^{g}/ is used in precisely the same situation in the other version of the myth (text 5).

The suffix sequence /-lhara-yun^{g}/ (assuming this to be the correct internal segmentation) was not recorded except in this text. Its functions are unclear and it may be an archaicism.

5.10 Kinship subcategories; body-part metonyms.

Because the kin-term system is classificatory, each category like 'Mo' is applied by a given Ego to many persons. It is therefore frequently necessary to distinguish focal from merely classificatory referents of a given term. Since the basic kin terms do not do this, recourse is had to supplementary expressions of various kinds to make the finer distinctions.

One device which Nunggubuyu shares with other nearby languages (especially the Yuulngu group to the north) is a set of what I will call body-part metonyms. The body-part categories in question are associated with particular kin terms, and the relevant expressions specify focal member(s) of the category. The usual form of the expression is a Relative case form, e.g., 'of the guts (belly)' /ama-da:n-jin^{y}un^{g}/ for 'Mo'.

These terms do not seem very common in Nunggubuyu and are poorly represented in texts. The forms in Table 5-2, below, were elicited from Yurrumurra and show his explanations of the associations of the body part with the kin term. The expressions refer essentially to dyads and can thus be used, in principle, for the reciprocals as well.

As the explanations in the table suggest, the body-part terms allude to prototypical, indeed stereotyped behavioural interactions between Ego (especially as unborn or born child) and actual, focal ascending relatives, along with spouse. The interactions involve physical contact or physical avoidance, and the behaviours in some sense epitomise the kinship relationship in its affective/emotional aspect. Since the body parts symbolise the focal kinship relations only through the medium of alluding to these steretyped behaviours, they are metonyms rather than metaphors.

Some of the forms given in Table 5-2 may in fact differ from forms elicited from other speakers; in general, it appeared to me

TABLE 5-2

Body-Part Metonyms

kin term	gloss	body-part and folk explanation
/mu:ri/	FaFa(Si)	/yinag/ 'forehead' [FaFa thinks about Ego, e.g., for ritual training]
/baba/ /n^{g}awuy/	Fa, FaSi	/n^{y}alaj/ 'top of shoulder' [carrying on shoulder]
/muruyun^{g}/	elder Br/Si	/laga/ 'calf' [walking behind elder Sb]
/n^{g}ayan^{g}/	MoFa(Si)	/wanja/ 'arm' [carrying in arms]
/rigan^{g}/ /bibi/	Mo, MoBr	/da:n/ 'guts, interior of belly' [i.e., Mo's womb]
/ga:gu/ /n^{g}anjal/ /gurumbaj/	MoMo(Br), WiMoBr, WiMo	/waraga/ 'upper back' [Ego turns back to avoidance relatives as sign of extreme respect]
/mu:mu/	FaMo(Br)	/rulbu/ 'back' [carrying piggyback]
/angi/	FaMoBrSo/WiFa	/nan^{g}ga/ 'hip' [Ego sleeps hip-to-hip with Da of /angi/]
/gulgu/	spouse	/bagalan^{g}/ 'eye' [frequent seeing (?)]

that the system as presented to me by this speaker is a slightly skewed version of the system given me in much more detail by speakers of Dhuwal, which I have discussed elsewhere. For example, in the Dhuwal system (which shows up much more frequently in texts), 'eye' and 'forehead' are associated with the avoidance category WiMo, alluding to eye aversion. Moreover, while Dhuwal shares the association between 'calf' and siblings, Dhuwal speakers have a more cogent explanation: younger sisters in particular are supposed to slash their calves in sympathy with an elder Br who is going through the painful operation of circumcision. Dhuwal and Nunggubuyu agree on 'shoulder' = 'Fa' and 'belly' = 'Mo', and also broadly agree in having some grandparental categories connected with the back, alluding to carrying piggyback. The Nunggubuyu usage of 'upper back' for MoMo and avoidance categories, though distinct from Dhuwal usage, is consistent with the Nunggubuyu expression 'to give each other the back' (i.e., avoid direct facial contact) to refer to avoidance behaviour (NMET 75.2.5, though the body-part term used in this passage is /janda/, not /waraga/).

Of the various body-part metonyms, the only one which seems to be in common usage is /da:n/ 'guts, belly' for 'Mo/MoBr', as in NMET 78.1.4.

Other functionally similar devices are expressions involving the verbs /=lhama-/ '(man) to beget (So/Da)' and /=yaba-/ '(woman) to bear (So/Da)'. A relative clause like /n^ganu=lhama-n^y-jin^{y}un^g/ '(the one) whom I begat' can be added to a kin term like /na-ni-gi/ 'my[man's] son' to specify that this is the actual offpsring, not a merely classificatory 'So'. However, it should be noted that these verbs have a broader sense than is suggested by English 'beget' and 'bear'. First, the grammatical subject may be the opposite-sex sibling of the actual biological parent; a man may say /n^ganu=yaba-n^y/ 'I bore him' (i.e., 'He is my sister's child', or even 'He is the child of a close female relative of my patriline, such as my FaSi'). In other words, /=yaba-/ can come close to being a general verb expressing the relationship between a person (direct object) and his/her Mo's clan. Similarly, a woman can say /n^ganu=lhama-n^y/ 'I begat him' (i.e., 'He is my Br's child', hence of my patriline). Second, the grammatical subject is often the primary waterhole or other focal place name, in the case of /=yaba-/, hence the very common expression /n^gan^{g}gu=yaba-n^y/ 'It (place n.) bore me' (i.e., 'That place is my Mo's clan's centre').

To specify that two persons are full (not classificatory) siblings, instead of the body-part metonym the usual expression is /an^{y}ja:bugij n^ga:-rigan^g/ '[we have] one Mo' (and one can add a similar expression meaning 'one Fa' if necessary).

Actual spouses are typically specified by an expression like /wini:-'n^yji=lha-ṟa/ 'They(MDu) sleep with [each other]' (3MDu-Comitative-sleep-Present). Here 'sleep with' has a more literal meaning than in English; though of course implying sexual relations, it literally indicates that the two persons share a camp.

To indicate a longer patrifiliative sequence, we can use Reciprocal /=lhama-n^yji-/ 'to beget each other' (i.e., 'to constitute a patriline'), as in NMET 72.1.3. Similarly, for matrifiliative sequences, Reciprocal /=yaba-n^yji-/ 'to bear each other' (157.13.3).

Forms involving a derivational suffix /-$w_2$alij/ (see §14.22) added to a noun may also imply that the two persons designated are a married couple. See also the verb /=gulgu-wa-/ 'to marry' discussed below (§5.12).

'Elder' vs. 'younger' subcategories are already distinguished lexically for siblings: /muruyun^g/ 'elder Sb' vs. /mun^{y}un^{y}un^g/ 'younger Sb'. (However, suppletive $PROP_2$ and $PROP_3$ stems for Sb categories neutralise this opposition, though they add a gender opposition; there is also some fuzziness in usage of /muruyun^g/ and /mun^{y}un^{y}un^g/ with the latter tending to become specialised as an affective Diminutive form.) For other categories, notably offspring, and in $PROP_2$/$PROP_3$ forms for Sb categories, the kin term does not indicate relative age, so recourse is had to a special set of NAdj (non-kin terms) including /mala:mar/ 'eldest' and /yabada/ 'second-born or later'. There are also some relevant verb forms involving compounds of /=$w_2$ann^{g}a-/. See list under BIRTH-ORDER on p. 286 of the dictionary, and lexical entries mentioned there.

A special term /adiya/ 'biological mother (of child)' is available but not in very common use (no textual exx.) as an alternative to /rigan^g/ 'Mo' and related stem forms. It has no morphological features of kin terms.

We should also mention the generic term /algur/, HumSg /algur-n^yun^g/ 'kinsman, relative', and less common roots /milg/ and /jawina/ with similar meanings (see dictionary entries).

The noun /ma:lg/, which in neighbouring languages means 'subsection' (there are eight subsections, each with M and F terms), in Nunggubuyu has the less specific meaning 'correct relationship for marriage', and is used as compound initial in some verbal expressions relating to this concept (see dictionary entry).

5.11 Nonhuman kin terms and compounds.

Naturally, the kin terms we have been describing normally involve human propositus and human referent(s). In this section, we discuss nonhuman kin terms, including cases where we simply have a nonhuman NC_{infl} prefix with a stem already presented above, but also cases involving stem derivations by NC_{der} prefixes. We also briefly mention some nonhuman compound nouns involving kin terms.

The texts show a number of instances of what is otherwise a VOC/$PROP_1$ form of a kin term used with ANA NC_{infl} prefix (punctual /a-/ or continuous /ana-/, §4.7). With /ga:gu/ 'MoMo(Br)', the sense with ANA prefix is 'MoMo's clan' or 'MoMo's clan estate' (NMET 49.1.1, 72.7.5, 76.1.5). Here the ANA class marking reflects the fact that place names and the generic noun /lha:l/ 'country, place' (and similar lexical items) are ANA_{wu}. On the other hand, with /gaja:li/ 'avoidance relationship' (14.9.3) and /gulgu/ 'spouse' (73.7.4), ANA variants focus on carrying out the behavioural aspects of the relationship properly (e.g., choosing a spouse by the traditional kinship considerations).

On the other hand, forms with NC_{der} prefix can produce a derived kin term of any noun class, reflecting whole-part NC harmony with reference to some plant or animal species or some object. The procedure here is to take the $PROP_3$ (N.B.) kin term and

put the NC_{der} prefix directly in front of it (of course, a NC_{infl} prefix for the derived noun class may be added as well). The sense of the nonhuman kin term may be more or less literal (e.g., mother kangaroo and her joey), or may be metaphorical.

The exx. which can be cited from NMET involve /-$w_2$ibi-yun^g/ 'Mo' ($PROP_3$) form. The underived form /ibi-yun^g/ involves loss of the initial semivowel by rule P-12, but it is present in the derivative. In 116.8.2, a passage concerning cycad nuts, a distinction is made between large nuts called /ma-bibi-yun^g/ 'Mo' (MANA class), and smaller ones identified by a non-kinship derivative with the same NC_{der} prefix /maG-/. This is clearly metaphorical. On the other hand, in 101.3.5 we find /ni-bibi-yun^g/ 'Mo' referring to the jungle-fowl bird /jadagag/ (NA class).

Aside from these textual exx., there is a distinction between /ma-n^{g}ari-mara-yun^g/ 'ǫDa' and /ma-bibi-yun^g/ 'Mo' (both MANA class), applied to the smaller and larger wooden parts (respectively) of the two-part firedrill /lhuruman/. This is obviously another metaphorical usage.

I have also recorded /u-ni-n^{y}ara-yun^g/ 'Fa' (e.g., of most kangaroo/wallaby spp.) and /u-dann^{g}ina-yun^g/ 'Hu' (e.g., of many bird spp.). With NC_{infl} prefix we would have /an-u-ni-n^{y}ara-yun^g/ and /an-u-dann^{g}ina-yun^g/. The form of /u-dann^{g}ina-yun^g/ (cf. regular $PROP_3$ /ann^{g}ina-yun^g/) suggests a stem variant //-rann^{g}ina-// with //r//→ /d/ after prefix /uG-/ by Hardening P-18; we have discussed the possible analogical basis for the /d/ in connection with Pl /mi-dann^{g}ina-yun^g/ (§5.4).

It is worth noting that in /u-ni-n^{y}ara-yun^g/ and in /ma-n^{g}ari-mara-yun^g/, the NC_{der} prefix /uG-/ or /maG-/ (§4.7) has been added to a stem which already includes a gender-marking derivational prefix /niG-/ or /n^{g}ari-/ which closely resembles the corresponding NC_{der} prefix. That such double derivatives exist, however, indicates that the M /niG-/ and F /n^{g}ari-/ with kin terms are morphologically distinct from the regular NC_{der} prefixes, including M /niG-/ and F /n^{g}ariG-/.

Although our data are limited, all of the forms cited are formally consistent, being the regular $PROP_3$ form with an additional regular NC_{der} prefix. Although a kinship category like 'MoMoBrDa' would be most unlikely in connection with nonhuman species or implements, it would be presumably possible to produce appropriate outputs by applying the same patterns already seen.

We briefly mention noun-noun compounds with /-lhal-/ 'country' as initial and a kin term as final. In addition to /lhal-mu:mu/ 'country (or countries) of my FaMo's clan' (NMET 157.11.4, from /mu:mu/ 'my/our FaMo'), I elicited /lhal-igan^g/ 'country of my Mo's clan' (/rigan^g/ 'my/our Mo', see rule P-25). There forms are based on $PROP_1$ kin terms, but forms based on $PROP_2$ and $PROP_3$ are possible (though not attested in the texts), e.g., /lhal-ibi-yun^g/ 'country of his/her/their Mo's clan'.

On compounds generally see Chapter 14.

5.12 Kinship verbs.

We have briefly mentioned some verbs related to kinship in §5.10 (e.g., 'to beget', 'to bear'). In this section we deal with derived

verbs based directly on kin terms. The forms attested involve the $VOC/PROP_1$ stem, suffix /-w_1a-/ (elsewhere Factitive suffix, §10.9), and regular transitive inflection. It seems that we should interpret the $VOC/PROP_1$ stem here as specifically vocative, hence meaning something like 'X[subject] calls Y[direct object] "K[kin category]"'.

An ex. is /=muruyun^g-ga-/ (with //w_1//→ /g/ by P-18) 'X to call Y "elder Br"'. Here the subject X is the younger brother and Y is his elder brother. Similar forms can be derived from the other VOC kin terms.

The form /=gulgu-wa-/, using the stem for (actual or potential) spouse, can mean 'to marry' (as in 'I married her').

In addition to the transitive forms shown above, we have Reciprocal derivatives thereof. Thus /=gulgu-wa-n^{y}ji-/ 'to marry each other, get married'. This ex. is no problem since /gulgu/ is a self-reciprocal kin term. With non-self-reciprocal kin pairs, the Reciprocal can still be formed: /=muruyun^g-ga-n^{y}ji-/ '(X and Y) to be brothers' (lit., 'to be elder brothers of each other'). Note that a literal translation with English reciprocals may be illogical.

Such kinship verbs with /-w_1a-/ do not have high text frequency. It is more usual to use longer statements of kinship relationships involving simple kin terms. Thus 'He is my Fa' can be simply expressed by a sentence like this:

(5.iv) na-baba nu:-'ba-gi-yun^g
my/our Fa that one (MSg)
'That (man) is my Fa'

Chapter 6

Personal pronouns

6.1 General.

In this chapter we discuss independent personal pronouns. For demonstrative pronouns see Chapter 7. For intransitive and transitive pronominal prefixes used with verbs and some other predicates, see Chapter 9. For affixes specifying pronominal person of propositus with kin terms, see Chapter 5.

Pronominal categories include NC (noun-class) markers; see §4.7 for the forms of NC prefixes with nouns.

Personal pronouns are clearly distinct formally from other stem classes. They differ from nouns in having NC and other pronominal categories built into the stem, and (thus) in avoiding the NC_{infl} prefixes used with nouns (§4.8). There are thus no punctual and continuous forms of nonhuman personal pronouns, and no possibility of omitting pronominal markers. The actual NC and other morphemes which can be identified in pronouns differ significantly from any found in nouns; for example, in the pronouns we find suffixes like MDu /-ni/, FDu /-rn^{g}i/, and Pl /-ru/, which have no counterparts in nominal morphology. However, pronouns do resemble nouns in taking case suffixes and postpositions.

Personal pronouns are also clearly distinct from demonstrative pronouns. The two stem classes do share some features, such as the MDu and other suffixes just mentioned. However, demonstrative pronouns have NC_{infl} prefixes of roughly the same type as nouns (not personal pronouns), and also have many other special features such as a set of motion suffixes including a high-frequency Centripetal ending (not used in personal pronouns). See Chapter 7.

Person categories are 1Ex (first exclusive), 1In (first inclusive, including both speaker and addressee), 2nd, and 3rd. In 1Ex and 2nd the cross-cutting categories are Sg (gender not specified), MDu, FDu, and (3+) Pl (gender unspecified). MDu is used for mixed gender (one male and one female). MDu is used for one male human and one nonhuman; FDu for one female human and one nonhuman. For 1In person, we have Du (gender unspecified), optional MTr and FTr (trial) categories, and (3+) Pl (gender unspecified).

In the 3rd person we have the same categories marked by NC prefixes in nouns. For humans we thus have MSg, MDu, FSg, FDu, and (3+) Pl. For nonhumans we have the NA, N^{g}ARA, ANA, MANA, and WARA noun classes. There is no difference between ANA_{wu} and $ANA_{\emptyset}$ subclasses in personal pronouns.

Within these 3rd person pronouns, the following formal neutralisations occur:

3MSg = NA
3FSg = N^{g}ARA
3Pl = WARA = ANA

These are basically the same neutralisations found in the NC_{der} prefix system used with nouns (§4.7). Except for ANA, these neutralisations also occur with the NC_{infl} prefix system with nouns. Similar but slightly different syncretisms occur in the pronominal prefix system (Chapter 9).

3MSg and NA can be regarded as cryptotypically distinct, since of the two only NA can refer to two or more entities; the same is true of N^{g}ARA as opposed to 3FSg. Likewise, 3Pl must refer to at least three entities (including at least one human), while WARA and ANA do not specify actual number.

The nonhuman NC forms have no way of expressing number in the independent pronouns. Specifically, Du suffix /-w_2a:/ and other number-markers used with nouns are inapplicable, except for 1InDu Nominative. There are no plural or collective reduplications.

A good part of this chapter is spent in simply describing the forms taken by the pronouns. However, it will soon become clear that the pronouns have some unique forms with special functions requiring extended commentary. Specifically, while the pronouns have roughly the same case forms that nouns have, they also have a specifically predicate genitive form (§6.5), and a number of vitally important forms with discourse-regulating functions centring around various kinds of focusing (§6.8ff.). These forms and functions must be understood in order to analyse texts.

6.2 Stem forms.

In Table 6-1, below, we present the following forms: Nominative (zero case form), unsuffixed Oblique, presuffixal Oblique stem, and Relative (including possessive) form. Where available, one textual citation (from NMET unless otherwise specified) is given for each form. For 3MSg/NA, 3FSg/N^{g}ARA, and 3Pl/WARA/ANA, we give two or three citations for the Nominative form only, showing the respective noun-class variation. Although some forms in the table are not validated by textual citations, they are quite certain (from multiple elicitation).

It is evident that the Nominative has zero case marker. In the Oblique, the Sg (and 1InDu, which is morphologically like the other singulars) has suffix /-wi-/ whether or not there is a following suffix. The remaining pronouns, all of which end in MDu /-ni/, FDu /-rn^{g}i/, or Pl /-ru/ (note that even the MANA form ends in /-ru/), have a long /a:/ in the unsuffixed Oblique but long /i:/ in the presuffixal Oblique. We can represent this by suffix /-a/ and suffix /-i-/, respectively, specifying in rule P-38 that the

TABLE 6-1

Personal Pronouns

	Nominative unsuffixed Oblique	Relative presuffixal Oblique
1Sg	n^{g}aya 47.10.4 n^{g}aya-wi 4.2.1/5	n^{g}aya-wi-$n^{y}in^{y}un^{g}$ 5.8.3/4 n^{g}aya-wi- 41.5.5
1ExMDu	ni-ni 65.4.4 ni-na:-'	ni-ni-$n^{y}in^{y}un^{g}$ ni-ni:-'-
1ExFDu	ni-rn^{g}i ni-rn^{g}a:-'	ni-rn^{g}i-$n^{y}in^{y}un^{g}$ ni-rn^{g}i:-'- 13.23.3
1ExPl	nu-ru 7.21.1 nu-ra:-' 64.8.3	nu-ri-$n^{y}in^{y}un^{g}$ 41.6.5 nu-ri:-'- 120.1.6
1InDu	na-ga-wa: TNT 7 na-ga-wi	na-ga-wi-$n^{y}in^{y}un^{g}$ 28.11.6 na-ga-wi-
1InMTr	n^{g}a-gu-ni n^{g}a-gu-na:-'	n^{g}a-gu-ni-$n^{y}in^{y}un^{g}$ 157.16.3 n^{g}a-gu-ni:-'-
1InFTr	n^{g}a-gu-rn^{g}i n^{g}a-gu-rn^{g}a:-'	n^{g}a-gu-rn^{g}i-$n^{y}in^{y}un^{g}$ n^{g}a-gu-rn^{g}i:-'-
1InPl	n^{g}a-gu-ru 18.16.7/8 n^{g}a-gu-ra:-'	n^{g}a-gu-ri-$n^{y}in^{y}un^{g}$ 15.14.2 n^{g}a-gu-ri:-'- 15.13.2
2Sg	nagan^{g} 14.7.3 nu-ga-wi 5.8.1	nu-ga-wi-$n^{y}in^{y}un^{g}$ 4.8.3 nu-ga-wi- 71.30.4
2MDu	nu-gu-ni 20.12.4 nu-gu-na:-'	nu-gu-ni-$n^{y}in^{y}un^{g}$ nu-gu-ni:-'-
2FDu	nu-gu-rn^{g}i nu-gu-rn^{g}a:-' 17.12.4	nu-gu-rn^{g}i-$n^{y}in^{y}un^{g}$ nu-gu-rn^{g}i:-'-
2Pl	nu-gu-ru 18.13.6 nu-gu-ra:-'	nu-gu-ri-$n^{y}in^{y}un^{g}$ nu-gu-ri:-'- 34.8.3
3MSg NA	ni-ga 10.5.1, 66.2.2 ni-ga-wi 17.1.1-3	ni-ga-wi-$n^{y}in^{y}un^{g}$ 20.10.2 ni-ga-wi- 73.4.5
3FSg N^{g}ARA	n^{g}i-ga 1.2.2, 162.1.3 n^{g}i-ga-wi	n^{g}i-ga-wi-$n^{y}in^{y}un^{g}$ 7.17.5 n^{g}i-ga-wi- 45.2.3
3MDu	wu-gu-ni 1.1.7 wu-gu-na:-' 138.3.2	wu-gu-ni-$n^{y}in^{y}un^{g}$ 63.1.2 wu-gu-ni:-'-
3FDu	wu-gu-rn^{g}i 12.3.4 wu-gu-rn^{g}a:-'	wu-gu-rn^{g}i-$n^{y}in^{y}un^{g}$ wu-gu-rn^{g}i:-'- TNT 15
3Pl WARA/ANA	wu-gu-ru 1.1.4, 36.2.3, 46.1.2 wu-gu-ra:-' 3.7.2	wu-gu-ri-$n^{y}in^{y}un^{g}$ 138.4.1 wu-gu-ri:-'-
MANA	ma-gu-ru 13.38.1 ma-gu-ra:-'	ma-gu-ri-$n^{y}in^{y}un^{g}$ ma-gu-ri:-'-

quality of the final vowel is that of the contracted long vowel on the surface (e.g., //nu-gu-ni-a//→ /nu-gu-na:-'/).

The Relative suffix with pronouns is clearly /-n^{y}in^{y}un^{g}/ rather than /-yin^{y}un^{g}/ (the latter is the form with nouns and verbs). In the Sg (and 1InDu) the suffix is added to the Oblique suffix /-wi-/. In the other forms we get MDu /-ni-n^{y}in^{y}un^{g}/, FDu /-rn^{g}i-n^{y}in^{y}un^{g}/, and Pl /-ri-n^{y}in^{y}un^{g}/. These last combinations are difficult to analyse morphologically. By analogy to the Sg forms we should expect /-n^{y}in^{y}un^{g}/ to be added to the Oblique stems, giving incorrect */-ni:-'-n^{y}in^{y}un^{g}/ and so forth, with long /i:/. This is a possibility, but requires additional ad hoc phonological rules shortening a long vowel before /-n^{y}in^{y}un^{g}/. Such an analysis was presupposed in NMET, where the surface forms were transcribed as /nu-gu-ni-'-n^{y}in^{y}un^{g}/ 'yours(MDu)' and so forth, where /-'-/ implies the existence of an underlying morpheme consisting of a vowel which is absorbed by the preceding vowel by contraction (P-49) and then somehow shortened. However, such an analysis based largely on analogy with Sg forms, while perhaps correct historically, is synchronically dubious, and it is also possible to generate the surface forms like /-ni-n^{y}in^{y}un^{g}/ by assuming that the Oblique /-i-/ morpheme is not present. This gives MDu /-ni-n^{y}in^{y}un^{g}/ and FDu /-rn^{g}i-n^{y}in^{y}un^{g}/. However, Pl /-ri-n^{y}in^{y}un^{g}/ does require a rule changing /-ru-/ to /-ri-/ in this combination; we account for this by allowing the sporadic rule V-Fronting P-50 to apply here.

Leaving aside the Oblique and other suffixes, we can identify the following as recurrent morphemes:

/-ni/	MDu
/-rn^{g}i/	FDu
/-ru/	Pl (also WARA, ANA, MANA)
/-ga-/	Sg stem-formative
/-gu-/	Du/Pl stem-formative
/nV-/	1Ex nonsingular (1ExNonsg)
/n^{g}a-/	1In nondual (1InNondu)
/nu-/	2nd
/wV-/	3rd nonsingular (3Nonsg) [also WARA/ANA]

The Sg stem-formative /-ga-/ is not used in the 1Sg forms, though one might argue that 1Sg /n^{g}aya/ consists of 1Sg /n^{g}a-/ (as in pronominal prefixes with verbs) and stem-formative /-ya/. In the 2Sg Nominative /nagan^{g}/ we might detect /-ga-/, but the form is too irregular to analyse (this is not true of the other 2Sg forms). In 1InDu Nominative /na-ga-wa:/ we have the /-ga-/, followed by the regular nominal Du suffix /-w$_2$a:/ (which is otherwise prohibited with personal pronouns, and does not coexist in the 1InDu with any suffix, whether marking case or discourse function).

Du/Pl stem-formative /-gu-/ is found in 1In, 2nd, and 3rd but not 1Ex persons.

1ExNonsg /nV-/ acquires surface vowel quality by V-Assimilation P-37, hence /ni-ni/ but /nu-ru/. The 3Nonsg morpheme always shows up as /wu-/, but since it is always followed by /-gu-/ we might set it up as /wV-/ (cf. /w$_2$V-/ with variable surface vowel as a component morpheme in pronominal prefixes, Chapter 9). The 2nd

person marker always shows up as /nu-/ (if we exclude the Nominative 2Sg /nagan^{g}/). However, it would be phonologically possible to extend to these pronouns an analysis of 2nd person prefixes worked out in Chapter 9 for the pronominal prefixes used with verbs, distinguishing 2Sg /nu-/ from a 2Nonsg form /nV-/ which normally acquires surface vowel quality by V-Assimilation (but for which a base form /na-/ is recoverable on the basis of certain 2Pl object combinations). If so, the convergence of 2Sg and 2Nonsg morphemes as /nu-/ in the personal pronouns is secondary, reflecting the fact that the 2Nonsg morpheme happens to occur before stem-formative /-gu-/ in the relevant combinations.

Note that 1InNonsg /n^{g}a-/ does not assimilate vowel quality in independent pronouns, though the corresponding morpheme does assimilate in pronominal prefixes used with verbs.

Remaining morphemes are 1Sg /n^{g}aya/ (no clear internal segmentation), Nominative 2Sg /nagan^{g}/ (no clear segmentation), and the prefixes related to noun classes: MSg/NA /ni-/, FSg/N^{g}ARA /n^{g}i-/, Pl/WARA/ANA /wu-/, and MANA /ma-/.

FDu /-rn^{g}i-/ can also be analysed as /-r-n^{g}i-/ with F /-n^{g}i-/ (cf. 3FSg$_a$ intransitive pronominal prefix /n^{g}i-/) and a Nonsg morpheme /-r-/ (cf. Nonsg or Pl morphemes of type /-rV-/ elsewhere). If we adopt this synchronically, it suggests a parallel analysis of MDu /-ni-/ as //-r-ni-//, cf. 3MSg$_a$ intransitive prefix /ni-/. The contraction of //rn// to /n/ is not a productive process in Nunggubuyu; for minor alternations of this type see discussion of rn-Contraction P-24.

The pronouns of Table 6-1 permit no additional prefixes. The presuffixal Oblique stems occur with following case suffixes. The discourse-function pronoun forms involve a distinct set of suffixes added to the Nominative stem, except for minor irregularities. These are: a) 2Sg uses /nu-ga-/ before all suffixes, including discourse-function ones, instead of regular Nominative /nagan^{g}/; b) Du suffix /-w$_2$a:/ in 1InDu /na-ga-wa:/ is dropped before any suffix, hence /na-ga-/ as stem for discourse-function suffixes; c) the 1Sg Contrastive form, which would regularly show up as */n^{g}aya:-'yun^{g}/ 'as for me', undergoes a minor haplological contraction to /n^{g}a:-'yun^{g}/.

The various complete pronoun words, including the Nominative, may be followed by postpositional suffixes like /-w$_2$ugij/ 'still, only' (§6.13).

6.3 Uses of Nominative pronouns.

The most common use of simple Nominative pronouns is as slightly weakened forms of the Contrastive pronouns in /-ayun^{g}/ (§6.8). That is, 3MSg/NA /ni-ga/ and /ni-ga:-'yun^{g}/ are not always sharply distinguishable functionally, though the contrastive sense is less strong with /ni-ga/. For this reason, we discuss the Contrastive in /-ayun^{g}/ along with functionally similar instances of simple Nominatives in §6.8 rather than here. We will anticipate this discussion by making one important point now: in contrastive sense, both the /-ayun^{g}/ and Nominative forms relate predominantly to (intransitive or transitive) subjects, though they can relate to

direct objects and occasionally to other grammatical relations. The /-ayun^{g}/ form, and presumably the Nominative in its contrastive sense, do not take overt nonzero case markers even when relating to non-Nominative cases.

In this section we deal with remaining functions of the Nominative, and thus with a fairly small proportion of actual textual occurrences.

First, Nominative pronouns may be used to specify the subject of a predicate which does not already specify pronominal category of subject. This is the case, for example, with the construction 'Who [are] you?', which consists of /yan^{g}i-n^{y}un^{g}/ or /yan^{g}u-n^{y}un^{g}/ 'who?' (or a Du or Pl form thereof) plus a 2nd person pronoun (in that order). The 'who?' word by itself cannot agree with subject directly. An ex. is this:

(6.i) yan^{g}a-yan^{g}i nu-gu-ru 'Who are you(Pl)?'
Rdp-who? you(Pl) NMET 18.12.2 and 18.13.5/6

See also 20.11.3 and 20.12.4 (Du forms), and 20.15.4 (Sg).

Similarly, Nominative pronouns can be used as subjects of a demonstrative form predicating position, i.e., '[to be] here/there':

(6.ii) n^{g}aya ya:-ni 'I am here'
I this(ANA)

While many "nonverbal" predicates really involve a predicative NAdj which has intransitive pronominal prefixes, sometimes the predicate is a nonadjectival noun (Nc) such as a flora/fauna term or a personal name. Since such predicates have no pronominal marking, a Nominative independent pronoun may be used:

(6.iii) n^{g}aya n^{g}uda-lhardharg ana:-'-ni
I king brown snake this(ANA)
'I (here) am King Brown' (e.g., in myth)

However, most actual textual exx. involving similar contexts have constructions of the type '[it's] me, King Brown', where the pronoun is in the Emphatic form with suffix /-waj/ and the noun is added as an apposition. See, e.g., text 20 in NMET and §6.9, below.

Occasionally, it appears that in a particular textual passage an implied verb has been elided, and a Nominative pronoun has been added to specify the subject, with the addressee left to interpret the elided passage on the basis of contextual knowledge. One ex., possibly reflecting broken syntax, is in NMET 15.14.4 (/n^{g}aya/). A more recurrent type involves a demonstrative adverb serving as a kind of surface predicate with a verb like 'sit' or 'stand' omitted:

(6.iv) nu-ru ya:-ji-ji:-'la '...(and) we [were] on
we(ExPl) (on) this side this side'

Infrequently, a Nominative pronoun is used as a predicate:

(6.v) nagan^{g} a:-da-nu:-' '(So) that's you!'
you(Sg) that(ANA)

However, the Emphatic form with /-waj/ is regular with such pronoun predicates, especially in answer to a 'who?' question.

In the exx. given above, we have been emphasising instances where the Nominative pronoun is the only way to express the pronominal category, thus filling a functional gap in the language. However, even leaving aside clear instances of the contrastive sense of Nominative pronouns, we cannot conclude that Nominative pronouns are restricted to syntactic contexts where no other pronominal marking is possible.

For example, 2nd person pronouns may be included (redundantly) in imperative clauses (which are formally identical to future assertions); see NMET 20.10.7 and

(6.vi) nagan^{g} da-ju:-' ba=bura:-' 'You stay there!'
you(Sg) there you will sit NMET 43.9.2

Similarly, 2nd person pronouns may be added (redundantly) to interrogatives which already include pronominal markers:

(6.vii) nagan^{g} a-ni-ga nu-n^{g}u=bura:-'
you(Sg) which? (ANA) you sit
'Where do you sit?' (i.e., 'Where are you staying?')
NMET 18.14.4

See also 20.14.5, and for a pronoun in a yes/no interrogative 34.5.4.

It is not uncommon to find a pronoun added (redundantly) to a clause whose core is a predicative NAdj with intransitive pronominal prefix:

(6.viii) n^{g}a=marbuy n^{g}aya n^{g}a=marbuy 'I know'
I know I I know NMET 32.3.1

Since the pronoun here is unnecessary, it may be favoured by an intensive context, and note that the predicate in this ex. is repeated for emphasis.

A Nominative pronoun may be added to a verb (with pronominal prefix) as a mild reinforcer or to clarify the pronominal category. It should be noted that there are surface syncretisms in the pronominal-prefix system (Chapter 9) which may favour the addition of independent pronouns; for example, transitive prefix /n^{g}unu-/ can mean '1Sg→ 2Sg$_{a}$' or '3FSg/N^{g}ARA→ 3MSg$_{a}$', so /n^{g}unu=na-n^{y}/ can mean 'I saw you' or 'She saw him'. These forms might be disambiguated by adding a Nominative pronoun, perhaps marking the object, and most likely postposed to the verb and unstressed:

(6.ix) n^{g}unu=na-n^{y} nagan^{g} 'I saw you(Sg)'
I saw you you(Sg)

Nominative pronouns also have functions within noun phrases. Nunggubuyu does not permit 1st or 2nd person pronominal prefixes to replace regular NC markers in nonpredicative nouns (as do some nearby languages) to produce a single-word construction of the 'we the people' type. It is therefore fairly common to find a full noun (with NC prefix, if appropriate) juxtaposed to a 1st or 2nd person pronoun:

(6.x) muru-murun^{g}un ya:-nu:-'-wuy n^{g}a-gu-ru
members of Murun^{g}un clan this way we(InPl)
'we the Murun^{g}un [are going] this way' NMET 18.16.7/8

For similar exx. see NMET 34.8.3, 50.3.6, 71.33.1, 74.1.1, and 77.2.6. (In 98.3.2/3 both the noun and pronoun are in a nonzero case form; in 114.11.5/6 we have a pronoun in /-ayun^{g}/ Contrastive form.)

Nonsingular pronouns are also used in conjoined noun phrases. The usual way to say 'Sam and I' in Nunggubuyu is 'Sam we(ExDu)', where the 1st person pronoun incorporates the first referent (§15.7). Some textual exx. are 161.18.2, 163.7.7, and 163.11.5/6.

Even the 3rd person pronouns, whose pronominal categories are already (potentially) marked on nouns by the latter's NC prefixes, may be added before or after nouns. We might think of these occasional constructions as roughly approximating English definite-article-plus-noun constructions. However, it must be emphasised that the Nunggubuyu construction is uncommon, once we factor out those pronouns which have contrastive functions due to the narrative structure. Exx. of the construction we are considering are these:

(6.xi) bi-rn^{g}i adaba win^{g}i=bura:-'
those(FDu) now they(FDu) sit
wu-gu-rn^{g}i n^{g}a:-run^{g}gal-wa:
they(FDu) big women(Du)
'They are sitting there now [as totems], the two Big Women' (NMET 25.4.5/6)

(6.xii) mana-wangurag ma-gu-ru ma:='ran^{g}ga-n^{y}
bandicoot it(MANA) it(MANA) looked
'Bandicoot[animal, in myth] took a look'
NMET 37.3.6

Finally, Nominative pronouns may be used occasionally in place of pronouns in marked (nonzero) case categories. Leaving aside the contrastive function, it is difficult to find textual exx. of Nominative pronouns substituting for Ablative, Allative-Dative, or similar cases. However, Nominative pronouns may be used as an option, instead of Relative (possessive) pronouns (§6.5), as "possessive" modifiers of another noun, especially kin terms or others with inalienable characteristics. See NMET 14.7.4 ('my mother'), 82.1.1 ('my name'), and perhaps 64.6.3 ('[various totems] of us the Mandha:yun^{g} moiety'). For discussion see §15.8.

It should be emphasised again that the most common use of Nominative pronouns is contrastive. Unfortunately, it is not always easy to determine the specific "function" of a given occurrence of a pronoun in a text. It is possible that some exx. cited above in connection with one or another of the minor functions of these pronouns may in fact, on further analysis, turn out to involve a contrastive nuance. The difficulty is that a discourse function like contrastive focus is a flexible one which correlates only roughly with specific syntactic contexts; this is especially the case with simple Nominatives in (weak) contrastive use.

6.4 Uses of Relative case forms of pronouns.

For the forms, see Table 6-1, above.

These pronouns are used as genitive modifiers with another noun (overt or covert). They should be distinguished from the

unsuffixed Oblique forms of pronouns (§6.5, below), which are used mainly in predicate-genitive function ('[is] mine', etc.).

In the textual exx., the modifying Relative pronominal form almost always refers to a human or myth protagonist. The modified (possessed) noun is usually a kin term (or similar word like 'group' or 'children'); a term for a place or a totem (belonging to members of a clan, moiety, etc.); a term or concept like 'language', 'words', or 'customs', all of which are often expressed by the noun /lha:wu/; or a material object or substance.

1Sg /n^{g}aya-wi-n^{y}in^{y}un^{g}/ has the following exx. in NMET: with kin term or similar 65.1.2, 68.3.2/9, 68.4.5, 72.1.1, 72.3.2/4, 72.4.3, 167.11.3, and also in almost predicative usage in 5.8.3/4 and 5.9.2; for place or totem 9.1.1, 41.11.5, 41.14.6, 64.2.4; with 'word' or the like 47.22.7, 100.1.1, 161.35.3; others are 'canoe' 70.3.3/7 and 'dog' 162.9.4. See below for cases of double Relative marking with /-n^{y}in^{y}un^{g}-jin^{y}un^{g}/.

1ExPl /nu-ri-n^{y}in^{y}un^{g}/ occurs with kin noun or similar in 132.7.4, 157.12.4, 161.32.2; with place or totem 41.6.5, 50.4.3, 50.7.5 (clan burial site), 64.1.1, 64.3.6, 64.8.5, 72.2.3, 113.1.3; others are 'bush medicine' (or knowledge thereof) 139.13.2 and 139.15.3, and 'rain shelter' 144.3.3.

The other common form in the texts is 3MSg /ni-ga-wi-n^{y}in^{y}un^{g}/: for kin term or similar 74.1.6; place/totem 28.13.1, 29.2.3, 35.9.6, 69.2.2/3, 168.10.1/2; others are 'tapsticks' 28.10.2 and 'ritual poles' 29.13.1/2.

2Sg /nu-ga-wi-n^{y}in^{y}un^{g}/: with kin term or similar 4.8.3; also with 'mission [settlement]' 161.16.1/3/4.

1InDu /na-ga-wi-n^{y}in^{y}un^{g}/: place 28.11.6.

1InMTr /n^{g}a-gu-ni-n^{y}in^{y}un^{g}/: place 157.16.3.

1InPl /n^{g}a-gu-ri-n^{y}in^{y}un^{g}/: kin or similar 15.14.2.

3FSg /n^{g}i-ga-wi-n^{y}in^{y}un^{g}/: words 7.17.5.

3MDu /wu-gu-ni-n^{y}in^{y}un^{g}/: totem 63.1.2.

3Pl/WARA/ANA found in ANA class sense 138.4.1 referring to a part (substance) of a tree sp. specified only by a relative clause ('its stuff which does that') and only later specified by a noun. We emphasise that nonhuman /-n^{y}in^{y}un^{g}/ pronouns are rare; the most common context for a nonhuman "possessor" is a whole-part form like 'its top' or 'its root' (usually expressed by a very different grammatical mechanism, see §4.9), or an occasional kinship term referring to social animals like 'its mother' (expressed by derivational prefixes, see §5.11).

From these data it is apparent that the pronominal form with /-n^{y}in^{y}un^{g}/ has essentially the same senses as do corresponding nominal forms with /-yin^{y}un^{g}/ (§4.30).

However, pronominal forms with /-yin^{y}un^{g}/ superimposed on /-n^{y}in^{y}un^{g}/ have been found. The textual exx. involve 1Sg /n^{g}aya-wi-n^{y}in^{y}un^{g}-jin^{y}un^{g}/ (where /n^{g}/ in the antepenultimate syllable may become surface /n/ or /n^{y}/) in NMET 47.23.1 and 64.9.4. These exx. appear to mean '[to speak] about my X', where 'my X' corresponds to /n^{g}aya-wi-n^{y}in^{y}un^{g}/, to which is then added the nominal case suffix /-yin^{y}un^{g}/ in the sense 'about, concerning'. We do not have any exx. of */-yin^{y}un^{g}-jin^{y}un^{g}/ with noun stem, but we have remarked (§4.30) that /-yin^{y}un^{g}/ is often added to a full

noun form already containing another case suffix, and it is possible that */-yin^{y}un^{g}-jin^{y}un^{g}/ would be possible with a noun in similar sense.

Relative forms of a pronoun may precede or follow the modified noun (if the latter if overt), and may be separated from it by other constituents.

If the modified noun is in a nonzero case form, the genitive pronoun normally shows up in the corresponding nonzero case (with no Relative suffix): /n^{g}aya-wi-wuy a-lha:l-wuy/ 'to-me to-country' (= 'to my country'). We may account for this by assuming a rule of case agreement or spreading from modified noun to modifier (affecting also relative clauses), and by a rule that the Relative suffix is dropped when another nonzero case suffix (except /-yin^{y}un^{g}/) is added; see §16.4.

Relative suffix /-n^{y}in^{y}un^{g}/ cannot be added to an already complete pronoun word containing another case suffix. However, the regular nominal Relative suffix /-yin^{y}un^{g}/ is attested with Allative-Dative /-w$_{1}$uy/ in a pronoun: /nu-ri:-'-wuy-in^{y}un^{g}/ 'of to us(ExPl)'. Here /nu-ri:-'-wuy/ 'to us' has the contextual sense '[earlier generations] down to and including us [the presently living]', while /-yin^{y}un^{g}/ means 'of, associated with [this generation]'.

6.5 Unsuffixed Oblique stem (predicate genitive).

The forms are given in Table 6-1, above.

The primary function of the unsuffixed Oblique form is that of predicate genitive: 'X [is] mine', 'X [is] yours', etc. There is no corresponding form for nouns, so in order to say 'X [is] the man's' or the like it is possible to use a predicate genitive pronoun '[is] his' with the noun added in apposition (usually in Relative case form with /-yin^{y}un^{g}/ suffix). See §15.8.

The unsuffixed Oblique form is thus, in principle, distinct syntactically from the Relative form of pronouns with suffix /-n^{y}in^{y}un^{g}/ (§6.4). However, in this language clause structures are relatively fluid, so that what might normally appear in English as a modifying (attributive) genitive might show up in Nunggubuyu as a separate predication (predicate genitive); on the other hand, a Relative case form of a pronoun ('my', 'your', etc.) with /-n^{y}in^{y}un^{g}/ might occasionally be used in a construction where it borders on a separate predication. Along the same lines, we might find English 'X gave Y to Z' showing up in Nunggubuyu as something syntactically translatable as 'X furnished Z (with Y), [it is] his', where a predicate genitive coreferential to Z is added. It should be added that the clause boundaries suggested by commas in formulae like the above are not necessarily marked in Nunggubuyu by pauses or clearcut intonational contour boundaries.

In addition to textual instances which are clearly or possibly predicate genitives, there are a few where the unsuffixed Oblique stem seems to be used as an abbreviated substitute for a fuller pronominal form involving a nonzero case suffix (which would be added to the presuffixal Oblique stem). Very rarely the unsuffixed Oblique occurs in a direct object pronoun; perhaps this (rare) usage involves the limited tendency of direct object nouns (usually

Nominative case) to acquire full or partial trappings of Allative-Dative case marking (§4.8, §4.19).

The following textual citations should be closely analysed by readers interested in these matters. Bear in mind that word glosses and free paragraph translations in NMET are only approximate.

1Sg /n^{g}aya-wi/ seems to be predicate genitive in 4.2.1/5, 5.9.4; it seems equivalent to Relative case form /n^{g}aya-wi-n^{y}in^{y}un^{g}/ in 30.3.1, 166.5.5, and possibly in the somewhat broken case of 161.1.1; probably a substitute for Allative-Dative /n^{g}aya-wi-wuy/ (semantically genitive with case agreement from modified noun) in 47.21.2; possibly for Locative /n^{g}aya-wi-ruj/ (genitive with /-ruj/ by case spreading) in 120.1.2.

1ExPl /nu-ra:-'/ is predicate genitive in 64.8.3; it may be construable in the same way in 69.1.3 if thought of as referring to /wun^{g}a:ri/ 'fighting' in 69.1.2.

2Sg /nu-ga-wi/ is possibly predicate genitive in 5.8.1.

2FDu /nu-gu-rn^{g}a:-'/ is a direct object in 17.12.4. It is added as a specifier in a context where the object marking in the pronominal prefix on the verbs indicates only a generalised 2Pl (which could be 2FDu, 2MDu, or the usual 3+ 2Pl).

3MSg /ni-ga-wi/ is predicate genitive in 17.1.1-3 and 21.2.2; it translates best as 'for him' in 17.2.4, 73.1.4/7, and 74.3.4, but it is possible to construe it syntactically as predicate genitive in Nunggubuyu as suggested above; the same remark holds for the recipient (of 'give') instance in 80.2.1.

3MDu /wu-gu-na:-'/ may be predicate genitive in 138.3.2.

3Pl /wu-gu-ra:-'/ is predicate genitive in 9.2.3 and 64.8.1, and arguably also in 3.7.2 and 4.1.3. The ex. in 17.16.3 is unclear, and is possibly a cut-off pronunciation of Contrastive /wu-gu-ra:-'yun^{g}/.

A comment is in order concerning the semantics of the pronominal categories in connection with predicate genitives. In some texts and unrecorded conversations, contrasts are made between totems, places, or the like which are the "property" of a particular clan. Predicate genitives like 'it [is] mine' or 'it [is] ours' in such a context specify the relationship of the referent to the speaker, his/her clan, or the like. On the other hand, in this context the 3Pl form 'it [is] theirs' can either specify a relationship to a particular other clan or group which has already been introduced into the conversation, or else can be a generalised statement indicating that the referent belongs to a contextually unspecified and indefinite third party. Note that English would use 'it is somebody else's' (not 'it is theirs') in this context.

The point is often made that the "third person" pronoun in various languages is defined negatively as non-participant (non-1st, non-2nd person). However, languages differ in precise rules for usage of the 3rd person (and indeed other pronouns). Nunggubuyu comes closer to the conventional analysis of 3rd person pronouns than does English in this respect.

6.6 Other nonzero case forms.

Independent pronouns have a range of nonzero case forms, the most common ones being locational or motional in nature. One source

for such pronouns is case agreement, by which the case of a noun is copied onto a modifying Relative (genitive) form, with deletion by another rule of the Relative suffix. Thus English 'to my house' will regularly show up in Nunggubuyu as 'to-me to-house', where to represents the Nunggubuyu case suffix.

However, often a case form of a personal pronoun occurs without a juxtaposed modified noun in the same case. The question then is whether something like /n^{g}aya-wi-wuy/ is to be translated 'to me' or as 'to my [X]', supplying some omitted noun from context.

With respect to the essentially spatial categories (Locative, Ablative, Pergressive, and Allative-Dative in allative sense), my interpretation of the textual exx. is that they generally are to be understood in the sense 'to my [X]', where X is ordinarily either one's camp (home) or one's (clan's) territory. However, this reading is more clearly necessary in some instances than in others, and interested readers would do well to consider the actual textual occurrences. A few exx. are clearly of the 'to me' type.

Exx. of Allative-Dative /-w$_1$uy/ are NMET 15.13.2 ('came to us', 1InPl), 34.8.3 (2Pl, see comment below), 41.5.5 (1Sg, genitive case agreement though case suffix omitted from juxtaposed noun), 47.16.3 (2Pl, 'to you' or 'to your camp'), 69.16.1 (1ExPl, see below), 71.28.3 (1ExPl, see below), 73.4.1 (1ExPl, see below), 73.4.5 (3MSg, probably 'to his camp'), 98.3.2 (1ExPl, see below), 100.7.7 (1ExPl, see below), 114.1.4 (case agreement, 1ExPl), 120.1.6 (case agreement, 1ExPl), 139.8.6 (1ExPl, see below), 139.13.5 (1ExPl, with further addition of /-yin^{y}un^{g}/, discussed at end of §6.4), 139.14.1 (1Sg then 1ExPl, see below), 162.7.3 (1ExPl, 'it faced toward us').

Several of the 1ExPl and 2Pl exx. just listed have a meaning 'you(Pl) too' or 'us(ExPl) too', normally in a temporal contrast of the type 'in the old days, and nowadays too' (where 'in the old days' is literally 'among the old people' with Retrospective Pergressive case suffix /-w$_1$aj/, and where 'nowadays' is literally 'to us [living persons]'). The 2Pl ex. (34.8.3) involves a similar extension of the type '[this is the origin of death for us Aboriginals], and maybe for you [whites] too', where the recent penetration of whites into the region may give a temporal dimension.

Exx. of Locative /-ruj/ are NMET 9.13.4 (1Sg, 'at my country'), 13.21.2 (3MSg, 'at his place'), 13.23.3 (1ExFDu, 'at our place'), 40.7.2 (3MSg, case agreement), 45.2.3 (N^{g}ARA referring to crocodile in legend, semi-personified, case agreement involving displaced preceding noun and following relative clause), 59.5.1 (1Sg, case agreement though following noun omits case-marking), 161.13.2 (1Sg, 'at my country'), 168.4.2 (1ExPl, 'in our country'), and in Hughes' texts TNT 15 (3FDu) and TNT 15 (3MSg).

Exx. with /-waj/, whether to be analysed as simple Pergressive /-w$_2$aj/ or Retrospective Pergressive /-w$_1$aj/, are NMET 47.1.3 (1ExPl, probably case agreement though following noun omits case-marking), 113.5.2 = 121.3.7 (1ExPl, case agreement; compare 113.1.3 with absence of case agreement, hence Relative form of pronoun, in similar context).

Ablative /-w$_1$ala/ is found in NMET 168.1.1 (2Pl, probably 'from your country').

Exx. of Similative /-yi:/ 'like, similar to' with pronouns are

71.30.1 (2Pl, 'like you'), 71.30.4 (2Sg then 1Sg, 'like you', 'like me'), and 167.10.4 (1Sg, 'like me', with preceding /n^{g}un^{y}ju/ 'like' as well as Similative suffix). In the Similative exx., the reading is clearly of the type 'like me' rather than 'like my [X]', though the latter might occur in other exx.

There is one ostensible ex. of an Instrumental case form: /ni-ga-wi-miri/ (3MSg, NMET 47.18.4). However, I do not consider this to be an ex. of the instrumental usage of suffix /-miri/; for discussion see §6.12, below.

It is not usual for a case suffix to be added to a discourse-function pronoun form, nor is it possible at all to add a discourse-function suffix (§6.8ff.) to a pronoun already containing a nonzero case marker. However, there is a single textual ex. with Locative /-ruj/ added to the Contrastive form in /-ayun^{g}/, namely /nu-ra:-'yun-duj/ 'in our [time]' NMET 100.4.6. Since there are hundreds of exx. of /-ayun^{g}/ Contrastive forms with no case marking, this case-marked type is best considered of very marginal grammaticality.

There is one important general observation to be made about the whole set of case-marked pronouns discussed in the present section. This is that the attested exx. all involve human referents (or personified animals in myths or legends). This does not necessarily mean that case-marked nonhuman pronouns are strictly ungrammatical, but it certainly does mean that they are very marginal, and can be disregarded for practical purposes. Instead of case-marked pronouns like 'in it', 'to it', or 'from it', it is usual in the relevant contexts to use demonstrative adverbs like 'there', 'to there', and 'from there', perhaps with a case-marked noun added if further specification is required. (For such adverbs see Chapter 7, below.) Indeed, such adverbs are sometimes used instead of or juxtaposed in apposition to the human case-marked pronouns. See also §15.2.

A similar remark about the infrequency of nonhuman pronouns with Relative suffix /-n^{y}in^{y}un^{g}/ was made above (§6.4).

6.7 Vocatives.

Instead of the usual Nominative pronouns, for direct address a special set of 2nd person pronominal forms is used:

2Sg	/gu-waj/	'hey you!'
2MDu	/gu-ni-waj/	"
2FDu	/gu-rn^{g}i-waj/	"
2Pl	/gu-ru-waj/	"

These are pronounced as interjections. In form, the nonsingular Vocative forms resemble Nominatives (/nu-gu-ni/, /nu-gu-rn^{g}i/, /nu-gu-ru/) except that the initial morpheme is lopped off. The ending /-waj/ is not to be taken as a Pergressive suffix, which would require the Oblique stem (*/nu-gu-ni:-'-waj/, etc.), but it could be connected formally with Emphatic /-waj/ (§6.9).

These pronominal Vocatives are very common and do not have the rude characteristics of English 'hey you!'. Textual exx. of the Sg are 20.9.6, 20.12.2, 20.15.4, 20.16.2, and 34.3.2; of the FDu TNT 15; of the Pl 18.10.4, 69.14.3 (exx. from NMET unless otherwise indicated).

The 2Sg Vocative /gu-waj/ is morphologically opaque, since the corresponding Nominative is /nagan^{g}/, while the other case forms and discourse-function forms begin with /nu-ga-/ (Table 6-1, above). Occasionally, /guwaj/ is treated as an unsegmentable noun (most likely NAdj) meaning 'friend, pal', though no textual ex. can be cited. The nonsingular Vocative pronouns do not have this meaning.

6.8 Contrastive /-ayun^{g}/, /-ayun^{g}-gaj/.

These are discourse-function forms which are based formally on the Nominative pronoun, though they occasionally relate to grammatical relations other than subject or direct object. The //a// always contracts with the preceding morpheme's final vowel by regular VV-Contraction P-49. Some exx.:

//nu-ru-ayun^{g}// → /nu-ra:-'yun^{g}/ (1ExPl)
//ni-ni-ayun^{g}// → /ni-ni:-'yun^{g}/ (1ExMDu)
//ni-ga-ayun^{g}// → /ni-ga:-'yun^{g}/ (3MSg/NA)

The forms which are not quite exactly based on the regular Nominative are these:

1Sg	/n^{g}a:-'yun^{g}/	cf. Nominative /n^{g}aya/
2Sg	/nu-ga:-'yun^{g}/	" " /nagan^{g}/
1InDu	/na-ga:-'yun^{g}/	" " /na-ga-wa:/

The forms in /-ayun^{g}-gaj/ are identical save for the addition of the final suffix, whose base form must be /-w$_{1}$aj/ and which might be associated formally with /-waj/ in Emphatic pronoun forms (§6.9) and/or with Retrospective Pergressive case suffix /-w$_{1}$aj/ (§4.23), though there are semantic discrepancies.

In this section we begin by discussing the functions of the form in /-ayun^{g}/, especially vis-à-vis the rather similar but often weaker contrastive usage of simple Nominative pronouns (§6.3). At the end of this section we discuss the less common form in /-ayun^{g}-gaj/.

There are probably well over one hundred exx. of /-ayun^{g}/ in the texts in NMET, and we cannot analyse all of them here. The prototypical function of /-ayun^{g}/ is to emphasise a change in NP in an important grammatical relation from one clause to another. Usually, the Contrastive pronoun in one clause C_n indicates a contrast with respect to the preceding clause C_{n-1} (or, more often, a string of clauses ending with C_{n-1}); we refer to this as retrospective contrast. In a sizable minority of instances, however, the contrast is with a following clause C_{n+1}; this is anticipatory contrast. Occasionally, we cannot tell whether a particular Contrastive pronoun is retrospective or anticipatory since both C_{n-1} and C_{n+1} happen to contain NPs which could have triggered the contrast.

The simple Nominative pronouns are frequently used in similar contexts, though usually the contrastive sense is less strong. However, Nominative pronouns also have other functions not involving contrasts of this kind (§6.3).

To get a better idea of how the two forms function, I have examined all occurrences in texts 1-12 (pp. 17-82) of NMET. I found 29 Nominatives and 34 /-ayun^{g}/ forms, indicating that the two are of comparable text frequency. These exx. were coded on a number of

TABLE 6-2

Analysis of /-ayun^{g}/ and Nominative Pronouns

	Nominative		/-ayun^{g}/	
1. givenness				
first occurrence	8	(28%)	1	(3%)
repetition	21	(72%)	33	(97%)
total	29	(100%)	34	(100%)
2. switching [repetitions only]				
yes	13	(62%)	25	(76%)
no	8	(38%)	8	(24%)
total	21	(100%)	33	(100%)
3. grammatical relation				
intr. subject	19	(66%)	22	(65%)
tr. subject	7	(24%)	8	(24%)
direct object	1	(3%)	1	(3%)
Relative case	2	(7%)	3	(9%)
total	29	(100%)	34	*(101%)

*reflects rounding error

Notes: givenness specifies whether the pronoun occurs in the clause which introduces the referent to the text; switching indicates whether the pronoun occurs in one clause (C_n) with the relevant contrast involving C_n and the preceding clause C_{n-1}; grammatical relation is based on case marking (especially that in pronominal prefixes in the verb) with the provision that subjects of normally intransitive verbs which have a Benefactive object specified in the verb are treated here as intransitive. In these definitions, 'clause' is interpreted liberally so that a pronoun postposed to a clause after a slight pause may be considered part of that clause.

Data from NMET texts 1-12.

- -

dimensions shown in Table 6-2, above.

We note, first of all, that the Nominative pronoun and especially the Contrastive form in /-ayun^{g}/ are most common in connection with referents which have already been introduced into the text, though (except in instances of anticipatory contrast) they have been omitted in the immediately preceding clause(s) or perhaps occurred in them in a distinct semantic role or in some other fashion which permits a contrastive nuance to occur. However, the pronoun forms are sometimes used in the clause which introduces the referent to the text (especially if this context involves a direct contrast with some other referent).

Second, we note (restricting our attention to pronouns not introducing the referent for the first time) that the Nominative

and Contrastive forms typically occur in clauses (often at the beginning of the clause) where there is a clear referential contrast between the referent of the pronoun and some other referent in the preceding clause; thus, retrospective contrast is the predominant function of these forms.

Third, we see a very strong predominance of (intransitive and transitive) subjects as referents of these pronouns, though a small number of instances involving direct object or Relative (i.e., genitive) are attested.

We have not coded these exx. for pronominal person or noun class. A statistical analysis would be biased, since the particular texts analysed are myths in which the characters are humans or personified nonhumans for the most part. Considering other texts as well, it appears that pronominal person or noun class is not a discernible factor in the usage of these pronoun forms. Nonhuman pronouns such as MANA /ma-gu-ra:-'yun^{g}/ are freely usable, and if they turn out to be statistically a little less common than forms of human pronouns, this would merely reflect interacting factors, such as the lower frequency of nonhuman than human grammatical subjects.

For the record, the exx. used are these. For Nominative: 1.1.4, 1.1.7, 1.2.2, 1.10.1, 2.2.2, 3.1.3, 3.2.3, 3.3.2, 3.4.4, 4.2.2, 4.5.5, 4.6.1, 4.6.2, 5.7.4, 6.2.1, 6.2.4, 7.7.2, 7.7.3, 7.17.4, 7.21.1, 8.4.1, 9.1.3, 10.2.1, 10.5.1, 10.8.1, 10.17.3, 11.10.1, 12.3.4, 12.6.2. For /-ayun^{g}/: 1.2.1, 1.8.8, 1.9.1, 1.9.3, 2.2.3/4, 3.2.1, 3.6.4, 4.2.3, 4.3.2, 4.4.2, 4.4.3, 5.10.2, 5.15.1, 7.5.2, 7.7.1, 7.7.4, 7.12.3, 7.12.4, 7.18.1, 7.20.7, 9.1.5, 10.5.3, 10.14.1, 10.17.1, 10.17.2, 11.1.3, 11.2.1, 11.2.3, 11.3.3, 12.1.1, 12.2.1, 12.2.2, 12.6.3, 12.10.1/2.

Because nouns and demonstratives do not have similar forms indicating clause-to-clause referential contrasts, such pronouns often co-occur with a noun, demonstrative, or both with the same reference. A common position for the pronoun is clause-initial (possibly preceded by /adaba/ or /aba/ 'now', which is commonly found at switching points). A coreferential noun or demonstrative may immediately follow, or may occur as specifiers later in the clause (or as tacked-on afterthought phrases). The following are informal and perhaps oversimplified representations of the syntactic frames of the pronoun (represented by ___), where subscript $_i$ on a noun (N) or demonstrative (D) indicates coreferentiality to the pronoun. First, Nominative pronouns (retrospective contrast contexts only):

1.1.7	V ___ Adv V	4.5.5	V yamba['because'] ___
1.10.1	aba ___ V N_i	4.6.1	adaba ___ V N_i
3.3.2	___ D_i N_i V	4.6.2	___ N, V, D_i N_i N
3.4.4	___ Adv V	8.4.1	___ aba N_i, V
4.2.2	___ N_i	10.8.1	adaba ___, V

Now some similar exx. involving pronouns with Contrastive suffix /-ayun^{g}/:

1.2.1	___ Adv V	4.3.2	___ N_i N, V
1.8.8	___ Adv V N_i	4.4.2	___ V
2.2.3	___ D_i N_i...V	5.15.1	V V ___ Adv
3.2.1	___ V...D_i N_i	12.1.1	adaba V ___ N, V

These and many other exx. establish clause-initial position as characteristic but far from obligatory for Nominatives (in contrastive function) and Contrastives, except for the particle /adaba/ or /aba/ which often precedes it. A variety of factors may result in a different position. In 4.5.5 (see list of Nominative exx. near bottom of preceding page), the particle /yamba/ 'because' is a complicating factor; this particle is a second-position-in-clause enclitic which must follow a major constituent, normally the verb or other predicate, so the pronoun can be considered to have been displaced rightward to accomodate /yamba/. In the case of anticipatory contrast, the pronoun may tend to be located at the end of the clause so as to occur near the break between the two contrasted clauses (though clause-initial position is possible in this context as well). Even in cases of retrospective contrast, where clause-initial position is optimal, the pronoun (and perhaps a larger NP also involving a demonstrative and/or noun) may be postposed to the core of the clause, in the afterthought position. Flexibility in word order, in other words, is permitted since the language has generally fluid order and does not require sharp phrasal or clausal boundaries (indicated by intonation contours, etc.).

Let us now look a little more closely at some of the exx. in this list. In NMET 4.2.1-3 we have a passage like this:

(6.xiii) "[quotation 1]," she$_i$-said, Emu$_i$, he$_j$[/ni-ga/] Gecko$_j$, as-for-him$_j$[/ni-ga:-'yun^{g}/] he$_j$-said, "[quotation 2]."

Here there is a clear contrast between two speakers (and their respective quotations). At the switch point the narrator begins with the weaker Nominative pronoun (juxtaposed to the noun 'Gecko'), then reinforces this with the stronger Contrastive pronoun. Because /ni-ga:-'yun^{g}/ does not occur at the actual break point it was coded as "no" in connection with switching in Table 6-2, while /ni-ga/ was coded as "yes" since it occurs at the break. We may refer to pronouns like /ni-ga:-'yun^{g}/ in this instance as reinforcers of contrast. A possible instance where the Contrastive pronoun occurs at the break and is then reinforced by a Nominative is 7.7.1/2, but in this instance the Nominative may have a function other than marking contrast.

In 9.1.3-5 we seem to have an instance where the Nominative pronoun /wu-gu-ru/ 'they [whites]' (9.1.3) is used in anticipation of a following contrast, which materialises with Contrastive /wu-gu-ra:-'yun^{g}/ 'as for them [Aboriginals]' (9.1.5). This pattern seems reasonably common. It is partly on this basis that I consider the Nominative to be weaker in its contrastive functions than the form in /-ayun^{g}/, since anticipatory contrast is likely to be weaker than retrospective contrast. The fact that the Nominative is more common than the Contrastive in first occurrences of NPs in narrative points in the same direction; first occurrences tend to draw attention to the identity of the new NP rather than to a specific contrastive relationship to another NP in a nearby clause.

In addition to a relatively complete inspection of pronouns in texts 1-12 of NMET, I have also gone through the other texts in that volume looking for further exx. of the more interesting or

exotic instances of Nominative and Contrastive pronouns (in what follows I also work in a few of the exx. from texts 1-12 not already commented on).

One pattern deserving comment is the dissolution of a nonsingular NP in one clause into two or more (usually Sg) NPs in the next. This results in many cases in contrasts at least between the two newly individuated referents (and possibly between them and the previous joint NP). Often a Nominative pronoun occurs in such contexts, at least with the first of the individuated NPs: 6.2.1, 13.33.4, 17.11.7. In 13.37.4/5 the first individuated referent has a Nominative pronoun and the second has a Contrastive pronoun, indicating that this is structured as anticipatory vs. retrospective contrast.

Since Table 6-2 indicates that direct objects do not usually get Nominative or Contrastive pronouns to mark clause-to-clause referential contrast, I have looked in NMET for other exx. of this uncommon type. In the following exx. we have intransitive subject IS_i in the preceding clause, and then the same noun as transitive subject TS_i with a direct object O_j; we get Nominative pronoun with O_j in 7.21.1 and 15.9.2, and Contrastive pronoun for O_j in 12.10.1/2, 14.13.1, 71.9.3. Another pattern is to have a transitive clause with TS_i and O_j, followed by another transitive clause with just the direct object changed, hence with TS_i and O_k (so that the primary contrast is between O_j and O_k); Contrastive pronouns occur in this construction for O_k in 41.5.2/4, 55.8.4/5, and 92.4.3. A variation of this is in 95.10.7, where instead of a clearcut preceding transitive clause we have a list of NPs. In 62.1.1 we have a Contrastive pronoun at the very beginning of the text as a kind of title; this becomes direct object of the first verb (somewhat later), but here the contrast is presumably with referents discussed in other texts recorded just before and is thus unrelated to the direct object status of the referent. A more uncommon construction is seen in 89.2.3, where we have TS_i and O_j in one clause, followed by TS_k and O_i in the next; the O_i occurs with Contrastive pronoun.

We have just seen that the construction with IS_i in clause C_{n-1}, followed by TS_i and O_j in clause C_n, can induce a Nominative or Contrastive pronoun for O_j (beginning of preceding paragraph). However, we also have exx. of the type with IS_i, then TS_j and O_i, where the new NP is TS_j and it is put in Contrastive pronoun form, an ex. being 15.6.2. These exx. show that Contrastive pronouns have rather flexible usage, and do not depend on a highly restricted syntactic frame (in the fashion, say, of switch-reference in many languages).

Another type of construction involves role reversals in adjacent transitives: TS_i and O_j, then TS_j and O_i (e.g., 'he hit her, then she hit him'). Ideally, we would like to see whether it is TS_j or O_i in the second clause which is put in the Contrastive form (it does not seem to be possible to put both NPs in this form). However, the textual exx. are inconsistent on this point and we conclude that either TS_j or O_i may be thus realised, presumably depending on the speaker's immediate perspective on the action. Thus in NMET 42.4-5 we get a sequence which we may represent in simplified fashion as follows, with English masculine and feminine

pronouns used to keep the two referents distinct; underlining indicates use of Nominative pronoun, double underlining use of Contrastive pronoun:

(6.xiv) they[reciprocal verb] # she # she him # he # he her # she him # she him # she him # he her #

The formula here omits verbs and other constituents; a single pronoun between cross-hatches (clause boundaries) is intransitive subject. The first 'she' (/n^gi-ga/) involves dissolution of a joint dual into one of the individuated referents (see above). Then there is a transitive verb with 'she him' (no pronouns except for pronominal prefixes in verb). We then have an intransitive verb with 'he' (/ni-ga/) as a weakly contrastive element. Then there is a transitive verb with 'he her' involving the only (strong) Contrastive pronoun /ni-ga:-'yun^g/; the action is the same as in the preceding transitive with 'she him' but with roles reversed, and it seems that here the contrast jumps over the intervening intransitive clause. This is followed by a transitive clause with a different but related verb, with roles reversed again and with 'she him' (repeated three times). We might have expected the TS rather than O to have the Nominative (or Contrastive) pronoun, but the speaker places the contrastive emphasis here on the O. Finally there is another reversal and this time it is the TS ('he') which gets the Nominative pronoun. For better understanding, readers should examine the actual passage and try to reconstruct the narrator's perspective.

In NMET 42.6, i.e., a bit later in the same text, we have this:

(6.xv) he her # she # she it # she it # she us # she [broken fragment] # he her # he her # she him #

We here disregard the initial Nominative 'he' since it involves preceding material not presented here. This passage shows fewer pronouns than the preceding passage. Role reversal in the final pair of clauses induces Nominative 'she' for the TS after the switch. However, the earlier shift to 'he her' after the broken fragment does not show up with a special pronoun--at least for the new TS (it is possible that the 'she' in the broken fragment is really the O of the following transitive clause).

Another ex. is NMET 78.1.5ff.:

(6.xvi) they him # they him # he them # they him # he them #

Here a different pattern is used, where the pronouns all relate to the 3MSg referent. As O (actually, recipient of 'give'), this referent shows up in Nominative form as /ni-ga/ (except in one repeated clause), but at the contrastive switch point (involving role reversals) this referent gets the (strong) Contrastive form /ni-ga:-'yun^g/. (The last two clauses are basically a repetition of the preceding sequence, and reproduce its basic structure.) It would seem that one factor here is the clear identity of the 3MSg referent, as opposed to the relatively vague 3Pl collectivity. Together with the previous exx., this one shows some fluidity in the way particular referential networks (involving specific case or relation categories) affect use of these pronouns.

Nominative or Contrastive pronouns may be used with 2nd person imperative subjects just as with other clause types. For example, in 17.12.1/2 we have consecutive imperatives addressed to two different persons; the first clause includes Nominative 2Sg pronoun /nagan^{g}/ while the latter has the (stronger) Contrastive form /nu-ga:-'yun^{g}/. This sequence of (anticipatory) Nominative and (retrospective) Contrastive is parallel to similar constructions involving declarative clauses.

In 13.29.3 we have 'he other word[s] he-gave-them' (i.e., 'he was giving them other words'), where 'he' is a Nominative pronoun. This is mentioned since the (weak) contrastive nuance indicated by this pronoun (referring to different NPs in the preceding clauses, not quoted here) co-occurs with a direct object NP ('other word[s]') which appears to be focal in a different sense (new, unexpected information of some importance). Preverbal position is a good one for such focal material (though this is not rigorous). Although the "contrastive" function described in this section is, in a way, a kind of focus, it is advisable to distinguish contrastive sense sharply from other kinds of "focus" which may be expressed by other discourse-sensitive pronominal forms (see below, this chapter) or by other mechanisms (preverbal position, absence of NC_{infl} prefix in nouns §4.8, etc.).

We mentioned earlier that the Contrastive form with /-ayun^{g}/ was not common with NPs in their initial mention in texts. The one ex. mentioned in Table 6-2 is actually a bad one since it co-occurs with an Anaphoric demonstrative pronoun and thus seems to imply contextual givenness (11.1.3). However, there are a few other exx. in later texts in NMET which do show /-ayun^{g}/ pronouns for initial occurrences (17.2.1, 80.2.2), as long as the context does involve some kind of clause-to-clause contrast.

We now consider the other suffixed form, in /-ayun^{g}-gaj/. I have found about 40 exx. in the texts in NMET; this form is therefore much less common than Nominative or Contrastive /-ayun^{g}/ forms.

This form can generally be translated 'X[pronoun] too'. Like the form in /-ayun^{g}/, it requires that the referent be in a clause where a direct contrast is possible with a distinct referent in a juxtaposed clause. However, with /-ayun^{g}-gaj/ there is the additional requirement that the two parallel referents be involved separately in (near-)identical actions (in the same basic roles). This excludes, for example, role reversals of the type 'he hit her, then she hit him (back)', and also excludes instances where the two relevant referents are in different roles in the two juxtaposed clauses.

There is no special preference for grammatical subjects with /-ayun^{g}-gaj/; several exx. in the texts involve direct objects (e.g., in long lists of foods eaten). Nonhuman as well as human referents are repeatedly attested. The form is not very common with 1st or 2nd person pronouns, and there are no textual exx. involving these categories, though the forms are possible. The pronoun in /-ayun^{g}-gaj/ may be preposed or postposed to the associated noun, and the latter position is reasonable common.

Aside from the increasingly frequent use of English too as a borrowing (with Nominative pronoun as in 117.2.6, with Contrastive

/-ayun^{g}/ as in 69.12.6, or with Emphatic /-waj/ as in 114.3.5), we should mention as a competitive form the use of Allative-Dative /-$w_1$uy/ especially in the pronoun /nu-ri:-'-wuy/ 'to us(ExPl)', in the contextual meaning '[in earlier generations and] nowadays as well' or '[among earlier generations and] us [living people] too'. This construction (see §6.6, above) is used when the two groups in question are separated by a large time interval.

We now give the textual exx. of /-ayun^{g}-gaj/. 3Pl/WARA/ANA /wu-gu-ra:-'yun^{g}-gaj/ is sometimes difficult to identify by noun class (since in many instances either a 3Pl subject or a WARA or ANA is a possible referent). The exx. are NMET 27.6.2, 35.6.2, 57.1.1, 59.5.5, 59.8.2, 59.8.6, 59.8.8, 59.9.1, 59.10.5, 97.7.3, 97.8.4, 109.2.1, 113.4.7, 119.6.7, 119.7.7, 119.8.1, 125.10.1, 126.3.3, 166.21.4, 166.22.1, 166.24.3. Also TNT 17, 21.

3MSg/NA /ni-ga:-'yun^{g}-gaj/: 34.2.7 [two consecutive instances in sense 'both X and Y'], 42.3.6, 100.6.1, 100.7.1/2, 109.5.5, 117.4.3, 139.11.4.

3FSg/N^{g}ARA /n^{g}i-ga:-'yun^{g}-gaj/: 21.10.4, 109.2.3, 109.6.1/5, 117.6.5, and TNT 19.

MANA /ma-gu-ra:-'yun^{g}-gaj/: 59.10.6, 118.3.7, 118.4.4.

6.9 Emphatic /-waj/, /-waj-baj/.

The primary Emphatic pronoun form involves suffix /-waj/ added to the Nominative: 1ExPl /nu-ru-waj/, 1Sg /n^{g}aya-waj/, etc. The 2Sg and 1InDu forms involve the same stem change seen above with /-ayun^{g}/:

2Sg	/nu-ga-waj/
1InDu	/na-ga-waj/

We cannot reliably identify the suffix as /-$w_1$aj/ or /-$w_2$aj/, though if I had to make a choice I would say /-$w_1$aj/, since the semivowel is sometimes elided in the environment /a___a/ and since when the preceding vowel is /i/ we may get /-yaj/ as surface form; these changes are (for suffixes) associated with /w_1/ rather than /w_2/ (see rules P-9, P-10).

If a postposition such as /-$w_2$ugij/ is present, the sequences /u-waj-/ and /a-waj-/ are usually contracted to /a:-'j-/ in normal speech, though the full pronunciations are also acceptable and may be given in elicitation.

The second Emphatic form is /-waj-baj/, which can be analysed formally as /-waj/ plus a suffix /-$w_2$aj/, whose //w_2// becomes /b/ regularly after a stop by Hardening P-18. The treatment of the first /-waj-/ is the same as that just described for /-waj/ when a postposition is added.

Thus, for 1Sg, the forms are /n^{g}aya-waj/ and /n^{g}aya:-'j-baj/, the former also becoming /n^{g}aya:-'j-/ before a postposition.

The forms in /-waj/ and /-waj-baj/ are formally distinct from case forms of pronouns involving simple Pergressive /-$w_2$aj/ or Retrospective Pergressive /-$w_1$aj/. These case forms require the presuffixal Oblique stem (Table 6-1, above). Thus compare Emphatic 1Sg /n^{g}aya-waj/ with Pergressive /n^{g}aya-wi-waj/.

In this section we will discuss the uses of the /-waj/ form, then turn later to the /-waj-baj/ form.

The form in /-waj/ involves a special type of focus. Unlike other discourse-related phenomena which might be lumped together as "focus" (contrastive focus as in §6.8, newness/givenness as described for nouns in §4.8, etc.), the precise nuance in the case of /-waj/ pronouns is foregrounding the identity of a referent as a paradigmatic choice.

For example, to answer a 'who?' question (with /yan^{g}i-n^{y}un^{g}/ 'who?' or some form thereof), a /-waj/ pronoun is standard. NMET text 20, for example, has several passages where one protagonist asks 'Who are you?', and the answer 'It is me/us' is built around a /-waj/ pronoun:

(6.xvii) Q: yan^{g}u-n^{y}um-ba: nu-gu-ni 'Who are you two?'
who? (Du) you(MDu)

A: ni-ni-yaj ana:-'-ni n^{g}uda-lhardhar-ba:
it is us(ExMDu) this(ANA) king brown snake (Du)
'It is us, (two) King Browns' (NMET 20.7.7/8)

As this very typical ex. shows, the pronoun in /-waj/ (here /-yaj/) may function as (nonverbal) predicate specifying identity. The demonstrative 'this' in the answer can be taken as the subject of this predicate, hence 'this [is] us'. (Proximate demonstratives are associated with 1st person categories; see §6.14, §7.27.)

The ex. above also shows that the /-waj/ pronoun is often juxtaposed to a full noun functioning syntactically as an appositive specifier (in other exx. this specifier is often a personal name or, for groups, a clan name or the like).

It is worth noting that in English, the answer to the question in (6.xvii) would be '(We are) King Browns', in which the name or other specifier is the predicate and the 1st person pronoun is backgrounded and often deleted. (The context in the passage cited involves referents who have not previously met; English 'It is us' with pronoun as predicate usually requires that the addressee be presumed to know the referents already.) Thus the syntax differs from English to Nunggubuyu; the latter puts the pronoun in focal (predicate) position with the specifier added in apposition.

In addition to being standard in such 'who?' answers, pronouns with /-waj/ are moderately common in connection with sentences in which the pronoun is merely an argument in a fuller proposition (e.g., subject of a regular intransitive or transitive verb). Such constructions correspond in sense to English cleft constructions such as 'It is you who ate the food', or sometimes to English constructions with the relevant pronoun or NP stressed, as in 'You ate the food'. The Nunggubuyu construction would involve a pronoun with /-waj/ (position variable) and a regular (unsubordinated) main clause. There is no simple syntactic test for determining whether this is a single-predicate or double-predicate construction (we will find the same problem in Chapter 7 in dealing with demonstrative pronouns). As is not infrequently the case in this language, drawing tree diagrams with phrasal and clausal units set off from each other is an arbitrary and generally unedifying exercise. What is important is to specify the discourse functions of the relevant forms. In this case, we can say that the /-waj/ pronoun is used in contexts (including but not limited to answers

to 'who?' questions) in which the speaker feels there is a need to emphasise the identity of a given referent as the real one out of a pool of possible choices.

We list the exx. in NMET (and a handful from Hughes' texts) here, with brief paraphrases in some instances.

1Sg /n^{g}aya-waj/ in 3.6.1ff., 5.6.1ff., 7.21.2 ('it is me speaking'), 16.11.3, 20.8.6 (unclear usage), 20.10.2, 40.5.5/6, 43.9.2 ('I alone will go in'), 60.3.5 ('it is me who made it'), 62.1.5 ('I [am the one who can send the NW wind]'), 161.20.2 (with /-miri/, 'I myself sawed it'), 163.1.2 ('me' in list of individuals), 163.17.3, 167.18.2 ('Give it to me! I [will do it]').

1ExMDu /ni-ni-waj/ or /ni-ni-yaj/ in 20.6.2 ('it is us who came'), 20.7.7, 20.10.3, 20.11.3, 20.12.4, 20.14.2.

1ExPl /nu-ru-waj/ in 18.12.2/3, 18.19.7 ('Only we will go'), 20.4.5, 20.5.4, 62.1.4 ('We [are the ones who send the NW wind]'), 114.3.5 (with English too, 'us too ate it'), 157.5.3 (unclear usage), 157.14.5 ('we sat there'), 167.21.1 ('Only we [remained]'), 168.6.4, 168.7.4 (Nominative /nu-ru/ followed by /nu-ru-waj/).

1InDu /na-ga-waj/ in 15.8.2 (followed by /na-ga-waj-baj/).

2Sg /nu-ga-waj/ in 7.12.1 ('maybe you stole it'), 20.8.5 (usage unclear), 30.1.4 ('if you go there').

2Pl /nu-gu-ru-waj/ in 168.8.4 ('it is you who speak Nunggubuyu').

3MSg /ni-ga-waj/ in 7.21.3/5 ('he [not I] will say it in English'), 13.7.2 ('it was he who made it'), 29.13.4 ('because it was he who made the songs'), 34.3.4 ('he said that'; narrator here correcting himself after using a 3MDu form), 35.8.3 ('he made it'), 49.2.3 ('it is he who will fix it'), 65.11.4/7 ('he found it'), 161.35.5 (same as 7.21.3/5). Also MT 26.

3Pl /wu-gu-ru-waj/ in 45.11.6 (usage unclear). Also MT 25, TNT 3.

One striking fact about these exx. is that we are dealing with overwhelmingly human referents (with the usual allowances for human-like myth characters and the like). The form in /-waj/ is thus predominantly used to emphasise a truly individual identity (including small groups of people as opposed to others). Observe that Sg and Du forms are quite common in the list above.

As already noted, many instances of /-waj/ involve predications of identity, so the question of permissible cases or grammatical relations is inapplicable here. In the exx. in the list which involve arguments in fuller clauses, the /-waj/ pronoun is normally associated with intransitive or transitive subject. However, /-waj/ pronouns can be used in connection with direct objects, e.g., as a simple answer to a 'whom?' question with the queried referent functioning grammatically as direct object.

Our final remark on /-waj/ pronouns is that, as in (6.xvii), they are often juxtaposed to fuller NPs as appositive specifiers in the exx. just listed (we omit the NP specifiers from our brief paraphrases).

For /gu-waj/, /gu-ru-waj/, /gu-ni-waj/, /gu-rn^{g}i-waj/ see §6.7.

The form in /-waj-baj/ is rather less common than the form in /-waj/, but can be characterised as a stronger form of the same general type. The attestations are these:

1Sg /n^{g}aya:-'j-baj/ in MT 26 ('Don't you give it to them. I myself will give it to them').

1InDu /na-ga-waj-baj/ (also /na-ga:-'j-baj/) in 15.8.2 ('it is us[you and me], us' where the /-waj-baj/ form is added as a reinforcer to an initial /na-ga-waj/).

1InPl /nu-ra:-'j-baj/ in 20.11.4, 20.12.6, and 20.15.7 (in all three the context is one set of totemic beings meeting another for the first time and discovering that they are of the same clan, hence 'we [both groups], of Murun^{g}un clan').

2Pl /nu-gu-ra:-'j-baj/ in 18.18.5 (elliptical, somewhat unclear, but reconstructable as 'you [stay at the place Burunju]').

3MSg /ni-ga:-'j-baj/ in 28.10.3 ('he played tapsticks for himself'), TNT 18 ('He did it himself').

3FSg /n^{g}i-ga:-'j-baj/ in 7.8.1 ('She said to herself').

The exx. generally indicate that an English pronoun with -self/-selves can be used in translation. However, this is not the usual Nunggubuyu equivalent of English reflexives. There is a Reflexive verbal suffix /-i-/ which creates reflexive and mediopassive (agentless) intransitives (§10.5), so no special independent pronoun is required. Instead, the /-waj-baj/ pronoun is a strong emphatic form which specifies that an activity is being carried out by one actor without reference to other potential participants. In 28.10.3 and 7.8.1 it is added (redundantly) to a clause already containing a Reflexive verb form, so here it is definitely emphatic; in MT 26 the point is that the actor can undertake the action without help from others. In the 1InDu and 1InPl exx., it seems that a slightly different usage is involved, stressing the solidarity of speaker (or speaker's group) with addressee(s) on an initial encounter. In this usage the form in /-waj-baj/ is more clearly independent (as a separate predication) than in the other (reinforcing) functions.

6.10 Sequential /-abilhan^{g}u/.

This is a relatively infrequent pronoun form. Like the other discourse-sensitive pronoun forms, the suffix is added to the Nominative, with vowels contracting at the boundary in the same way as with /-ayun^{g}/ (§6.8). The 2Sg and 1InDu forms show the same stem form as in other discourse-sensitive pronouns:

2Sg	/nu-ga:-'bilhan^{g}u/
1InDu	/na-ga:-'bilhan^{g}u/

The Sequential form, like the Contrastive forms (§6.8), is used to indicate a clear syntagmatic (clause-to-clause) rather than paradigmatic (choice among alternatives in one slot) contrast. However, the Sequential differs from the much more common Contrastive forms in requiring a very clear temporal dimension to the contrast. It is best glossed with English 'I in turn', 'he in turn', etc. That is, it presupposes a temporally prior parallel action by some other referent. In addition, it normally presupposes that the two referents are related to each other in some way (individuals in a group performing an activity in an organised sequence, etc.). That is, although the two actions are nonsimultaneous, they form a larger pattern.

The attestations, with simplified paraphrases, are now given.

ANA /wu-gu-ra:-'bilhan^{g}u/ occurs in NMET 19.8.5 ('he performed mortuary ritual'; preceding discussion involves performance of circumcision ritual), 41.2.4 ('ghosts pick up /dha:mbulg/ feathered sticks'; preceding segment discusses an associated character's picking up a different type of feathered stick called /murubu/), and 166.23.3 ('we ate dugong and turtle'; previous segments discuss different foods eaten in earlier seasons of the year).

3MSg/NA /ni-ga:-'bilhan^{g}u/ occurs in 34.6.1 ('he in turn jumped into water'; other character had done this earlier), 100.5.2 ('they [collected and] cooked hermit crabs'; preceding sections discuss a different food), and from Hughes' texts TNT 17 ('they[MDu] drank, [or rather] the elder drank [first]'), and MT 11 (passage about marriage of myth character's son, after earlier discussion of the first character's life).

1Sg /n^{g}aya:-'bilhan^{g}u/ in 34.5.4 ('I in turn will now go into water', after addressee has gone in first).

The perspective, from these exx., is clearly retrospective rather than anticipatory; the possible counterex. is TNT 17 (see paraphrase above), but the passage seems somewhat broken and involves an apparent attempt at repairing by the narrator.

Even this small set of exx. suffices to indicate that there is no strict correlation between the /-abilhan^{g}u/ form and any particular grammatical relation (several exx. involve direct objects, others intransitive subjects; transitive subjects are not clearly attested in these exx., 'to drink' in TNT being formally intransitive in Nunggubuyu, but elicited exx. not presented here show that transitive subjects can also have this form).

As with the other discourse-sensitive pronoun forms, with /-abilhan^{g}u/ it is normal to have a coreferential fuller noun or NP juxtaposed in apposition, except that 1st and 2nd person pronouns do not require such additional specification. Nouns (and demonstrative pronouns) lack a functional equivalent of /-abilhan^{g}u/, so the pronoun form must be called on to express this discourse category.

While the /-abilhan^{g}u/ requires a temporal dimension in the contrast, this does not mean that the competing /-ayun^{g}/ Contrastive form requires simultaneous action. Many exx. of /-ayun^{g}/ clearly or apparently involve temporal sequencing ('he hit her, and she hit him [back]'). It is therefore best to consider /-abilhan^{g}u/ as an optional, marked alternative to /-ayun^{g}/.

6.11 Lateral derivatives.

Demonstrative pronouns and adverbs have an important derivation involving Centripetal suffix /-ala/ and Final Reduplication of the preceding stem (by rule P-3), producing forms translatable with '(on) this side' or '(on) that side'; see §7.21. An ex. is /ya:-ji-ji:-'la/ 'on this side' (adverb), from /ya:-ji/ 'here'.

This construction is not typical with personal pronouns (nor with nouns), but one ex. has cropped up in a text. This is NMET 162.12.3 /nu-ri-ri:-'-yala/ '[away] from our side'. In form this is actually a compromise between the demonstrative derivative mentioned and the regular Ablative pronoun /nu-ri:-'-yala/ 'from us'. The

reduplicative pattern is identical to that of the Lateral demonstrative form, but the final suffix should be set up as /-$w_1$ala/ (surface /-yala/ by rules P-9 and P-10) rather than /-ala/. The meaning is also more clearly ablative than in the Lateral demonstrative forms. In the absence of more and better exx., we conclude that this is a very marginal pronoun form.

6.12 Suffix /-miri/.

A suffix of this form occurs in nominal morphology as an Instrumental case marker (§4.27). However, it also occurs in demonstrative morphology as an emphatic element resembling English 'right' in 'right here, right there'; see §7.19.

No clear exx. of /-miri/ in instrumental sense ('by means of it') have been found with pronouns. This sense is incompatible in Nunggubuyu with human pronouns, and for nonhuman instrumentals we get the full noun form instead of a pronoun, thus /n^{g}ura-miri/ 'by means of fire'. We conclude that Instrumental forms of independent pronouns are ungrammatical, or at least vanishingly rare.

There are three exx. of pronoun forms involving /-miri/ in the texts, and so far as I can determine they have the emphatic rather than instrumental sense.

In NMET 47.18.4 we have /ni-ga-wi-miri/ 'he', where /-miri/ is added to the presuffixal Oblique stem (and thus has the form of a case-marked pronoun). The passage is too broken to interpret.

In 47.8.7 /n^{g}a-gu-ra:-'yun^g-miri/ with /-miri/ added to /-ayun^g/ is problematic but may involve case-spreading from a verb.

In 161.20.2 we have /n^{g}aya-waj-miri/ 'I myself [sawed wood]', where /-miri/ seems to reinforce the Emphatic /-waj/ form (§6.9).

In 28.10.3 we have /ni-ga:-'j-baj-miri/ 'he [played tapsticks for] himself', added to Emphatic /-waj-baj/ (§6.9).

We conclude that /-miri/ may be added sporadically to pronouns to reinforce an emphatic sense; if the pronoun does not already have Emphatic form, /-miri/ is added to the presuffixal Oblique. The /-miri/ suffix is far more common with demonstratives than with personal pronouns.

6.13 Postpositions: /-$w_2$ugij/, /-maji:/, etc.

Our initial exposition of postpositional suffixes was in §4.32, and readers are referred there for comments about the semantics of the individual forms. See also §7.30 and §12.21.

The suffix /-miri/ discussed in the preceding section (§6.12) could be considered a postpositional suffix, at least when added to /-waj/ or /-waj-baj/.

Of the postpositional suffixes also used with nouns, the only one which is at all common with independent personal pronouns is /-$w_2$ugij/ 'only, still, nothing but'. One fairly common combination is /-waj-bugij/, where /-$w_2$ugij/ follows Emphatic /-waj/ in the sense 'only [me/you/him]'. Since the /-waj/ pronoun emphasises the narrowing down of a reference from a set of choices, it is natural that it co-occur with a postposition meaning 'only'. The exx. are NMET 18.19.7, 45.11.6, 167.21.1, TNT 3 and 33, MT 25 and 26.

The postposition /-$w_2$ugij/ can also be used with the unsuffixed Oblique form (in predicate genitive function). Thus from /ni-ga-wi/ '[it is] his' we can get /ni-ga-wi-wugij/ '[it is] still his' or '[it is] exclusively for him' (NMET 21.2.2, 73.1.4/7, 74.3.4).

Similarly, /-$w_2$ugij/ can be added to the Relative (i.e., modifying genitive) form of the pronoun with suffix /-n^{y}in^{y}un^g/, as in /n^{g}aya-wi-n^{y}in^{y}un^g-bugij/ '[I learned] only my own [myths]' (NMET 47.22.7). There is also one ex. of /-$w_2$ugij/ added to the suffix sequence /-n^{y}in^{y}un^g-jin^{y}un^g/ (discussed in §6.4, above) with two Relative suffixes (in different functions), hence /n^{g}aya-wi-n^{y}in^{y}un^g-jin^{y}un^g-bugij/ 'only about my own [myths]' in NMET 47.23.1.

It would seem that /-$w_2$ugij/ would be illogical in combination with Contrastive /-ayun^g/ or /-ayun^g-gaj/, or Sequential /-abilhan^{g}u/, and no exx. have been found.

Another postposition found occasionally with an independent pronoun is Conditional /-maji:/ 'if'. This morpheme is typically added to the predicate but can also be added to any conveniently available word at or near the start of a clause. Exx. involving Nominative pronouns are /ni-ga-maji:/ 'if he...' (NMET 78.1.5) and /n^{g}aya-maji:/ 'if I...' (80.1.1). We also have one ex. with /-maji:/ added to an Emphatic pronoun with /-waj/, namely /nu-ga-waj-maji:/ 'if it is you who...' (30.1.4). See §16.7.

Other postpositions are not recorded with pronouns. The suffix /-maga:/ is not used with pronouns, at least not in its usage with negative NAdj or nonverbal predicates. Suffix /-magi/ (Evitative) is regularly attached to the predicate or to a negative particle, not to a pronoun. Suffix /-$w_2$indi:yun^g/ 'very, very much' does not seem to be logically compatible with a pronoun since it is essentially a quantifier. However, I cannot rule out the possibility of such a combination occurring rarely in a very large textual corpus.

6.14 Interaction of pronominal and demonstrative categories.

We will see in the next chapter that in addition to an Anaphoric series, demonstratives have three deictic series: Proximate ('this, here'), Immediate (not far away), and Distant. The Proximate is often used to designate the region around the speaker (in some contexts expanded to include addressee), while the Immediate often indicates the region around the addressee.

More significantly for this chapter, demonstrative pronouns (in ANA class form) are frequently juxtaposed to actual pronouns. For 1st person (exclusive and inclusive) the form is /ana:-'-ni/ 'this (ANA)', for 2nd person the form is /a:-da-nu:-'/ or a closely related form. We might roughly compare English 'you there', 'we here'.

Ex. (6.xvii) in §6.9, above, shows /ana:-'-ni/ functioning as appositive to (or perhaps dummy grammatical subject of) a 1st person pronoun. For other exx. and discussion see below, §7.27.

Chapter 7

Demonstratives

7.1 General.

The demonstrative system is extremely complex formally; it is both complicated and extremely important functionally.

We begin by identifying demonstratives formally as words based on any of four roots whose paradigms are closely associated. The roots are these:

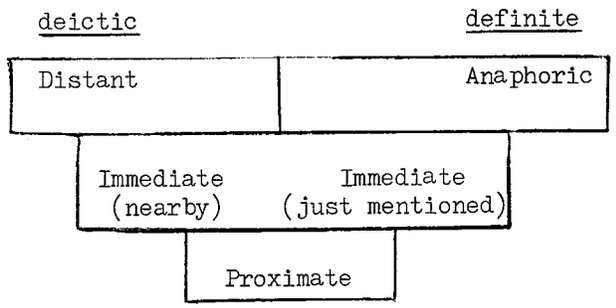
	#__	Prefix-__
Proximate	ya:-	-a:-
Immediate	da-	-da- (usually)
Distant	yuwa:-	-uwa:-
Anaphoric	ba-	-uba-

From these roots we can produce demonstrative pronouns and a variety of demonstrative adverbs, abbreviated DemPro and DemAdv. DemPro forms are characterised by a special set of obligatory NC (noun-class) suffixes which is distinct from the NC suffixes used with personal pronouns (Chapter 6) except for some overlap in human nonsingular categories. For example, the ANA forms always have suffix /-ni/, as in /ya:-ni/, /da-ni/, /yuwa:-ni/ and /ba-ni/. Among the DemAdv we may mention now Locative forms in /-ji/ (/ya:-ji/, /da-ji/) or /-gu/ (/yuwa:-gu/, /ba-gu/). These formations clearly justify grouping the four roots together as a morphological class distinct from personal pronouns and nouns. (The most closely associated forms are certain interrogative forms like /a-ni-ga/ 'where is it(ANA)?', see §13.8.)

The semantic distinctions among the four root categories are moderately tricky. In deictic (pointing) function the three relevant roots are Proximate, Immediate, and Distant. Prototypically, the Proximate forms relate to an area which crucially includes the speaker (depending on context-specific scope it may subsume the addressee as well). The Immediate zone is, by definition, not specifically Proximate, and often focuses on the addressee's location if contrasted with that of the speaker. The Immediate is also used for locations conceptualised as being within easy access (not necessarily closer to addressee than to speaker), for

FIGURE 7-1

Demonstrative Categories



example when speaker and addressee are sitting together and speaker indicates an object a few metres away. Immediate is also used for indefinite but roughly Proximate/Immediate location ('somewhere around here'). Distant is used for anything outside of the Proximate and Immediate zones. Naturally, the boundaries are highly variable depending on perspective. Distant would usually be used to refer to a locality or site other than the reference site, but it may be used to refer to zones well inside of the horizon. Again, if speaker and addressee are sitting together, Immediate would be used for something a few feet away, but ordinarily the Distant would be used to refer to something more than about 20 metres away.

The choice between Immediate and Distant tends to be skewed (in favour of using the Immediate) in forms with Centripetal /-ala/ added to DemPro (§7.7, below). Moreover, the entire system may be skewed by adopting the perspective of an actor in a narrative (§7.26).

Demonstratives are not always deictic, however. They may also be used, in Nunggubuyu as in English, to designate entities or locations which have been previously introduced into the discourse or which are otherwise in some fashion presupposed. I would like to use the term 'anaphoric' for this function, but since the function does not correspond one-to-one with usage of the Anaphoric root I will instead use definite. I must emphasise that this is an informal label for a type of function, not for a formal category; it is opposed to deictic (see above). See also §17.6.

The Anaphoric root requires contextual definiteness of the location and/or referent. However, the Immediate root may be used to refer back to something just mentioned, and in this sense (most common with /da-ni:-'la-yun^{g}-gala-waj/ and /da-ni-yung/, see §7.7, §7.9) should be categorised as definite rather than deictic (unless we want to say that it is deictic but here used metaphorically). The Proximate root is neutral as to deictic vs. definite, in the sense that the Proximate zone is automatically definite (given an initial perspective). Thus the deictic/definite opposition applies most clearly to Distant vs. Anaphoric demonstratives. The situation is represented informally in Figure 7-1.

The demonstrative system thus has special discourse functions, as well as the obvious reference-by-pointing function. Indeed, the discourse functions are more complex than indicated so far. To begin with, DemPro (unlike personal pronouns) take more-or-less regular nominal prefixes, including NC_{infl} prefixes (§4.8). There is thus a prefixal opposition, minimally zero (no prefix) vs. NC_{infl} prefix, with nonhuman categories further differentiating punctual from continuous forms of the NC_{infl} prefix if present. As noted in §4.8, these oppositions have discourse functions (subject to skewing or neutralisation, as in negative contexts), though for DemPro the system is somewhat different (§7.4, below). DemAdv, like other NAdv (§4.3), are formally nouns of ANA class and thus can also take these NC_{infl} prefixes, though the most common adverbial forms are without prefix.

Secondly, demonstratives (especially DemPro) have a special Absolute suffix /-yun^{g}/, which is also sensitive to discourse definiteness (§7.7, below). A distinct type of definiteness is part of the meaning of another suffix, Concrete /-u/, likewise limited to demonstratives (§7.6, below).

Third, aside from these discourse-sensitive affixes, demonstrative categories are important in narratives since they may be used opportunistically by the speaker to maintain referential distinctions. In what we will refer to as narrative perspective (§7.26), the speaker may adopt the point of view of an actor or of a hypothetical invisible observer, using (mainly Proximate and Immediate, sometimes other) demonstratives to differentiate two referents or two locations. Demonstratives like 'here' or 'along here' are commonly used to designate parts of the body (with a manual gesture) even with reference to actors in the narrative (e.g., 'they speared him here [point to belly]'), where English would prefer an explicit body-part phrase. In other words, Nunggubuyu tends strongly to telescope speech-event and narrative perspectives and thus to make extensive use of demonstrative categories. (See also the discussion of Lateral demonstratives, §7.21.)

It is also worth mentioning in this introductory section that Nunggubuyu demonstratives carry out some semantic functions commonly carried out in other languages by verbs. Specifically, differences between centripetal and noncentripetal motion (cf. English go/come, take/bring) are expressed in Nunggubuyu chiefly by demonstratives, which mark motion toward point of reference by Centripetal suffix /-ala/. For this and other motion markers see §7.5, below.

As in other languages, demonstratives in Nunggubuyu are concerned primarily with spatial (and discourse) rather than temporal orientation. For comments on the relationship between demonstratives and time orientation, see §7.31.

Cardinal direction adverbs ('north south east west up down inside') are formally unrelated to demonstratives, though they are included in this chapter for convenience (§7.29).

7.2 Forms of predicative (unprefixed) DemPro.

The basic forms are presented in Table 7-1. By definition, these forms permit no additional prefixation.

TABLE 7-1

Predicative DemPro

NC	Prox	Imm	Dist	Anaph
MSg NA FSg N^{g}ARA	ya:-gi 29 10.3.3 15.1.2 144.2.3	da-gi 13 1.3.3 20.15.2 104.3.6	yuwa:-gi 6 11.3.4 43.14.4	ba-gi 17 8.7.3 19.3.5 24.2.5
MDu	ya:-wi-ni 1 43.16.2	di-ni 1 43.3.6	yuwi-ni 0	bi-ni 0
FDu	ya:-wi-rn^{g}i 0	di-rn^{g}i 0	yuwi-rn^{g}i 0	bi-rn^{g}i 3 13.19.4
Pl	ya:-wu-ru 3 14.7.4	du-ru 1 40.14.1	yuwu-ru 0 MT 17	bu-ru 0
WARA	ya:-wa 7 20.9.6	da-wa 0	yuwa:-wa 3 9.5.3	ba-wa 9 9.12.3
or	or	or	or	
	ya:-wi 3 1.5.1	da-wi 0	yuwa:-wi 1 18.13.3	ba-wi 0
ANA	ya:-ni 91 1.8.6	da-ni 22 10.4.3	yuwa:-ni 21 5.16.4	ba-ni 79 1.6.3
MANA	ya:-ma 20 9.6.4	da-ma 4 115.1.4	yuwa:-ma 3 114.5.2	ba-ma 13 11.12.4
or	or	or	or	
	ya:-mi 6 11.4.4	da-mi 2 20.16.1	yuwa:-mi 0	ba-mi 0

Note: Numeral directly following form (on same line) indicates no. of occurrences in NMET texts. Figures under form (e.g., 10.3.3) are coded cross-references to passages in NMET; if no NMET citation is available a citation may be made relating to MT or TNT. The figures refer to textual instances with no following suffix (except a postposition).

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The suffixes are therefore these:

-gi	MSg/NA/FSg/N^{g}ARA
-ni	MDu
-rn^{g}i	FDu
-ru	Pl
-wa, -wi	WARA
-ni	ANA
-ma, -mi	MANA

It is noteworthy that DemPro distinguish Pl from WARA. However, WARA forms are not uncommon to refer to human collectivities.

For two noun classes we have a choice between /-Ca/ and /-Ci/ NC suffix (WARA, MANA). The distinction does not appear to be important grammatically, and the variant forms are more-or-less interchangeable. However, the available statistics suggest some asymmetries and correlations. First, for these NCs the /-Ca/ form is more common overall; the figures in Table 7-1 add up to 40 instances of /-ma/ vs. 8 for /-mi/, and 19 for /-wa/ vs. 4 for /-wi/.

Further analysis including other forms not yet introduced indicate the following on this point. DemPro with or without NC$_{infl}$ prefix, with no suffix (or with postposition only) show these totals:

/-ma/ 80	/-wa/ 46
/-mi/ 14	/-wi/ 11

Forms in which the immediately following suffix is Centripetal /-ala/, forming /-ma:-'la/, /-mi:-'la/, etc., are consistent with this asymmetry though the numbers are small:

/-ma-/ 5	/-wa-/ 13
/-mi-/ 3	/-wi-/ 7

With immediately following Transverse suffix /-waj/ (becoming /-yaj/ often after /i/-vowel), we get:

/-ma-/ 0	/-wa-/ 2
/-mi-/ 9	/-wi-/ 2

Here the /-mi-/ instances include 4 with Prox /ya:-mi-/ and 5 with prefixed Dist /am-uwa:-mi-/. These data suggest a clear reversal of the preference for /-ma-/ in the other forms given above, though no clear pattern emerges for /-wa-/ vs. /-wi-/.

With immediately following Locative case suffix /-ruj/ we have:

/-ma-/ 9	/-wa-/ 0
/-mi-/ 2	/-wi-/ 5

For the MANA forms we are back to the earlier preference for /-ma-/, suggesting that preference for /-mi-/ before /-waj/ is an idiosyncracy. The sudden preference for /-wi-/ before /-ruj/, if valid, is problematic.

When the following suffix is Absolute /-yun^{g}/, it seems advisable to distinguish instances involving Anaph root /ba-/ from the exx. involving other roots:

Anaph		other root	
/-ma-/ 23	/-wa-/ 11	/-ma-/ 0	/-wa-/ 0
/-mi-/ 9	/-wi-/ 30	/-mi-/ 6	/-wa-/ 0

These data seem to indicate a preference for /-Ci-/ before /-yun^{g}/, except for the Anaph MANA instances where the reverse is found. The preference for /-Ci-/ here may be influenced by the semivowel /y/ in the suffix.

The patterns suggest considerable fluctuation, but with some tendencies toward correlations with other affixes. Except for the data involving /-yun^{g}/, there are no clear correlations between NC suffix vowel and the various demonstrative roots (thus, all roots prefer /-ma/ and /-wa/ with no further suffix). It is conceivable that further study might show some additional patterning, e.g., with /-Ci/ tending to refer to smaller referents than /-Ca/, but no such patterns are clear to me at present.

Regarding the phonology of the forms in Table 7-1, note that for Prox /ya:-/ it is advisable to recognise an augmented form /ya:-wV-/ in human nonsingular forms. Here the /V/ acquires surface

vowel quality from the following syllable by V-Assimilation P-37. Note that the unaugmented roots (Imm, Dist, Anaph) also show P-37 in human nonsingular forms, thus //da-ni//→/di-ni/. The Dist root /yuwa:-/ not only undergoes this P-37, but also shortens its presuffixal vowel: //yuwa:-ni//→/yuwi-ni/ (P-37, P-41).

MDu ending /-ni/, also found with personal pronouns, can also be analysed as //-r-ni// via rn-Contraction P-24 (not, however, a productive rule). Since FDu /-rn^{g}i/ can be further analysed as nonsingular /-r-/ plus F /-n^{g}i/, this reanalysis of /-ni/ as //-r-ni// would give us a parallel structure. However, this is doubtful as a valid synchronic analysis.

7.3 Forms of nonpredicative (prefixed) DemPro.

Though somewhat irregular, the prefixed DemPro are essentially the

TABLE 7-2

Human Nonpredicative DemPro

NC	Prox	Imm	Dist	Anaph
MSg	na:-'-gi 15 5.8.4	na:-da-gi 0 or na-da-gi 0	nu:-'wa:-gi 2 171.1.1	nu:-'ba-gi 17 10.11.3
FSg	n^{g}ara:-'-gi 3 73.8.5	n^{g}a:-da-gi 0 or n^{g}ara-da-gi 0	n^{g}ar-uwa:-gi 0 TNT 7	n^{g}ar-uba-gi 5 29.7.3
MDu	na:-'-wi-ni 0	na:-di-ni 0 or na-di-ni 0	nu:-'wi-ni 0	nu:-'bi-ni 8 1.1.1
FDu	n^{g}ara:-'-wi-rn^{g}i 0 MT 8	n^{g}a:-di-rn^{g}i 0 or n^{g}ara-di-rn^{g}i 0	n^{g}ar-uwi-rn^{g}i 0	n^{g}ar-ubi-rn^{g}i 0
Pl	wara:-'-wu-ru 3 28.27.1	wa:-du-ru 1 14.9.2 or wara-du-ru 0	war-uwu-ru 2 65.13.4	war-ubu-ru 2 65.9.5

Note: See notes to Table 7-1, above. Figures to right of form are textual exx. in NMET with no further suffix (except postposition).

TABLE 7-3

Nonhuman Nonpredicative DemPro

NC	Prox	Imm	Dist	Anaph
NA$_{c}$	na:-'-gi 12 19.1.3	na:-da-gi 1 100.7.3 or na-da-gi 0	nu:-'wa:-gi 0	nu:-'ba-gi 4 108.4.5
NA$_{p}$	yira:-'-gi 0 MT 8	yi:-da-gi 0 or yi:-ni-da-gi 0	yir-uwa:-gi 0 or yi:-'wa:-gi 0	yi:-ba-gi 6 14.10.2 yiri-ba-gi 0
N^{g}ARA$_{c}$	n^{g}ara:-'-gi 13 112.7.1	n^{g}a:-da-gi 0 or n^{g}ara-da-gi 0	n^{g}ar-uwa:-gi 0	n^{g}ar-uba-gi 6 104.2.5
N^{g}ARA$_{p}$	[same as NA$_{p}$] 0	[same as NA$_{p}$] 0 or yiri-da-gi 0 or yi:-n^{g}ari-da-gi 0	[same as NA$_{p}$] 0	[same as NA$_{p}$] 0
WARA$_{cp}$	wara:-'-wa 16 4.2.1 or wara:-'-wi 2 59.1.4	wa:-da-wa 1 7.11.2 or wa:-da-wi 0 or wara-da-wa 1 7.11.1 or wara-da-wi 0	war-uwa:-wa 2 112.6.3 or war-uwa:-wi 0	war-uba-wa 6 17.10.2 or war-uba-wi 5 9.10.4
ANA$_{c}$	ana:-'-ni 188 1.7.5	a:-da-ni 4 47.21.7 or ana-da-ni 0 or an-uda-ni 0	an-uwa:-ni 5 14.16.3	an-uba-ni 136 1.2.3

[continued next page]

(Table 7-3, cont.)

NC	Prox	Imm	Dist	Anaph
ANA_p	a:-'-ni 19 10.12.5	wuda-ni 0	o:-'wa:-ni 19 1.8.7	o:-'ba-ni 23 2.5.3
		or o:-'da-ni 0		
$MANA_c$	mana:-'-ma 29 9.4.3	ma:-da-ma 1 97.3.1	man-uwa:-ma 0	man-uba-ma 5 10.15.6
	or mana:-'-mi 1 13.8.4	or ma:-da-mi 0	or man-uwa:-mi 0	or man-uba-mi 5 1.7.2
		or mana-da-ma 0		
		or mana-da-mi 0		
$MANA_p$	ama:-'-ma 3 120.5.4	am-uda-ma 0	am-uwa:-ma 0	am-uba-ma 0
	or ama:-'-mi 0	or am-uda-mi 0	or am-uwa:-mi 0	or am-uba-mi 0
		or wuda-ma 0		or o:-'ba-ma 2 14.2.2
		or wuda-mi 0		or o:-'ba-mi 0

Note: As in previous tables, figures indicate no. of NMET exx. without further suffix (except post-position). Subscripts: p(unctual), c(ontinuous), §4.8.

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unprefixed forms shown in Table 7-1 with the addition of nominal NC_{infl} prefixes; see Tables 7-2 (human) and 7-3 (nonhuman). We may observe immediately that the NC_{infl} prefixes produce some NC oppositions which were not made in the unprefixed forms. In particular, MSg/NA is now distinct from FSg/N^gARA (at least in the continuous NC_{infl} form). In the punctual NC_{infl} form, NA and N^gARA are identical (except for an optional differentiation in the Imm category), but they are distinct from MSg and FSg in this form. This is also the pattern with nouns.

In the prefixed forms, the initial /y/ of Prox /ya:-/ and of Dist /yuwa:-/ is not seen, and the surface forms are compatible with postprefixal base forms //-a:-// and //-uwa:-//, respectively. We therefore recognise distinct word-initial and post-prefixal allomorphs for these roots. One could also formulate a minor rule deleting //y// in these combinations, or perhaps taking the /y/ as inserted (in the word-initial form) by another minor rule. I prefer to say that we have allomorphs here, since the Imm and Anaph also show partly variant root shapes with no phonological basis.

The Anaph root takes the form /-uba-/ in the prefixed forms. When preceded by a bisyllabic NC_{infl} prefix like FSg/N^gARA prefix /n^gara-/, the prefix loses its final vowel by V-Truncation P-46, since the root begins with a high vowel. With MSg/NA prefix /na-/ and with ANA_p prefix /a-/, however, we get /nu:-'/ and /o:-'/ by VV-Contraction P-49.

The regular NA/$N^g$$ARA_p$ prefix with nouns is /yi:-/. This form occurs in some of the corresponding DemPro forms like /yi:-'ba-gi/, but there are also some DemPro forms where the prefix seems to have the form /yira-/ (as in /yira:-'-gi/) or /yiri-/ (as in /yiri-da-gi/, /yiri-ba-gi/).

The Anaph $MANA_p$ variants /o:-'ba-ma/ and /o:-'ba-mi/ are not regular (in terms of prefix patterns in nominal morphology). Rather, they show extension of ANA_p prefix /a-/, as in /o:-'ba-ni/, to the MANA class. This prefixal neutralisation causes no harm in DemPro morphology, since (unlike nouns) these DemPro forms already clearly distinguish MANA from ANA forms by the NC suffixes (/-ma/ or /-mi/ vs. /-ni/, respectively).

The most serious irregularities are found in the Imm paradigm, which has unusual prefix forms like ANA_c /a:-/ (instead of /ana-), MSg or NA_c /na:-/ (instead of /mana-/). That is, the special Imm prefix forms are derived from the regular prefix forms by lopping off the second prefix syllable (if bisyllabic), and in any event lengthening the first prefix vowel; see Prefix-Truncation P-35. (This rule also takes care of some prefix alternations affecting certain kin terms.) This accounts for the human prefixes and the continuous nonhuman prefixes in the Imm forms. (Actually, the regular prefix forms unaffected by P-35 can be used in Imm forms, but they are not common.)

The punctual Imm forms for nonhuman NC are also messy. Forms like /am-uda-ma/ point to a postprefixal root allomorph /-uda-/ parallel to postprefixal Anaph root /-uba-/. This also occurs in //uda-ni//→/wuda-ni/ (ANA_p) and //uda-ma//→/wuda-ma/ ($MANA_p$), with /w/ inserted word-initially by Initial Semivowel-Insertion P-5. Here there is no apparent prefix, though it may well be that we have /a-/ prefix being "swallowed" by the following /u/ in a partly irregular contraction here. A variant /o:-'da-ni/ does occur in addition to /wuda-ni/, reflecting //a-uda-ni//. The forms are probably unstable and opaque to speakers. I have not recorded forms based on //-uda-// with NA, N^gARA, or WARA forms in the punctual prefix form, and with ANA I have recorded //-uda-// even in the continuous form /an-uda-ni/ (admittedly rare).

The punctual Imm forms for NA and N^gARA include unusual optional forms with /-ni-/ (NA) or /-n^gari-/ (N^gARA) inserted between the usual NA/$N^g$$ARA_p$ prefix /yi:-/ and the root: /yi:-ni-da-gi/, /yi:-n^gari-da-gi/. These inserted forms resemble NC_{der} prefixes /niG-/ (NA) and /n^gariG-/ (N^gARA), see §4.7, §4.9. The form /yiri-da-gi/ with the bisyllabic variant of prefix was, according to one informant, applied to N^gARA but not NA referents; I suspect that it might also apply to NA, but in any event the form is rare.

The WARA forms in Table 7-3 do not distinguish continuous from punctual prefix forms, since this prefix opposition is possible in this NC only when the root begins with a consonant. The Prox, Dist,

and Anaph (postprefixal) roots begin with vowels, so /wara-/ is the only possible (underlying) prefix form, the distinctive $WARA_p$ variant /wa:-/ being phonologically impossible before vowel. The remaining root, Imm, though (here) beginning with consonant, changes /wara-/ to /wa:-/ by Prefix-Truncation P-35 most of the time, so the continuous vs. punctual prefix opposition is basically merged here as well. The optional full form with /wara-/, as in /wara-da-wa/, is perhaps explicitly continuous, but it seems that /wa:-/ is most common regardless of "aspect" value.

7.4 Uses of predicative and nonpredicative DemPro.

For common nouns, it may be recalled, omission of the NC_{infl} prefix is characteristic of nouns which are foregrounded, particularly in initial discourse occurrences. For human nouns, the alternative is the presence of the single NC_{infl} prefix form. For nonhuman nouns, we have a further choice between continuous and punctual NC_{infl} forms, an opposition whose significance is contextually variable and correlates with negation (requiring continuous prefix rather than punctual prefix or zero) and, in nonnegative contexts, with grammatical case/relation (§4.8, above).

For DemPro, the tables just given indicate that the array of formal possibilities is close to that seen with nouns; human DemPro have choice between presence and absence of NC_{infl} prefix, and nonhuman DemPro have a three-way choice between absence of prefix, continuous prefix, and punctual prefix.

With DemPro, however, the unprefixed forms are characteristically used in predicative function. In particular, the normal present positive predication of location is with a DemPro:

(7.i) ya:-gi — na-walyi-n^yun^g — 'The man is here'
this-MSg — MSg-male-HumSg — (or, 'Here is the man')

That is, the regular predication of location is of the type 'X [is] this/that' or 'This/That [is] X'. The DemPro may precede or follow the subject NP (if the latter is overtly mentioned), with initial position common.

If the literal translation 'X [is] this/that' is kept in mind, it will be seen that this construction cannot be used in negative contexts, and only with difficulty can be used in non-present tenses. A putative construction *'X [is] not this/that' could not be a normal translation for English 'X is not here/there', since *'X [is] not this/that' (a formulation presupposing a distinct referent in the demonstrative zone specified) would have another, simpler reading of the type 'X is not identical to this/that (person or thing)'. Instead, negative predications of location have a negative element /=ari/ as predicate, with adjoined demonstrative adverb (§15.6):

(7.ii) na-walyi-n^yun^g — ni:='ri — ana:-'-ji
MSg-male-HumSg — $3MSg_a$=absent — ANA_c-Prox-Loc
'The man is/was not here'

For past positive 'X was here/there', a predicative DemPro may be used under limited conditions involving either narrative perspective, or the continuing (present tense) presence of at least some

mark or imprint of the referent. In any event, an additional verb like 'he sat' is usually added. A corresponding construction with demonstrative adverb instead of DemPro is, in general, more likely:

(7.iii) ya:-gi — ni=bura-n^{g}a-n^y
this-MSg — $3MSg_a$=sat
'He sat down here' (narrative perspective, or emphasising continuing visible imprint)

(7.iv) ya:-ji — ni=bura-n^{g}a-n^y
Prox-Loc — [as above]
'He sat down here' (usual form with adverb 'here')

Another alternative is to use a predicative DemPro which refers not to the person who sat down in the location, rather to the place itself. Since the generic noun /lha:l/ 'place, country' and place names generally are in the ANA_{wu} subclass of the ANA noun class, this means using /ya:-ni/ 'it (ANA class) [is] this' or some other predicative DemPro of ANA class:

(7.v) ya:-ni — ni=bura-n^{g}a-n^y
this-ANA — $3MSg_a$=sat
'He sat down here'

Note that whereas the uncommon type (7.iii) is literally '[he is] this, he-sat', the type (7.v) is literally '[it is] this, he-sat', where 'it' refers to the (Prox) location. The problem with (7.iii) is that, except in special contexts, it is ruled out by the fact that the man who sat down is (presumably) no longer in the Prox region with respect to speaker and addressee at the time of the speech event, so that 'this' represents an inappropriate presupposition. On the other hand, (7.v) presents no problem, since the location ('this [place]') remains in place. In other words, the ANA DemPro in (7.v) is very close functionally to the Locative adverb in (7.iv). However, as shown in (7.ii), the adverb (with obligatory ANA_c prefix /ana-/) is required in negatives.

Although /ya:-ji/ 'here' and /ya:-ni/ '[it is] this' are partly interchangeable in these exx., I consider /ya:-ji/ in (7.iv) to be a constituent of the clause whose predication is 'he-sat', while (7.v) syntactically constitutes a double-predicate construction. This is because /ya:-ni/ and /ni=bura-n^{g}a-n^y/ are each perfectly capable of standing alone as predications, '[it is] this' (i.e., more loosely, 'it is here') and 'he-sat', respectively. The same is, of course, true of /ya:-gi/ and /ni=bura-n^{g}a-n^y/ in (7.iii). However, the adverb /ya:-ji/ in (7.iv) specifies the location to which the predication ('he-sat') applies, but does not itself predicate anything. It is included within the scope of negation of the main predicate, shown in (7.ii). Textual occurrences of /ya:-ji/ 'here' or some other demonstrative adverb which lack an immediately juxtaposed main predicate are analysed here as involving ellipsis, with a verb like 'he was sitting' to be supplied.

Now for some textual exx. (from NMET), first with predicative Prox /ya:-gi/ (MSg, FSg, NA, N^{g}ARA) '[is] this'. We give exx. in informal translations where each word corresponds to a Nunggubuyu word but where word-internal hyphens in the translation do not match

Nunggubuyu morphemes. In 10.3.3 we have a quotation, 'along-here and it[Brolga]-speaks __ now to-there let's-go' (i.e., I hear the sound of Brolga [bird] over here, let's go), where __ marks the location of /ya:-gi/ (here $N^{g}ARA$). Similarly 11.10.3: 'let's-go, branch __ let's-pick-it-up' (let's go pick up the branch over here). In 119.1.2 'crow __ it-defecated' (i.e., crow has defecated here), despite past tense and absence of narrative perspective, uses /ya:-gi/ since the excrement constitutes the enduring visible mark of crow's former presence. (The relevant words for 'branch' and 'crow' are NA class.) Narrative perspective is seen in 12.5.3 'spear, he-kept-going-with-it and __ he-stood-with-it' (i.e., he came along holding the spear and there he stood with it) where the DemPro refers to the spear-holding man (not the spear, MANA class); also 15.11.1 'he-sat he-looked and __ "wu:::" blowfly, fly, it-buzzed-at-him' (blowfly is NA). A difficult ex. is 14.7.4: 'I my-mother __ she-went, to-fish' (my mother has gone fishing), where /ya:-gi/ (referring to the mother) might mean 'who is usually here (but temporarily absent)' or 'who was just here'. The other exx. of /ya:-gi/ are 10.9.3, 15.1.2, 20.8.2, 27.4.4, 28.6.5/6 (FSg), 34.1.2 (Prox vs. Imm used in narrative to keept two referents apart), 41.6.2, 43.9.1, 47.23.6, 72.3.5, 74.4.1-3, 79.1.3, 100.1.5, 100.3.1 (twice, for different referents in narrative), 104.3.5 ($N^{g}ARA$), 119.1.4 (repeat of 119.1.2, crow ex. just mentioned), and 144.2.3. Because NMET contains mostly past-tense narratives, exx. of narrative-perspective skewing in the list are common.

The prefixed DemPro corresponding to /ya:-gi/ are MSg and NA_{c} /na:-'-gi/, FSg and $N^{g}ARA_{c}$ /n^{g}ara:-'-gi/, and $NA/N^{g}ARA_{p}$ /yira:-'-gi/, see Tables 7-2, 7-3. Exx. of /na:-'-gi/ include several where this DemPro is clearly used to refer to a presupposed entity rather than to predicate location. For example, it was used by speakers to refer to the linguist, e.g., 7.16.2, 47.9.6, 47.10.6, 64.9.7, 161.35.6. Other exx. of /na:-'-gi/ are 5.8.4, 15.14.2, 19.1.3 and 19.2.2/3 (again, used as referential index to keep turtle distinct from other actor), 34.1.4, 34.2.6, 34.4.1, 34.7.3, 71.5.4, 73.4.1, 100.4.2, 100.5.1, 108.8.2, 121.3.3, 139.11.4, 140.3.5 (refers to tree sp.), 161.6.2 (added to man's name), 170.3.3, 170.4.1. In some of these instances, /na:-'-gi/ is added to the name of a plant sp. or whatever simply to indicate that the plant is found in the vicinity; thus in 170.3.3 the phrase /na-yalgurg na:-'-gi/ 'this tree orchid' does not presuppose that the speaker is pointing to a given specimen or even that orchids are immediately visible, rather merely that orchids can be found nearby.

Attestations of /n^{g}ara:-'-gi/, the FSg and $N^{g}ARA_{c}$ form, are: 7.4.1, 7.8.2, 13.5.2, 13.6.3, 23.1.1, 33.5.2, 36.2.2, 65.11.3/5/7, 73.8.5, 112.7.1, 112.8.1, 116.2.3, 167.4.1. The $NA/N^{g}ARA_{p}$ form /yira:-'-gi/ does not occur (except with case suffix present) in NMET (but cf. MT 8).

For nonhuman NC, choice between continuous and punctual prefix is based on essentially the same principles spelled out for nouns in §4.8. That is, negative contexts require continuous form; in other contexts the continuous is regular for subject and (usually) direct object, while punctual is common (though not required) for spatial cases like Allative-Dative /$-w_{1}$uy/, Ablative /$-w_{1}$ala/,

Pergressive suffixes /$-w_{1}$aj/ and /$-w_{2}$aj/, and Locative /-ruj/, as well as the nonspatial Similative /-ỹi:/. We have not yet covered overt case-marked forms of demonstratives since they present several departures from nominal usage; the figures in the tables above (7-1, 7-2, 7-3) do not include case-marked forms.

However, in addition to overtly case-marked DemPro forms, there are also many NP-like combinations of DemPro with following coreferential noun. In such combinations, if the whole NP is in a grammatical relation calling for a marked case suffix, the suffix may be added to both DemPro and noun, to just the DemPro, or to just the noun. Both DemPro and noun are typically in the punctual prefix form (if appropriate for the case category) regardless of which one gets the case suffix in the exx. with just one case suffix. Thus in 14.10.2 we see /yi:-ba-gi yi:-n^{g}ala:ligi-ruj/ 'at that(Anaph) turtle(NA class)' (i.e., 'at the place where the turtle was'), where the DemPro is /yi:-ba-gi/ instead of the full Locative form /yi:-ba-gi-ruj/, and where both DemPro and noun have punctual NA prefix /yi:-/. Both DemPro and noun have case marking in 101.3.4, but there is a pause between them: /yira:-'-gi-wuy, yi:-ni-bibi--yun^{g}-guy/ 'to this one, to the mother(NA class)'. The type with case-marked DemPro and no suffix on the noun is less common, but note 5.20.5 /nu:-'ba-gi-wuy na-wiri-$n^{y}un^{g}$/ 'for[to] that boy', with suffix added to MSg Anaph DemPro /nu:-'ba-gi/. See also §15.2.

Moreover, as explained in §4.18 and elsewhere in Chapter 4, case-marking in general is somewhat lax, and an appropriate case suffix is often omitted on a noun even if it is not carried by a coreferential appendage (such as a DemPro). Thus, even when a noun, or more pertinently here a DemPro, is the only surface word in a NP, an expected case suffix is optionally omitted if this does not create serious ambiguities. In this situation it is usual to have the punctual NC_{infl} prefix (if called for by the underlying grammatical relation), so this form of the prefix can function as an indicator of the virtual presence of a marked case suffix. Some exx. of DemPro with punctual prefix but without overt case suffix are of this type. Thus, Similative suffix /-yi:/ may be omitted when the particle /$n^{g}un^{y}$ju/ 'like' is present, hence /$n^{g}un^{y}$ju a:-'-ni/ 'like this(ANA)' 157.15.3 (cf. 10.12.5, 69.13.2, 139.3.4, 143.3.5, 143.10.1, 157.16.2). The full Similative form here is /a:-'-ni-yi:/, which can be used to mean 'like this(ANA)' either by itself (71.12.6, 157.1.2/5) or with /$n^{g}un^{y}$ju/ (13.8.2, 113.9.3). As with nouns, the punctual NC_{infl} prefix must be replaced by the continuous prefix in negative contexts, thus /ana:-'-ni-yi:/ 'like this(ANA)' in negative context in 165.1.7.

7.5 Centripetal /-ala/, Centrifugal /-ali/, Transverse /-waj/.

A very important component of the demonstrative system is a set of three suffixes implying motion (activated or expected) between two reference points. In the primary constructions to be discussed in this section, the three suffixes listed above are mutually exclusive. There is thus a four-way opposition between an unmarked static category and the three marked categories. We now describe uses of /-ala/, /-ali/, and /-waj/ with DemPro. These suffixes are also used in adverbial formations discussed in later sections.

TABLE 7-4

Motion Forms of DemPro

A. Centripetal /-ala/ (predicative), all forms

Prox	Imm	
ya:-gi:-'la 6	da-gi:-'la 6	MSg/FSg/NA/N^{g}ARA
ya:-wi-n̲i:-'la 1	di-n̲i:-'la 1	MDu
ya:-wi-rn^{g}i:-'la 0	di-rn^{g}i:-'la 1	FDu
ya:-wu-ra:-'la 2	du-ra:-'la 2	Pl
ya:-wa:-'la 8	da-wa:-'la 0	WARA
ya:-wi:-'la 5	da-wi:-'la 2	"
ya:-ni:-'la 15	da-ni:-'la 1	ANA
ya:-ma:-'la 2	da-ma:-'la 1	MANA
ya:-mi:-'la 2	da-mi:-'la 0	"

Dist	Anaph	
yuwa:-gi:-'la 3	ba-gi:-'la 5	MSg/FSg/NA/N^{g}ARA
yuwi-n̲i:-'la 0 [TNT 4]	bi-n̲i:-'la 0	MDu
yuwi-rn^{g}i:-'la 1	bi-rn^{g}i:-'la 2	FDu
yuwu-ra:-'la 0	bu-ra:-'la 0	Pl
yuwa:-wa:-'la 2	ba-wa:-'la 1	WARA
yuwa:-wi:-'la 0	ba-wi:-'la 0	"
yuwa:-ni:-'la 6	ba-ni:-'la 27	ANA
yuwa:-ma:-'la 0 [MT 5]	ba-ma:-'la 3	MANA
yuwa:-mi:-'la 0	ba-mi:-'la 0	"

B. Centrifugal /-ali/ (predicative), attested forms only

Prox	Imm
ya:-gi:-'li 0 [MT 13, 21]	none
ya:-wi-n̲i:-'li 0 [MT 18]	
ya:-ni:-'li 8	
ya:-ma:-'li 4	

Dist	Anaph
yuwa:-ni:-'li 1	none

C. Transverse /-waj/ (predicative), attested forms only

Prox	Imm
ya:-gi-waj 1	none
ya:-wa-waj 1	
ya:-ni-waj 6	
ya:-mi-waj 4	

Dist	Anaph
yuwa:-gi-waj 1	ba-gi-waj 1
yuwa:-wa-waj 1	bi-n̲i-waj 1
yuwa:-wi-waj 1	bu-ru-waj 1
yuwa:-ni-waj 0 [MT 4, 19]	ba-ni-waj 5

There are no important phonological difficulties in connection with the motion forms of DemPro. Centripetal /-ala/ and Centrifugal /-ali/ will always undergo VV-Contraction P-49 since the DemPro stems to which they are added all end in vowels; thus //a-a//→ /a:-'/, //i-a//→/i:-'/, //u-a//→/a:-'/. The predicative (unprefixed) DemPro forms are shown in Table 7-4, though for /-ali/ we indicate only forms citable from the texts. Transverse /-waj/ may show up as /-yaj/ (after /i/) or /-aj/ (after /a/), though the transcriptions given in the table show /-waj/.

Centripetal /-ala/ is semantically close to Ablative case suffix /-w$_1$ala/ (with nouns, see §4.21). Synchronically, I would say that they are distinct but closely associated affixes; we will see later (§7.8) that a combination of the two, /-ala-w$_1$ala/, is possible in demonstratives. Centrifugal /-ali/ is unique to demonstratives. Transverse /-waj/ is semantically close to Pergressive nominal case suffixes /-w$_2$aj/ and /-w$_1$aj/ (§4.23), but again there are some differences and I prefer to label Transverse /-waj/ with a different term.

The forms in Table 7-4 are followed by numerals indicating no. of occurrences in NMET (a few forms not found in NMET are shown with an attestation in Hughes' text collections, MT and TNT). The totals are (for NMET only): 105 Centripetal, 13 Centrifugal, and 21 Transverse. As usual, these figures are for the forms shown with no further affixes (except postpositions). There are many other exx. involving these same forms along with other prefixes and/or suffixes, in adverbs, and in special derivatives like the (mostly reduplicated) Lateral forms in §7.21 and those involving suffix sequences like /ala-yun^{g}-gala-waj/ (§7.9). However, the figures we give here will offer an idea of the importance of these motion forms of DemPro. By comparison, the total for all non-motion (static) predicative DemPro (Table 7-1) is 358. Since the three motion types add up to 139, we can see that the motion forms are about one-third as common in the texts as the static forms.

The Centripetal is used to indicate motion (actualised or anticipated) between two locations. Prototypically, the reference locations are a) the location of the referent of the DemPro, and b) the speaker's 'here'. If the referent is in motion toward the speaker, hence going from (a) to (b), it is appropriate to add /-ala/, but if the referent is not moving it is appropriate to use the unsuffixed static form. Thus, with predicative DemPro, we have /yuwa:-gi/ 'There(Dist) he is' and Centripetal /yuwa:-gi:-'la/ 'There(Dist) he comes'. Notice that Nunggubuyu does with a single demonstrative what English does with a three-word sentence (with demonstrative adverb specifying present location of referent, pronoun indicating who the referent is, and motion verb indicating direction of movement). In /yuwa:-gi:-'la/, the Dist root /yuwa:-/ indicates the present location of the referent, the NC suffix /-gi-/ indicates pronominal (NC) category of referent, and Centripetal /-ala/ indicates axis of motion. We should add that the opposition static vs. Centripetal is more-or-less obligatory in Nunggubuyu. In many contexts where 'There he comes' is possible in English, we have the option of just saying 'There he is'. In Nunggubuyu, if motion is in fact occurring, the Centripetal form is standard.

In the ex. just given ('There he comes'), the referent is in motion from (a) to the speaker's location (b). However, in Nunggubuyu the Centripetal is also frequently used when one or more of the immediate participants in the speech act is/are in motion toward the referent (who may be static), so that the motion is from (b) to (a). In English, this kind of shift in perspective is usual only when the speech-event participants are in vehicles (in which case we may talk of a building 'coming up on the left', etc.). In Nunggubuyu, the perspective shift is much more common. If you and I are walking around in the bush looking for something, say a coconut palm, if I spot one I will normally say to you /da-ma:-'la ma=lha-ra/ 'There(Imm-Centrip) it stands'. Here /da-ma:-'la/ (MANA class) by itself could be translated 'There it comes', but of course the palm is in a fixed position, and indeed if we add a verb it will be something like /ma=lha-ra/ 'it stands' instead of a verb of motion. Moreover, the motion from (b) to (a) need not be actualised at the time of the speech event. If you approach me (from whatever direction) and ask me, 'Where is So-and-So?', I may point to a man sitting under a tree some distance away and say /yuwa:-gi:-'la/ 'There(Dist-Centrip) he is'. This is appropriate if and only if I assume that you will go over to the man after finding out where he is. (On the other hand, if you were to ask where your mother-in-law is, I would not use /yuwa:-gi:-'la/ since I assume that you will not approach her--which would be an outrageous infringement of native custom.)

In the case of ANA class forms, the Centripetal may be used with reference to motion which has occurred or will occur, regardless of tense. This is because the ANA forms often refer to the place(s) of reference rather than to the actors. To translate English 'He came along here', one can say /ya:-ni:-'la ni=ya-n^{g}gi/, lit., 'Here-it-is (Centrip) he-went' (where 'to go' in Nunggubuyu does not exclude motion in a centripetal direction). Hence /ya:-ni:-'la/ can mean 'along here'. Centripetal DemPro of other classes are used under stricter conditions in past tense contexts (§7.26).

Textual exx. of predicative Centripetal DemPro (Table 7-4) are: /ya:-gi:-'la/ 5.14.5, 5.16.3, 5.18.7, 20.15.3, 69.3.1, 69.6.3; /ya:-wi-ni:-'la/ 69.6.4; /ya:-wu-ra:-'la/ 45.10.2, 157.9.2; /ya:-wa:-'la/ 15.8.1, 30.3.5 (past tense, hence with narrative perspective), 40.14.2 ('lest' Evitative clause), 143.4.4/5 (past), 143.12.4, 161.34.5 (past), 166.17.3; /ya:-wi:-'la/ 18.13.7, 20.12.2/3, 20.13.3/4; /ya:-ni:-'la/ 5.17.2, 10.3.1/2 (past), 10.14.3, 13.37.2, 14.12.1, 18.8.6 (they saw island coming up), 18.10.4 (ditto), 18.18.6, 20.17.4, 21.6.2, 35.2.2, 45.10.4, 65.11.2, 113.7.3; /ya:-ma:-'la/ 55.3.4, 127.4.3 (static tree); /ya:-mi:-'la/ 18.21.3 and 20.16.2 (stone-hills coming up); /da-gi:-'la/ 1.9.4, 5.18.3 (past), 10.17.4 (past), 69.3.1 (past); /di-ni:-'la/ 40.4.4 (past); /di--rn^{g}i:-'la/ 11.4.1 (past); /du-ra:-'la/ 69.7.1 (past), 166.19.1 (past); /da-wi:-'la/ 18.13.6 (past), 37.3.4 (past); /da-ni:-'la/ 70.1.2 (past); /da-ma:-'la/ 55.3.1; /yuwa:-gi:-'la/ 34.4.4 (past), 34.5.1, 144.2.4 (tree); /yuwi-rn^{g}i:-'la/ 11.10.1 (past); /yuwa:-wa:-'la/ 9.13.4, 143.12.8; /yuwa:-ni:-'la/ 15.8.4, 18.9.5, 21.3.2, 31.1.2, 35.1.1, 161.27.2; /ba-gi:-'la/ 12.9.4 (past), 24.1.2/5 (past), 65.10.2, 95.2.6 (past); /bi-rn^{g}i:-'la/ 13.19.2 (past),

13.28.3 (past); /ba-wa:-'la/ 42.5.5; /ba-ni:-'la/ 1.8.10, 5.16.1, 9.3.4, 18.15.4, 19.4.4, 21.9.5, 22.4.4, 23.1.2, 23.2.3, 24.3.4, 26.1.1, 28.12.6, 29.7.1, 35.1.2, 35.2.1, 35.20.1, 40.12.1, 42.5.4, 45.6.5, 52.5.3, 55.2.5, 55.8.1, 94.3.4, 125.11.2, 161.3.7, 162.7.3; and /ba-ma:-'la/ 9.4.2 (tide coming in), 21.4.5 (floodwaters coming), and 163.3.3 (vehicle).

Some uses of /ba-ni:-'la/ (see list just above) involve the appearance of celestial bodies (40.12.1, star) or of the dawn (52.5.3, 125.11.2), but not by agreement with the NC of any particular noun. The ex. in 94.3.4 involves a sound coming from afar, and is consistent with the regular use of motion or directional elements in connection with speech and noises.

Centripetal forms can also be made from prefixed (nonpredicative) forms of DemPro, though they are less common than the predicative ones already illustrated in Table 7-4 and the lists of exx. just given. The nonpredicative forms are used with NPs which are clearly just part of the argument structure of some other predication, so that the Centripetal marker (and the location in general) is not focal.

We can cite the following forms with their textual occurrences: Proximate /wara:-'-wa:-'la/ 21.7.1; /ana:-'-ni:-'la/ 113.5.5, 120.1.5 (negative); /a:-'-ni:-'la/ 7.14.3 (cloud), 35.10.1, 143.12.5; /ama:-'-ma:-'la/ 13.7.1 (excrement); zero Immediate forms; Distant /war-uwa:-wa:-'la/ 47.20.5 (people coming from south), 114.1.3 (water lilies); /an-uwa:-ni:-'la/ 161.30.4; /o:-'wa:-ni:-'la/ 16.1.3, 28.1.1, 161.3.6, 166.1.3; and some 30 exx. of Anaph /an-uba-ni:-'la/ sometimes meaning 'from there' but often in temporal sense 'after that', e.g., 2.5.4, 7.9.3, 8.5.2, 8.6.2, 9.10.3, 16.19.4, 24.3.3, 41.16.4, 161.23.1, and several others.

We now consider Centrifugal /-ali/. We will find this to be a common suffix in Lateral derivatives such as /ya:-ji-ji:-'li/ 'on this (the near) side' (§7.21), and in some unreduplicated adverbs such as /ya:-ji:-'li/ (see §7.16). However, as Table 7-4 indicates, we find relatively few instances of /-ali/ with predicative DemPro. They are overwhelmingly concentrated in the Prox category (as is also the situation with adverbs involving /-ali/).

Centrifugal forms are not concerned with the destination of a trajectory (in the way Centripetal forms are). Instead, they focus on a limited portion of the trajectory within (usually) the Prox zone, and normally specifically imply that the trajectory begins in this zone. Thus the focus, if anything, is on the point of departure rather than the destination. Let us consider the textual exx. in NMET.

We find /ya:-ni:-'li/ in 18.19.4 (stabbed him here in the throat), 47.12.6 (here I speak, tomorrow I go to another place), 47.12.6 (I know words [i.e., myths/customs] starting here at [place n.]), 118.4.4 (from here and that way, to the south), 119.7.4/6 (tree sp. found from here going north), 161.3.4 (came here to the mainland, was eating dugong along from here), and 163.6.1 (let's go back from here). We have /ya:-ma:-'li/ four times in text 40 (40.1.5/6, 40.13.5, 40.14.1) referring to a path or track (MANA class) which is 'going along from here'. Note that /ya:-ni:-'li/ normally refers to locations (ANA class) rather than actors and thus has functional

affinities to adverbs, and the exx. with /ya:-ma:-'li/ refer to the path rather than to persons or objects in motion. The form /yuwa:-ni:-'li/ cited in Table 7-4 is actually unclear on the tape (5.16.5) and may be erroneous; it involves the Dist root.

A handful of prefixed (nonpredicative) Prox DemPro with /-ali/ are recorded: /ana:-'-ni:-'li/ 125.13.2, 166.8.1; /a:-'-ni:-'li/ TNT 19 ("anili").

The Centrifugal forms, as noted, do not specify destination or even the broad direction of the trajectory. However, in several of the exx. just cited, they co-occur with a cardinal-direction adverb, another demonstrative adverb, or an Allative NP specifying endpoint or direction of motion.

This brings us to Transverse /-waj/. As Table 7-4 shows, a number of forms are attested for the Prox, Dist, and Anaph roots. The Imm root is not represented for the simple DemPro Transverse type, but would be represented if we allowed combinations including Concrete suffix /-u-/, which is particularly common with the Imm root and which is attested several times with following /-waj/.

The forms citable from NMET related to Table 7-4 are these: Prox /ya:-gi-waj/ 15.10.4 (he_i went past him_j, [while] he_j was sitting along here); /ya:-wa-waj/ 9.5.5 ([one group was over there and the other] was along here); /ya:-ni-waj/ 13.39.3 (it was this deep), 13.44.1/2 (rising water was up to here [manual gesture on body]), 15.9.6 (was hidden in scrub up to here, up to his upper back), 33.4.5 (stood with water up to here), 132.2.1 (dug hole this deep [i.e., up to here]); /ya:-mi-waj/ 12.10.2/3/4 (tide was up to here on them); Dist /yuwa:-gi-waj/ 108.1.4 (pulled up large plant, this long [approx. meaning]); /yuwa:-wa-waj/ 9.5.4 (one group was going along over there [and the other was along here]); /yuwa:-wi-waj/ 71.1.2 (they were going along over there, to the Ngandi [tribe]); Anaph /ba-gi-waj/ 18.14.5 (there he goes now!); /bi-ni-waj/ 5.3.7 (they were going along there); /bu-ru-waj/ 14.14.2 (they were paddling along there); and /ba-ni-waj/ 113.9.6 (we stayed in that area), 120.2.1 (we don't have that tree sp. in our country, over in that area they get it), 164.3.4 (we will not come [back], we'll stay in that area), 166.3.3 and 167.7.4 (were hunting trepang around there [list of several place names]). In addition to the predicative forms just given, we can cite some prefixed DemPro as well: /ana:-'-ni-waj/ 12.10.4; /a:-'-ni-waj/ MT 4; /yi:-ba-gi-waj/ 103.2.1 (eating giant clams [exact sense unclear]); /war-uwa:-wi-waj/ 119.6.5 (all those people along there were cutting up fruits); /o:-'wa:-ni-waj/ 108.7.1, 162.14.3; and /am-uwa:-mi-waj/ 116.8.6, 118.3.4, and three times 142.2.1/2 (skinning off bark).

These are fairly crude translations, but we seem to have the following closely related meanings: a) referent moving along in some axis not specifically centripetal, perhaps prototypically across the line of sight of speaker (hence 'Transverse'); b) location fuzzily or vaguely defined zone ('around there'), also a complex of several nearby locations; c) group of referents, especially when strung out in a line or similar formation; d) measuring height of water or hole with reference to body ('up to here') with accompanying manual indication.

FIGURE 7-2

DemPro Motion Axes

Centripetal	Centrifugal	Transverse
A → B [A moving toward B]	← B [motion beginning in B with no definite target]	A → B [motion not toward B]
or		
A ← B [someone in B moving, or expected to move, toward A]		

Note: B is 'here' in narrative perspective or in the speech-event (though the relevant motion from B in the second Centripetal scenario may be of the addressee); A represents a distinct referent (or location). The DemPro root is based on the location of A in Centripetal and Transverse, that of B in Centrifugal.

The common denominator for the Transverse DemPro forms seems to be that there is an axis of motion (usually straight but sometimes crooked or zigzagged) not crucially defined as having the speech-event (or narrative) 'here' as starting or ending point (though the demonstrative root itself may be Prox, when the entire trajectory is within the Prox region, or in cases like 'water was up to here' where the rising water constitutes a broad geometric plane which cannot be visualised as being aimed at a particular point).

The primary senses of the motion suffixes are represented schematically in Figure 7-2.

One final point which perhaps was not made clearly enough in the preceding discussion is that linear extent and motion are effectively interchangeable in connection with these suffixal categories. Thus, some of the exx. cited involve a stretch of land, a path, a roughly linear array of persons or things, or something like water or a hole of a certain (specified) depth. In these cases the referent(s) need not actually be moving physically. However, even in such objectively non-moving instances, we can argue that the entities or zones are conceptualised as vectors, with a starting point and/or a target or end point. Perhaps we could speak of metaphorical motion here; cf. English 'My property goes from here to that fence' and related expressions. However, Nunggubuyu differs in that it does not use motion verbs in such contexts; if a verb is used it will be 'sits' rather than 'goes'.

7.6 Concrete /-u/.

This suffix is very common with Imm demonstratives of all types. It is also combinable with Anaph demonstratives but is much less

common in this category. It is not used with Prox or Dist roots. The exception is that it is part of a frozen suffix sequence /-u-wuy/ used to form Directional adverbs, almost exclusively with Imm and Prox roots (§7.14).

Phonologically, /-u/ added to a DemPro is manifested by a surface long /u:/ regardless of the quality of the preceding underlying vowel: /da-gi/ vs. /da-gu:-'/, /da-ma/ and /da-mi/ vs. /da-mu:-'/, /du-ru/ vs. /du-ru:-'/. Note that the difference between MANA endings /-ma/ and /-mi/ is phonologically neutralised here; the same is true of WARA endings /-wa/ and /-wi/.

Concrete /-u/ follows Centripetal /-ala-/, hence /da-ni:-'la/ 'There it comes' vs. Concrete /da-ni:-'lu:-'/. It cannot co-occur with Centrifugal /-ali/ (used with Prox root, §7.5), and if it did we would get the same output form /V:-'lu:-'/ as in the Centripetal. Concrete /-u-/ precedes Transverse /-waj/, as in /da-mu:-'-waj/ 'There it(MANA) goes' (37.5.1/2/3).

My understanding of the semantics of /-u/ has changed since earlier publications. Though no longer satisfied with the label 'Concrete', I retain it to avoid confusion and because other terms which might be considered are already pre-empted by other sections of this grammar.

In Table 7-5, below, we can see that the Concrete forms constitute about 35% of predicative Imm DemPro, but over 90% of nonpredicative Imm DemPro (based on NMET texts). This shows that

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TABLE 7-5

Frequency of Concrete Imm Forms

predicative DemPro			nonpredicative DemPro		
	Concrete	simple		Concrete	simple
da-gi	3	13	na:-da-gi	10	1
			n^{g}a:-da-gi	3	0
			yi:-da-gi	1	0
di-ni	0	1	na:-di-ni	1	0
di-rn^{g}i	1	0	n^{g}a:-di-rn^{g}i	0[MT 26]	0
da-wa/i	5	0	wa:-da-wa/i	11	1
			wara-da-wa/i	0	1
da-ni	14	22	a:-da-ni	32	4
			ana-da-ni	5	0
			an-uda-ni	1	0
			wuda-ni	2	0
da-ma/i	0	6	ma:-da-ma/i	11	1
			mana-da-ma/i	1	0
			am-uda-ma/i	1	0
TOTAL	23	42	TOTAL	79	8

Note: Computations exclude forms with further suffixes (except postpositions). Pl /du-ru/ vs. /du-ru:-'/ omitted because of difficulty in transcribing accurately.

the Concrete suffix is not exceptionally common when Imm location is foregrounded (predicated). In the textual corpus, predicative Imm DemPro are particularly common in contexts of the general type 'X took a look and there was Y' (/X ni=waran^{g}ga-n^{y} n^{g}a da-gi Y/), with narrative perspective determining choice of Imm root; this is a common way of saying 'Y appeared' or 'X saw/noticed Y'. Since, however, the Concrete suffix is very common with nonpredicative DemPro, which usually designate referents who are already socially present (i.e., visible to speech-event participants), or who (in narrative perspective) have already been mentioned, it would seem that the Concrete suffix tends to imply some presuppositions about the referent and/or the location.

The nonpredicative DemPro shown on the right in Table 7-5 were also analysed in terms of their syntactic roles. There were some coding problems and in some instances it was necessary to make a judgement as to which clause-like sequence the DemPro belonged to if there were two possibilities. The preponderance of the 76 codable Concrete forms, such as /na:-da-gu:-'/ and /a:-da-nu:-'/, were one-word NPs functioning as subjects of a nonverbal predicate (29%) or were otherwise one-word NPs or separated from other segments of the same NP by a pause or another word (41%). Other categories were: immediately preceding coreferential noun (12%), immediately following noun to finish NP (11%), and use in connection with 2nd person pronominal (8%). Only 7 simple (non-Concrete) forms like /na:-da-gi/ and /a:-da-ni/ were codable; 3 directly preceded coreferential noun, 2 were subjects of nonverbal predicate, and 1 each were after coreferential noun and separate NP.

Subject of nonverbal predicate, e.g., 'That (one) is bad', tends strongly to involve a presupposed subject referent, with the adjective or other predicate highly foregrounded. In the computations just reported I found 22 instances of Concrete form and only 2 of non-Concrete (simple) nonpredicative DemPro. Moreover, the 2 simple DemPro occurred in one passage (/wara-da-wa/ 7.11.1 and /wa:-da-wa/ 7.11.2), where the context was 'Who [is] that/those [who] hid it from me?'. Since the predicate here is an interrogative ('who?'), this is an exceptional case in which the subject of a nonverbal predicate does not have a presupposed identity or location.

The usage of Concrete form /a:-da-nu:-'/ (ANA class) as a redundant 2nd person marker (see §7.27) may be accounted for by observing that the addressee is, more or less by definition, established by the speech event and may thus be presupposed. Exx. are 14.7.3, 16.16.1, 40.5.2 (twice, here 2Du), and most likely also 3.7.5 and 5.8.2 (where, however, there is also another possible interpretation).

With predicative DemPro, there is more leeway in deciding whether to use /-u/. It appears that the speaker must decide whether the Imm location in 'X is there' (or 'There is X') is strictly deictic (pointing, non-presupposing) or whether it is legitimate to specify the location as one presupposed by the speech-event (or narrative perspective). It is likely that location quite near the addressee favours use of the Concrete suffix, since this location is at the core of the Imm region and in the sector most strongly presupposed by the speech event. However, my understanding of the

unpublished elicited data on this matter is that the Concrete suffix is not used when the location is vague (as in 'it must be somewhere around here/there'); this was the main reason I chose the label 'Concrete' in the first place.

Another important factor circumscribing the use of /-u/ with the Imm root is competition with another suffix /-yun^{g}/, which we label 'Absolute' (following section), but whose meaning involves a discourse-summative element. That is, /da-ni-yun^{g}/ '[it is] that' and not Concrete /da-nu:-'/ is used to refer to either the form or the substance of what has just been said (/da-ni-yun^{g}/ is thus most common at the end of a text as part of the coda). There is also a form /da-ni:-'la-yun^{g}-gala-waj/ '[it is] all of that' (§7.9) used as a list-summative element (e.g., 'catfish, perch, barramundi, bony bream--all those we ate'). Thus /-yun^{g}/ and /-u/ both have a kind of definiteness-marking function, but they differ in that /-yun^{g}/ refers exclusively to the preceding spoken discourse, while /-u/ is primarily spatial in orientation (it can have semi-anaphoric connotations but even there does not refer specifically to the just preceding discourse as such). Also, /-yun^{g}/ occurs mainly with predicative DemPro, while (as we have seen) /-u/ is most common with nonpredicative DemPro functioning as an NP (or part of an NP) in a clause with a distinct predication. Absolute /-yun^{g}/ but not Concrete /-u/ is also found with the Prox root; neither is attested with the Dist root.

As for the Anaph root /ba-/, while Absolute /-yun^{g}/ is by far more common, Concrete /-u/ is also possible. I heard such forms as /ba-nu:-'/ 'There(Anaph) it(ANA) is', cf. simple /ba-ni/. It was observed that stylistic lengthening was typical in the first syllable, hence /ba:::-nu:-'/. Unfortunately, I cannot find a single textual ex. involving a DemPro; in NMET I counted 79 occurrences of /ba-ni/ but none of /ba-nu:-'/, and the other noun-class forms of the Anaph root likewise are unattested in the texts with /-u/. However, in connection with demonstrative adverbs based on this root (see later in this chapter), /-u/ is clearly recorded, specifically with Allative /bu-guni/ 'to there' and related forms, hence /bu-gunu:-'/. As expected, it cannot co-occur with parallel forms based on the Dist root, hence /yu:-guni/ 'to there' but not */yu:-gunu:-'/.

The exact sense of forms like /ba-nu:-'/ is hard to determine in the absence of textual exx., but in comparison to simple /ba-ni/ it would seem that /ba-nu:-'/ (or /ba:::-nu:-'/ with stylistic lengthening for emphasis) is more emphatic about the anaphoric nature of the location (e.g., 'X is in that very place'). Its low frequency is due to the fact that the Anaph root is already by definition anaphoric, and to competition from Absolute /-yun^{g}/. The relatively high frequency of adverbial /bu-gunu:-'/ is due to the fact that /-yun^{g}/ cannot co-occur with this (Allative) formation. (Another suffix, Instrumental /-miri/ in a specialised sense, is also a competing suffix; see §7.19.)

We mentioned earlier that /-u/ may follow Centripetal /-ala-/ (§7.5, above). The exx. of /da-ni:-'lu:-'/ 'There(Imm) it(ANA) comes' are 30.1.1, 45.10.5, and 70.1.2. An Anaph form /ba-ni:-'lu:-'/ occurs in MT 9.

Concrete /-u/ occurs with some types of Imm and Anaph DemAdv to be mentioned in later sections. We have just noticed that /-u/ can be added to Anaph Allative /bu-guni/ to give /bu-gunu:-'/ (§7.13). The Imm does not have this Allative formation. However, /-u/ can be added to Locative adverbs of the type /da-ji/ 'there(Imm)' and /ba-gu/ 'there(Anaph)' (§7.12), hence /da-ju:-'/, /ba-gu:-'/ (the latter usually with stylistic lengthening, /ba:::-gu:-'/). From these simple Locative DemAdv we can get Centripetal DemAdv of the type /da-ji:-'la/ 'there(coming)' and /ba-ga:-'la/ 'from there (Anaph)', and /-u/ can be added to these: /da-ji:-'lu:-'/, /ba-ga:-'lu:-'/(§7.15).

Finally, as already noted, /-u-/ is a meaningless, obligatory part of the sequence /-u-wuy/, which produces Directional DemAdv for Prox and Imm roots: /ya:-nu:-'-wuy/ 'this way', /da-nu:-'-wuy/ 'that(Imm) way' (§7.14).

For more quantitative information and textual exx. of these DemAdv types, see the relevant sections below.

7.7 Absolute /-yun^{g}/ and Absolute Dual /-yum-ba:/.

The suffix /-yun^{g}/ found with demonstratives has a phonological similarity to Human Sg /-yun^{g}/ or /-n^{y}un^{g}/ with nouns (§4.15), 3rd person propositus (possessor) suffix /-yun^{g}/ or /-n^{y}un^{g}/ with kin terms (§5.2), and Contrastive /-ayun^{g}/ with independent personal pronouns (§6.8); cf. also Dual /-w$_{2}$i:yun^{g}/ instead of usual Du /-w$_{2}$a:/ with kin terms (§5.3). However, it is doubtful that there is any clear synchronic connection among these forms because of their distinctive functions, and even the phonological form is somewhat divergent.

Absolute /-yun^{g}/ is added to DemPro under certain conditions. It is advisable to discuss it first (in this section) in its most basic combination, as the sole suffix added to a DemPro form (predicative or nonpredicative). In §7.9 and §7.10, below, we discuss some suffix combinations in which it is a part, such as /-ala-yun^{g}/ with Centripetal /-ala-/. A major justification for this is that /-yun^{g}/ cannot be added directly to Locative DemAdv like /ya:-ji/ 'here' and /ba-gu/ 'there(Anaph)' (hence */ya:-ji-yung/, */ba-gu-yun^{g}/), but some of the suffix combinations containing /-yun^{g}/ can be added to these Locative DemAdv, suggesting that these suffix combinations are specialised sequences functioning as units, rather than simply being chance juxtapositions of independent elements.

Limiting ourselves to DemPro, then, we immediately note some very striking distributional facts in frequency statistics from NMET. As shown in Table 7-6, below, /-yun^{g}/ is particularly common in nonpredicative Anaph DemPro (where it constitutes a majority of total forms). With the Imm root it is found in the high-frequency form /da-ni-yun^{g}/ (predicative, ANA class). Aside from these types, /-yun^{g}/ has low frequency (but is well-attested) in Anaph, Imm, and Prox forms (least common in the latter), and is quite absent from the Dist root. Recalling our rough distinction between deictic and definite functions of demonstratives (§7.1, above), it seems clear that /-yun^{g}/ is associated with the definiteness axis.

TABLE 7-6

Frequency of Absolute /-yun^{g}/

Prox	Imm /da-ni/	Imm other	Dist	Anaph	
					predicative DemPro:
11	(59)	4	0	21	with /-yun^{g}/
0	14	9	0	0	with Concrete /-u/
159	22	20	34	121	with no suffix
					nonpredicative DemPro
6	3	3	0	(334)	with /-yun^{g}/
0	40	39	0	0	with /-u/
304	4	4	30	226	with no suffix

Note: Figures are no. of occurrences in NMET with no further suffix (except postposition or Du). Important cases of Absolute /-yun^{g}/ are circled.

The high-frequency form /da-ni-yun^{g}/ is used chiefly as a discourse-summative element in the coda of texts. Quite often it is found as a one-word "period" signaling the end of the text (for the benefit of the linguist perhaps), and might be roughly translated 'that is it'. It can also be used to end an episode within a text, or just as an occasional aside ('that is how it was [in the old days]'). Occasionally it is part of a fuller expression such as /da-ni-yun^{g} ana-lha:wu wara-min^{y}-n^{g}ambara-yin^{y}un^{g}/ 'those [are] the words(/lha:wu/) of the elders', in which /da-ni-yun^{g}/ is the predicate, with the noun /lha:wu/ 'words, speech' (also by extension 'customs, myths') as subject. Representative exx. of this function of /da-ni-yun^{g}/ with or without /lha:wu/ are 13.44.4, 15.15.2, 40.16.4, 43.17.7, 47.1.8, 47.2.8, 47.3.6 (several others in text 47), and 52.7.5

The other highest-frequency forms with /-yun^{g}/ are nonpredicative DemPro with Anaph root /ba-/, hence ANA /an-uba-ni-yun^{g}/, MSg/NA /nu:-'ba-gi-yun^{g}/, FSg/N^{g}ARA /n^{g}ar-uba-gi-yun^{g}/, MANA /man-uba-ma-yun^{g}/ or /man-uba-ma-yun^{g}/, etc. (including forms with punctual instead of continuous NC$_{infl}$ prefix). As shown in the table, the majority of Anaph nonpredicative DemPro have /-yun^{g}/. Further analysis shows that the ANA form has more occurrences without /-yun^{g}/: /an-uba-ni/ 136 occurrences, /o:-'ba-ni/ 23, vs. /an-uba-ni-yun^{g}/ 87, /o:-'ba-ni-yun^{g}/ 11. However, this is more than made up by the higher frequency of /-yun^{g}/ forms with other NC categories, e.g., MSg/NA /nu:-'ba-gi/ 21 vs. /nu:-'ba-gi-yun^{g}/ 93. My interpretation of these and other data is that /-yun^{g}/ is more or less normal with Anaph nonpredicative DemPro, but may be omitted without seriously affecting the meaning. Omission seems most common (§15.2) when DemPro is immediately followed (with no intervening pause) by a coreferential noun, as in such high-frequency NPs as /an-uba-ni ana-lha:l/ 'that (Anaph) country' (29.1.2 and many others). Statistically, omission of /-yun^{g}/ is more common with nonhuman NC categories than with

human ones, as is suggested by the comparison above of ANA and MSg/NA (MSg outnumbering NA in the latter). However, I doubt that this is an independent factor, since it is likely that this asymmetry reflects the fact that /an-uba-ni/ (ANA) is more often directly followed by a noun than is a human DemPro like MSg /nu:-'ba-gi/. In other words, the basic point is that, while /-yun^{g}/ is essentially always possible with Anaph nonpredicative DemPro, it is most often found when the DemPro is not tightly bound to a following coreferential NP and is thus in syntactically independent (absolute) position.

Sample textual exx. from NMET are: /nu:-'ba-gi-yun^{g}/ 3.5.2 and 130.1.2, /yi:-ba-gi-yun^{g}/ 103.1.3 (only ex.), /n^{g}ar-uba-gi-yun^{g}/ 13.4.1 and 17.9.5, MDu /nu:-'bi-ni-yun^{g}/ 1.2.9, FDu /n^{g}ar-ubi-rn^{g}i--yun^{g}/ 11.1.3, Pl /war-ubu-ru-yun^{g}/ 73.4.6, WARA /war-uba-wa-yun^{g}/ 45.4.3 and /war-uba-wi-yun^{g}/ 46.1.6, ANA /an-uba-ni-yun^{g}/ 1.5.5 and punctual /o:-'ba-ni-yun^{g}/ 47.13.7, MANA /man-uba-ma-yun^{g}/ 12.5.1/2 and /man-uba-mi-yun^{g}/ 116.3.1 and punctual /am-uba-mi-yun^{g}/ 7.5.1 (only ex., with postposition). I should emphasise that analysis of the complete set of textual exx. with and without /-yun^{g}/ leads only to a rough correlation between /-yun^{g}/ and syntactically absolute position, not to a rigorous one. (I may add that in transcription sessions, my assistants tended to encourage me to transcribe /-yun^{g}/ in forms like /an-uba-ni-yun^{g}/ even in many instances involwing a following coreferential noun where I did not clearly hear the /-yun^{g}/, and perhaps had I strictly followed my own ears the correlation of /-yun^{g}/ with syntactically absolute position would have been better.)

We now have the more difficult task of accounting for /-yun^{g}/ in those contexts where it is a minority form: predicative DemPro other than discourse-summative /da-ni-yun^{g}/, and all nonpredicative DemPro based on roots other than Anaph.

Only 11 Prox predicative DemPro have /-yun^{g}/ vs. 159 which do not in NMET. These 11 exx. seem to represent optional use of /-yun^{g}/ when the contextually definite aspect of the Prox category (always present though redundant in speech-event perspective, not always present in perspective shifts) is emphasised. The exx. are /ya:-gi-yun^{g}/ 17.9.1 ('here he burned her', with DemPro referring to the woman's body); /ya:-ni-yun^{g}/ 16.18.1 ('in this place it killed him'), twice 28.11.5 ('it hurt her here[body part]'), 71.12.2 ('he looked, here, then he looked to the west'), 168.7.4 ('rather [in] this [language] they spoke'); /ya:-mi-yun^{g}/ 123.4.1 ('"binan^{g}" named "binan^{g}", here[i.e., gum of tree], [whereas] the wood[i.e., the whole tree] that(Imm) as-for-it [is called] "min^{y}arn^{g}"'), twice 167.20.3/4 ('then here[i.e., point where rope snapped, in narrative perspective] it[rope] fouled things up for them'); and in Du form /-yum-ba:/ finally /ya:-wi-ni-yum-ba:/ 72.4.4 ('they are both right here') and (with postposition) 72.6.1 ('just they are here' or perhaps 'they are still right here'). As usual, the English translations do not represent exact Nunggubuyu syntax, and may show nonpredicative glosses for what are predicative DemPro in Nunggubuyu. Note that some of the exx. involve body-part terms (the speaker pointing to the relevant part of his own body), while others involve use of Prox in anticipatory contrastive function. Others simply

display emphasis on the anaphoric aspects of Prox, especially when the Prox category has been used in the preceding discourse and the point is that someone or something is 'still here' or 'right here'.

For Anaph predicative DemPro with /-yun^{g}/ we cite these exx.: /ba-gi-yun^{g}/ 49.2.1, 54.4.3, twice 78.1.4/5; /ba-ni-yun^{g}/ 8.5.3, 18.20.5, 48.2.4, 60.3.6, 76.2.4, 98.7.2, 115.6.4, 139.2.4, 161.33.1, 166.23.1, with postposition 47.14.3; /bu-ru-yun^{g}/ 108.8.4; /ba-wa-yun^{g}/ 76.1.6 and /ba-wi-yun^{g}/ 47.15.4; /ba-mi-yun^{g}/ 112.3.1, 120.3.5, with postposition 143.7.5. A typical gloss is '[is/was] in that same place'.

There are only a few exx. of Prox or Imm nonpredicative DemPro with /-yun^{g}/. Prox exx. with some indication of context: /na:-'-gi-yun^{g}/ 28.12.2 ('this man[who was just here]'); /n^{g}ara:-'-gi-yun^{g}/ 65.10.4 and 65.11.5 ('this Brolga[song cycle] has just been changed'); /ana:-'-ni-yun^{g}/ 97.1.2 (unclear), twice 161.14.2 ('this mission was originally going to be built in another location'). It is hard to pin down the contribution of /-yun^{g}/, but all exx. involve some kind of opposition or tension between two locations or two referents, and there is thus a contrastive nuance. Of the 3 Imm exx., two are /a:-da-ni-yun^{g}/ 70.2.5/7 in essentially the same discourse-summative function mentioned above for predicative /da-ni-yun^{g}/, while the other is /wuda-ni-yun^{g}/ 162.18.4 referring to a referent (buffalo) present in the preceding discourse. Note in Table 7-6, above, that Concrete /-u/ is much more common than /-yun^{g}/ with nonpredicative Imm DemPro and is the usual suffix for giving a definite or anaphoric tint to these DemPro (except when discourse summation is explicitly involved).

DemPro without /-yun^{g}/ do not permit Dual suffix /-w$_2$a:/ since MDu and FDu categories are marked within the DemPro stem (and since Du is not marked with nonhuman DemPro). Thus MDu Prox /ya:-wi-ni/ 'They[MDu] are here' cannot add a redundant Du suffix to form */ya:-wi-ni-wa:/, and ANA Prox /ya:-ni/ is used for all numbers. However, when /-yun^{g}/ is added it becomes possible to add Du /-w$_2$a:/. We first consider instances with MDu or FDu followed by /-yun^{g}/, where a further /-w$_2$a:/ is redundant. For Prox we can cite 2 cases with /-yum-ba:/ (72.4.4, 72.6.1) and 0 with just /-yun^{g}/. For Imm we have 1 ex. with /-yum-ba:/ (138.1.6) and 0 with just /-yun^{g}/. On the other hand, for Anaph we have 7 cases of MDu /nu:-'bi-ni-yun^{g}/ (1.2.9, 17.1.4, 17.8.6, 17.9.3, 28.11.7, 76.2.1/6) and 2 of FDu /n^{g}ar-ubi-rn^{g}i-yun^{g}/ (11.1.3, 73.1.3) but 0 with /-yum-ba:/. This suggests the possibility that /-yum-ba:/ is more frequent with Prox and Imm than with Anaph with already dual stems. The data just given actually suggest a rigorous usage of /-yum-ba:/ with Prox and Imm and rigorous usage of /-yun^{g}/ with Anaph; however, at least the first half of this "rule" is invalidated by data in Hughes' texts, where FDu Imm /n^{g}a:-di-rn^{g}i-yun^{g}/ TNT 15 is found in addition to /n^{g}a:-di-rn^{g}i-yum-ba:/ MT 31.

When /-yum-ba:/ occurs with a nonhuman NC, the Du ending is not redundant. There are only a couple of attested forms, both from Hughes' texts: ANA Anaph /an-uba-ni-yum-ba:/ MT 10 and ANA Imm predicative /da-ni-yum-ba:/ MT 7.

With already dual stems, it is arguable that the apparently low frequency of /-yum-ba:/ with Anaph DemPro, in comparison with

the higher percentage of Prox and Imm forms which do have /-yum-ba:/, has to do with the generally backgrounded character of Anaph DemPro as opposed to the relatively more foregrounded (deictic) uses of Prox and Imm DemPro. Although Du /-w$_2$a:/ is redundant (and thus, in a sense, emphatic) in all such forms, it may be that it is more common when the whole DemPro is highly foregrounded. This point, however, would not apply (at least not so strongly) in the case of nonhuman DemPro, where adding /-w$_2$a:/ is the only way to mark duality.

The following sections, notably §7.9 and §7.10, treat suffix combinations in which /-yun^{g}/ is a component. For the occasional combination of /-yun^{g}-/ with a following case suffix, e.g., Locative /-yun-duj/, Relative /-yin^{y}-jin^{y}un^{g}/ and variants, Allative /-yun^{g}-guy/, see sections §7.18-20, below.

We repeat also two distributional restrictions on /-yun^{g}/. First, it does not co-occur with Concrete /-u/, a partially competing morpheme discussed in §7.6, above. Second, /-yun^{g}/ (unlike /-u/) cannot be directly added to Locative DemAdv like /ya:-ji/ 'here' and /ba-gu/ 'there(Anaph)' discussed in §7.12, below (though the combination /-ala-yun^{g}/ containing Centripetal /-ala-/ can be added to such DemAdv, §7.9).

7.8 Centripetal plus Ablative: /an-uba-ni:-'la-wala/.

The Centripetal suffix /-ala/ (§7.5), though somewhat similar semantically and phonologically to nominal Ablative case suffix /-w$_1$ala/ (§4.21), is best considered a distinct suffix in view of its specific meaning with demonstratives and also in view of the absence of an initial semivowel.

Indeed, the combination /-ala-w$_1$ala/ (also pronounced /-ala-ala/ or even /-ala-yala/) occurs, though the only attested form is the high-frequency ANA Anaph form /an-uba-ni:-'la-wala/. Although the literal meaning should be something like 'from that(Anaph) one (who is coming this way)', the regular translation is simply 'after that' or just 'then', indicating the sequential relationship between an event and the preceding narrated event. The exx. in NMET (total 13) are these: 4.5.1, 8.3.1, 22.4.1/3, 28.5.2, 28.13.3, 29.3.1, 42.3.3/5, 44.6.3, 62.4.1/2, 62.6.1. In some of these exx. it would be contextually possible to consider 'from that place' as the sense, for ex. in such a combination as 'he slept there, __ he got up and left'. However, the temporal-sequence interpretation is also possible in this context, and is the only possible reading in those contexts where the two sequenced events take place in the same location.

The form /an-uba-ni:-'la-wala/ has continuous ANA prefix. I have not recorded a variant with punctual ANA prefix */o:-'ba-ni:-'la--wala/ in this usage, nor has predicative (unprefixed) */ba-ni:--'la-wala/ been found. It seems clear that /an-uba-ni:-'la-wala/ is a specialised type, formally and functionally.

For temporal orientation in general, see below, §7.31.

This combination of /-ala-/ and /-w$_1$ala/ should not be confused with other constructions involving /-w$_1$ala-waj/ (§7.17), which is occasionally found after DemAdv ending in Centripetal /-ala-/.

7.9 /-ala-yun^{g}/, /-ala-yun^{g}-gala/, /-ala-yun^{g}-gala-waj/.

Centripetal /-ala-/ (§7.5) combines with Absolute /-yun^{g}/ (§7.7) to form a sequence /-ala-yun^{g}/, which is also the basis for some additional sequences. All of these have somewhat specialised functions which are not directly predictable from the components. We first consider /-ala-yun^{g}/ with no further suffix (except possible postposition).

DemPro with /-ala-yun^{g}/, like DemPro with just /-ala/, involve a trajectory (prototypically linear, but possibly zigzagging or partially curved). The form in /-ala-yun^{g}/ differs, however, in its nearly exclusive orientation to static phenomena with linear extensions (e.g., a line of trees), whereas the form in /-ala/ may indicate either linear extension or actual motion (see end of §7.5). Moreover, with /-ala/ the specifically centripetal axis is central; the motion or linear extension must involve the speech-event (or narrative) 'here' as one endpoint or target. On the other hand, with /-ala-yun^{g}/ this aspect does not seem to be emphasised; rather, the main concern is with the extension itself.

The texts in NMET show 8 instances of /-ala-yun^{g}/ with a predicative DemPro, and 15 with nonpredicative DemPro. We also get /-ala-yun^{g}/ in some DemAdv forms based on Locative /yuwa:-gu/ 'there(Dist)' and /ya:-ji/ 'here' (and their prefixed variants), see §7.12, below.

The attested predicative forms are: /ba-ni:-'la-yun^{g}/ 25.3.2 ('[going] along there'); /ya:-gi:-'la-yun^{g}/ not in NMET but found in TNT 8 ('[his footprints] coming along here'); ANA form /ya:-ni:-'la-yun^{g}/ 14.19.1[incorrectly "14.18," p. 102 of NMET] ('along here[eyes]'), twice 25.3.3/4 ('let's swim over here'); /ya:-ma:-'la-yun^{g}/ 63.2.4 ('[tide] along here'); /da-gi:-'la-yun^{g}/ twice 14.12.2/3 ('she was following his$_i$ footprints and his$_j$ footprints'; note revised interpretation); /da-ma:-'la-yun^{g}/ ('[lots of wattle trees] stand there in the bush').

Among the nonpredicative forms with /-ala-yun^{g}/, the most common form is /ana:-'-ni:-'la-yun^{g}/ (ANA Prox). This is used to describe a string of locations or other geographical extension (recall that place names and the noun /lha:l/ 'country' are ANA$_{wu}$ in the NC system). There are 11 exx.: 47.1.3, three 64.7.2/3, 73.6.8, 97.4.4, 117.4.6, 143.10.3, twice 144.4.4, 166.27.1. The other common form in NMET is MANA class Prox /mana:-'-ma:-'la-yun^{g}/ 97.5.2, 114.5.2 or /mana:-'-mi:-'la-yun^{g}/ 166.24.1, which can be used to describe a plant sp. found along a long coastal extension (114.5.2, 166.24.1), or can be used to refer to a long extension of the sea (/mana-lhagayag/) or the coast itself (/mana-madhalag/ 'beach'), the latter being the most likely sense in 97.5.2. There is also an ex. of ANA Anaph /an-uba-ni:-'la-yun^{g}/ 157.16.3 referring to places.

The sequence /-ala-yun^{g}-gala/ consists formally of /-ala-yun^{g}-/ plus Ablative case suffix /-w$_1$ala/. This particular form is not very common; two exx. from NMET can be cited. In 166.12.4 we have ANA Imm predicative /da-ni:-'la-yun^{g}-gala/ in the context of a list of trees whose wood is used for harpoon spikes; this is clearly the list-summative function we will see in a moment for the very common form with /-ala-yun^{g}-gala-waj/. The other ex. is in 120.4.2 with ANA Dist

/o:-'wa:-ni:-'la-yun^{g}-gala/, the approximate context being 'they kept well away from the fire'. It is rather difficult to pin down the sense here, but perhaps the form refers to a stretch of space ringing the fire, and is thus similar to forms in /-ala-yun^{g}/.

Finally, there is a suffix sequence /-ala-yun^{g}-gala-waj/, with variant pronunciation /...-yaj/ or /...-aj/. This involves a special combined case-suffix sequence /-w$_1$ala-waj/ (Ablative-Pergressive) '[going] along' also found with nouns (§4.26), added to /-ala-yun^{g}-/.

The common form is /da-ni:-'la-yun^{g}-gala-waj/ (ANA Imm predicative DemPro). This is used in list-summative function, as in 'tortoises, lizards, file snakes--all those we ate'. In other words, the DemPro occurs at the end of a list and sums up the members of the list. It is often accompanied by another predication, here 'we ate [them]'. There are a little over 30 exx. of this form in NMET, including 7.17.4, 7.20.8, 9.8.3, 64.3.2/5/6, 64.6.5-7, 64.8.5, 69.8.3, 93.2.4, 95.10.6, 98.9.2, 98.10.2/4, 98.11.1, 109.3.1, 167.9.2.

This form, in ANA class, is the unmarked form and is used when the nouns in the list are of variable NC or when the NC is not emphasised by the speaker. However, parallel forms marked for a given NC other than ANA are possible. A form with Pl NC /du-ra:--'la-yun^{g}-gala-waj/ occurs twice 14.14.1 in the sense 'they were stretched out [in a line] there', apparently with linear-extension rather than list-summative function. However, MANA form /da-ma:--'la-yun^{g}-gala-waj/ 64.6.3 seems to be in list-summative sense, referring to two nouns just given which both happen to be in this NC. The forms above all have Imm root /da-/, but other demonstrative roots are also compatible with /-ala-yun^{g}-gala-waj/. With Prox root we have ANA form /ya:-ni:-'la-yun^{g}-gala-waj/ 29.4.3 and 35.2.2, both exx. involving a linear trajectory; this is also the sense of the nonpredicative form /ana:-'-ni:-'la-yun^{g}-gala-waj/ 166.2.3. Anaph prefixed /o:-'ba-ni:-'la-yun^{g}-gala-waj/ is found twice in 2.2.5 in linear-extension sense.

Of course, list-summation can be thought of as an extension of the linear-extension sense, going from a spatial context to that of a string of words in the preceding discourse.

7.10 /-yun^{g}-gaj/.

This is the combination of Absolute /-yun^{g}-/ (§7.7) and a suffix which is phonologically compatible with Retrospective Pergressive /-w$_1$aj/ (§4.23). We should also mention the similarity to the suffix-sequence /-ayun^{g}-gaj/ 'too' (as in 'me too') used with independent personal pronouns (§6.8).

It is possible to distinguish two basic senses of /-yun^{g}-gaj/ with DemPro. First, there are three more or less interchangeable expressions based on nonpredicative Anaph DemPro all meaning 'long ago, in the old days, in the days of the old people (now dead)'. With ANA as the NC we have 24 instances of /an-uba-ni-yun^{g}-gaj/ 'long ago', sometimes with irregular pronunciation /ano:-'ba-.../, some exx. being 47.22.4, 53.2.4, 69.8.4, 71.26.4, 100.4.3/4, 100.7.2, 109.4.1, 112.6.1/2, and 113.1.3. A variant /o:-'ba-ni-yun^{g}-gaj/, differing only in having punctual ANA prefix //a-// instead of continuous //ana-//, is found 8 times in the same sense: 35.6.4,

41.4.3/5, 55.1.2, 71.4.5, 71.23.1, 100.7.6, 163.10.4. A slightly different formulation of the same basic sense is the corresponding WARA class form (here in indefinite human sense), hence /war-uba-wi-yun^{g}-gaj/ 73.2.1, 125.1.2. This also means 'in the old days', though literally the sense is 'back in their era' referring to the ancestral people.

In these 'long ago' forms, it seems that /-yun^{g}-gaj/ is really the sum of its parts, /-yun^{g}-/ having its regular discourse-definite function (recall that it is regularly added to nonpredicative Anaph DemPro, §7.7), and /-w$_{l}$aj/ meaning 'back at the time of', a sense which it can have with nouns as in /wara-min^{y}-n^{g}ambara-waj/ 'back in the time of the elders' and which is its usual sense when added to predicates (§4.23, §16.6).

The frequency figures for textual occurrences of /an-uba-ni--yun^{g}-gaj/, /o:-'ba-ni-yun^{g}-gaj/, and /war-uba-wi-yun^{g}-gaj/ would be somewhat higher if we included exx. with a further Relative case suffix /-yin^{y}un^{g}/, but we hold these exx. off until §7.20, below.

There are also some other DemPro with /-yun^{g}-gaj/ which have a meaning other than 'long ago' (or 'at the time of'). In 116.7.4 we have /da-mi-yun^{g}-gaj/ (Imm MANA, predicative) meaning 'another [night] too' (passage of time is typically specified by demonstratives in MANA class referring to the noun /min^{y}n^{g}an^{g}a/ 'night[as unit of passage of time]'). Actually, while 'another [night] too' gives a satisfactory contextual translation, it is likely that a more syntactically correct gloss would be 'all those [nights]', hence approximating the list-summative function described in the preceding section for /-ala-yun^{g}-gala-waj/. Since nonhuman demonstratives do not have number-marking, /da-mi-yun^{g}-gaj/ is ambiguous in this respect. However, we can cite Prox Pl /wara:-'-wuru-yun^{g}-gaj/ 73.1.5 'all these', where the context is 'the women promised him (bestowed on him) their daughters'. It is not entirely clear whether the DemPro cited refers to the women (not likely) or the daughters who were to be born later, but in any event the form is clearly Pl. Other DemPro with /-yun^{g}-gaj/ are MANA Prox predicative /ya:-mi-yun^{g}-gaj/ 55.7.5 ('these ritual songs') and ANA Imm predicative /da-ni-yun^{g}--gaj/ 72.7.4 (with list of place names), which are (in context) compatible with a summing-up reading.

If we take a collective, list-summative reading of /-yun^{g}-gaj/ as prototypical, can we go back to the 'long ago' forms and assign them a literal interpretation along these lines? I do not think so, since this would mean taking /war-uba-wi-yun^{g}-gaj/, for example, as meaning literally 'all of those [elders]'. It is difficult to get from this to 'long ago, in the old days', and it is preferable to take /war-uba-wi-yun^{g}-gaj/ simply as /-w$_{l}$aj/ 'back in the time of' added to /war-uba-wi-yun^{g}-/ 'those (people)' (i.e., the elders). If we insist on reconciling the 'long ago' sense with the list-summative one, it would have to be interpreting 'all these [just listed]' literally as 'back among these [just listed]' in which we look back not to another era but to the preceding discourse.

7.11 Demonstrative adverbs (DemAdv) in general.

Up until now we have been considering DemPro, both predicative and nonpredicative. Of course, some combinations involving DemPro

end up functioning much like adverbs, as is the case with /an-uba-ni-yun^{g}-gaj/ in the preceding section ('long ago'). Thus the distinction between DemPro and DemAdv is not always sharp, at least in functional terms.

As we use the term, however, DemAdv refers to certain specific formations which do not involve DemPro stems, and in particular do not include the NC suffixes like ANA /-ni/ and MANA /-ma/ or /-mi/ which characterise the DemPro forms. Thus DemAdv includes these forms: a) Locative adverbs in /-ji/ and /-gu/ (§7.12), b) Allative adverbs in /-guni/ (§7.13), and c) Extent adverbs in /-ga-waj/ (§7.24), as well as other adverbial formations involving these endings plus one or more additional suffixes (with or without reduplication). I also include under this rubric the Directional adverbs in /-u-wuy/ (§7.14), although in this instance the form is really based on an ANA class DemPro; I include this in the DemAdv category since it functions as part of the DemAdv system and since it is impossible to change ANA to another noun class.

The fundamental difference between DemAdv and DemPro is that the latter is a cover term for formations with agreement in surface NC to some referent (though there may be an unmarked choice of NC in connection with list-summation or the like). DemAdv, on the other hand, is a cover term for a set of invariable forms lacking NC agreement with external referents. Like other NAdv (adverbial nouns, §4.3), DemAdv are all ANA class nouns, though commonly omitting the NC$_{infl}$ prefix (continuous /ana-/, punctual /a-). Thus /ya:-ji/ is the common form for 'here' (101 occurrences in NMET with no further suffix or with just a postposition). The continuous form /ana:-'-ji/ (21 occurrences) is obligatory in negative contexts and occurs now and then in other contexts, while punctual /a:-'-ji/ is not recorded in NMET except with following case suffix.

In analysing the role of these DemAdv in the larger system of orientation, there are two major problems to be kept in mind. First, the Locative adverbs translated 'here' and 'there' (§7.12) compete with predicative DemPro translated literally '[is] this' and '[is] that'. This is because what may appear in English as a single clause including an adverb (e.g., 'He is sitting there') may turn up in Nunggubuyu as a double-predicate construction (§7.4) of type '[He is] that, he sits'. The second problem is sorting out the respective usage of three types of DemAdv involving motion--the already mentioned Allative and Directional DemAdv (§7.13, §7.14), and Centripetal and other derivatives of Locative DemAdv (§7.15ff.). Thus understanding the overall system requires going back and forth among the sections cited.

7.12 Locative DemAdv in /-ji/, /-gu/.

The basic Locative (i.e., static) DemAdv involves /-ji/ or /-gu/, as shown in Table 7-7, below. Note that the distinction between the two suffixes suggests an otherwise covert subgrouping of Prox with Imm (using /-ji/) and of Dist with Anaph (using /-gu/). (However, other similar subgroupings cross-cut this one; recall from §7.6 that Concrete /-u/ is used in DemPro with Imm and Anaph roots only, and from §7.7 that Absolute /-yun^{g}/ occurs with Prox, Imm, and Anaph.)

TABLE 7-7

Locative DemAdv

	unprefixed	continuous prefix	punctual prefix
Prox	ya:-ji 101	ana:-'-ji 21	a:-'-ji 0[TNT 20]
Imm simple	da-ji 19	ana-da-ji 0 a:-da-ji 0 an-uda-ji 0	wuda-ji 0
Imm Concrete	da-ju:-' 11	ana-da-ju:-' 0 a:-da-ju:-' 0 an-uda-ju:-' 0	wuda-ju:-' 0
Dist	yuwa:-gu 103	an-uwa:-gu 22	o:-'wa:-gu 4
Anaph	ba-gu 163	an-uba-gu 13	o:-'ba-gu 0

Note: As usual, figures include no. of occurrences with no suffix or with just postposition.

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The totals are 397 unprefixed, 56 continuous (including forms in negative contexts), and just 4 punctual, so that 87% of NMET occurrences are without prefix and most of the remainder are with continuous NC_{infl} prefix /ana-/. The absence of attested continuous forms with the Imm root (/ana-da-ju:-'/, etc.) is fortuitous.

It is probable that the Anaph forms should be broken up into simple /ba-gu/ vs. Concrete /ba-gu:-'/ and so forth for the prefixed variants. However, no statistical breakdown is given because there are questions about transcriptional reliability on this point since the only surface difference is in final vowel length. The problem is that in some cases we find /ba-gu:::/ with what is apparently a stylistic lengthening rather than the result of vowel contractions: 18.18.5, 23.3.1, 24.4.5, etc.

Selected Prox exx. are /ya:-ji/ 1.1.7, 1.10.3, 3.4.1, 5.11.6/7, 7.9.5/6, 7.12.5, 7.13.2, 7.15.2, 9.2.2/3 (contrastive), 9.12.4, 10.4.2, 10.11.1, 10.15.5, 15.6.1, 45.10.3, 52.1.2/3, 63.2.5, 92.1.3, 118.3.6, 123.3.4; /ana:-'-ji/ 1.7.3, 10.7.1, 12.3.1, 28.13.4 (Neg), 48.1.3, 48.2.4, 92.2.2, 103.2.3, 109.3.4, 112.5.3, 120.3.4 (Neg), 125.4.3/5, 127.2.3, 131.2.4, 132.9.4, 138.5.3, 162.22.2, 166.9.4, 166.22.2 (Neg). Imm /da-ji/ is found 1.8.6, 5.18.6, 9.9.1, 18.13.6, 18.20.7, 20.7.3, 25.3.4/5, 28.10.3/4, 41.2.2, 44.2.5, 62.3.1 (twice), 62.3.2, 71.5.2, 92.1.2, 92.3.1/2. Imm Concrete /da-ju:-'/ is found 3.8.1/2, 11.9.3, 14.13.3, 17.4.6, 23.2.1/2, 43.9.2, 65.5.4, 139.8.7, 168.8.2. For Dist /yuwa:-gu/ a few exx. are 1.10.7, 7.11.3, 10.6.1, 10.15.5, 11.2.1, 13.11.1, 13.16.3, 13.44.3, 15.10.2, 37.5.3, 51.3.3/4, 62.5.1, 65.1.4, 65.14.1; for /an-uwa:-gu/ 2.3.6, 14.4.4, 15.7.3, 21.1.3, 57.2.3 (twice), 57.3.3 (twice), 57.4.1/2, 68.2.1, 75.1.5 (conditional), 75.2.4 (conditional), 108.6.1, 110.2.7, 125.4.2/4 (contrastive), 138.3.3, 138.5.8, 146.1.2, 166.9.3, 167.17.5; for /o:-'wa:-gu/ 15.9.4, 15.15.2 (twice), 30.3.7. Some exx. of Anaph /ba-gu/ are 1.1.1, 1.4.1, 1.6.4 (twice), 1.8.8, 13.11.2 (following earlier Dist /yuwa:-gu/), 15.13.3, 27.3.3, 32.3.1-3, 54.2.3, 62.5.3,

92.2.3/4/5, 101.1.3; /an-uba-gu/ occurs in 16.13.8, 32.2.5, 47.12.5, 54.2.4, 54.4.4, 73.5.3, 77.2.1 (Neg), 78.1.4 (cond.), 103.2.2, 108.3.1, 115.6.2, 161.15,5, 161.23.2.

Exx. of the same forms and also of punctual counterparts with an additional case suffix will be given in sections below treating these case markers (§7.18-20).

In §7.4, above, we first raised the issue of the choice between Locative DemAdv and a simple DemPro, pointing out that English may show a single clause including a NP argument containing a demonstrative pronoun ('This man hit me') or a demonstrative adverb ('He is sitting there'), where Nunggubuyu may have a double-predicate construction ('[He is] this # he-hit-me' and '[He is] that # he-sits'). The latter ex. is more pertinent to this section:

(7.vi) yuwa:-gi ni=bura:-' 'He is sitting there'
that[Dist]-MSg he sits

This is considered a double-predicate construction since /yuwa:-gi/ '[He is] that' (i.e., 'He is there') is a perfectly good predicate form, as in the next ex.:

(7.vii) yuwa:-gi na-baba 'My father is there'
that[Dist]-MSg father

Here /yuwa:-gi/ is an unprefixed (predicative) DemPro (§7.4); prefixed counterparts like /nu:-'wa:-gi/ (with MSg prefix) do not have this predicative function.

As pointed out in §7.4, this preference for predicative DemPro over DemAdv is limited by the fact that the DemPro must have a valid referent, either present-tense or at some point in time determined by narrative perspective. Thus, negative 'My father is not there' requires a different construction involving a DemAdv instead of a DemPro:

(7.viii) ni:='ri an-uwa:-gu na-baba
he is not there[Dist] father
'My father is not there'

This is because, in this context, DemPro /yuwa:-gi/ 'He is there' is invalid, and since there is no way directly to negativise a predicative DemPro, the construction with DemAdv is necessary. Similarly, non-present tenses in the positive tend not to use the DemPro construction. To say 'He was sitting here' or 'He will sit here', we will usually get a construction with /ya:-ji/ 'here', since a double-predicate construction of the type '[He is] this # he-sat/he-will-sit' is logically problematic (since 'this' presupposes a valid present-tense Prox referent). However, a double-predicate construction (or a predicative DemPro with no other clause) is possible in past tense positive, either if narrative perspective is adopted (§7.26) or if the former presence of the referent is effectively continued by some mark or imprint (e.g., footprints or a trace of blood). A further provision is that an ANA class DemPro like Prox /ya:-ni/ '[It is] this' may be used in place of DemAdv /ya:-ji/ 'here' in a non-present-tense clause like 'He was sitting here', where /ya:-ni/ has as its referent the location itself rather than any particular person or object (§4.7). Cf. §15.5.

We now extend the observations made in §4.7 by considering the relatively small number of textual occurrences of DemAdv like Prox /ya:-ji/ and Anaph /ba-gu/, with or without prefixes, in present positive contexts, which (as just mentioned) commonly use predicative DemPro instead.

The exx. have been grouped here into categories, though some exx. could have been put in either of two since the categories cross-cut. To begin with, we have a set of cases involving 1st person pronouns of the type 'We (habitually) dance over there', where predicative DemPro cannot be used (DemPro cannot agree in NC with 1st/2nd person pronouns, and in any event DemPro could not be used here since the 1Pl referent is not 'there' at the time of speaking): 57.2.3 (twice), 57.3.3 (twice), 68.2.1, 57.1.6, all with Dist DemAdv.

Secondly, DemAdv are commonly used (along with a manual gesture) to refer to body parts even in present tense contexts: Prox exx. are 92.1.3, 92.2.2, 109.3.4, 112.5.3, 131.2.4, 131.3.2; Imm 92.1.2, 92.3.1/2; Anaph 92.2.3/4/5.

Third, DemAdv are used even in present positive in contexts like 'He put it here/there'. In this instance the DemAdv may be Allative (§7.13) or Directional (§7.14), but the Locative can also be used; we might conceptualise the syntax as 'He put it down [so it stopped] here/there'. Typical verbs would be 'to put', 'to put in', 'to take[transport]', and 'to bury'. Exx. are Prox 123.3.4; Dist 106.2.3, 106.3.4, 109.2.2-6, 115.2.4; Anaph 101.2.1, 115.2.5. We similarly have intransitive exx. of the type 'He went there', where again the Allative or Directional DemAdv is possible, but where the Locative can occur when the syntax is of the type 'He went along and [stopped] here/there': Prox 63.2.5; Anaph 13.3.3, 58.1.4, 155.3.3.

A number of additional exx. may belong with the type in the previous paragraph, but are more difficult. With some transitive verbs like 'eat', 'give', and 'hit', a specification of location (place, not body part) of action does not easily focus on a single referent involved in the event, and it is reasonable to have a Locative DemAdv rather than a DemPro predicating the location of one referent. On the other hand, since verbs like 'eat' and 'give' do involve some physical changes in location, it might be argued that these cases are like those of the preceding paragraph; perhaps we should say that the two types are distinct in principle but that there are borderline exx. With 'eat' we have Dist in 39.1.5, 156.4.5; Anaph 140.3.3. With 'give' Dist 74.2.5, 92.4.2; 'hit' 155.1.4/5; 'dig/uproot' Dist 121.1.4/5; 'bear (young)' Anaph 101.1.3; 'leave behind' (formally NAdj) Anaph 109.6.3; 'soak' (elsewhere often with Allative or Directional, hence better glossed 'immerse in liquid') Prox 123.3.4; Anaph 115.6.2.

The most potentially troubling exx. are of the type 'He is sitting/standing here/there', since a present tense predication of stance should be ideal for the double-predicate construction with stance verb and separate predicative DemPro. Indeed, the double construction commonly occurs here, but there are a number of cases with Locative DemAdv instead. There seem to be two possible ways

to account for this. One is to argue that the textual exx. involve prior motion to the location indicated, so that what appears on the surface as 'He is standing here' should be reconceptualised as '[He stopped] here [and] he is standing'. The other is to say that in these exx. the location of the referent is permanently fixed (as with totemic sites representing a formerly mobile being), or else that the context involves habitual or characteristic location not really emphasising location at the moment of the speech event or any other temporal point of reference. At any rate here are the exx. I am thinking of: Prox 48.1.3 and 48.2.4; Dist 41.24.4 and 77.2.3; Anaph 9.13.2, 41.19.2, 101.2.4, 140.1.4, 140.3.1.

Imm /da-ju:-'/ in 139.8.7 is difficult to interpret and may involve broken syntax.

7.13 Allative DemAdv in /-guni/.

This DemAdv is restricted to the Dist and Anaph roots. In the case of Anaph, the Concrete suffix /-u/ (§7.6) may be added (in NMET about one-fourth of Anaph exx. show the /-u/). The forms with or without NC_{infl} prefix are shown in Table 7-8 along with the number of occurrences in NMET.

It is possible that the ending /-guni/ should be itself segmented as /-gu-ni/, with /-gu-/ related to Locative /-gu/ (§7.12) and /-ni/ perhaps thought of as the ANA class suffix (used with DemPro, §7.2). The extra boundary is shown in the transcriptions in NMET but has been dropped in the present grammar.

In /yu:-guni/ and its prefixed form /an-u-guni/ there is a minor alternation between /u:/ and /u/ in the root segment (loss of /y/ in the prefixed form is normal for demonstrative roots). However, the transcriptions represent my judgement as to the most common pronunciation of each form (with subsequent normalisation), and some variation in surface pronunciation of vowel length was observed.

The form /o:-'-guni/ was transcribed either /o:::-'-gu-ni/ 55.1.3 or /wu-gu-ni/ 48.1.6, 48.2.1 in NMET, the first of these showing optional stylistic lengthening. Hughes also presents a transcription "wuguni" (TNT 1). There appears to be some low-level variability in pronunciation in this form. It is also worth noting that the attestations for punctual-prefix forms all involve the Dist root, just as was the case with Locative DemAdv (Table 7-7, above). (Non-Dist Locative DemAdv forms like Prox /a:-'-ji/ seem

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TABLE 7-8

Allative DemAdv

	unprefixed	continuous	punctual
Dist	yu:-guni 117	an-u-guni 43	o:-'-guni 3
Anaph simple	bu-guni 35	an-ubu-guni 2	---
Anaph Concrete	bu-gunu:-' 12	an-ubu-gunu:-' 1	---

distinctly rare except when a case suffix is directly added.) The textual exx. of /o:-'-guni/ and of /o:-'wa:-gu/ (§7.12, Locative) suggest that these punctual forms occur only when closely connected to a noun (preceding or following) in the appropriate case relation and with punctual NC_{infl} prefix. Thus Locative /o:-'wa:-gu ama--malwad/ 15.9.4 'there in the malwad trees', Allative /wu-guni a-lhal-an^{y}baj-guy/ 48.2.1 '[they send messages] there to other countries'. For adverb following the noun see, e.g., 48.1.6. While we would normally consider a phrase like 'there in the malwad trees' to be an instance of apposition, with 'there' juxtaposed to 'in the malwad trees', the occasional use of punctual prefix for the DemAdv (in addition to the noun) suggests an occasional tendency to treat the two as part of a single NP, so that the use of punctual prefix with the noun triggers use of punctual prefix with the DemAdv. As we have seen, this is not common and the attestations involve the Dist forms only.

A more common pattern is to have a DemAdv co-occur with a (case-marked) noun but with no formal interaction, so that the noun may well have punctual prefix but the DemAdv is unprefixed or sometimes with continuous prefix. Thus, in Nunggubuyu we find 'He went there(All) northward' instead of just 'He went north', 'He is sitting there(Loc) at Numbulwar' instead of just 'He is sitting at Numbulwar', and so forth, with appositional but formally independent DemAdv and noun (perhaps separated by a pause or by other constituents). Though no computations have been carried oút, it is likely that this appositional structure is particularly common for the exclusively deictic Dist category (since Anaph refers back to a definite location already mentioned and since Prox and Imm are circumscribed by the speech-event or sometimes narrative vantage point).

Allative DemAdv can be used in the dative sense as well, and may accompany a noun in Allative-Dative form with dative sense (e.g., recipient of 'to give', benefactive indirect object). The dative exx. of /yu:-guni/ are 4.2.4, 6.2.2, 7.12.3, 80.1.5, 106.5.1; /an-u-guni/ 47.2.1, 79.1.3 (adverse Benef). A few of these are ambiguous between allative and dative senses (e.g., with 'to send'), but several are unambiguously dative.

Other functions of the Allative-Dative nominal case category (§4.20, §4.22) are also carried over to these DemAdv. Thus the occasional use of All-Dat for direct object may be accompanied by /yu:-guni/: 36.4.4, 37.4.4, 45.1.5. In 34.8.4 /yu:-guni/ is found in the sense 'He spoiled us here [i.e., made us mortal], and maybe he spoiled you <u>over there</u> as well'. In 47.10.2 the context is 'the words get around [i.e., are divulged and circulated], [and go] <u>there</u> to [make] trouble'; in 66.3.1 we have 'sounds go in <u>there</u> into the ears'; both have /yu:-guni/.

Having pointed out that Allative DemAdv often co-occur with Allative-Dative nouns (and are sometimes drawn into the same NP with them), we may make the converse point that Allative-Dative forms of DemPro are rather uncommon (§7.20) if we leave aside the special Directional adverbial formation of §7.14. Thus, if we want to say something like 'I gave it to that man', we are more likely in Nunggubuyu to say 'I gave it there[All] to-the-man' than to say

FIGURE 7-3

DemAdv Motion Axes

<u>Centripetal</u> (§7.15)

A→ B — Root specifies point of departure rather than terminus, especially when root is Dist or Anaph. Situation less clearcut with Prox or Imm roots, because point of departure and terminus blurred.

<u>Allative</u> (§7.13)

A ← B — Used when motion is away from B, or in any other noncentripetal direction, and where there is a clear endpoint or target region. Root specifies this endpoint/target rather than point of departure. Root must be Dist or Anaph.

<u>or</u>

A
↑
C B

<u>Directional</u> (§7.14)

← B — Axis defined by B with no reference to endpoint or target; used when the latter is indefinite. Root is Prox or Imm.

Note: B is speech-event or narrative 'here'; A and C are distinct points or zones. Other DemAdv types not covered here include Centrifugal (§7.16), Pergressive (§7.17), and Lateral (§7.21).

'I gave it to-that to-the-man' with modifying DemPro agreeing in case with the noun.

It may be useful at this point to outline the relationships among the three most important motion-oriented DemAdv categories (Figure 7-3, above), leaving some other types aside for the moment. The primary opposition is between Centripetal and Allative forms. To describe a trajectory such that 'here' (B in the figure) is in the path of the moving object (whether or not the object actually reaches B, or stops short), a Centripetal adverb of the type 'there-coming' is used. Here the root specifies the point of departure (often Dist or Anaph), while the Centrip ending indicates direction roughly toward 'here'. Arrival 'here' is not usually specified, but in many contexts is implied. Thus the normal way to say 'He came here' is this:

(7.ix) ni=ya-n^{g}gi ba-ga:-'la
he went there(Anaph)-Centrip
'He came here'

This particular form with Anaph root would be used when the point of departure has been established (as in 'He went from Darwin to Ngukurr. Then <u>he came here</u>.'). Note that English ordinarily

specifies the endpoint ('here'), while Nunggubuyu usually indicates point of departure and centripetal direction.

On the other hand, if the direction of motion is noncentripetal and there is a more or less well-defined terminus or target area, Nunggubuyu regularly uses an Allative DemAdv:

(7.x)	ni=ya-n^{g}gi	bu-guni	'He went there'
	he went	there(Anaph)-All	

Again, /bu-guni/ with Anaph root implies that the location is discourse-definite; otherwise Dist /yu:-guni/ is used. In either event, the specification here is of the endpoint or target rather than on the point of departure. Furthermore, since Allative DemAdv is not used when the motion is centripetal, use of Allative implies that the trajectory is either centrifugal (away from 'here') or in some transverse axis (see figure). However, neither the precise axis nor a specific point of departure is specified; the unmarked interpretation in some contexts is that 'here' is the point of departure.

Directional forms are used to indicate a portion of a trajectory when there is no definite or specific endpoint (as in 'Let's go this way').

Note that the verb translated 'he went' in (7.ix) and (7.x) does not itself specify the axis of motion, and can be translated 'he came' in appropriate contexts. (Only in the imperative is there a special verb root for 'come'.) The same is true of other verbs like 'to take' (= 'to bring'). Directions must therefore be specified by demonstratives or by case-marked nouns.

It should be clear by now that "case" categories in the DemAdv system differ from those of nouns. If X is a noun, say a place name, one can use Ablative /X-w$_1$ala/ 'from X' or Allative-Dative /X-w$_1$uy/ 'to X' with no restrictions; each such case-marked form specifies either point of departure or endpoint. DemAdv, on the other hand, typically involve an axis which must be placed with respect to the speech-event or narrative 'here'. Thus whether you can appropriately say 'to there (All)' or 'from there (Centrip)' depends on a complex configurational perspective.

We close this section with some textual citations of Allative DemAdv (excluding /o:-'-guni/ and dative uses of the others, already cited earlier in the section). Representative exx. of /yu:-guni/ are 4.3.1, 8.4.2, 9.4.5, 9.9.3 (with 'to see'), 12.9.2, 12.10.1 ('to see'), 13.44.3, 14.3.2, 16.2.3/6, 17.3.7 ('to jump'), 35.9.5, 43.3.2, 47.16.3, 65.6.1 ('turned and faced that way'), 70.3.1, 113.7.4 ('wild potato sp. found from [place n.] to there, [other place n.]'), 115.3.4, 118.4.5, 122.4.5, 162.4.2, 167.10.2. Close inspection of these exx. reveals the same liberal usage of this category (e.g., 'he drank to there' meaning 'he went there drinking' or the like) already seen with Allative-Dative case suffix /-w$_1$uy/ (§4.20). Often /yu:-guni/ is directly contrasted with Directional /ya:-nu:-'-wuy/ 'this way' (§7.14) or some other Prox DemAdv either in a 'to and fro' sense or to differentiate two events or referents: exx. are 10.17.5, 12.8.3. 13.3.1, 13.10.3, 14.11.3, 27.7.4, 35.7.1, 43.15.3/4, 51.3.2, 95.9.2, 132.11.5. The prefixed form /an-u-guni/ is used in negative contexts (20.19.3, 21.10.3, 54.4.1, 67.3.2, 121.3.7),

including conditional protasis (65.13.3, apparently 76.2.6 with very omitted; but cf. /yu:-guni/ 30.1.4). Other exx. of /an-u-guni/ not involving negative contexts include 13.39.2, 13.43.3, 22.4.4, 28.8.4 ('before I go there'), 30.3.1, 33.4.1, 41.11.4, 59.10.1, 62.2.4/5, 77.2.4, 108.7.3, 167.3.3.

A few exx. of /bu-guni/ are 1.1.3, 10.2.3, 10.3.3/4, 35.13.1/2, 65.2.3, 114.4.4, 162.12.2, 164.2.3. In view of the semantics of Anaph it is not surprising to find several exx. with postposition /-w$_2$ugij/ 'still, only, nothing but' (§7.30). The exx. of /bu-gunu:-'/ are 12.1.3, 14.10.1, 21.6.5, 27.2.2, 44.1.5, 50.5.5, 70.3.4, 119.5.3, 143.12.3, 162.23.4, 166.13.5, 167.20.2; no exx. with /-w$_2$ugij/ are recorded. For /an-ubu-guni/ see 22.1.5 (conditional) and 59.10.1; /an-ubu-gunu:-'/ is found in 41.13.5.

The unprefixed Anaph form, usually /bu-gunu:-'/ with Concrete suffix present, can also be used as an NAdj (with intransitive pronominal prefixes) meaning 'facing away'; usually it is reduplicated as /buguwugunu:-'/ in this sense. The form may be fully verbalised by adding Inchoative /-ma-/. See §7.22 for details; these forms are not included in the computations and textual citations given in the present section.

7.14 Directional DemAdv in /-u-wuy/.

For the forms and frequencies in NMET, see Table 7-9, below. The obvious generalisation is that this is very largely a Prox form with an occasional Imm ex. Formally, this DemAdv seems to be based on the ANA noun-class form of the DemPro, e.g., Prox /ya:-ni/, with Allative-Dative case suffix /-w$_1$uy/. The vowel just before the semivowel of the case suffix is not always heard as clearly long (I have normalised textual transcriptions), but is always rounded, and I take it here as Concrete /-u-/ (§7.6) added to the class suffix /-ni-/ with VV-Contraction P-49. Since the /-u-/ is obligatory in this DemAdv it does not have an independent semantic value here. Note that in other Prox DemPro and DemAdv, Concrete /-u/ is not permitted.

The usual sense of /ya:-nu:-'-wuy/ is 'this way' in connection with motion or sometimes a linear extension (such as a path); it does not mean 'this way' in the manner-adverbial sense. A typical context is 'Let's go this way', perhaps with a manual gesture. The Directional form can also be used to mean roughly 'to here, in this direction' (as in 'The cloud is coming this way'), but as we have indicated in Figure 7-3 (§7.13) if the starting point of the

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TABLE 7-9

Directional DemAdv

	unprefixed	continuous	punctual
Prox	ya:-nu:-'-wuy 93	ana:-'-nu:-'-wuy 9	a:-'-nu:-'-wuy 1
Imm	da-nu:-'-wuy 2	a:-da-nu:-'-wuy 0 ana-da-nu:-'-wuy 0	wuda-nu:-'-wuy 0

trajectory is determinate we are more likely to get a Centripetal DemAdv than a Directional one.

In the context of trajectories as opposed to static points, it is not surprising that the Imm category becomes statistically less common, so that in practise it tends to be absorbed into the Prox category. Thus only 2 out of 105 NMET attestations (Table 7-9) have Imm roots. The Imm is likewise not especially common in the Centripetal forms (§7.15).

Frequently, /ya:-nu:-'-wuy/ occurs contrastively with a juxtaposed Dist Allative DemAdv /yu:-guni/ 'to there', giving a 'to and fro' sense or contrasting two referents or events: 9.9.4, 10.17.5, 13.10.2, 14.11.3, 27.7.3, 34.8.4, 35.7.1, 43.15.2/3/4, 51.3.2, 95.9.2, 132.11.6. In 36.3.5 it seems that /ya:-nu:-'-wuy/ is associated with the low-frequency usage of case suffix /-$w_1$uy/ with a noun in direct object function (see §4.22). In 20.17.5 the context is that of two characters walking along, whereupon 'a hill came up [into view]', with the same shift in static/moving perspective described for Centripetal DemPro in §7.5, above. Some occurrences of /ya:-nu:-'-wuy/ co-occur with Centripetal DemAdv such as Anaph /ba-ga:-'la/, the latter specifying point of departure and axis orientation and the former specifying the Prox portion of the trajectory: 28.1.3, 168.4.4; however, more often just one DemAdv is used. Occasionally, /ya:-nu:-'-wuy/ is used twice in succession indicating two different paths or directions (perhaps with two manual gestures): 13.2.3/4, 22.5.2/3, 51.3.1 (each occurrence having its own accompanying noun), 132.11.6, 162.19.4. As we have just noted in parentheses, /ya:-nu:-'-wuy/ may co-occur with a Dative-Allative noun with /-$w_1$uy/ case suffix; other exx. are 95.8.5, 113.9.1 (and several exx. involving another adverb such as a cardinal-direction NAdv like 'southward'). Some other representative instances of /ya:-nu:-'-wuy/ include 3.7.1, 7.9.4 ('to swallow'), 9.4.1/2, 9.7.1, 13.34.2 ('to lie across'), 15.10.4, 17.15.4, 18.8.5, 18.17.1, 20.14.6, 20.16.2 ('to see'), 20.16.5 ('to put'), 29.4.2 ('to see'), 29.6.4 (with 'facing' derivation, §7.22), 33.6.5/6, 41.15.3 ('to dance'), 44.3.1, 71.31.4, 116.3.2, 161.5.3 ('to call out'), 162.13.1.

The continuous-prefix form /ana:-'-nu:-'-wuy/ is required in negative contexts (twice 40.1.6, 41.7.3/4); non-negative exx. are 4.3.4 and 4.4.4 (sun coming in time-of-day expression), 55.12.4, 113.4.6, 113.8.6. The single ex. of punctual /a:-'-nu:-'-wuy/ 33.2.2 was probably influenced by preceding /a-wagi-yaj/ 'southward', also with punctual ANA prefix //a-//. The punctual form can also occur in occasional instances of Directional DemAdv with following case suffix (§7.20, below).

The most useful ex. of /da-nu:-'-wuy/ is 3.8.1 ('You go play over that way') where there is a clear connection with second person. The other, 45.6.4, is in an apparently broken phrase.

In elicitation sessions it was possible to obtain Anaph /ba-nu:-'-wuy/ (and prefixed /an-uba-nu:-'-wuy/, /o:-'ba-nu:-'-wuy/), but it is not clear whether these forms are really used at all.

It was not possible to obtain variants of /ya:-nu:-'-wuy/ showing NC agreement with a variable referent, e.g., MANA Prox */ya:-mu:-'-wuy/; we conclude that /-u-wuy/ is a DemAdv formation (not DemPro).

TABLE 7-10

Centripetal DemAdv

a) /-ala/ added to Locative /-ji-/ or /-gu-/

	unprefixed	continuous	punctual
Prox	ya:-ji:-'la 22	ana:-'-ji:-'la 16	a:-'-ji:-'la 2
Imm simple	da-ji:-'la 1	a:-da-ji:-'la 0 ana-da-ji:-'la 0 an-uda-ji:-'la 0	wuda-ji:-'la 0
Imm Concrete	da-ji:-'lu:-' 1	a:-da-ji:-'lu:-' 0 ana-da-ji:-'lu:-' 0 an-uda-ji:-'lu:-' 0	wuda-ji:-'lu:-' 0
Dist	yuwa-ga:-'la 55	an-uwa-ga:-'la 101	o:-'wa-ga:-'la 2
Anaph	ba-ga:-'la 22	an-uba-ga:-'la 43	o:-'ba-ga:-'la 0
Anaph Concrete	ba-ga:-'lu:-' 0 [MT 5]	an-uba-ga:-'lu:-' 0	o:-'ba-ga:-'lu:-' 0

b) /-ala-yun^g/ added to Locative /-ji-/ or /-gu-/

attested forms: /ana:-'-ji:-'la-yun^g/ 3
/yuwa-ga:-'la-yun^g/ 2 /ya:-ji:-'la-yun^g/ 13

- -

7.15 Centripetal DemAdv in /-ala/, /-ala-yun^g/.

There is no true Ablative DemAdv of the type 'from here', 'from there'. Instead, there is a set of Centripetal DemAdv (Table 7-10, above) which, at least for Dist and Anaph roots, can be translated 'from there', but specifically implies motion (or linear extension) in the general direction of the speech-event or narrative 'here'. The basic form is with suffix /-ala/ added directly to the Locative DemAdv (for the latter see Table 7-7, §7.12).

Suffix /-ala/ is roughly similar to nominal Ablative case suffix /-$w_1$ala/ (§4.21) in form and function, but should be considered a distinct morpheme now. It also occurs with DemPro (§7.5), where it specifies that the referent is in motion toward 'here' (or else that one or more speech-event participants is in motion or may soon be in motion toward the referent). For additional information on how the Centripetal DemAdv fit into the system of motion-oriented DemAdv, see Figure 7-3 (§7.13, above) and accompanying discussion. Note in particular that English 'He came here' is typically restructured as 'He went[= came] from-there[Centrip]', specifying point of departure and centripetal direction rather than point of arrival. In §7.14, we noted that Centripetal DemAdv occasionally co-occur with /ya:-nu:-'-wuy/ 'this way' (Directional), in which case the latter gives some specificity to the point of arrival or at least the latter portions of the trajectory.

This semantic pattern is, naturally, most clear when the root of the Centrip DemAdv is Dist or Anaph, and Table 7-10 indicates

that some 85% of the textual exx. are in one of these two categories. The Imm is the least common category in the sample, though perhaps in a conversational rather than narrative corpus it would be a little more common.

It is also noteworthy that the Dist and Anaph forms are more common in the continuous-prefix form with //ana-// than in the unprefixed form, though in the Prox and Imm the unprefixed form seems slightly more common. The preference for continuous form for Anaph and Dist is quite striking in view of the very different patterns seen for the same root categories in the tables for other DemAdv formations (e.g., Tables 7-7, 7-8, 7-9), where unprefixed DemAdv greatly outnumber continuous-prefix forms for all root categories even if we include adverbs in negative contexts (which make continuous prefix obligatory).

We might approach an explanation of this preference for continuous-prefix Centrip adverbs by recalling that with place names, the continuous prefix was used in 48% of textual exx. of the Ablative case, but only in 17% of Allative(-Dative) case forms. We explained this by pointing out that in the narratives, a place name is often mentioned twice, once when the protagonist reaches it (Allative) and then a second time when he/she leaves it (Ablative). Because the continuous prefix is favoured by backgrounded, "given," nonfocal status, it is more common with noninitial than initial mentions of nouns in discourse, and thus interacts with narrative patterns to give the Ablative a high rate of prefixation (see also §4.8).

There is some difficulty in applying this analysis directly to the statistical asymmetries in Table 7-10. Our line of reasoning would lead us to believe that the Anaph root should have a high rate of continuous prefixation in the Centripetal DemAdv, which is in fact the case, but it does not lead us to expect the same trends with the (deictic) Dist root--yet nearly 65% of Dist Centripetal DemAdv (101 out of 158) have //ana-// prefix. From my understanding of the textual exx., I venture this explanation for the high rate of continuous prefixation of the Dist forms.

Because Centripetal DemAdv are effectively required (Figure 7-3) when the motion is in fact directed toward the speech-event or narrative 'here', Nunggubuyu speakers must say 'He went[= came] from there' where speakers of most other languages would say 'He came (to) here'. In most contexts, the 'from there' form in Nunggubuyu will have either Anaph or Dist root. In the texts, Anaph Centripetal forms are most often used when the point of departure for the motion is the most recently mentioned location in the immediately preceding discourse segment ('He went from Darwin to Ngukurr, then he came from there [to here]'). Therefore Dist forms are normal to specify motion to or toward 'here' when the point of departure is any point other than this most-recently-mentioned one (though we should make some allowance for flexibility on this requirement). Thus 'from there[Dist-Centrip]' might be used in connection with a location which was mentioned earlier but has been displaced from most-recently-mentioned status by an intervening location expression. Moreover, 'from there[Dist-Centrip]' is also regularly used when the point of departure is only vaguely defined

or does not particularly matter (to the speaker), since as we have emphasised the orientational system requires a Centripetal DemAdv frequently where other languages would emphasise the point of arrival (terminus). The overall effect is that Dist Centripetal DemAdv, though ostensibly deictic (by our definition of Dist), have an appreciable tendency to background (de-focus) the (distant) point of departure, so that Dist forms end up approximating the prefixing patterns of their Anaph counterparts.

We now give some exx. of the Dist and Anaph. Several specific features of the nominal Ablative case recur in Centripetal DemAdv. With /yuwa-ga:-'la/ we have one case involving the use of Ablative as an occasional marked case for subjects (45.1.4), cf. also /an-uwa-ga:-'la/ with 'to give' (78.1.6). Place of origin rather than trajectory starting point seems present with /yuwa-ga:-'la/ in 50.7.3, 71.4.2, 71.26.4. We have the context 'named from' with /yuwa-ga:-'la/ 80.2.3/5/7, 81.1.4/5, 90.2.6. We have 'X saw Y from there[X's position]' with /yuwa-ga:-'la/ 10.14.1 and /an-uwa-ga:-'la/ 10.17.2, 15.6.3. We have 'X spoke/called/sang from there' or the like with /yuwa-ga:-'la/ 28.10.1, 33.5.4, 41.8.2 and /an-uwa-ga:-'la/ 13.27.3, 47.2.2, 94.2.1/2.

Often the Centripetal DemAdv co-occurs with another adverb in contrastive sense (distinguishing two events or referents). Thus /yuwa-ga:-'la/ is opposed to a Centrifugal form in /-ali/ (§7.16) or a reduplicated Lateral form also in /-ali/ (§7.21) in 50.5.3, 168.2.3; cf. /an-uwa-ga:-'la/ in 13.29.2, 41.9.1, 157.14.1 and Anaph /an-uba-ga:-'la/ 111.3.2. We can also have a form like /an-uwa-ga:-'la/ repeated to indicate arrival from two or more directions (perhaps distinguished by manual gesture or a juxtaposed expression such as a cardinal-direction adverb): see 40.8.1-3. When a Dist or Anaph Centripetal form co-occurs with a Prox Centripetal form we may likewise have a contrastive opposition, as with /an-uwa-ga:-'la/ and /ana:-'-ji:-'la/ 53.2.1, /an-uwa-ga:-'la/ and /ya:-ji:-'la/ 110.3.3/4, and possibly /an-uba-ga:-'la/ and /ana:-'-ji:-'la/ 161.14.3. However, when the juxtaposed adverb is Directional /ya:-nu:-'-wuy/ 'this way' (§7.14), the usual sense is that of continuation of the same trajectory: /ba-ga:-'la/ plus /ya:-nu:-'-wuy/ 28.1.3, 168.4.4.

A few other exx. of /yuwa-ga:-'la/ (which is, incidentally, shortened from expected */yuwa:-ga:-'la/ by P-42) are 7.10.3, 8.1.3, 10.5.3 ('was perched'), 13.41.2, 15.13.1, 20.10.5, 21.1.5, 28.9.3, 34.4.5, 60.1.3, 71.31.4, 89.1.7, 101.1.1, 162.11.3. Prefixed /an-uwa-ga:-'la/ replaces this obligatorily in negative contexts (85.1.2/3/4), including conditional protasis (75.1.5, 84.1.5, 88.3.3, 90.1.6, 90.2.1/2). Other exx. of /an-uwa-ga:-'la/ are 9.12.4, 10.18.2, 13.32.2, 21.4.5, 41.12.3, 44.5.2, 47.20.4, 52.4.1, 101.3.3, 108.6.6, 110.2.4, 112.5.1, 149.1.4, 155.1.3, 162.22.3, 166.17.2. Punctual /o:-'wa-ga:-'la/ is attested 69.5.2, 166.1.3.

Anaph /ba-ga:-'la/ 15.13.2, 16.13.7, 18.18.6, 28.3.3, 29.3.3, 65.12.7, 168.10.3; /an-uba-ga:-'la/ 16.19.3, 20.3.6, 21.7.2, 98.5.2, 98.6.5, 161.3.6, 161.28.3, 163.20.6, 167.7.2.

These citations will give a good idea of the range of uses; as with other motion-oriented adverbs, these may occur without a verb (so that we should "supply" a verb in our interpretation), or may

co-occur with a nonmotional activity verb like 'to anchor' in a sense 'to come and anchor' (e.g., 167.12.1). With a verb like 'to see' it is not always possible to tell whether the correct translation is 'to come and see' or 'to see from there'. Regarding glosses in NMET, I have occasionally ventured a temporal gloss 'after that' or 'then' (e.g., 1.1.4), but I am now inclined to think that this is wrong and that motion is implicitly involved in these exx.

The Anaph form /ba-ga:-'la/ can also be used as NAdj with intransitive pronominal prefix in the sense 'facing this way', usually reduplicated as /bagawaga:la/; see discussion §7.22.

Prox /ya:-ji:-'la/ seems to have a considerable range of specific senses, as does prefixed /ana:-'-ji:-'la/. In some contexts it seems to mean simply '[coming] along here', '[coming] along this way': /ya:-ji:-'la/ 10.16.1, 35.3.1, 61.2.6/8, 62.5.3/4, 108.3.5, 161.14.4, 162.12.1, 168.1.1; /ana:-'-ji:-'la/ 25.4.4, 63.4.2, 161.14.3/4, 161.15.3, 161.23.1, 161.30.2; this is also the case with the only exx. of punctual /a:-'-ji:-'la/ 167.1.1/3. These forms can also be used in connection with the occasional Ablative case for the grammatical subject: /ya:-ji:-'la/ 36.4.3/4 (161.8.1 might be another ex. but could have other interpretations). A number of exx. involve clear contrasts with a non-Prox location or side and are related in meaning to the Lateral derivatives (§7.21) and translatable 'over here' or 'on this side': /ya:-ji:-'la/ 3.5.1, 16.21.3, 110.3.4; /ana:-'-ji:-'la/ 40.8.2, 53.2.1, perhaps 53.4.2/5. The same effect can be created by using two or more identical Prox Centripetal forms ('over here [and] over here') to indicate separate locations or sides: /ya:-ji:-'la/ 17.12.2/3, 17.16.1/3; /ana:-'-ji:-'la/ 70.1.5. As usual, /ana:-'-ji:-'la/ is required instead of /ya:-ji:-'-'la/ in negative contexts including conditionals (62.5.3).

The Imm exx. are /da-ji:-'la/ 163.3.1 ('maybe it[vehicle] is coming up behind us') and /da-ji:-'lu:-'/ ('she was about to turn and face him there').

We have covered Centripetal DemAdv with just /-ala/ or Concrete /-alu:-'/. It remains to cover the much smaller number of attested forms in /-ala-yun^{g}/ including Absolute /-yun^{g}/ (§7.7, cf. also /-ala-yun^{g}-/ with DemPro §7.9). For frequency figures see Table 7-10 (above), part (b). Note that while Prox Centripetal DemAdv in just /-ala/ are much less common than Dist or Anaph forms, with /-ala-yun^{g}/ it is the Prox which is easily most common (15 exx. out of a total of 17 for all roots). The other exx. (2) are Dist. It is possibly significant that /-ala-yun^{g}/ is attested mainly with the unprefixed roots.

One important clue to the meaning of the /-ala-yun^{g}/ DemAdv is the fact that we have attestations with the Dist root but none with the Anaph root. Although a larger sample would perhaps turn up an Anaph form like /ba-ga:-'la-yun^{g}/, the statistics make it very clear that /-ala-yun^{g}/ here is not simply the Absolute /-yun^{g}/ with sense as described in §7.7 added to a Centripetal DemAdv (/-yun^{g}/ with DemPro in §7.7 is exceptionally common with the Anaph root, is possible with Prox and Imm but common only in one list-summative Imm form, and is impossible with Dist). It is therefore reasonable to compare DemAdv in /-ala-yun^{g}/ with the

semantically specialised suffix-combination /-ala-yun^{g}/ as found with DemPro (§7.9), the sense being linear extension (straight or zigzagging).

Several exx. of /-ala-yun^{g}/ with DemAdv indicate a small trajectory along the body: /ya:-ji:-'la-yun^{g}/ 17.15.2 ('he cut her here on the neck'), 136.1.4/5/6/7/8 ('we put a stick along here, and along here,...', i.e., to set broken bone); /ana:-'-ji:-'la-yun^{g}/ 149.2.6 twice (with necklace). The other exx. are of the type '[going/coming] along here' involving either motion or linear extension: /ya:-ji:-'la-yun^{g}/ 26.1.3/4/6/7, 168.2.2; /ana:-'-ji:-'-'la-yun^{g}/ 15.4.3; and Dist /yuwa-ga:-'la-yun^{g}/ 144.1.4, 148.1.5. Here the Dist exx. cited are linear-extension cases (distribution of tree spp.), while the Prox exx. involve motion (with 'swim', 'go', 'paddle'), Note that /ya:-ji:-'la-yun^{g}/ is sometimes found repeated several times; in the body-part ex. (136.1.4ff.) the repetitions indicate parallel lines (for several sticks bound to the broken limb), while in the swimming ex. (26.1.3ff.) we simply have repetition for emphasis.

The body-part exx. are more or less interchangeable with Centrifugal DemAdv in /-ali/ (next section), the difference being merely one of perspective. The motion and linear-extension exx. do not seem to be very different in meaning from some uses of Centripetal DemAdv in /-ala/ (without /-yun^{g}/), or indeed from some other adverbial formations which compete in some contexts with the Centripetal (i.e., Directional §7.14, Lateral §7.21).

7.16 Centrifugal DemAdv in /-ali/.

The suffix /-ali/, found only with demonstratives, was introduced in §7.5 as part of the system of motional endings for DemPro; here we consider corresponding DemAdv forms (Table 7-11, below).

All textual exx. (total 44) involved the Prox root, showing /-ali/ added to the Locative DemAdv /ya:-ji/ 'here' and prefixed variants (§7.12). Imm forms were elicited but are probably rare or absent in real speech; recall from §7.5 (Table 7-4) that with DemPro as well, for practical purposes /-ali/ is confined to the Prox root.

These adverbs can usually be translated '[going] along here' or '[going] through here'. In spatial terms, we are dealing with a Prox starting point and a brief trajectory leading from it. Most exx. involve a small part of the body: /ya:-ji:-'li/ 7.15.3 ('she hit him here, on the back'), 10.10.1 ('she cut him in two here at the waist'), 10.12.3, 10.18.3/4, 17.7.4 ('water went through

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TABLE 7-11

Centrifugal DemAdv

Prox	ya:-ji:-'li 30	ana:-'-ji:-'li 14	a:-'-ji:-'li 0
Imm	da-ji:-'li 0	a:-da-ji:-'li 0 ana-da-ji:-'li 0 an-uda-ji:-'li 0	wuda-ji:-'li 0

nostrils here'), 17.14.4, 18.19.1/3, 71.23.4/5, 95.8.1 ('cut carcass down chest from neck'); /ana:-'-ji:-'li/ 42.5.1, 71.23.5. There are, however, a number of exx. involving motion away from 'here' on a more normal spatial scale: /ya:-ji:-'li/ 15.11.3 ('he ran from here'), 50.5.5 (with Anaph Allative /bu-gunu:-'/ indicating the terminus), 161.11.2, 162.1.1 (with Allative-Dative place name for terminus), 162.10.3 (with juxtaposed Ablative noun), 162.19.3, 168.2.3; /ana:-'-ji:-'li/ 15.4.4, 24.2.4, 138.5.8, 163.1.1, 165.1.4. Note that 'from here' is not a very common adverbial form because of the preference for specifying terminus (not starting point) when the trajectory is in a noncentripetal direction (§7.13, Figure 7-3, above); it is used when the focus is specifically on the (Prox) starting point, which is usually the case only when dealing with very small trajectories (as in the body-part exx.). In 13.29.1 and 78.1.7 we have /ana:-'-ji:-'li/ in connection with transitive actions ('to say', 'exchanging'); it is not clear whether we should take these exx. as meaning literally 'from here' (referring to the "trajectory" from agent to object, see §4.22 concerning Ablative case for subject) or '[the one] over on this side' (one narrated-event participant as opposed to the other), but the choice of literal interpretations does not affect the broad interpretation of the passages. Both passages cited do involve a contrasted Centripetal form /an-uwa-ga:-'la/ (13.29.2, 78.1.6) in connection with a reciprocal action from the other actor. In 114.2.4 we have a series of instances of /ya:-ji:-'li/ indicating a series of closely-spaced locations. The remaining exx. are these: /ya:-ji:-'li/ 12.8.3 (unclear, could indicate relative position of person or part of body speared), 20.16.4 ('went through surface of ground here'), 50.5.3 (not clear, perhaps 'over here' in contrast to /yuwa-ga:-'la/ 'from there[Dist]' on same line); /ana:-'-ji:-'li/ 41.8.4 ('over here'), 41.16.3 ('over here'), 111.3.2 (unclear recording; with /an-uba-ga:-'la/ 'from there[Anaph]'), 157.14.1 (not very clear). The exx. glossed here 'over here' (alternatively, 'on this side') show that the type with /-ali/ may approach the sense of derived reduplications (also with /-ali/) discussed under the rubric of Lateral adverbs (§7.21, below).

7.17 Pergressive DemAdv in /-waj/, /-waj-gaj/, /-$w_1$ala-waj/.

For nouns, the Pergressive case ending is /-$w_2$aj/ or /-$w_1$aj/, the latter with a retrospective sense (§4.23). We have seen in §7.5 that /-waj/ with DemPro, called Transverse in this context, may indicate that the referent of the DemPro is in motion along an axis prototypically broadside to the line of vision of the speaker (or perhaps an actor in narrative perspective). We now consider DemAdv involving /-waj/ (whether or not we can specify it further as /-$w_1$aj/ or /-$w_2$aj/). However, Extent adverbs in /-ga-waj/ are treated separately below (§7.24), and /-waj/ added to a reduplicated Lateral derivative (/ya:-ji-ji:-'la-waj/) is mentioned in the section treating such derivatives (§7.21).

The only DemAdv to be considered in this section which have any text frequency worth mentioning are forms with /-waj/ added to a Locative DemAdv (§7.12), as shown now in Table 7-12, below.

TABLE 7-12

Pergressive DemAdv

Prox	Imm Concrete	Dist	Anaph
ya:-ji-waj 3	da-ju:-'-waj 1	yuwa:-gu-waj 1	ba-gu-waj 8

Notes: Attested forms only shown (prefixed forms, and non-Concrete Imm forms, grammatical but not shown). As usual, attestations counted include forms with postposition (but not other suffix) following. Prox /ya:-ji-waj/ also pronounced /ya:-ji-yaj/.

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Our initial observation about the frequencies in the table is an apparent concentration in relatively definite forms (see §7.1, and recall from §7.6 that Concrete /-u/ may have presupposing features as well). Let us examine all of the textual exx., looking for some or all of these characteristics: a) definiteness; b) emphasis, cf. /-waj/ with independent personal pronouns (§6.9); c) pergressive meaning ('along, through, by, among, around').

Prox /ya:-ji-waj/ (or /ya:-ji-yaj/) is found 54.3.3 ('detribalised Aboriginals will be buried around here [instead of being taken to remote clan burial sites]'), 132.5.1 ('we dug pit, up to here, we buried it'), 162.7.4 ('buffalo came toward us, it saw us [in moving truck], along here, then [I said] "Stop!"'), and also MT 5[line 3 up] ('You two[men], do not run off with my daughters! Just stay around here!'). Imm /da-ju:-'-waj/ is attested 163.3.4 in a quotation ('"Park it[truck] there"'), with /ba-gu-waj/ in the surrounding text. Dist /yuwa:-gu-waj/ is found in 57.4.3 ('Down below, in the camp, we sing ordinary songs, but important ritual business is done only there, on top[in the men's ritual ground]'); though the Dist root is always essentially deictic, in this passage the deictic quality is weakened since the ritual ground was contrasted with the camp earlier in the same text (57.2). The exx. of /ba-gu-waj/ are 15.12.1 ('he died there'), 95.4.4 ('one emu fell, then another one they speared, [and] there it fell too'), 95.9.5 ('kangaroo could not escape ring of fires. Suddenly, still there they speared it'), 112.5.2 ('we tow the dugong along if we have only a small canoe, but if we have a large boat we put the dugong right in there'), 123.3.2 ('if the gum from the wattle trees is soft we just break it off and eat it there, but if it is hard we put it in a can of water and soak it'), 125.15.3 ('they would take the yams out of the native oven and eat them there as a light snack'), 163.3.4/5 ('the truck was getting bogged, so they parked it there, ..., they left it there, back with the cypress trees'); a further ex. is MT 16.

In some of these exx. the gloss is tentative. In the majority of exx. the contribution of /-waj/ is clearly definite: 'right here/there', 'in this/that same place'. In 163.3.4/5, /ba-gu-waj/ is juxtaposed to the Retrospective Pergressive noun form /yi:-yimbid-gaj/ 'back with the cypress[es]'. The Prox exx. are more difficult to interpret because in this category it is more

difficult to differentiate deictic from definite (presupposing) nuances; the exx. glossed 'around here' or 'along here' might possibly be reanalysed as definite 'right here' (reasonable for MT 5 and NMET 54.3.3, not so good in 162.7.4). The Prox ex. glossed 'up to here' suggests occasional use of /ya:-ji-waj/ as a competitor for /ya-ga-waj/ (§7.24). However, the overall conclusion is that /-waj/ adds an incremental emphasis on the definiteness or sameness of the location in most instances, and thus competes most directly with /-miri/ as in /ba-gu-miri/ 'right there[Anaph]' (§7.19). In a fashion, this use of /-waj/ with Locative DemAdv may be seen as compensation for the morphological incompatibility of Absolute /-yun^{g}/ (§7.7), an important definite element for DemPro, with Locative DemAdv.

The conclusion that /-waj/ is mainly a definite marker with these adverbs is supported by the frequent occurrence of post-position /-w$_2$ugij/ 'still, only, nothing but' after them. Of the exx. already cited, several in fact have this postposition; see §7.30.

There is one attestation of /-waj/ (actually, /-waj-bugij/ with the just-mentioned postposition) added to an Allative DemAdv: 40.9.2 /bu-guni-yaj-bugij/ ('"You take honey, firewood, etc., there [i.e., to the bachelors' camp]"'). The nuance is hard to ascertain from this one ex., but since the bachelors' camp is a fixture and since delivering supplies such as honey to it is a recurrent daily operation, we can probably take this as grammatically definite.

The combination /-waj-gaj/, where the second element is formally identifiable as Retrospective Pergressive /-w$_1$aj/, is uncommon but attested with Locative DemAdv. In NMET we can cite only 68.4.7 /ya:-ji-yaj-gaj/ ('we will not take the old men there, they will stay back here'). From Hughes' texts we have TNT 24 /yuwa:-gu-waj-gaj/ ('Some paperbark was there[Anaph, i.e., at her camp], and Winyaagi covered himself in it; as for her, [she was] back there[Dist], the women were dancing'). Although it is somewhat unusual to have this retrospective increment to the normally deictic Dist DemAdv, in this ex. the location in question has already been mentioned, and is now given as Dist rather than Anaph because of an intervening /ba-gu/ 'there[Anaph]' referring to a distinct location (the woman's camp).

A composite case marker found with nouns is Ablative-Pergressive /-w$_1$ala-waj/ (§4.26) '[going] along __'. In demonstratives, this form is attested once with a Centripetal DemAdv, hence in a suffix sequence /-ala-w$_1$ala-waj/. The ex. is /ba-ga:-'la-wala-waj-bugij/ (with final postposition) 1.8.1 (magician in underground tussle comes up at a place to find his bearings, then 'again still coming along this way he returned underground'). Here the /-w$_1$ala-waj-/ seems to stress the continuation of the trajectory, whereas /ba-ga:-'la/ merely indicates centripetal direction and the point of departure (Anaph 'there').

Hughes also has /ba-ga:-'la-yun^{g}-gala-waj/ TNT 23 with this /-w$_1$ala-waj/ added to /-ala-yun^{g}-/ (for the latter see §7.15). The context is: 'She disguised herself as a man, [fearing that] it would take her away from there'. Both /-ala-yun^{g}-/ and /-w$_1$ala-waj/ components emphasise going along through a sector of a trajectory, and perhaps in this ex. dragging the woman away is emphasised.

7.18 Case suffixes with DemAdv and DemPro: Locative /-ruj/.

With DemAdv and with predicative DemPro, the normal meaning of an additional Locative case suffix (see §4.25 for suffix /-ruj/ with nouns) is 'a bit farther on from here/there'. That is, adding /-ruj/ indicates a point in the vicinity of the point or small area which would otherwise be specified.

With DemAdv the attestations are with /-ruj/ added to the (already) Locative DemAdv in /-ji-/ or /-gu-/ (§7.12). The common forms are Anaph /ba-gu-ruj/ (often with stylistic lengthening of first vowel) with 14 exx. in NMET and Imm /da-ji-ruj/ with 13. The exx. of /ba-gu-ruj/ or /ba:::-gu-ruj/ are 13.4.3, 13.13.2, 15.9.3, 17.4.2/6, 17.5.4, 21.9.1/2, 43.11.3, 44.1.4, 97.6.1, 162.3.2, 162.16.2, 166.25.3. Imm /da-ji-ruj/ is found in NMET chiefly when narrative perspective intrudes into a narration; the exx. are 1.4.3, 1.5.8, 2.5.2, 22.2.2, 28.2.2, 28.3.1/4, 29.3.3, 29.8.4, 29.10.2, 31.1.3 (twice), 45.8.4. Concrete */da-ju:-'-wuj/ is unattested and apparently of doubtful grammaticality, probably because the /-ruj/ construction by definition specifies a new point whereas Concrete /-u-/ has definiteness connotations (§7.6). Imm /da-ji-ruj/ often co-occurs with NAdv /a_laga_la/ 'on the way, en route' which emphasises that the new point is still somewhere between the starting point and the terminus of the overall trajectory (e.g., 29.8.4).

Dist /yuwa:-gu-ruj/ is found once in 43.6.5. Prox /ya:-ji-ruj/ does not occur in the NMET texts but is grammatical, the sense being 'just over here' (a short distance from speaker).

The DemAdv type with /-ruj/ is commonly used to indicate small increments in a trajectory. There is no other convenient expression for such contexts as 'He went on a little farther and sat down'. Quantifiers such as 'a little[distance]' do not regularly occur and there is no other adverb for 'farther'. Verb stem /=w$_2$ayama-/ 'to proceed, to keep going' does not by itself specify the end of an incremental addition to a trajectory; however, it may co-occur with /ba-gu-ruj/ or /da-ji-ruj/.

The DemAdv forms listed above all lack prefixes. Forms with continuous NC$_{infl}$ prefix are grammatical (and would be required in negation, for example). Anaph /an-uba-gu-ruj/ occurs TNT 3.

All attested DemAdv with /-ruj/ are already Locative, rather than Allative, Directional, Centripetal, etc. Although a form like /da-ji-ruj/ might co-occur with a motion verb, the DemAdv focuses on a particular point and implies in most texts that the character stopped at that point.

With predicative (unprefixed) DemPro, /-ruj/ has the same meaning and can be translated '[is/are] just beyond there' or the like. Past tense translations are possible under the same limited conditions as for other predicative DemPro (§7.4). There are six exx. in NMET: Anaph WARA /ba-wi-ruj/ 97.6.3, 143.12.2; Dist WARA /yuwa:-wi-ruj/ 143.12.7; Imm MSg /da-gi-ruj/ 43.10.2/3; and Imm MDu /di-_ni-ruj/ 5.2.5.

With nonpredicative (prefixed) DemPro, /-ruj/ has its ordinary meaning as a Locative case marker (as with nouns), hence 'at/on/in this/that'. Most of the possible forms are uncommon, since English 'at/on/in this' as a complete prepositional phrase will usually

show up in Nunggubuyu as a simple Locative DemAdv 'here' (/ya:-ji/), and since English 'at/on/in this X' with some modified noun X will usually show up in Nunggubuyu either as 'here X-Loc' with DemAdv in apposition to case-marked noun or as 'this X-Loc' with case suffix on the noun only.

The only forms with /-ruj/ after nonpredicative DemPro are Prox MANA forms meaning 'today' or 'on that day'. For further discussion and exx. see below, §7.31. Leaving aside these exx. (11 occurrences in NMET), we can cite just 5 instances: punctual Anaph ANA /o:-'ba-ni-yun-duj/ 'at that [place]' 13.10.5, 13.21.3 (with Absolute /-yun^{g}-/); Imm WARA /wa:-da-wi-ruj/ twice 100.4.5 with temporal sense 'among[= at the time of] those people' (Imm indicating the most recently deceased generation of elders, not the oldest within living memory); and Prox NA /na:-'-gi-ruj/ 101.3.6 '[chick will grow up] in[i.e., with] this one, in[with] the adult jungle-fowl bird', where the DemPro is in apposition to a Locative noun following a pause. From Hughes' texts we can additionally cite Anaph Pl /war-ubu-ru-yun-duj/ TNT 27 and Prox ANA (punctual) /a:-'-ni-ruj/ TNT 23.

There are insufficient exx. to determine frequency of punctual vs. continuous forms of the NC_{infl} prefix (§7.3) in these nonpredicative exx., especially since most of the WARA and Pl forms are morphologically indeterminate. However, the few exx. do seem to show that the punctual form is reasonably common. This suggests that with nonpredicative DemPro, suffix /-ruj/ functions as a genuine case suffix. On the other hand, with DemAdv as in /da-ji--ruj/ (see above), the fact that none of the 28 textual exx. shows punctual ANA prefix /a-/ indicates that /-ruj/ is not functioning as a real case suffix in that combination--a pattern which is consistent with the special meaning of the suffix with DemAdv. By contrast, in §7.20 we will see exx. of use of punctual /a-/ with DemAdv when followed by real case suffixes.

While we thus have even a morphological validation for taking the 'just beyond __' sense with DemAdv (and unprefixed DemPro) as grammatically distinct from the usual locative sense of /-ruj/ (notably with nouns), there is a possible link. English glosses for /-ruj/ in locative sense include 'in, on, at', and perhaps 'by' in static sense ('It is by the door'). Some of these contextual glosses, notably 'on' and 'by', specify location near or on the surface of the following noun; if we take these, rather than 'in', as prototypical for /-ruj/, the sense 'just beyond' with demonstratives is not a sharp conceptual jump. We may add in this regard that in some instances 'in X' is expressed in Nunggubuyu by the Pergressive rather than Locative case (§4.23), that enclosures (e.g., houses, containers) played a relatively small role in traditional Nunggubuyu life, and that 'inside' is terminologically equated with 'under, below' (/lhiribala/).

7.19 Case suffixes with DemAdv and DemPro: Instrumental /-miri/.

Like Locative /-ruj/ (above), Instrumental /-miri/ (discussed §4.27 with nouns) has a special meaning in most instances when used with demonstratives. The primary meaning is 'right' as in 'right here' and 'right there', emphasising sameness of the location. The form with /-miri/ after Locative DemAdv like /ba-gu/ 'there[Anaph]' is thus competitive with /-waj/ (§7.17, e.g., /ba-gu-waj/), and in the case of the Imm root perhaps also the form /da-ju:-'/ with Concrete /-u/ added to the Locative DemAdv (§7.6, §7.12); however, recall that Absolute /-yun^{g}/ (§7.7), another potentially competing suffix with the Anaph root, cannot be added directly to a Locative DemAdv and so is not a factor here.

Because sameness is rather emphatically expressed by /-miri/, it is natural that it should co-occur frequently with Anaph DemAdv. Indeed, with Locative DemAdv we find 8 attestations of the Anaph root and none of the other roots in NMET: /ba-gu-miri/ 3.4.4, 3.5.4, 52.4.4, 63.2.5, 95.10.1, 140.3.3; prefixed /an-uba-gu-miri/ 55.12.4, 113.8.4. Prox /ya:-ji-miri/ 'right here' was heard occasionally, though it was not found in the texts. With the Imm root, /da-ji-miri/ and Concrete /da-ju:-'-miri/ are perhaps grammatical but /da-ju:-'/ by itself usually suffices since /-u/ implies definiteness. Dist /yuwa:-gu-miri/ 'right there' is not ordinarily possible because of the deictic nature of the root, and may be ungrammatical.

We have Anaph Allative /bu-guni-miri/ 'right [in-]to there' twice 11.8.2/4.

Suffix /-miri/ also occurs with DemPro. First, we have 166.7.3 /a:-'-ni:-'la-yun^{g}-miri/ 'along here [i.e., in an extended coastal area including the Prox region]'; this contains /-ala-yun^{g}-/ (§7.9) with punctual ANA form of the Prox root. Choice of punctual prefix is here influenced by immediately preceding /a-wunumbi-yaj/ 'northward', also with punctual ANA prefix /a-/.

Aside from this, most occurrences of /-miri/ with DemPro are predicative forms without prefixes, and the sense is '[is/are] right here/there'. Thus Anaph NA and N^{g}ARA /ba-gi-miri/ 21.10.2/4/5; Anaph MANA /ba-ma-miri/ three times 7.1.3/4, and Prox ANA /ya:-ni-miri/ 71.18.2.

However, /-miri/ is occasionally found with DemPro in its original instrumental meaning, forcing a quite different reading. Recall from §4.27 that /-miri/, unlike other case suffixes, normally takes the prefixless form of the noun. This pattern is retained in Instrumental forms of DemPro, so that in this instance there is a violation of the normal rule that prefixless DemPro have predicative status. There are only two clear exx. in NMET, both with the Anaph root, one with Absolute /-yun^{g}-/ preceding /-miri/. Thus /ba-ma-miri/, cited in the sense '[is/are] right there' in the preceding paragraph, shows up in the sense 'by means of that' 170.4.4, summing up a list of pigments and fixatives (for painting) which are overtly or covertly Instrumental. Similarly, /ba-wa-yun^{g}-miri/ 113.2.4 must mean 'by means of that' (WARA class) and occurs with following Instrumental noun ('she doused him with that bush lily medicine').

The form /n^{g}ar-uba-gi-yun^{g}-miri/ TNT 24 seems to mean 'that [Anaph] same one[FSg]', and if so is an ex. of /-miri/ emphasising sameness with a prefixed Anaph DemPro. However, this is at best a rare combination, since /n^{g}ar-uba-gi-yun^{g}/ is already clearly definite with Anaph root and with Absolute /-yun^{g}/ (§7.7), and this form without /-miri/ is found 48 times in NMET.

As a final note on /-miri/ in the sameness sense, we should point out that postposition /-$w_2$ugij/ 'still, only, nothing but' competes with /-miri/ in its contextual meaning 'still' (as in /ba-gu-wugij/ 'still there'). The semantic difference is that /-miri/ emphasises absence of deviation from a given location, while /-$w_2$ugij/ stresses temporal continuity. The two do not seem to co-occur, although /-$w_2$ugij/ is found several times following /ba-gu-waj/ and similar DemAdv with /-waj/ (§7.17).

7.20 Case suffixes with DemAdv and DemPro: /-mira:dhu/, /-$w_1$ala/, /-$w_1$uy/, /-yun^{g}guyun^g/, /-yi:/, /-yin^{y}un^g/.

In this section we discuss a number of additional case suffixes which occur now and then with DemPro and/or DemAdv, with more or less their regular case value as discussed for nouns in §4.20ff. However, the adverbial combination /-u-wuy/, as in /ya:-nu:-'-wuy/ 'this way', is treated separately in §7.14. In addition, Centripetal /-ala/ (which has affinities to Ablative /-$w_1$ala/) is discussed in §7.5, the form /an-uba-ni:-'la-wala/ 'after that' is covered in §7.8, and the Ablative-Pergressive combination /-$w_1$ala-waj/ is treated in §7.9 (DemPro) and §7.17 (DemAdv).

It should be noted that the forms to be mentioned here (as well as forms in /-ruj/ and /-miri/ in the preceding two sections) have not been counted in the tabulations of numbers of occurrences of non-case-marked DemPro and DemAdv in earlier sections of this chapter. However, the small number of these case-marked forms means that our main statistical generalisations in earlier sections will not be threatened.

All forms attested are listed in Table 7-13, below, along with the textual references. Since most of the forms are only attested from one to three times, it is difficult to draw any profound conclusions on statistical points.

One point of interest is whether the case-marked forms show the same patterns of NC_{infl} prefixation as do ordinary nouns; recall that with the possible exceptions of /-mira:dhu/ and /-yin^{y}un^g/, the suffixes considered here generally favour the use of punctual prefixes (§4.8), except that in negative contexts (including conditional protasis) the continuous prefix is required. Relative /-yin^{y}un^g/, on the other hand, shows a moderate preference for continuous over punctual, while for Originative /-mira:dhu/ the paucity of exx. makes it difficult to determine prefix patterns.

The data in Table 7-13 are broadly consistent with the nominal patterns. DemAdv, like place names and some other NAdv (§4.3), are formally of ANA class, and in case-marked forms we frequently get continuous /ana-/ or punctual /a-/ (and variants). DemPro are of variable NC, but do show tendencies to take punctual prefix forms with Allative-Dative /-$w_1$uy/ and Similative /-yi:/. The high-frequency form /wa-ga-ga:-'la-wuy/ is a special case which will be examined in §7.21.

Two exx. in the list show continuous prefix (ANA_c--note subscript in glosses) due to negation: /ana:-'-ni-yi:/ 165.1.7, /ana:-'-ji:--'la-yin^{y}un^g/ 171.1.3.

TABLE 7-13

Other Case Forms of DemAdv and DemPro

Originative /-mira:dhu/

an-uba-ni-yun^g-mira:dhu 162.22.4 ANA_c Anaph DemPro

Ablative /-$w_1$ala/

ba-ni-yun^g-gala 71.16.3 unprefixed ANA Anaph DemPro

Allative-Dative /-$w_1$uy/

nu:-'ba-gi-wuy 5.20.5 MSg Anaph DemPro
yira:-'-gi-wuy 101.3.4 NA_p Prox DemPro
war-uba-wi-yun^g-guy 47.17.1 WARA Anaph DemPro
a:-'-ni-wuy 50.6.3, 140.4.5 ANA_p Prox DemPro
am-uda-mi-yun^g-guy 7.5.3 $MANA_p$ Imm DemPro

wa-ga-ga:-'la-wuy [8 exx.; see §7.21]

Purposive /-yun^{g}guyun^g/

a:-'-ji-yun^{g}guyun^g 138.4.3 ANA_p Prox Locative DemAdv

Similative /-yi:/

ana:-'-ni-yi: 165.1.7 ANA_c Prox DemPro
a:-'-ni-yi: 13.8.2, 71.12.6, 113.9.3, 157.1.2/5 ANA_p Prox DemPro
ama:-'-mi-yi: 71.23.2, 122.1.5 $MANA_p$ Prox DemPro

Relative /-yin^{y}un^g/

na:-'-gi-yin^y-jin^{y}un^g 47.7.2 MSg Prox DemPro
n^{g}ar-uba-gi-yin-jin^{y}un^g 56.1.5 FSg Anaph DemPro
war-uba-wa-yun^y-jin^{y}un^g 90.1.1 WARA Anaph DemPro
war-uba-wi-yin^y-jin^{y}un^g 139.13.4, 113.1.4[-yun^y-] WARA Anaph DemPro
an-uba-ni-yin^y-jin^{y}un^g 139.15.4 ANA_c Anaph DemPro
o:-'ba-ni-yin^{y}un^g 164.2.5 ANA_p Anaph DemPro
o:-'wa:-ni-yin^{y}un^g MT 10 ANA_p Dist DemPro
ana:-'-ni-yin^{y}un^g MT 9 ANA_c Prox DemPro
a:-'-ni-yin^{y}un^g TNT 4 ANA_p Prox DemPro

a:-'-ni:-'la-yin^{y}un^g TNT 4 ANA_p Prox Centrip DemPro
o:-'wa:-ni:-'la-yin^{y}un^g MT 9 ANA_p Dist Centrip DemPro

war-uba-wi-yun^g-ga-jin^{y}un^g 47.9.2, 47.11.6, 139.8.5 WARA Anaph
an-uba-ni-yun^g-ga-jin^{y}un^g 47.4.3, 47.20.2, 112.7.2 ANA_c Anaph
o:-'ba-ni-yun^g-ga-jin^{y}un^g 47.23.2 ANA_p Anaph DemPro

ana:-'-ji-yin^{y}un^g 139.2.2 ANA_c Prox Locative DemAdv
o:-'wa:-gu-yin^{y}un^g 57.2.4 ANA_p Dist Locative DemAdv
an-uba-gu-yin^{y}un^g 55.1.5 ANA_c Anaph Locative DemAdv
o:-'ba-gu-yin^{y}un^g 55.5.3 ANA_p Anaph Locative DemAdv

ana:-'-ji:-'la-yin^{y}un^g 46.1.3, 171.1.3 ANA_c Prox Centrip DemAdv
yuwa-ga:-'la-yin^{y}un^g 71.31.2 unprefixed Dist Centrip DemAdv
o:-'wa-ga:-'la-yin^{y}un^g 55.5.3 ANA_p Dist Centrip DemAdv
an-uwa-ga:-'la-yin^{y}un^g 46.1.2/5 ANA_c Dist Centrip DemAdv

[continued next page]

(Table 7-13, cont.)

yu:-guni-yin^{y}un^{g} 30.4.1 unprefixed Dist Allative DemAdv

ana:-'-ji-ji:-'la-yin^{y}un^{g} 13.38.2 ANA_c Prox Lateral DemAdv
a:-'-ji-ji:-'la-yin^{y}un^{g} MT 11 ANA_p Prox Lateral DemAdv
ana:-'-ji-ji:-'li-yin^{y}un^{g} 169.1.8 $^{p}ANA_c$ Prox Lateral DemAdv

man-uwa:-ma-ma:-'la-yin^{y}un^{g} 169.1.6 $MANA_c$ Dist Lateral DemPro

Note: For Lateral demonstratives see §7.21; for /-yun^{g}-gaj-/ see §7.10. Transcriptions shown above are slightly normalised by omitting stylistic lengthening and lumping /ano:-'.../ with /an-u.../. Subscripts: $_{p}$ punctual, $_{c}$ continuous NC_{infl} prefix.

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It is not necessary to comment here on each form in the table since most are straightforward and since textual citations are given. One of the exx. with /-w$_1$uy/ (47.17.1) involves case spreading from a verb in /-w$_1$uy/. The sole ex. of /-yun^{g}guyun^{g}/ is unfortunately in an apparently muddled textual segment.

Some exx. with /-mira:dhu/, /-w$_1$ala/, /-w$_1$uy/ show Absolute suffix /-yun^{g}-/ (§7.7) before the case suffix. In the Relative exx., this /-yun^{g}-/ shows up with variant pronunciations /-yin-jin^{y}un^{g}/, /-yin^{y}-jin^{y}un^{g}/, /-yun^{y}-jin^{y}un^{g}/. The shift of //u// to /i/ here is not regular and is not accounted for in our phonological rules, but could be thought of an another variant of V-Fronting P-50.

Since the Relative forms are reasonably numerous and diverse, perhaps we can illustrate a few typical uses. With DemAdv stems, a common meaning is '[clan, totem, flora-fauna sp., etc.] of/from this/that area'. The ex. of /yuwa-ga:-'la-yin^{y}un^{g}/ 71.31.2 '[people] from there[Dist]' shows Rel /-yin^{y}un^{g}/ added to a Centripetal DemAdv, while in 55.5.3 we have an opposition between /o:-'ba-gu-yin^{y}un^{g}/ '[people] of/from that[Anaph] place' and /o:-'wa-ga:-'la-yin^{y}un^{g}/ '[people] from there[Dist, i.e., some other place]', for which free glosses would be 'the locals' and 'the visitors'.

Of the categories considered here, Similative /-yi:/, Relative /-yin^{y}un^{g}/, and perhaps Purposive /-yun^{g}guyun^{g}/ and Originative /-mira:dhu/, would seem to occur in these DemPro and DemAdv forms whenever semantically appropriate, since there is no obvious alternative form. However, Ablative /-w$_1$ala/ and Allative-Dative /-w$_1$uy/ have surprisingly low text frequencies considering their very high frequencies with nouns. The reason is basically that they are usually replaced by Centripetal DemAdv in /-ala/ and by Allative DemAdv in /-guni/ (or Directional DemAdv in /-u-wuy/), see §7.13-15. Thus English 'to that one' usually translates as '(to) there' (e.g., Dist /yu:-guni/) and 'to that man' as '(to) there, to the man' (e.g., /yu:-guni na-walyi-n^{y}un^{g}-guy/).

7.21 Lateral DemAdv and DemPro: /ya:-ji-ji:-'la/, /ya:-ji-ji:-'li/, /wa-ga-ga:-'la/, /wa-ni:-'la/, etc.

We are here concerned with DemAdv and occasionally DemPro in derivatives usually translatable 'on this/that side', hence termed

TABLE 7-14

Lateral DemAdv and DemPro

a) DemAdv from Centripetal DemAdv

	unprefixed	continuous	punctual
Prox	ya:-ji-ji:-'la 25/2	ana:-'-ji-ji:-'la 1/1	a:-'-ji-ji:-'la 0
Imm	da-ji-ji:-'la 0	a:-da-ji-ji:-'la 0 ana-da-ji-ji:-'la 0	wuda-ji-ji:-'la 0
Dist	wa-ga-ga:-'la 6/8 yuwa-ga-ga:-'la 1	an-uwa-ga-ga:-'la 3	o:-'wa-ga-ga:-'la 0
Anaph	ba-ga-ga:-'la 0	an-uba-ga-ga:-'la 0	o:-'ba-ga-ga:-'la 0

b) DemAdv from Centrifugal DemAdv

Prox	ya:-ji-ji:-'li 2	ana:-'-ji-ji:-'li 2/1	a:-'-ji-ji:-'li 0
Imm	da-ji-ji:-'li 0	a:-da-ji-ji:-'li 0 ana-da-ji-ji:-'li 0	wuda-ji-ji:-'li 0
Dist	wa-ga:-'li 2	an-uwa-ga:-'li 0	o:-'wa-ga:-'li 0
Anaph	--	--	--

c) DemPro (Centripetal or Centrifugal), all attestations

ana:-'-ni-ni:-'la 53.2.5 ANA_c Prox Centrip
ana:-'-ni-ni:-'li 166.25.2 ANA_c Prox Centrif
wa-ni:-'la TNT 16 unprefixed ANA Dist Centrip
yuwa:-ni-ni:-'li 20.18.4 unprefixed ANA Dist Centrif
yuwa:-wa-wa:-'la 114.1.4 unprefixed WARA Dist Centrip
man-uwa:-ma-ma:-'la-yin^{y}un^{g} 169.1.6 $MANA_c$ Dist Centrip with Relative case suffix

Note: In parts (a-b) we give all possible forms with NMET frequencies; where slashes are shown (e.g., 23/2) the figure to the right indicates no. of occurrences involving a further case suffix.

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Lateral. The context prototypically involves two locations facing each other over an intervening divide (two sides of river, two lines of fighters squaring off, etc.), but can also involve other roughly similar oppositions and can sometimes apply to configurations such as that with four points (like the corners of a square). The translation 'on this/that side' is usually applicable, though in some nonprototypical contexts 'over here/there' might be better.

Although it is possible to elicit Imm and Anaph forms, in practice the system of four roots (§7.1) boils down in this subsystem to just Prox vs. Dist. Even where these DemAdv are used to specify more than two points, one or both of Prox or Dist is re-used with manual gestures keeping the locations apart.

The forms are shown in Table 7-14. The basic rule for the DemAdv is to take a Centripetal DemAdv (§7.15) or a Centrifugal

DemAdv (§7.16) and create the Lateral derivative by applying Final Reduplication P-3, a morphophonemic rule which is confined to this Lateral formation. This is all we need to do with the Prox forms. However, in the Dist category there is a further change, in that the root (which is /yuwa-/ in the relevant Centrip and Centrif forms, with second vowel short by Adverb-Shortening P-42) is, in the majority of instances, reduced to /wa-/ when there is no prefix. Moreover, since the reduced form /wa-/ is confined to Lateral derivatives, sometimes the reduplication is omitted in Dist forms--see /wa-ga:-'li/ in part (b) and /wa-ni:-'la/ in part (c) of the table, but note that all attested Centrip DemAdv in part (a) and three of the Dist DemPro in part (c) show the reduplication.

The really important forms are thus Centripetal /ya:-ji-ji:-'la/ (Prox) and /wa-ga-ga:-'la/ (Dist). Other DemAdv of some importance are the prefixed forms of these two, plus Centrif DemAdv /ya:-ji-ji:-'li/ and /wa-ga:-'li/.

Attestations of case-marked forms have already been given in Table 7-13 (§7.20, above), except for /wa-ga-ga:-'la-wuy/ 'to the other (far) side', which is found 16.6.2, 16.7.1, 25.5.5, 35.4.3, 35.7.2, 35.8.1/5, 111.4.8. Simple /wa-ga-ga:-'la/ 'on the other side' is found 3.5.2, 11.11.6, 13.1.4, 30.6.2, 126.2.1, 161.4.4. The variant /yuwa-ga-ga:-'la/ with unreduced root is seen 17.13.1. Prefixed /an-uwa-ga-ga:-'la/: 3.5.3, 14.6.3, 97.5.4. Prox Centrip /ya:-ji-ji:-'la/: 5.3.5, 5.4.4, 5.5.5 (twice), 13.2.1/2, 13.33.4, 17.16.4, 35.4.6, 36.3.2/3, 43.10.5 (twice), 95.2.1/2/3, 95.3.2/3, 95.4.1, 95.9.2 (twice), 116.4.4, 161.4.4. Cases with two instances on the same line or successive lines usually indicate double use of the DemAdv to specify two distinct locations (with manual gestures); there are also several passages involving opposition with /wa-ga-ga:-'la/. Prefixed /ana:-'-ji-ji:-'la/: 109.5.3.

Turning to Lateral Centrif DemAdv, /ya:-ji-ji:-'li/ is found 30.2.4 ('far away from here'), 30.6.2 ('were on this side'), while its prefixed form /ana:-'-ji-ji:-'li/ occurs 97.5.5 ('they kill goannas over there and over here') and 166.25.1 ('We used to eat roots [there], and here too, it was the same thing'). While the first of these exx. (30.2.4) seems to have the sense 'from here', in the others there is no clear sense of 'here' as point of departure, and in general there is little practical difference between /ya:-ji-ji:-'la/ (Centrip) and /ya:-ji-ji:-'li/ (Centrif), except perhaps that the latter may suggest a more indefinite extension. Centrif Dist DemAdv /wa-ga:-'li/ is attested 166.6.1 and 166.7.1. This form calls for some comment, since it is ostensibly derived from */yuwa-ga:-'li/, a Dist Centrif DemAdv with no attestations and which seems in fact not to exist (Table 7-11, §7.16). The exx. of /wa-ga:-'li/, if I understand them correctly, can be translated 'here on the other side' (or 'back here'), involving a shift from a discourse segment focusing on a distinct location to one focusing on 'here, this area'. Therefore the DemAdv is, in effect, Prox (except with respect to the other location), and use of Centrif /-ali/ (characteristic of Prox DemAdv) is reasonable. In other words, the Prox/Dist opposition in Lateral forms may be skewed in ways not possible with simple (non-Lateral) forms.

From Prox /ya:-ji-ji:-'la/ a suffixed form /ya:-ji-ji:-'la-waj/ is attested twice in one passage 3.4.2/3 ('on this side [of bush]'). It is difficult to distinguish the two forms semantically on the basis of this single passage. For /-waj/ in general see §7.17.

DemPro do not occur very often in Lateral form. However, part (c) of Table 7-14 does present the attested exx. with textual citations. They show the same formal features as do the Lateral DemAdv: reduplication (P-3) obligatory for Prox and optional for Dist (perhaps obligatory for Dist except in unprefixed form beginning with /wa-/), endings based on Centrip /-ala/ or Centrif /-ali/ (cf. §7.5 for the unreduplicated inputs).

Although Lateral forms are normally confined to DemAdv and DemPro, one ex. did turn up of the same formation involving a personal pronoun, with Ablative /-$w_1$ala/ used instead of Centrip /-ala/; see §6.11.

7.22 'Facing here/away' derivatives /bu-gunu:-'/, /buguwugunu:/, /ba-ga:-'la/, /bagawaga:la/, /bagawaga:lu:/.

Among the more important motional DemAdv are Allative /bu-guni/ 'to there' (§7.13) and Centripetal /ba-ga:-'la/ 'from there [to here]' (§7.15), both from the Anaph root /ba-/. These may be followed by Concrete /-u/, hence /bu-gunu:-'/, /ba-ga:-'lu:-'/.

Usually, these are DemAdv and as such take no further affixes, except for reasonably frequent presence of the regular ANA NC_{infl} prefixes //ana-//, //a-//. However, on occasion these forms are used as NAdj (§4.2). The only forms known which are clearly of NAdj status are those with intransitive pronominal prefixes (Chapter 9), which are also used with verbs but not with ordinary nouns or adverbial nouns. The Concrete suffix is regularly used but not obligatory with /bu-guni/, and is possible but used sparingly with /ba-ga:-'la/.

We can cite the following exx.: /wini=bu-gunu:-'/ 14.18.1 'They were [heading] that way'; /ni=ba-ga:-'la/ 29.5.1 'He was [coming] this way [toward here]'; /ni=ba-ga:-'la/ 29.6.5 (same gloss). These exx. co-occur with motion verbs, and there is no obvious semantic difference between these NAdj forms and the same forms in DemAdv status (i.e., with the intransitive prefixes omitted). For /ni=bu-guni/ without Concrete /-u/ see TNT 15.

Related to these forms are a special set of frozen reduplications /buguwuguni/ 'facing/looking that way, facing away' and /bagawaga:la/ 'facing/looking this way [toward here]'. We write these without internal hyphens, but it is clear that these are basically irregular reduplications of the earlier forms. The alternation of /b/ with /w/ combined with the bisyllabic initial reduplication (characteristic of stems not beginning with a stop) suggests that these forms could be handled phonologically by associating them with the small set of roots which undergo Leftward-Hardening P-19, e.g., /lhamungur/ 'short', of which the basic uncompounded form is /dhamungur/, reduplicated /dhama--lhamungur/. This would mean taking //w_2u-guni// and //w_2a-ga:-'la// as inputs. We note this possible solution in passing but will not show boundaries in our transcriptions.

The simple NAdj form with just a pronominal prefix present is found in 162.7.3 /wu=bagawaga:la/ '[buffalo] was heading/facing [toward us]'. In this particular ex. it may be that the animal is moving and not merely facing in the centripetal direction. Most of the textual exx. involve complete verbalisation including /-ma-/, the Inchoative suffix (§10.8) and an inflectional ending. We thus have /=bagawaga:la-ma-/ 'to be facing this way' 65.8.4 and its opposite /=buguwugunu:-'-ma-/ 'to be facing away, to look away' 65.10.1, 65.12.5/6, 75.2.6.

The form /buguwuguni/ should be distinguished, at least synchronically, from NAdj or NAdv /$w_2$uguwuguni/ 'for good, permanently', although the latter will regularly become /=buguwuguni/ following a stop or nasal by Hardening P-18 (in the same contexts true /buguwuguni/ will become /-n^gu=buguwuguni/ by n^gu-Epenthesis P-1, so they will still be distinct). For more on /$w_2$uguwuguni/ and compound variant /$w_2$uguni/ see §7.31.

7.23 Compounds with /mulun^g-/ 'group' and Gentilic /nuN-/.

Here we briefly mention compounds (or derivatives if you prefer) involving a demonstrative stem plus a special derivational initial.

First we have /mulun^g-/, an initial which occurs as part of the Pl form of two NAdj (§4.16) and occasionally in verbal compounds to indicate a group (do not confuse with /mulun^g/ 'elbow'). This occurs with demonstrative stem in the form /wara-mulun^g-uda-wi--yun^g-gaj/ 'that bunch of people, that crowd' 69.6.5/6, 139.14.3. The first prefix is just the Pl NC_{infl} prefix and is optional. The derived (compound) stem involves /-mulun^g-/ followed by Imm root /-uda-/, WARA NC suffix /-wi-/, and the suffix sequence Absolute-Pergressive /-yun^g-gaj/ (§7.10). The ex. 139.14.3 is compatible with the reading 'back in the time of those people' in which /-gaj/ (//-$w_1$aj//) has its regular Retrospective Pergressive status (§4.23), as it does in some instances with /-yun^g-gaj/ in demonstrative forms; however, no such retrospective nuance is detectable in the exx. 69.6.5/6.

Although the NC suffix in /wara-mulun^g-uda-wi-yun^g-gaj/ is WARA /-wi-/ rather than Pl /-ru-/, this seems to be because the form has specialised as such, and I do not think that other NC variants are in use.

The other initial, /nuN-/, is found chiefly with certain clan names and similar expressions for groups of people (§14.11). In the demonstrative system, we can cite two forms: /wa:-nun^g-guba--wi-yin^y-jin^{y}un^g/ 139.13.3 'of those people', and NAdj form with intransitive prefix /win^{g}i=nun^g-guba-ni/ 7.4.4 'They[FDu] were [there] for a long time'. The first of these exx. seems to refer to an earlier generation now deceased. Semantically, these forms therefore resemble forms like /o:-'ba-ni-yun^g-gaj/ 'long ago, in the old days' (§7.10). The latter forms involve Anaph root //-uba-// and ANA class suffix /-ni-/ or WARA suffix /-wi-/, and this sequence recurs in the /nuN-/ forms cited. We assume that /g/ is inserted by Velar-Insertion P-8. In the ex. 139.13.3, /-yin^y-/ is the surface form of Absolute /-yun^g-/ (§7.7, §7.20) before Relative case suffix //-yin^{y}un^g-//.

7.24 Extent DemAdv in /-ga-waj/.

In the demonstrative system, we have seen /-waj/ as the Transverse suffix with DemPro (§7.5), as a suffix added to already complete DemAdv (§7.17), and (sometimes specifically as /-$w_1$aj/) as part of some suffix sequences (§7.9-10).

We have not yet covered a special type of DemAdv ending in /-ga-waj/, where /-ga-/ is arguably a morpheme taking the place of Locative DemAdv ending /-gu/ or /-ji/ (§7.12). The forms are these:

Prox	ya-ga-waj	13.39.3, 13.43.2 (three times), 112.5.4 (twice), 167.19.1; also TNT 28
Imm	da-ga-waj	1.8.12, 119.6.2; also TNT 9, 26
Dist	yuwa:-ga-waj	71.28.1, 157.3.5

The usual sense is 'this/that high', 'this/that deep', etc. In other words, these are deictic forms indicating how high the water is/was on someone, or how deep a hole way, generally with reference to the speaker's body or some other conveniently visible standard (such as a tree). The ex. of /yuwa:-ga-waj/ 71.28.1 does not seem to be of this type, but its precise sense is not clear.

The Prox form has /ya-/ with short vowel, cf. usual Prox root /ya:-/. It seems that at least the Prox form (the most common one) has become an independent lexical item whose internal structure is opaque.

These forms are used chiefly in connection with measuring the vertical dimension within the range effectively conveyed by a manual indication of a point on the body or some other standard. For a different type of linear measurement expression used chiefly to specify somewhat greater distances, see §7.28.

Prox /ya-ga-waj/ should not be confused with the particle /yaga:/ (§12.12).

7.25 Type derivatives: /i:-jun^g/, /i:-jin^y/, /i:-jin^{y}un^g/, /bu-jun^{y}un^g/.

The forms to be considered here are best considered nouns syntactically. In their stem forms, they are highly irregular and frozen derivatives which are, however, still identifiably based on the Prox and Anaph demonstrative roots.

These derivatives can be translated 'this type, something like this, this sort of thing' (Prox) or counterparts with 'that' (Anaph). The Prox forms are used when the speaker simultaneously indicates some object or substance to the addressee, and may or may not co-occur with an explicit noun (if they do, we have syntactic apposition). The Anaph forms do not involve this deixis and are thus generally used with a noun or other descriptive phrase.

The Type derivatives may occur with or without NC_{infl} prefix (continuous prefix required in negative contexts). If there is a NC_{infl} prefix, either the prefix agrees with the NC of the referent, or the ANA class is used as unmarked class (ANA forms are even found occasionally when a noun of another class is juxtaposed).

The Prox forms show root //i:-//, which of course becomes /yi:-/ word-initially by rule P-5. Since Prox is generally /ya:-/, we could say that the shift of //a:// to /i:/ is due to the following

/j/ by V-Fronting P-50, a set of unproductive and morphologically restricted shifts of this type. The complete Prox derivative is normally /i:-jun^{g}/ or /i:-jin^{y}un^{g}/, where the endings may be identified formally as Absolute /-yun^{g}/ (§7.7) and Relative case marker /-yin^{y}un^{g}/ (§4.30, cf. §7.20), respectively. If so, we should set the root up as //i:G-// with final stop archiphoneme, so that //y// will become /j/ by Hardening P-18. (Prox /ya:-/ in regular DemPro forms cannot end in a stop, cf. WARA class form /ya:-wi/.) As for the Anaph derivative, we get /bu-jun^{y}un^{g}/, which could possibly be set up as //baG-yin^{y}un^{g}// with double application of V-Assimilation P-37 from right to left (P-37 is another collection of morphologically restricted changes of this variety). Obviously, these forms are synchronically specialised and are best treated as separate lexical forms. However, /bu-jun^{y}un^{g}/ does share with other forms of Anaph /ba-/ the increment /u/ when preceded by a prefix, hence /an-ubu-jun^{y}un^{g}/.

Attestations of /i:-jun^{g}/ are these: simple /yi:-jun^{g}/ 10.12.1, 36.1.2, 143.16.1; MANA form /man-i:-jun^{g}/ 157.3.2, 157.5.6 (both clearly refer to MANA nouns). A variant /yi:-jin^{y}/ is found 43.3.3 if the transcription is correct.

The form /i:-jin^{y}un^{g}/ is more common. Simple /yi:-jin^{y}un^{g}/: 18.19.3, 41.19.4, 168.9.2. ANA form /an-i:-jin^{y}un^{g}/: 43.17.2, 48.8.1, 71.16.5 (Neg), 95.4.2, 160.1.4, 161.26.3 (Neg). MANA forms are /man-i:-jin^{y}un^{g}/ 41.22.7 with continuous prefix and /am-i:-jin^{y}in^{y}--jin^{y}un^{g}/ 41.3.2 with punctual prefix, the latter showing an added //-yin^{y}un^{g}// as a true Relative case marker.

Anaph /bu-jun^{y}un^{g}/ occurs as such 138.5.1, with postposition /-w$_{2}$ugij/ 'still, only' as /bu-jun^{y}un^{g}-bugij/ 97.7.2, and with Relative case suffix //-yin^{y}un^{g}// as /bu-jun^{y}un^{g}-jun^{y}un^{g}/ 47.1.8, 47.13.8, 47.23.3. This Relative form tends to be phonologically irregular in that even the penultimate vowel of the suffix becomes /u/, and the whole form including the Relative suffix seems to be on the verge of becoming frozen as a new unit replacing the form /bu-jun^{y}un^{g}/. With ANA prefix we have /an-ubu-jun^{y}un^{g}/ 47.2.7, 47.3.6, 47.8.2, 47.12.1, 64.9.5, 139.15.3 (Neg), and /an-ubu--jun^{y}un^{g}-jun^{y}un^{g}/ 47.13.5 (Neg), 47.22.8.

The Prox forms compete functionally with Similative DemPro such as /a:-'-ni-yi:/ 'like this'; see Table 7-13 (§7.20).

7.26 Perspective shift.

The concept of perspective shift has been briefly mentioned in some earlier sections of this chapter. It involves a full, or more often partial, breakdown of the division between the perspective of the speaker and that of some participant in a narrated situation.

The most obvious grammatical forms relevant to such shifts are verbal inflection (notably tense) and demonstratives. An instance of full perspective shift should involve adopting both the tense and demonstrative categories appropriate to the narrative actor in the narrated situation, as in direct quotations. In Nunggubuyu, this occurs only in quotations, whether of spoken discourse or of mental events (such as intentions). For example, English He decided to go this way is expressed in Nunggubuyu as "'Which way will I go?', he said, 'I will go that way'". See §16.9.

This type of perspective shift is formally simple, and the main analytical issue it raises is how extensively such direct quotations are used. However, there is also a partial perspective shift in which demonstrative categories are shifted to conform to the viewpoint of the narrative actor while the remainder of the formal structure (including tense marking) is from the speaker's viewpoint.

In referring to locations (or spatially located persons or objects), if the speaker chooses not to use the Anaph demonstrative (relating the location to one previously mentioned or otherwise understood), the remaining (chiefly deictic) demonstratives Prox, Imm, and Dist may be used to locate with respect to narrative actor. This is sensible since the speaker may be relating an extended narrative about events in a remote location such that Prox and Imm could not be used to indicate locations around the speaker. Partial perspective shift allows the speaker to use Prox and Imm to index locations around the narrative actor, thus permitting maximal usage of the demonstrative categories. In this usage, while both Prox and Imm are repeatedly attested, it appears that Imm is preferred, even to index locations embracing or very close to the actor of reference.

Within the context of partial perspective shift we must also consider the choice between predicative DemPro (prototypically used in present tense positive '[is] here/there', literally '[is] this/that', see §7.4) and a Locative (or other) DemAdv ('here/there'). Although narrated events are ordinarily in past tense from speaker's viewpoint, so that DemAdv rather than predicative DemPro should be expected, perspective shift permits either of the two (we could say that use of predicative DemPro represents a slightly greater shift toward narrative actor's perspective). However, even when predicative DemPro are used in perspective shift, accompanying inflected verbs remain in the past tense (or whatever tense is appropriate from speaker's here-and-now viewpoint).

One recurrent context in the narrative texts in NMET is of this general type: X was looking (for Y) and then Y came into sight. This is commonly expressed in Nunggubuyu as 'X looked [past tense verb], and there was Y, he[Y] arrived', or some variation on this pattern. The phrase glossed 'there was Y' is usually an Imm predicative DemPro with optional co-occurrence of a NP for Y, a good example being /da-gi ni wali-n^{y}/ '...there he arrived' 1.3.3. Because Y's location is semantically focal, a predicative DemPro is more common than a DemAdv here. However, full perspective shift does not occur, and even an accompanying phrase like '...he[y] arrived' (as in this textual ex.) remains in past tense. Although most similar exx. involve the Imm demonstrative, we can also cite a few with Prox predicative DemPro, as in 28.6.4-5 ('...he looked and here she was'), the form being /ya:-gi/.

A Locative or other DemAdv in perspective shift is most common when the location is not quite as focal as in the previous exx., i.e., when there is some focal event or activity (other than coming into view). Thus Imm Locative DemAdv /da-ji/ 'there' occurs in 1.8.6 in the context 'the doctor-magician swam back past the snakes, and the entrails [which he was carrying] were gleaming there'; another ex. is /da-ji/ in 18.20.7: 'They left white clay there'.

In instances of partial perspective shift such as these, we should recognise that the use of deictic categories is tricky. Although we have been speaking of the adoption of a given narrative actor's viewpoint, the viewpoint might in some cases switch from that of one actor to that of another actor, or be a kind of merged joint perspective of the actors, or be that of an invisible "omniscient observer," or be linked to a location as such rather than to a human actor.

A special type which we will refer to as reverse perspective shift occurs when the speaker explicitly points to objects or locations in the here-and-now of the speech event, referring to [typically distinct] objects or locations of the original narrative event. This procedure is common in two contexts: a) mention of a body part; or b) specification of length or of a geometrical configuration. In both cases, Prox demonstratives are usual.

Although of course it is possible in Nunggubuyu to say, 'He hit me in the stomach' (perhaps as a compound 'he-me-stomach-hit-Past'), it is perhaps more common in idiomatic Nunggubuyu to say 'He hit me here' with an accompanying manual indication. Moreover, 'here' can also be used when the person hit in the narrative was not the speaker, hence 'He hit him here'. Some textual exx. involving /ya:-ji/ 'here' in connection with a body part are 3.4.1, 7.9.5 ('she gulped it down, and it stopped here, in her belly'), 7.15.2, 10.11.1 ('he felt twinge here in shoulder'), 10.15.5 ('he held a stone here', i.e., in his hand), 11.12.3/4, 16.14.3, 45.2.1, and 71.23.4 ('he speared [them] here and here and along here'); note that explicit body part terms may or may not be added in apposition to the DemAdv.

Expressions of linear measure (length, height, width) are commonly of the type 'like this and that' (i.e., 'as long [far, wide] as from here to that [e.g., tree over there]', containing both a Prox and nonproximate (Imm or more often Dist) demonstrative. Such expressions, which are dealt with below in §7.28, may be embedded in narratives, and are in fact the only explicit expressions for specific absolute measures.

Related to this are expressions (with accompanying manual indication) specifying the geometrical configuration of two or more objects or locations relative to each other. Thus, to indicate that three persons were in a row, or that they were at the points of a potential triangle, the speaker will say 'One was here, another here, another here', pointing to (or making marks in) the ground to indicate the arrangement (but not the absolute distances between the original objects or locations). In this context, the speaker may adopt the perspective of one of the objects, referring to it as being 'here' (Prox) while the others are 'there' (Imm or possibly Dist); or all may be specified by Prox forms as perspective follows the speaker's successive manual indications. Some relevant exx. are 9.2.2/3, 14.19.2/3 (p. 102 of NMET with "14.18" emended to 14.19), 36.3.2/3, and 55.7.3. Many instances of Lateral DemAdv (see §7.21) meaning 'on this side' and 'on the far side' occur in similar configurations.

Although our terminology is somewhat arbitrary, the term 'reverse perspective shift' is based on the feeling that these

last few types of exx. represent a jump out from the narrated situation to an aspect of the speaker's and hearer's here-and-now environment, while the previous exx. of (simple) perspective shift seem to involve a (full or partial) absorption by speaker and addressee into the perspective of a narrative actor or the like. However, in both cases the formal consequence is that expressions associated with the speaker's here-and-now context are worked into a narrative (which is usually dealing with situations distant in place and time).

7.27 Demonstrative categories associated with pronominal persons.

As in a number of languages, in Nunggubuyu there is a direct syntactic relationship between Prox and 1st person pronouns, and between Imm and 2nd person pronouns. The specific manifestation of this is the common use of /ana:-'-ni/ 'this[ANA]' in apposition to a 1st person pronoun (independent or prefixal), and similarly of /a:-da-nu:-'/ 'that[ANA, Imm]' in apposition to a 2nd person pronoun. Note that the forms are in the nonhuman ANA class rather than agreeing with gender/number of referent; it is therefore arguable that these DemPro literally designate the location of the referent rather than the referent as such (cf. English you there, we here). A second point to notice is that, while all pronouns and pronominal affix systems carefully distinguish 1st exclusive from 1st inclusive, /ana:-'-ni/ 'this' is the appositional demonstrative for all 1st person pronominals, showing that a general 1st person category does exist at least as a cryptotype. (Likewise, stem variation for kin terms depending on pronominal person of propositus, i.e., "possessor," involves an opposition between a general 1st person and 2nd and 3rd persons, see Chapter 5.)

The most common textual exx. of appositional DemPro with pronouns are expressions of the type 'it is me!' by which the speaker identifies himself/herself to an addressee. The expression in Nunggubuyu is usually some variant of /n^{g}aya-waj ana:-'-ni/ with Emphatic /-waj/ in the pronoun (§6.9), and one could argue that this is literally 'this, [it's] me!' with the DemPro acting as a kind of topic. Textual exx. include 3.6.1/4, 5.6.2, 16.11.3, 20.10.2, and 40.5.5/6. A similar case but with 1InDu /na-ga-waj/ 'it is us [you and I]' is 15.8.2, while 1ExPl /nu-ru-waj/ 'it is us[excl.]' is found in several exx. including 18.12.2/3. A slight variant on this construction is the predication of names, roughly 'I [am named]"X"' ('named', if present, is a noun including NC$_{der}$ prefix rather than a verb or participle), with an appositional DemPro typically juxtaposed to the independent pronoun, which may or may not contain Emphatic /-waj/. Thus 20.14.3-4 /n^{g}aya-waj ana:-'-ni jiwajiwangali/ 'I [am named] J', cf. also 82.1.1, and for 1ExPl forms 20.4.5 and elsewhere in text 20.

Most of the similar 2nd person cases with /a:-da-nu:-'/ are interrogatives involving WH words like /yan^{g}i-n^{y}un^{g}/ 'who?' or /nun^{y}-jan^{g}i-mayi/ 'of what country?' (Chapter 13). Thus 14.7.3 /nagan^{g} a:-da-nu:-' nu=nun^{y}-jan^{y}i-mayi/ 'You there are from what country?'.

However, even aside from these specific identificational constructions, 1st person /ana:-'-ni/ and 2nd person /a:-da-nu:-'/

may be added as (optional) reinforcers to a phrase or clause containing the associated pronominal category. It is difficult to catalogue relevant textual exx., since in many specific passages the /ana:-'-ni/ or /a:-da-nu:-'/ could arguably be a real ANA class demonstrative not in apposition to the 1st/2nd person pronominal. In 47.13.2, where /ana:-'-ni/ follows /n^{g}a-dir=n^{g}awi:-'-na/ 'I am afraid', I believe that /ana:-'-ni/ has the function of being in apposition to the 1st person pronoun, but it could possibly mean 'this' (as in 'I am afraid [of] this'). A probable ex. of 2nd person /a:-da-nu:-'/ is in 40.5.2 with juxtaposed /ni:ni=n^{g}awi-'-n^{y}/ 'you[MDu] have died?'.

7.28 Deictic measures of distance: /n^{g}un^{y}ju...n^{g}a.../.

There are no abstract units of linear measure comparable to 'metre', 'kilometre', or the like. Instead, deictic measures of the type 'like [from] this [to] that' are used (the translation is not exactly literal), with the Prox location as the initial point and some convenient object or other point as the endpoint (commonly represented by an Imm or Dist demonstrative). See also §7.24.

The ordinary Nunggubuyu expression is of the type /n^{g}un^{y}ju DEM$_1$ n^{g}a DEM$_2$/, where both DEM$_1$ and DEM$_2$ represent predicative ANA class demonstrative pronouns. Here /n^{g}un^{y}ju/ is a particle meaning 'like, just as'; it is often preposed to a noun with Similative case suffix /-yi:/; see §4.29, §12.13. The other particle, /n^{g}a/, is a kind of 'and' conjunction which emphasises continuity between the constituents which it links (§12.4.). A typical ex. would therefore be /n^{g}un^{y}ju ya:-ni n^{g}a yuwa:-ni/ 'like [from] this [to] that[Dist]', with the Dist demonstrative specified either by a manual gesture (pointing out a tree, for example) or by a place name or other NP.

The Prox form seems always to be /ya:-ni/, but the paired Dist demonstrative may be either the structurally parallel /yuwa:-ni/ or may occur in the form /o:-'wa:-ni/ from //a-uwa:-ni// with the punctual form of the ANA NC prefix; thus /n^{g}un^{y}ju ya:-ni n^{g}a o:-'wa:-ni/ 1.8.6-7. Other textual exx. show that the construction is formally flexible, allowing the Dist form to precede the Prox, allowing omission of one of the particles, etc.; see 5.19.4, 21.6.1-2, 41.22.6, 112.1.3-4.

Even when the measure refers to distances between objects or actors in a narrative, the /n^{g}un^{y}ju...n^{g}a.../ phrase refers directly to the physical environment of speaker and addressee; it thus may constitute a special type of shift of spatial perspective (§7.26).

7.29 Cardinal directions: compass points, up/down.

Cardinal directions are expressed by NAdv which are not based on any of the four demonstrative roots, but can be handled in this chapter for convenience. They have complex and irregular paradigms, shown in Table 7-15, below. We do not give complete lists of textual citations here, since all forms indicated in the table are also listed in the dictionary as separate entries, with NMET citations included.

TABLE 7-15

Cardinal Directions

a) compass points

	'north'	'south'	'east'	'west'
Loc	wunumbi	wagay	ramali	argali
Rdp	wunu-wunumbi	waga-waga	rama-ramali	arga(:)-'rgali
All	wunumbi-yaj	wagi-yaj	ramali-yaj	argali-n^{y}i
Abl	wunumbi-yala	wagi-yan^{g}u	ramali:-'la	argali:-'la

b) up/down

	'up'	'down'/'inside'
Loc	arwar	lhiribala
Rdp	arwagarwar	lhiri-lhiribala
All	{arwar-(w)aj arwi-yaj	{lhiribala-(w)aj lhiribala-wuy
Abl	arwar-(w)ala	lhiribala-(w)ala
Abl-Per	arwar-(w)ala-(w)aj	lhiribala-(w)ala-(w)aj
Rdp Abl-Per	arwagarwar-(w)ala-(w)aj	lhiri-lhiribala-(w)ala-(w)aj

Like other NAdv, these forms may take ANA class NC prefixes, and must do so in negative contexts.

As with place names and many NAdv, the simple (unmarked) form regularly functions as locative ('in the north', etc.). There is a reduplication (usually regularly formed using rule P-2, but irregular in the case of 'up' and losing a final semivowel in that of 'south'); the reduplication seems to indicate greater distance from speaker than the simple Loc form but may also perhaps indicate distributivity.

The semantically allative (All) form is generally based on an ending which may be associated with the nominal case suffix /-w$_1$aj/ or /-w$_2$aj/ (Pergressive), as in /wunumbi-yaj/ '[going] northward'. That is, the distinction between Allative and Pergressive, kept for nouns, is neutralised with these adverbs. There is an irregular All form for 'west' with otherwise unattested suffix /-n^{y}i/ (this is a Warndarang borrowing, incidentally). In the case of 'up', the usual form is /arwi-yaj/, showing an irregular truncation of the end of the root (see also vocalic change to /i/ before /-yaj/ with 'north' and perhaps 'south'). With 'down', the regular Allative suffix /-w$_1$uy/ is possible and may be distinct semantically from the form with /-waj/.

The semantically ablative (Abl) forms show Abl suffix /-w$_1$ala/ often becoming surface /-ala/ or /-yala/ by phonological rules. With 'east' and 'west', however, the underlying form must be //-ala// because of the operation of VV-Contraction P-49; cf. Centripetal //-ala// with other demonstratives (this chapter), but note that

the Abl of 'west' and 'east' is not semantically specialised as a Centripetal formation. The Abl of 'south' is irregular with suffix /-yan^{g}u/ (or possibly /-w$_1$an^{g}u/ with later phonological rules); there are no other attestations of this ending in the language.

With 'up' and 'down', the combination of Ablative and Pergressive case suffixes (§4.26) is common in a sense like '[going] along through___'. Most of the textual exx. involve reduplication as well. This formation does not seem to occur with the compass-point terms.

The semantics of the four compass points is not unusual. In some contexts the terms are slightly skewed to correlate with the predominant configurations of the local geography, so that 'north' and 'south' are bent slightly to conform to the coastline, 'east' focuses on Groote Eylandt, and 'west' indicates inland areas. Alternatively, some bending may be made to associate the terms with the dominant wind directions, so that 'north' is bent slightly to the NW to correlate with the prevailing NW wind of the monsoon season and 'south' with the prevailing SE wind of the dry season.

The more interesting semantic patterns, however, are found with 'up' and 'down'. In some contexts the standard of reference is vertical, but in real life it is more usual to find the terms in specialised meanings. Thus 'up' may mean 'uphill, upriver', or generally 'in the interior', while 'down' may mean 'downhill, downriver', or generally 'in the coastal area' or even 'offshore'. Thus the clan name /nun-dhiribala/ based on the stem 'down' is applied to a group whose estate is in the coastal lowlands.

In addition, 'down' in some contexts is translated 'inside', since being under something and enclosed in it are not linguistically differentiated in this language.

For relevant textual references see the dictionary entries.

7.30 Postpositions with demonstratives: /-w$_2$ugij/, /-lhan^{g}u/, /-w$_2$indi:yun^{g}/, /-maga:/, /-magi/, /-maji:/.

Postpositions (see §12.21, §4.32) are last-position suffixes which are typically added to words of any inflectable type (i.e., nouns, demonstrative, pronouns, verbs) but not particles. There is nothing very remarkable about their uses with demonstratives.

Since the only common postposition with demonstratives is /-w$_2$ugij/, we begin by disposing of the others. Conditional /-maji:/ 'if' can be added to a demonstrative (functioning as NP) or to a DemAdv. The textual exx. are /ana:-'-ji:-'la-maji:/ 62.5.3 and /an-uwa-ga:-'la-maji:/ 90.1.6 (Centrip DemAdv, Table 7-10); /an-u-guni-maji:/ 68.4.4 and 90.1.5 (All DemAdv, Table 7-8); /an-uwa:-gu-maji:/ 75.1.5 (Loc DemAdv, Table 7-7); with nonpredicative MSg Anaph DemPro (Table 7-2) /nu:-'ba-gi-maji:/ 79.1.1 and the same form plus Absolute suffix /nu:-'ba-gi-yu-maji:/ or variant /nu:-'ba-gi-yun^{g}-maji:/ (§7.7) 49.1.4, 54.1.1, 80.1.**1**, 89.1.1, 90.1.2/3. On conditional syntax see §16.7.

Evitative /-magi/ (§8.7) happens to be added to a demonstrative in the form /ya:-ni-magi/ 171.1.3 (predicative DemPro, Table 7-1).

Postposition /-maga:/ occurs twice with demonstratives. In /an-u-guni-maga:/ 19.9.3 we have an Allative DemAdv (Table 7-8) with /-maga:/ associated with negation; in /da-gi:-'la-maga:/ 45.6.2 we have (untranslated) narrative use with predicative DemPro.

The ending /-lhan^{g}u/ (§4.17), a kind of intensive pluraliser which may belong formally with postpositions, is not normally used with demonstratives, but Hughes has /a:-'-ni-yin-dhan^{g}u/ TNT 21 where the demonstrative is //a-a:-ni-yun^{g}// (ANA class Prox nonpredicative DemPro, Table 7-3, plus Absolute /-yun^{g}/, §7.7).

Postposition /-w$_2$indi:yun^{g}/ 'really, very much' is rare with demonstratives, but Hughes has /yuwa-ga:-'la-windi:yun^{g}/ MT 22 with Centrip DemAdv (Table 7-10).

The common postposition with demonstratives (as with other word classes) is /-w$_2$ugij/ 'only, still, nothing but'. In combinations like 'still there', it is reasonable to expect a statistical association with Anaph root or at least with demonstratives having some definite (presupposing) character, including many forms with Absolute /-yun^{g}/ (§7.7) and even Concrete /-u/ (§7.6). However, since /-w$_2$ugij/ does not always indicate temporal continuity, such an association cannot be expected to be rigorous.

There are 11 exx. with /-w$_2$ugij/ after DemPro. The breakdown is this: 8 are predicative (Table 7-1) and 3 are nonpredicative (Tables 7-2 and -3); 4 are Anaph with /-yun^{g}/, 1 each is /-yun^{g}/ with Prox or Imm root, 1 is Imm with /-u/, 3 are simple Imm, 1 is simple Prox. Textual references in NMET are 7.5.1, 17.13.6, 47.1.7 (for same form as this one see also TNT 4), 47.14.3, 71.27.2, 71.34.4, 72.6.1 (with Absolute-Dual sequence /-yum-ba:-/), 143.7.5, 157.6.3, 162.9.3, and 166.13.2.

With Locative DemAdv (Table 7-7) we have Anaph /ba-gu-wugij/ 7.5.1, 55.7.1, 55.9.3, Imm /da-ji-wugij/ 9.9.1, 92.3.1, the same plus Concrete suffix /da-ju:-'-wugij/ 23.2.2, Prox /ya:-ji-wugij/ 20.19.4 and 90.2.7, and even Dist /yuwa:-gu-wugij/ 57.1.4. We can also cite /-w$_2$ugij/ in DemAdv formed by adding /-waj/ (Table 7-12) to a Locative DemAdv: /ba-gu-waj-bugij/ 95.9.5 (also MT 16), /ya:-ji-waj-bugij/ MT 5.

Allative DemAdv with /-guni/ (Table 7-8) can occur with /-w$_2$ugij/. All textual exx. are with the Anaph root rather than the (purely deictic) Dist root, hence /bu-guni-wugij/ 16.14.1, 40.9.3/4, 40.10.1, 74.3.5, 74.4.3, 125.5.4. With further /-waj/ added (§7.17) we have /bu-guni-yaj-bugij/ 40.9.2. Turning to the semantically similar Directional DemAdv in /-u-wuy/ (Table 7-9), used basically with Prox and Imm roots, we can cite Prox /ya:-nu:-'-wuy-wugij/ 21.7.4 and 40.1.7.

Centripetal DemAdv in /-ala/ (Table 7-10) are not very common with /-w$_2$ugij/, but we have /ya:-ji:-'la-wugij/ 61.2.6 and 62.5.4. There are no exx. involving Lateral DemAdv (Table 7-14).

There is one ex. with /-w$_1$ala-waj/ (§7.17) added to Centrip DemAdv: /ba-ga:-'la-wala-waj-bugij/ 1.8.1.

Finally, the basically noun-like Type derivative (§7.25) can occur with the postposition: /bu-jun^{y}un^{g}-bugij/ 97.7.2.

7.31 Temporal orientation.

Although there is no well-defined morphological system relating primarily to time (aside from tense in verbs), it may be helpful to indicate ways in which time and time relations can be talked about.

The usual way to indicate the passage of from one to a few days is to use /=ya-y/ 'slept, spent the night' with the appropriate subject, repeating the verb to indicate how many nights passed. To indicate a particular day in such a context, a demonstrative form of MANA class, agreeing with /min^{y}(n^{g})an^{g}a/ 'night [unit of passage of time]', may be used. The same demonstratives may be used to mean 'today' in opposition to the immediately preceding days. Textual exx. are /mana:-'-ma-ruj/ (Loc suffix, Prox DemPro) 'on this day' 62.7.2/3/4, 115.5.5/6, and 115.6.3; /ama:-'-ma-ruj/ (same as preceding but with punctual form of prefix) 62.7.1; /mana:-'-mi-ruj/ 'on this day' 34.6.2 or 'today' 71.15.3; /mana:-'-ma/ (like preceding forms but without Loc suffix) 'on this day' 71.15.4; and predicative form /ya:-ma/ 'on this day' (apparent meaning) 115.5.3. All exx. of this usage involve Prox roots even with past or future time reference.

There is also a nondemonstrative system including the three stems /agalgi/ 'yesterday', /yimbaj/ 'today', and /agaṟay/ 'tomorrow'. In past narrative contexts the frame of reference can be shifted: 'the preceding day', 'the same day', 'the following day'. The stem /yimbaj/ may also have the general sense 'nowadays' in opposition to distant past or future. Distant past in a general sense is usually specified by the demonstrative /o:-'ba-ni-yun^{g}-gaj/ 'long ago, in the old days' or a variant with different prefix form (§7.10); this means something like 'back at that[Anaph, ANA class]' if analysed morphologically, but is a frozen combination.

By relative time we mean relations like 'before X', 'during X', and 'after X' where X is some moment or event. 'During X' may be translated into Nunggubuyu by adding Pergressive case suffix /-w$_{2}$aj/ to a verb form, as in /ni=ya:-ri:-waj/ 'while he is going' (§16.6).

'After X' can be expressed in several ways. Ablative case suffix /-w$_{1}$ala/ 'from' may be added to a verb or other predicate with the meaning 'after', as in /ni=ya-n^{g}gi-wala/ 'after he went' (§16.6). Particles like /wurugu/ 'later, afterwards' and even /aḏaba/ 'now, then' (generally implying closely-spaced sequencing) may be used with one clause to specify its temporal relationship to a preceding one. Similarly, ANA class DemPro /an-uba-ṇi:-'la-wala/ (Centrip /-ala-/ with further Ablative suffix added) is commonly used in the temporal sense 'after that' (§7.8), linking two clauses. The simpler form /an-uba-ni:-'la/ sometimes has similar meaning.

Expressing 'before X' is the most difficult (nowadays English before is not uncommon in Nunggubuyu). In most narrative contexts it is assumed that the order of utterance of clauses indicates the temporal order of the respective events. To emphasise 'before X', where X is a clause, one can use a Past Potential verb form (§8.6), i.e., '[when] X was about to happen', but this usage is not very common. Another form is 'while not [yet] X' (47.19.3, see §16.6).

For expressions relating to time of day, and to seasons of the year, see lexical references in p. 326 of the dictionary (for time of day add /-w$_{1}$aḻir=lha-/, with /=lha-/ 'to stand', meaning '[sun] to be high in sky [at noon]').

Chapter 8

Outline of the verbal inflectional system

8.1 Tense-Aspect-Mood-Negativity categories.

The essential grammatical categories marked in verbs, excluding pronominals and derivations, are these:

Tense:	Past	Nonpast	
Aspect:	Punctual	Continuous	
Mood:	Actual	Potential	Evitative
Negativity:	Positive	Negative	

We will use Present as a synonym for Nonpast Actual combinations, and Future for Nonpast Potential.

There are some restrictions on combinations of categories from the four dimensions. Evitative ('lest...') distinguishes Positive from Negative but has no tense or aspect distinctions. In addition, aspect is neutralised in all Negative combinations, and also in the Past Potential Positive and in the Present Positive. Therefore the full set of possible combinations is as shown in Table 8-1, below.

TABLE 8-1

Verbal Inflectional Categories

<table>
<tr><td>Past Actual Punctual Positive</td><td rowspan="2">Past Potential Positive</td><td rowspan="2">Present Positive</td><td>Future Punctual Positive</td><td rowspan="2">Evitative Positive</td></tr>
<tr><td>Past Actual Continuous Positive</td><td>Future Continuous Positive</td></tr>
<tr><td>Past Actual Negative</td><td>Past Potential Negative</td><td>Present Negative</td><td>Future Negative</td><td>Evitative Negative</td></tr>
</table>

8.2 Formal expression of the categories.

The categories in Table 8-1 are expressed formally by complex combinations of a) inflectional suffixes, see paradigms in Chapter 11; b) choice between A and B form of pronominal prefix, see Chapter 9; c) presence or absence of a Negative element, usually preposed to the verb; and d) postpositional suffix (Evitative /-magi/) added to the inflected verb or to another constituent in the clause.

The inflectional suffix categories, though they are the most important formal expressions of the tense, aspect, and mood dimensions, are difficult to gloss since some of them are distributed over a number of composite categories. Each verb has six such suffixal forms, which we label somewhat conservatively as follows:

$Past_1$	$Nonpast_1$	Evitative
$Past_2$	$Nonpast_2$	
	$Nonpast_3$	

Using the same geometrical arrangement as in Table 8-1, we show in Table 8-2, below, how the six suffixal categories are distributed.

The $Past_1$ is identified specifically with the Past Actual Punctual Positive, but $Past_2$ is used for all other Past forms and is thus difficult to gloss. In the Nonpast system, $Nonpast_1$ is used anomalously as both Future Punctual Positive and Present Negative, a clearly disjunctive pair; $Nonpast_2$ is used more reasonably as Present Positive and Future Continuous Positive; $Nonpast_3$ is basically Future Negative but is occasionally used in place of Evitative (provided that Evitative postposition /-magi/ is present to mark the mood value).

By themselves, of course, the six suffixal categories do not suffice to differentiate the twelve composite categories of Table 8-1. The second morphological system at work is the pronominal prefix system. Each intransitive prefix category like 1Sg, and each transitive (complex) prefix category like 1Sg⟶3MSg, has two distinct forms which we refer to as the A and B series, indicated by subscripts $_a$ and $_b$ as in $1Sg_a$, $1Sg_b$, and $1Sg⟶3MSg_a$.

The A and B series are distributed across the composite verbal categories of Table 8-1 as shown in Table 8-3 (following page). Note that the A vs. B opposition cross-cuts the suffixal oppositions of Table 8-2, so that by superimposing Tables 8-2 and 8-3 we can make most of the differentiations shown in Table 8-1.

TABLE 8-2

Distribution of Suffixal Categories

(Punctual)	$Past_1$	$Past_2$	$Nonpast_2$	$Nonpast_1$	Evitative or $Nonpast_3$
(Continuous)	$Past_2$			$Nonpast_2$	
(Negative)	$Past_2$	$Past_2$	$Nonpast_1$	$Nonpast_3$	

TABLE 8-3

Distribution of A and B Prefixes

	Past Actual	Past Potential	Present	Future	Evitative
Punctual	A	B	A	B	A
Continuous	A			B	
Negative	B	B	B	A	A

In the Past system, we could take B as being a general irrealis series, used both in Potential and Negative forms. In the Nonpast system, there are shades of a parallel distribution, with B found in Present Negative and in Future Positive (vs. A in Present Positive). However, the symmetry is disrupted by the occurrence of A in the Future Negative and in the Evitative, which would normally fall under a generalised irrealis category. The only way to make any synchronic structural sense of the A vs. B opposition in the Nonpast system would be to argue that since Future Negative is clearly marked by other means (/yagi/ Negative particle, and $Nonpast_3$ suffix), and since Evitative forms are clearly marked by other means (usually /-magi/ postposition, and usually Evitative suffix, certainly one of the two), the A vs. B opposition in the prefixes is simply suspended with the unmarked (elsewhere realis) A category being used. However, the A vs. B opposition serves a useful purpose in the morphology, regardless of whether we think of it as semantically reasonable.

Verbs are negated by the following Negative words (one a particle, the other itself analysable as a predicative NAdj):

yagi	in Potential (including Future) and Evitative
wa:='ṛi	in Actual (including Present)

The Future Negative is doubly distinguished formally from the Present Negative (by suffixal category and by A vs. B prefix) even before the opposition in Negative words between /yagi/ and /wa:='ṛi/, hence /yagi n^gawu=buri-∅/ 'I will not put it[ANA_{wu}] down' vs. /wa:='ṛi n^gan^{g}gu=bura-n^g/ 'I do not put it down'. However, the opposition between /yagi/ and /wa:='ṛi/ is significant in that it distinguishes Past Actual Negative, e.g., /wa:='ṛi n^gan^{g}gu=bura-n^gi/ 'I did not put it down' from Past Potential Negative, e.g., /yagi n^gan^{g}gu=bura-n^gi/ 'I would not have put it down'; in both situations the verb itself has B prefix and $Past_2$ suffix. The difference between /yagi/ and /wa:='ṛi/ is also important when the two Negative words are used by themselves (with omission of an implied verb).

The fact that, aside from the Negative word itself, the verb in a Negative category is often formally different from the corresponding Positive verb form, is functionally useful even though it might seem to be redundant. This is because the changes in the verb (e.g., from A to B prefix in Past and Present) index that verb as

being under the scope of the negative element; such indexing is helpful since a Negative word may have a scope of two or more clauses, and in general because of indeterminacies in surface clause boundaries. On negation see §15.6.

In addition to the inflectional suffixes, the A and B series of pronominal prefixes, and the (usually preposed) Negative words, we must mention the Evitative postposition /-magi/, attached either to a verb or to some (preceding) constituent in the clause. Usually an Evitative form is doubly marked, both by the Evitative inflectional suffix (ending in /-n^{g}un/ or /-n^{g}an/) and by this Evitative postposition. However, occasionally the Nonpast$_3$ form is used in evitative sense (Table 8-2), in which case the postposition /-magi/ must be used to mark the form as Evitative; there are also some attestations of verbs with Evitative inflectional suffix where the redundant postposition /-magi/ is not added.

8.3 Aspect.

The categories Punctual and Continuous, in essence, describe intrinsic aspectual properties of the event or situation described, rather than being perspective-influenced categories like "perfective" and "imperfective" as in many European languages. Punctual is used for events which either occurred suddenly ('He died', 'He hit her'), or are represented as processes which took place over a relatively brief time span. Continuous applies to prolonged or repeated events/situations.

In positive contexts (except in Past Potential and Present, where aspect is neutralised), both Punctual and Continuous are quite common and there is little evidence that one is semantically more marked than the other. Verbs such as 'to go' and 'to eat' which refer to events which in other languages are typically categorised now as punctual, now as continuous, show some fluidity in aspectual preferences in Nunggubuyu. English He ate it can appear either as /niwu=n^{g}a-n^{g}/ (Past Punctual) or as /niwu=n^{g}u-ni/ (Past Continuous), the former suggesting a sudden gulping down and the latter a more leisurely ingestion--both are common in texts. English He went (there) is most often Continuous in Nunggubuyu, hence /ni=ya-n^{g}gi/, while Punctual /ni=ruma-n^{y}/ suggests a very brief trajectory.

The texts often have series of repeated Punctual verb forms to describe situations in which a prolonged event is broken up into segments. One characteristic of narratives is the occurrence of certain motion verbs, notably /=jarara-/ and /=yarba-/, in such Punctual series, referring to stop-and-go motion as when an actor is moving stealthily, perhaps to sneak up on or to follow another actor; among numerous textual exx. cf. /=yarba-/ in 15.9.1 and /=jarara-/ in 40.12.4 to 40.13.4. This pattern is also possible with /=madhanda-/ 'to paddle [canoe]' as in 14.17.2. Other exx. include /=madhara-/ 'to chop' 43.4.2 and /=w$_1$aran^{g}ga-/ 'to look' 15.10.3. Of course, such Punctual series are more or less interchangeable with Continuous verbs, especially reduplicated forms of the latter, which emphasise repetition and/or prolongation.

Particularly with reference to motion verbs and others which describe processes with at least some intrinsically durative

status, a Punctual verb form may have inceptive nuances. In this event, the Punctual verb may be immediately followed by a cognate Continuous form (with or without reduplication), as in 16.2.3-4 where the context is this: "[The fish were too small at place A, so] again he moved[Punctual] to there, to place B, he paddled[Punctual], he kept paddling[Continuous, reduplicated]...". The first, Punctual 'paddle' verb focuses on the transition between (static) fishing and paddling away toward another location; the second, Continuous 'paddle' verb emphasises the extent of paddling which was necessary to reach the new location. Such contiguous aspect pairs are rather common. (See Chapter 17 on such narrative patterns.)

This inceptive nuance of the Punctual (with verbs which would normally be Continuous by virtue of their intrinsic semantics) is perhaps also responsible for the use of Punctual verbs to describe some mental and emotional states. For example, 'He is angry' is normally translated as /ni=riyaldhi-n^{y}/, literally 'He became angry[Punctual]', while Present /ni=riyaldhi:-/ 'He becomes angry' would probably have habitual meaning. Similarly, /=w$_2$arn^{g}ayu-/ 'to pity, feel sorry for' occurs in Punctual /n^{g}ana=warn^{g}ayu-n^{y}/ 'I pity you' (lit., 'I pitied you') 17.12.5. Likewise, English 'I refuse (your request)' is Nunggubuyu /n^{g}a=lha:bi-n^{y}/ 'I refused' 47.10.2. This pattern applies, of course, only to true verb forms and not to predicative NAdj like /n^{g}a-wurij=gala:di/ 'I am sad', which lack inflectional suffixes and thus lack aspect marking.

8.4 Verb reduplication.

Reduplication of verbs is by phonological rule P-2 (§3.3), which specifies the form of the -Rdp- morpheme. In its underlying form, -Rdp- is usually //-C$_1$V$_1$C$_2$V$_2$-// except that it is just //-C$_1$V$_1$-// before a stop. The -Rdp- morpheme regularly disregards the pronominal prefix which begins the verb form, and applies to the remaining stem (including compound initials and derivational prefixes if present). Further formal details and irregularities are dealt with in the section just cross-referenced.

In its primary use as a productive marker of repetition and/or prolongation, -Rdp- is incompatible with Punctual inflections. Almost any page of the narrative texts in NMET contains exx. of reduplicated Past Continuous Positive verbs, and reduplicated Present Positive verbs are also very common, an ex. being 11.12.4 /ni-ja-janda-n^{g}u=duma-na/ '[Crows] have black on their backs' (-Rdp- is /-ja-/). Reduplication is also possible with Future Continuous Positive, though not terribly frequent, exx. being 7.16.3 ('hit'), 7.17.2/3 ('go', 'go out'), 7.18.4/5 (several), and others in the same text, also 20.18.5 ('sit').

Reduplication in this productive sense is possible, though not very common, with Negative verb forms (where aspect is never marked). Reduplicated Past Actual Negative forms occur in 113.3.3 and 113.5.4, the first of these being /wa:='ri na:mbu-raja=rajara-n^{g}i/ 'We did not (formerly) disperse'. The combination of Negative with -Rdp- indicates that a potential event which could have occurred at a number of times regularly failed to occur; a translation with 'never' is also possible in some contexts. I cannot cite textual

exx. of -Rdp- with Present Negative, Future Negative, or Past Potential Negative, but such combinations were elicitable and would turn up in a larger text corpus or one less biased toward past tense narratives.

For some verbs, -Rdp- has become specialised as a stem-deriving element with the result that reduplication does not obey the rules just given for its location and distributional possibilities. Using -Rdp$_1$- for the productive reduplication (for repetition or prolongation), we may summarise the main points just given by saying that /Pronominal-Cpd=Verb-Suffix/ reduplicates as /Pronominal-Rdp$_1$-Cpd=Verb-Suffix/ (where -Cpd- is any compounding initial or derivational prefix), and that -Rdp$_1$- cannot co-occur with Punctual aspect. By contrast, stem-deriving -Rdp$_2$- with a small set of verbs occurs adjacent to the verb root, as in /Pronominal-Cpd-Rdp$_2$=Verb-Suffix/, and may co-occur with Punctual aspect.

Even with these verbs which permit -Rdp$_2$-, in many particular instances we cannot be sure whether -Rdp$_1$- or -Rdp$_2$- is at hand; the only clear cases of -Rdp$_2$- are those involving a -Cpd- morpheme and/or Punctual aspect. When the -Cpd- morpheme is present, we refer to the -Rdp$_2$- type as internal reduplication. It is also possible to have double reduplication with both -Rdp$_1$- and -Rdp$_2$- separated by -Cpd-, as in /Pronominal-Rdp$_1$-Cpd-Rdp$_2$=Verb-Suffix/.

One verb highly subject to internal reduplication is /=maya-/ 'to sing; to call [name]'. With Multiple derivational prefix /-w$_1$ara-/ there is a high-frequency reduplication /-w$_1$ara-maya=maya-/ instead of regular (-Rdp$_1$-) */-w$_1$ara:-'ra=maya-/. The internally reduplicated form is attested in 69.8.4, 95.10.7, and 167.16.1 in NMET, and is also found in Hughes' texts (TNT 10 and 17). A similar form with a compound initial is /-lhal-maya=maya-/ 'to call [name of] country' 167.16.2 (and TNT 16).

The verbs /=ma-/ 'to pick up, get, take' and /=na-/ 'to see' appear to permit internal reduplications only in their Reciprocal forms /=ma-n^{y}ji-/ and /=na-n^{y}ji-/. Thus /nura:-'-jiga-nan^{y}ja=na-n^{y}ji:-na/ from //nuru-aG-yiga-Rdp$_2$=na-n^{y}ji:-na// 'we saw [located] each other [by setting] fires', with Benefactive /-aG-/ and compound initial /-yiga-/ 'fire' 166.17.1. Likewise, double reduplication is seen in /an^{g}gu-yigi-yiga-man^{y}ja=ma-n^{y}ji:-na/ 'fires will get[meet] each other' 97.4.2; in view of this it is possible that /wu:-man^{y}ja=ma-n^{y}ji:-ni/ 'They got[gathered] each other' 16.16.4/5 has -Rdp$_2$-, though here there is no way of excluding -Rdp$_1$-.

It seems that /=lalagi-'-/ 'to get up' (Reflexive in form) may (uncommonly) show internal -Rdp$_2$-, to judge by the single ex. /ni-mabunu-la=lalagi-'-n^y/ 'carcass rose up [to surface]' 34.7.1/2; it may be that this -Rdp$_2$- is associated with this particular compound initial /-mabunu-/ '[decomposed] carcass'.

The ex. just cited is also notable in that it has Past Punctual form. This is most common with verbs like /=w$_2$ara-/ 'to become bent, crooked' and its transitive counterpart /=w$_2$aruga-/ (in Dictionary under their surface variants /=bara-/ and /=baruga-/) which are associated with (usually or always reduplicated) NAdj, in this case /-w$_2$ara-waru-j/ 'crooked, bent' (becomes /bara-waru-j/ with no compound initial preceding it). For these verbs, -Rdp$_2$-

is usual in all forms (and aspects), hence /ni-bara=wara-n^{g}a-n^y/ 'He moved crookedly[Punctual]', and /wirin^{g}a-bara=waruga-n^y/ 40.3.1 'They led her in zigzag motion[Punctual]'. (By contrast, in the cases of 'to sing; to call [name]' and the Reciprocals of 'to pick up' and 'to see', mentioned above, there seems to be a residual association between -Rdp$_2$- and the productive reduplicative senses of repetition and prolongation.)

A remaining unexplained reduplicated Past Punctual is in 13.16.2 ('tangled'), with an uncommon verb root whose properties are not clear.

In Nunggubuyu narrative, reduplication (by -Rdp$_1$-) may have specific discourse functions. To begin with, recall from §8.3 that an event such as 'He paddled [from place A to place B]' may be described in Nunggubuyu by a Past Punctual verb (with inceptive sense), then by a cognate Past Continuous verb, often reduplicated (describing the entire trajectory). It is common for reduplicated Past Continuous verb forms, often repeated several times and pronounced with a special high-pitched intonation, to serve as backdrop for a subsequent clause introducing a new (often Punctual) event. (This does not mean that the reduplicated verbs function like imperfectives in European languages; the new event may well have followed rather than co-occurred with the trajectory or process described by the reduplicated verb.) There are many variations in the discourse status of reduplications, and I can only suggest examination of a complete text, such as text 20 in NMET or the text analysed in Chapter 17, to see how they work.

Morphological reduplication, of course, is formally distinct from repetition of complete word forms. This also, however, is rather common in Nunggubuyu. We mentioned in §8.3 that some verbs occur fairly often in series of Punctual forms, suggesting stop-and-go rather than truly continuous motion or processes. (Aside from verbs, nouns including NAdv are often repeated several times for emphasis--see /lha:lhag/ 'recently' 1.1.2, /ya:gun^y/ 'sedge sp.' 6.1.2/3, and /gu:gu/ 'water' and /n^{g}ajal/ '[water] spring' 22.2.3.

8.5 Imperative.

There are no differences in inflectional form between verbs which function as commands and ordinary Future verbs, whether positive or negative. Thus /ba=bura:-'/ can mean either 'Sit!' or 'You will sit' [in either case with Continuous aspect], and the negative equivalent /yagi nu-n^{g}u=bura-n^{g}i-Ø/ means 'Do not sit!' or 'You will not sit' (also 'You cannot sit').

The only explicitly Imperative forms in the language are forms with a 2Sg or other 2nd person pronominal prefix plus /=ani-n^y/ (Punctual) or /=ani:-na/ (Continuous) 'come!'. This is a defective verb root used only in imperative sense, hence only in these (Future Positive) inflected forms. (Outside of the imperative there is no verb 'to come', this notion being expressed by the general motion verb /=ya-/ and its variants, 'to go', plus an appropriate adverb.)

Using the Punctual form, these 'come' imperatives with 2nd person pronominal prefix (B series, as required in Future Positive) are: 2Sg /ba:='ni-n^{y}/, 2MDu /nimbina:='ni-n^{y}/, 2FDu /nimbin^{g}a:='ni-n^{y}/, and 2Pl /numbura:='ni-n^{y}/ or less often /numburu=wani-n^{y}/; see dictionary s.v. /=ani-/ for textual citations. The dual forms are phonologically irregular, since //nimbini=ani-n^{y}// should regularly give */nimbini:='ni-n^{y}/, etc., with //i-a// → /i:/, not /a:/, by VV-Contraction P-49, cf. /nimbini:='bi-n^{y}/ 'jump![MDu]' with verb /=abi-/. This phonological irregularity highlights the rather frozen status of these 'come' imperatives.

With the exception of 'come', no verb formally distinguishes its imperatives from ordinary Future forms. Therefore such elementary "universals" of language, such as the notion that all languages have an imperative favouring or requiring 2nd person intransitive subject or transitive subject, are inapplicable here.

Although many 2nd person Future verb forms in the texts can be appropriately translated with English imperatives (and 1st inclusive Future forms are often translated with 'let's...', i.e., as hortatives), there are also a number of 3rd person forms in the texts which would be translated as imperatives as well. The exx. from NMET are 11.7.4 ('let them[your legs] go together', i.e., 'put your legs together!'), 40.9.4 ('may your daughters go that way'), 162.6.1/2 [=162.7.5 and 162.8.3] ('may it[car] stand', i.e., 'stop it!'), and with Negation 171.1.3 ('may he not pass by', i.e., 'Don't let him pass by!').

We should also mention that there is often no formal difference between clauses glossed as imperatives and those glossed as suggestions. Thus a form like /ba=bura:-'/ could be translated in various contexts as 'Sit[stay]!' (imperative), 'Why don't you sit[stay]?' (suggestion), or 'You will sit[stay]' (statement). The specific contextual pragmatic sense is not encoded in the verb.

Among the particles which may be added to provide such pragmatic specification are these: /ala/ postposed to the verb is a mitigator of an imperative or suggestion, requesting confirmation or approval from addressee (cf. English tag questions, as in 'You stay here, okay?'), see §13.1; the yes/no interrogative particle /yu:ga/ is infrequently used in a similar sense, see §13.1; emphatic postposition /-w$_2$indi:yun^{g}/ 'really, indeed, very much' (§12.21) may be added to indicate urgency, or the necessity of exact obedience, as in 12.7.5. In addition, since aspect is distinguished in Future verbs which can be used as imperatives, in some contexts where aspectual marking is not predetermined by the intrinsic structure of the event, the Punctual form seems to be more forceful (hence perhaps less polite) than the Continuous when used as an imperative. I remember once saying /ba:='ni-n^{y}/ 'come!' to an older person, and having someone else tell me I should have said /ba:='ni:-na/ with Continuous form.

An overt 2nd person pronoun is occasionally juxtaposed to the verb with imperative force, especially when some kind of clause-to-clause contrast is present; see 17.12.1-2. It is also possible to add demonstrative /a:-da-nu:-'/ 'that[Imm, ANA]' in its function as 2nd person pronoun reinforcer (§7.27).

8.6 Past Potential.

The Past Potential verb form, whether in its Positive form or with Negative particle /yagi/, has a variety of translation equivalents in English, principally 'was going to...', 'was just about to...', 'should have...', 'could have...'. It is also used in both clauses of a counterfactual conditional.

In the sense 'was going to...' or 'was just about to...', the Past Potential verb may take Purposive case suffix /-yun^{g}guyun^{g}/, forming a Purposive subordinated clause. Textual exx. are 10.18.1 ('Jabiru was about to jump on him'), 11.7.1. 12.7.2, 13.36.2, and from Hughes' texts TNT 15 and 32 and MT 22. The Past Potential without /-yun^{g}guyun^{g}/ has the same type of sense in a number of other textual exx.: 7.13.2 ('Brolga was about to strike Emu'), 161.9.3 ('I was trying to break it [but failed]'), and 161.14.2 ('[in our early plans] the mission was going to be there'); see §16.5.

The sense 'was just about to...', implying apparent imminence of an event (which did not necessarily take place), is made explicit by adding particle /yin^{g}ga/ as in 7.13.2; cf. §12.7.

There is no lexical verb meaning 'to try, attempt to...'. In 161.9.3, cited above, the sense 'I was trying to break it' is expressed by the Past Potential form of 'I break it' with the sense clarified by the NAdv /lha:lhag/, here translated 'nearly' or 'on the verge of'; the next clause is 'I failed [to break it]' making it clear that the attempt was unsuccessful. See also §16.9.

The sense 'in order to...' in a past tense context is normally expressed in Nunggubuyu not by a Past Potential verb, but by a Pact Actual form (Positive or Negative) with /-yun^{g}guyun^{g}/, see §16.5.

The sense 'should have...' is exemplified by this passage from TNT 27: /yagi-maga: bamba:-'=bi-ni, bamba:-'=ga:ru:-'/ (my retranscription) 'You should not have hit them, you should have left them [alone]'. The verbs here are //=w$_2$i-ni// 'hit' and //=a:ru:-'// 'left', both with Past$_2$ suffix and with B series pronominal prefix; note also that the Negative word is /yagi/, used in Past Potential but not Past Actual to mark negation. The scope of /yagi/ here is limited to the first of the two verbs.

Past counterfactual constructions (cf. 'Had I seen him, I would have killed him' in English) are expressed by juxtaposing two Nunggubuyu clauses, both in Past Potential form. Postposition /-maga:/, which we just saw in the preceding paragraph with the 'should have' sense of Past Potential, is also common in the counterfactual construction--it may be added to the protasis ('if' clause), the apodosis ('then' clause), or both. The exx. in NMET are 120.6.1-3 ('if it had gotten into they would have been unable to see permanently') and 161.33.2 ('if they had done that [helped us with the heavy work], these houses would have been big'). For further discussion of /-maga:/ postposition see §12.21; cf. §16.7.

Ordinary hypothetical conditionals ('If I see him, I will kill him') do not involve Past Potential; see §16.7.

Other Past Potential exx. from Hughes' texts are to be found in TNT 12, 15, 16.

It is possible to express Past Potential with a predicative NAdj by using the B rather than A series of the pronominal prefix.

Because such predicative NAdj lack the verbal inflectional suffixes, the Past Potential form is identical to the Future form, hence /an^{g}gu=run^{g}gal/ 'It[ANA] would have been big' or 'It will be big'. The textual exx. which we can confidently analyse as Past Potential are 12.6.3 /an^{g}i=bagawaga:lu:-'/ 'She was about to be facing [him]', and 120.6.2 /amburu=altogether amburu=wuguwuguni-maga:/ 'They would have been for good [unable to see, specified in juxtaposed clause]'.

8.7 Evitative.

The term "Evitative" was coined from Latin evitare 'to avoid' and has been used in several of my grammars. A clause containing an Evitative verb can be translated with 'lest...', or more colloquially with 'or else...' in the threatening or warning sense. An Evitative form usually co-occurs with an imperative or suggestion which indicates a precaution which may be taken to avoid the undesirable potential event described by the Evitative itself, as in 'Get inside, lest you be caught in the rain'.

This category is normally expressed doubly, by the Evitative inflectional suffix on the verb (ending in /-n^{g}an/ or /-n^{g}un/ depending on verb class), and by Evitative postposition /-magi/. The /-magi/ is added to the verb form most of the time, but may be attached to a preceding constituent in the same clause, and in the Evitative Negative /-magi/ is added directly to Negative particle /yagi/.

Occasionally, /-magi/ is omitted so that the Evitative inflectional suffix carries the modal meaning. On the other hand, occasionally the Nonpast$_3$ (usually Future Negative) inflectional form is used with /-magi/ to mark the Evitative.

Although the Evitative is fairly common in everyday conversation, e.g., in warnings from adults to children, it is not especially common in the published texts (mostly narrative). We can cite the following cases from NMET involving the double marking: 'lest I bring down the sky' 5.17.2 and 7.14.3/4; 'lest I do thus' 7.14.5; 'lest I call out to it' 7.14.5; 'lest I destroy them' 7.14.6; 'lest it get away from us' 13.12.3, 13.13.3, 13.25.2; 'lest they pursue me' 40.14.2; and 'lest he rebuke me' 163.17.5. In 171.1.3-4 we have a case where /-magi/ is added to a preposed demonstrative rather than to the verb, the sense being 'lest this[tape recorder] get[record] his voice'. An Evitative inflectional ending with no trace of /-magi/ is found in 94.2.3/4 'lest it burn[out of control]'.

Evitatives in Hughes' texts can be found in TNT 15 and 16.

The Evitative form in Nunggubuyu has approximate parallels in many other Australian languages, but the counterpart in some of these languages is a much more general and more common form expressing any undesirable potential event. In Nunggubuyu, the Evitative is used for an undesirable potential event which can be avoided by prudent action, and is thus generally juxtaposed to another clause containing an imperative or suggestion.

Chapter 9

Pronominal prefixes with verbs

9.1 General.

The term pronominal prefix designates a class of prefixes (many of which can be decomposed into two or more component morphemes in a phonologically abstract analysis) which are used with verbs, and with NAdj (adjectival nouns, §4.2) when they are in predicative form.

The pronominal prefix may be intransitive (marking pronominal subject only), or transitive (marking subject and object). For simple transitives like 'to see' and 'to hit', the object marked in the pronominal prefix is the direct object (patient). However, if a transitive pronominal prefix is followed by Benefactive derivational prefix /-aG-/, the object marked in the pronominal prefix is an indirect object. For a few verbs like 'to give', where an indirect object is part of the minimal case frame, the object marked in the prefix is always the indirect object and Benefactive /-aG-/ is not used.

Pronominal prefixes are formally distinct from all other prefix classes in the language. There are some formal resemblances between the intransitive pronominal prefixes and some NC (noun class) prefix series (see Table 4-1, Chapter 4), but the correspondences are far from exact. For example, it is easy to tell when a NAdj like /run^{g}gal/ 'big' is in nominal surface status and when it is in predicative form with intransitive pronominal prefix: /ana-run^{g}gal/ 'the big one[ANA]', /wu=run^{g}gal/ 'it[ANA] is big'. Transitive pronominal prefixes have no parallels whatever elsewhere in the language.

Depending on whether we are concerned with the pronominal element as a whole or with its internal structure, we will speak of it as a prefix (singular!) or as a sequence of component morphemes.

The following pages contain elaborate tables showing all intransitive (Table 9-1) and transitive (Tables 9-2 to 9-15) prefixes. Readers interested only in identifying prefixes in textual passages may wish to use these tables but to skip the formal analysis implied by the "underlying" representations in double slashes //...// in the tables, and discussed in the rest of this chapter.

TABLE 9-1

Intransitive Prefixes

$1Sg_a$	n^ga-	//n^ga-// 3.7.3; $ANA_\emptyset$ 162.3.1
$1Sg_b$	n^gan-	//n^ga-$w_2$an-// 7.18.2; $ANA_\emptyset$ 143.10.5
$1ExMDu_a$	ni:ni-	//nV:-ni-// 163.11.5; $ANA_\emptyset$ 121.3.4
$1ExMDu_b$	na:ni-	//nV:-$w_2$an-ni-// 164.2.5; $ANA_\emptyset$ 121.3.5
$1ExFDu_a$	ni:n^gi-	//nV:-n^gi-//
$1ExFDu_b$	na:n^gi-	//nV:-$w_2$an-n^gi-// 17.14.6
$1ExPl_a$	nuru-	//nV:-ru-// 162.2.1; $ANA_\emptyset$ 163.19.5
$1ExPl_b$	na:mbu-	//nV:-$w_2$an-w_2u-// 163.6.2; $ANA_\emptyset$ 163.2.3
$1InDu_a$	na-	//na-//
$1InDu_b$	nan-	//na-$w_2$an-// 10.3.3
$1InMTr_a$	n^gi:ni-	//n^gV:-ni-//
$1InMTr_b$	n^ga:ni-	//n^gV:-$w_2$an-ni-//
$1InFTr_a$	n^gi:n^gi-	//n^gV:-n^gi-//
$1InFTr_b$	n^ga:n^gi-	//n^gV:-$w_2$an-n^gi-//
$1InPl_a$	n^guru-	//n^gV:-ru-// 7.9.2
$1InPl_b$	n^ga:mbu-	//n^gV:-$w_2$an-w_2u-// 7.9.1; $ANA_\emptyset$ 119.8.3
$2Sg_a$	nun-	//nun-// 13.38.3; $ANA_\emptyset$ 16.16.2
$2Sg_b$	ba-	//ba-// 3.8.1
$2MDu_a$	ni:ni-	//na-w_2V-ni-// 20.11.5; $ANA_\emptyset$ 65.5.2
$2MDu_b$	nimbini-	//na-$w_2$an-w_2V-ni-// 20.9.4
$2FDu_a$	ni:n^gi-	//na-w_2V-n^gi-// 12.6.1
$2FDu_b$	nimbin^{g}i-	//na-$w_2$an-w_2V-n^gi-// 12.1.4
$2Pl_a$	nuru-	//na-w_2V-ru-// 18.12.3
$2Pl_b$	numburu-	//na-$w_2$an-w_2V-ru-// 162.4.1
$3MSg/NA_a$	ni-	//ni-// 1.3.3; $ANA_\emptyset$ 162.5.3
$3MSg/NA_b$	(w)ani-	//$w_2$an-ni-// 7.21.5
$3FSg/N^gARA_a$	n^gi-	//n^gi-// 1.2.2; $ANA_\emptyset$ 14.2.1
$3FSg/N^gARA_b$	(w)an^{g}i-	//$w_2$an-n^gi-// 7.6.3
$3MDu_a$	wini-	//w_2V-ni-// 1.1.1; $ANA_\emptyset$ 162.5.4
$3MDu_b$	(w)ambini-	//$w_2$an-w_2V-ni-//
$3FDu_a$	win^{g}i-	//w_2V-n^gi-// 3.7.2; $ANA_\emptyset$ MT 26
$3FDu_b$	(w)ambin^{g}i-	//$w_2$an-w_2V-n^gi-//
$3Pl/WARA_a$	wuru-	//w_2V-ru-// 4.5.4; $ANA_\emptyset$ 9.8.4
$3Pl/WARA_b$	(w)amburu-	//$w_2$an-w_2V-ru-// 164.3.1; $ANA_\emptyset$ 166.10.4
ANA_a	wu-	//w_1u-// 1.1.5
ANA_b	(w)an^{g}gu-	//$w_2$an-w_1u-// 4.7.3
$MANA_a$	ma-	//ma-// 1.1.2
$MANA_b$	(w)ama-	//$w_2$an-ma-// 162.6.1

Note: Except for ANA and MANA forms, these prefixes are also used for transitive __→$ANA_\emptyset$; cf. Table 9-13.

TABLE 9-2

1→2 and 2→1 Prefixes

[all equipollent]

$1 \rightarrow 2Sg_a$	n^gunu-	//n^ga-nu-// 38.1.1
$1 \rightarrow 2Sg_b$	(w)a-	//w_2a-// MT 9, 10, 22; TNT 33
$1 \rightarrow 2Pl_a$	n^gana-	//n^ga-na-// 17.12.5, 47.16.2, 65.13.5
$1 \rightarrow 2Pl_b$	(n^g)anamba-	[unclear] 13.31.2, 16.1.1, 17.12.4/5
$2Sg \rightarrow 1_{ab}$	numba-	[unclear] 5.15.6[b], 7.12.1[a]
	nimba-	[unclear] 11.4.3[b]
$2Pl \rightarrow 1_{ab}$	n^giri-	[unclear] 5.17.1[b], MT 5[a]

Note: "1" subsumes 1Sg, 1ExDu, and 1ExPl (1st inclusive cannot co-occur with 2nd person). Several of the forms shown are opaque or ambiguous in structure; see discussion.

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TABLE 9-3

1Sg Object Prefixes

[inverse]

$3MSg/NA \rightarrow 1Sg_a$	n^gani-	//n^ga-N-ni-// 163.1.2[MSg], 102.1.5[NA]
$3MSg/NA \rightarrow 1Sg_b$	n^gambani-	//n^ga-N-$w_2$an-ni-//
$3FSg/N^gARA \rightarrow 1Sg_a$	n^gan^{g}i-	//n^ga-N-n^gi-//
$3FSg/N^gARA \rightarrow 1Sg_b$	n^gamban^{g}i-	//n^ga-N-$w_2$an-n^gi-//
$3Pl/WARA \rightarrow 1Sg_a$	n^gambi-	//n^ga-N-w_2i-// 7.11.2
$3Pl/WARA \rightarrow 1Sg_b$	n^gambambi-	//n^ga-N-$w_2$an-w_2i-// 7.18.5
$ANA \rightarrow 1Sg_a$	n^gan^{g}gu-	//n^ga-N-w_1u-// 10.11.3
$ANA \rightarrow 1Sg_b$	n^gamban^{g}gu-	//n^ga-N-$w_2$an-w_1u-// 7.16.6
$MANA \rightarrow 1Sg_a$	n^gama-	//n^ga-N-ma-//
$MANA \rightarrow 1Sg_b$	n^gambama-	//n^ga-N-$w_2$an-ma-//

- -

The tables also show, to the right, textual citations for the prefix forms, preferably from NMET but sometimes from Hughes' volumes (TNT, MT). Usually just one citation is given, but for a few irregular prefixes we give more than one, and in some cases where the prefix has a range of pronominal possibilities (due to idiosyncratic categorial mergers) we may give one attestation of each major function. In Table 9-1, for example, we try to show exx. both of the intransitive function and of the transitive function with $ANA_\emptyset$ object.

Although we point out textual citations where available, the paradigms have been put together primarily by direct elicitation and observation of (unrecorded) speech. The forms have in almost all cases been rechecked and confirmed many times.

Glosses like '1Sg→$MANA_a$' show subject to the left and object to the right of the arrow. Final subscripts $_a$ and $_b$ refer to the two series of pronominal prefixes (cf. §8.2 and Table 8-3).

TABLE 9-4

1ExPl Object Prefixes

[inverse]

3MSg/NA→1ExPl$_a$	nani-	//nV-N-ni-// 163.1.3
3MSg/NA→1ExPl$_b$	nambani-	//nV-N-w$_2$an-ni-// 164.2.2
3FSg/N^{g}ARA→1ExPl$_a$	nan^{g}i-	//nV-N-n^{g}i-// 62.1.7
3FSg/N^{g}ARA→1ExPl$_b$	namban^{g}i-	//nV-N-w$_2$an-n^{g}i-// 62.1.8
3Pl/WARA→1ExPl$_a$	nambi-	//nV-N-w$_2$i-// 166.6.1
3Pl/WARA→1ExPl$_b$	nambambi-	//nV-N-w$_2$an-w$_2$i-// 165.1.2
ANA→1ExPl$_a$	nan^{g}gu-	//nV-N-w$_1$u-// 163.23.5
ANA→1ExPl$_b$	namban^{g}gu-	//nV-N-w$_2$an-w$_1$u-//
MANA→1ExPl$_a$	nama-	//nV-N-ma-// 167.21.1
MANA→1ExPl$_b$	nambama-	//nV-N-w$_2$an-ma-// 164.2.3

Note: 1ExPl here includes 1ExDu.

TABLE 9-5

1InDu Object Prefixes

[inverse]

3MSg/NA→1InDu$_a$	nani-	//na-N-ni-//
3MSg/NA→1InDu$_b$	nambani-	//na-N-w$_2$an-ni-// 22.1.6
3FSg/N^{g}ARA→1InDu$_a$	nan^{g}i-	//na-N-n^{g}i-//
3FSg/N^{g}ARA→1InDu$_b$	namban^{g}i-	//na-N-w$_2$an-n^{g}i-//
3Pl/WARA→1InDu$_a$	nambi-	//na-N-w$_2$i-//
3Pl/WARA→1InDu$_b$	nambambi-	//na-N-w$_2$an-w$_2$i-//
ANA→1InDu$_a$	nan^{g}gu-	//na-N-w$_1$u-// 13.25.2
ANA→1InDu$_b$	namban^{g}gu-	//na-N-w$_2$an-w$_1$u-//
MANA→1InDu$_a$	nama-	//na-N-ma-// 13.12.3
MANA→1InDu$_b$	nambama-	//na-N-w$_2$an-ma-// 13.11.4

9.2 Additional phonological modifications.

The forms of pronominal prefixes shown in the tables (9-1 to 9-15) are what we might call the basic forms. The forms shown are always possible, and in most cases obligatory, when the following morpheme begins with a consonant. However, if that morpheme begins with a vowel, there is always a further phonological change, usually VV-Contraction P-49, but Pronominal d-Insertion P-20 in case the prefix' underlying form ends in /n/. There are also some other relevant rules, and it is useful to mention all of them to enable readers to analyse actual textual forms using our tables.

By far the most common such rule is VV-Contraction P-49, since almost all of the pronominal prefixes end in a (short) vowel and

TABLE 9-6

1InPl Object Prefixes

[inverse]

3MSg/NA→1InPl$_a$	n^{g}arani-	//n^{g}V:-rV-N-ni-// TNT 21
	n^{g}a:ni-	" 34.8.2
3MSg/NA→1InPl$_b$	n^{g}a:mbani-	//n^{g}V:-N-w$_2$an-ni-//
3FSg/N^{g}ARA→1InPl$_a$	n^{g}aran^{g}i-	//n^{g}V:-rV-N-n^{g}i-// 42.6.4
	n^{g}a:n^{g}i-	"
3FSg/N^{g}ARA→1InPl$_b$	n^{g}a:mban^{g}i-	//n^{g}V:-N-w$_2$an-n^{g}i-//
3Pl/WARA→1InPl$_a$	n^{g}arambi-	//n^{g}V:-rV-N-w$_2$i-// 15.13.2
	n^{g}a:mbi- (?)	"
3Pl/WARA→1InPl$_b$	n^{g}a:mbambi-	//n^{g}V:-N-w$_2$an-w$_2$i-//
ANA→1InPl$_a$	n^{g}aran^{g}gu-	//n^{g}V:-rV-N-w$_1$u-// TNT 15
	n^{g}a:n^{g}gu- (?)	"
ANA→1InPl$_b$	n^{g}a:mban^{g}gu-	//n^{g}V:-N-w$_2$an-w$_1$u-//
MANA→1InPl$_a$	n^{g}arama-	//n^{g}V:-rV-N-ma-//
	n^{g}a:ma- (?)	"
MANA→1InPl$_b$	n^{g}a:mbama-	//n^{g}V:-N-w$_2$an-ma-//

Notes: 1InPl here includes 1InTr; variants followed by a query were not recorded but may have been overlooked.

TABLE 9-7

2Sg Object Prefixes

[inverse]

3MSg/NA→2Sg$_a$	nini-	//nu-N-ni-// 69.3.2
3MSg/NA→2Sg$_b$	ani-	//a-N-ni-//
3FSg/N^{g}ARA→2Sg$_a$	nin^{g}i-	//nu-N-n^{g}i-//
3FSg/N^{g}ARA→2Sg$_b$	an^{g}i-	//a-N-n^{g}i-//
3Pl/WARA→2Sg$_a$	nimbi-	//nu-N-w$_2$i-// 69.16.4
3Pl/WARA→2Pl$_b$	ambi-	//a-N-w$_2$i-//
ANA→2Sg$_a$	nun^{g}gu-	//nu-N-w$_1$u-// 16.20.4
ANA→2Sg$_b$	an^{g}gu-	//a-N-w$_1$u-//
MANA→2Sg$_a$	numa-	//nu-N-ma-//
MANA→2Sg$_b$	ama-	//a-N-ma-//

since many verbs begin in a vowel. There are also some important derivational prefixes, such as Comitative /-an^{y}ji-/ and Benefactive /-aG-/, which begin in a vowel (and may directly follow the prefix). In NMET and this grammar, the symbol ' indicates the absorption of a morpheme-initial vowel by VV-Contraction P-49, as in /wa:='bi-n^y/ 'it jumped' from //w$_1$u=abi-n^y//.

P-49 has a number of specialised subrules, some applicable only in morphological contexts not relevant to the analysis of

TABLE 9-8

2Pl Object Prefixes

[inverse]

3MSg/NA→2Pl$_a$	nani-	//na-N-ni-//
3MSg/NA→2Pl$_b$	nambani-	//na-N-w$_2$an-ni-//
3FSg/N^{g}ARA→2Pl$_a$	nan^{g}i-	//na-N-n^{g}i-//
3FSg/N^{g}ARA→2Pl$_b$	namban^{g}i-	//na-N-w$_2$an-n^{g}i-//
3Pl/WARA→2Pl$_a$	nambi-	//na-N-w$_2$i-//
3Pl/WARA→2Pl$_b$	nambambi-	//na-N-w$_2$an-w$_2$i-// 17.12.3
ANA→2Pl$_a$	nan^{g}gu-	//na-N-w$_1$u-//
ANA→2Pl$_b$	namban^{g}gu-	//na-N-w$_2$an-w$_1$u-//
MANA→2Pl$_a$	nama-	//na-N-ma-//
MANA→2Pl$_b$	nambama-	//na-N-w$_2$an-ma-//

Note: 2Pl includes 2Du.

- -

pronominal prefixes. The regular parts of P-49 which do apply to the boundary between pronominal prefix and following morpheme are:

//i-a//
//i-i//
//a-i//
//i-u// } → /i:-'/

//u-i// → /i:-'/ or /u:-'/ (see §3.50 for details)

//a-u//
//u-u// } → /u:-'/

//u-a//
//a-a// } → /a:-'/

These formulae can be used, working backwards, to narrow down the set of possible prefix-final underlying vowels (and also the set of possible morpheme-initial underlying vowels). Remember that ' after the boundary is the signal that P-49 has applied. If the second morpheme is represented solely as /-'-/ or /-'=/, it is usually Benefactive //-aG-// (or the less common compound initial //-aG-// or //-a-// 'ground'). If the second morpheme is written as /='-/, it is either from //=u-// (a form of /=w$_2$u-/ 'to hit, kill') or from //=i-// or //=u-// (forms of /=yi-/ 'to give'). Note that = is used for the boundary just before the verb root.

In a surface form like /wa:=na-yi:/ 'They see them', the long /a:/ is not due to P-49 since there is no ' after the boundary. Since there are no pronominal prefixes whose basic form ends in a long vowel, the only remaining possibility is that rV-Truncation P-36 has applied, converting //...V$_1$rV$_1$-// to /...V$_1$:-/ at the end of the pronominal prefix. Ordinarily this can only apply before a consonant (across the boundary), so confusion with P-49 is not possible. In the case of /wa:=na-yi:/, then, we take the prefix as /wara-/ (see Table 9-9), optionally truncated to /wa:-/.

TABLE 9-9

3Pl/WARA Object Prefixes

[inverse]

3MSg/NA→3Pl/WARA$_a$	wani-	//w$_2$V-N-ni-// 1.10.4
3MSg/NA→3Pl/WARA$_b$	(w)ambani-	//w$_2$an-w$_2$V-N-ni-// 12.7.2
3FSg/N^{g}ARA→3Pl/WARA$_a$	wan^{g}i-	//w$_2$V-N-n^{g}i-// 1.2.6
3FSg/N^{g}ARA→3Pl/WARA$_b$	(w)amban^{g}i-	//w$_2$an-w$_2$V-N-n^{g}i-//
3MDu→3Pl/WARA$_a$	wa:ni-	//w$_2$V-w$_2$V-N-ni-// 17.8.8
3MDu→3Pl/WARA$_b$	(w)amba:ni-	//w$_2$an-w$_2$V-w$_2$V-N-ni-//
3FDu→3Pl/WARA$_a$	wa:n^{g}i-	//w$_2$V-w$_2$V-N-n^{g}i-// MT 26
3FDu→3Pl/WARA$_b$	(w)amba:n^{g}i-	//w$_2$an-w$_2$V-w$_2$V-N-n^{g}i-//
1ExMDu→3Pl/WARA$_a$	na:ni-	//nV:-w$_2$V-N-ni-//
1ExMDu→3Pl/WARA$_b$	na:mbani-	//nV:-w$_2$an-w$_2$V-N-ni-//
1ExFDu→3Pl/WARA$_a$	na:n^{g}i-	//nV:-w$_2$V-N-n^{g}i-//
1ExFDu→3Pl/WARA$_b$	na:mban^{g}i-	//nV:-w$_2$an-w$_2$V-N-n^{g}i-//
1InMTr→3Pl/WARA$_a$	n^{g}a:ni-	//n^{g}V:-w$_2$V-N-ni-//
1InMTr→3Pl/WARA$_b$	n^{g}a:mbani-	//n^{g}V:-w$_2$an-w$_2$V-N-ni-//
1InFTr→3Pl/WARA$_a$	n^{g}a:n^{g}i-	//n^{g}V:-w$_2$V-N-n^{g}i-//
1InFTr→3Pl/WARA$_b$	n^{g}a:mban^{g}i-	//n^{g}V:-w$_2$an-w$_2$V-N-n^{g}i-//
2MDu→3Pl/WARA$_a$	na:ni-	//na-w$_2$V-w$_2$V-N-ni-//
2MDu→3Pl/WARA$_b$	namba:ni-	//na-w$_2$an-w$_2$V-w$_2$V-N-ni-// 65.13.3
2FDu→3Pl/WARA$_a$	na:n^{g}i-	//na-w$_2$V-w$_2$V-N-n^{g}i-//
2FDu→3Pl/WARA$_b$	namba:n^{g}i-	//na-w$_2$an-w$_2$V-w$_2$V-N-n^{g}i-//
3MDu→3Pl/WARA$_a$	wa:ni-	//w$_2$V-w$_2$V-N-ni-// 20.4.4
3MDu→3Pl/WARA$_b$	(w)amba:ni-	//w$_2$an-w$_2$V-w$_2$V-N-ni-//
3FDu→3Pl/WARA$_a$	wa:n^{g}i-	//w$_2$V-w$_2$V-N-n^{g}i-// 11.1.2
3FDu→3Pl/WARA$_b$	(w)amba:n^{g}i-	//w$_2$an-w$_2$V-w$_2$V-N-n^{g}i-//
ANA→3Pl/WARA$_a$	wan^{g}gu-	//w$_2$V-N-w$_1$u-// 16.22.2
ANA→3Pl/WARA$_b$	(w)amban^{g}gu-	//w$_2$an-w$_2$V-N-w$_1$u-// 120.3.4
MANA→3Pl/WARA$_a$	wama-	//w$_2$V-N-ma-// 11.9.2
MANA→3Pl/WARA$_b$	(w)ambama-	//w$_2$an-w$_2$V-N-ma-// 120.6.1

[equipollent]

3Pl/WARA→3Pl/WARA$_a$	wara-	//w$_2$V-w$_2$V-ra-// 2.1.2
3Pl/WARA→3Pl/WARA$_b$	(w)ambara-	//w$_2$an-w$_2$V-w$_2$V-ra-// 47.12.2

[direct]

1Sg→3Pl/WARA$_a$	n^{g}ara-	//n^{g}a-w$_2$V-ra-// 15.13.1
1Sg→3Pl/WARA$_b$	n^{g}amba-	//n^{g}a-w$_2$an-w$_2$a-// 27.1.2
1ExPl→3Pl/WARA$_a$	nara-	//nV:-w$_2$V-ra-// 7.14.6
1ExPl→3Pl/WARA$_b$	na:mba-	//nV:-w$_2$an-w$_2$a-// 67.3.3
1InDu→3Pl/WARA$_a$	nara-	//na-w$_2$V-ra-//
1InDu→3Pl/WARA$_b$	namba-	//na-w$_2$an-w$_2$a-//

[continued next p.]

(Table 9-9, cont.)

1InPl⟶3Pl/WARA$_a$	n^{g}ara-	//n^{g}V:-w$_2$V-ra-// 18.5.2
1InPl⟶3Pl/WARA$_b$	n^{g}a:mba-	//n^{g}V:-w$_2$an-w$_2$a-// 3.8.2
2Sg⟶3Pl/WARA$_a$	bara-	//ba-w$_2$V-ra-// 3.7.4
2Sg⟶3Pl/WARA$_b$	bamba-	//ba-w$_2$an-w$_2$a-// 4.2.4
2Pl⟶3Pl/WARA$_a$	nara-	//na-w$_2$V-w$_2$V-ra-//
2Pl⟶3Pl/WARA$_b$	nambara-	//na-w$_2$an-w$_2$V-w$_2$V-ra-// 40.9.2

Note: 3Pl (as object category) here subsumes 3Du. For WARA⟶WARA$_{ab}$ it is possible to substitute /Ø-/ prefix as with other transitive nonhuman prefixes.

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In rapid speech, phonologically irregular contractions involving a pronominal prefix whose basic form ends in /...rV-/ and a following morpheme beginning in a vowel may occur. Thus /wura:='dadi-n^y/ 'They [or it, WARA class] went up on shore' is sometimes heard as /wa:='dadi-n^y/, and can thus be confused with 'It[ANA] went up on shore', as in 26.2.2 (cf. also 'it twitched legs' 25.1.2). Although such forms are avoided in careful speech, they suggest that the rV-Contraction surface variants like 3Pl/WARA$_a$ /wu:-/ from /wuru-/ and 3Pl/WARA⟶3Pl/WARA$_a$ /wa:-/ from /wara-/ may be in the process of extending their distribution and becoming context-independent (not just preconsonantal) variants of the prefixes.

While virtually all pronominal prefixes end in a vowel (in their basic forms), there are three prefixes of the form /CVn-/, all in Table 9-1; they may be used as intransitives, or as transitives with ANA$_Ø$ object. Note that 1Sg$_b$ /n^{g}an-/ is distinguished from 1Sg$_a$ /n^{g}a-/ solely by the second nasal, as is also the case with 1InDu$_b$ /nan-/ vs. 1InDu$_a$ /na-/; the third form is 2Sg$_a$ /nun-/ (vs. 2Sg$_b$ /ba-/).

There are several phonological rules which are affected by the presence or absence of the prefix-final nasal which we have (somewhat indirectly) identified as underlying //n//. Presence of this nasal triggers the following: a) if the following morpheme begins with underlying vowel, Pronominal d-Insertion P-20 inserts /d/ to the left of the boundary and also lengthens the vowel; b) if the following morpheme begins in a stop, n^{g}u-Epenthesis P-1 inserts /-n^{g}u-/ at the boundary (with the //n// then being deleted before /-n^{g}u-/ by Nasal-Deletion P-30); c) if the following morpheme begins in a continuant /w$_1$ y r lh w$_2$/, this continuant hardens to /g j d dh b/ by Hardening P-18 and the //n// assimilates in position by Nasal-Assimilation P-27; d) if the following morpheme begins in a nasal or unhardened lateral /l l r/, the //n// is deleted by Nasal-Deletion P-30 with no other change. Hence these pairs with 1Sg$_a$ /n^{g}a-/ vs. 1Sg$_b$ /n^{g}an-/:

/n^{g}a:='bi:-na/ 'I jump'	/n^{g}and=a:bi:-na/ 'I will jump'
/n^{g}a=bura:-'/ 'I sit'	/n^{g}a-n^{g}u=bura:-'/ 'I will sit'
/n^{g}a=ya:-ri:/ 'I go'	/n^{g}an^y=ja:-ri:/ 'I will go'
/n^{g}a=na-yi:/ 'I see it[ANAØ]'	/n^{g}a=na-yi:/ 'I will see it'

Note that there is no surface difference in the final pair.

TABLE 9-10

3MSg Object Prefixes

[inverse]		
ANA⟶3MSg/NA$_a$	nin^{g}gu-	//ni-N-w$_1$u-// 43.8.3, 49.2.5
ANA⟶3MSg/NA$_b$	(w)anin^{g}gu-	//w$_2$an-ni-N-w$_1$u-// 89.1.7
MANA⟶3MSg/NA$_a$	nima-	//ni-N-ma-//
MANA⟶3MSg/NA$_b$	(w)anima-	//w$_2$an-ni-N-ma-//
[equipollent]		
3MSg/NA⟶3MSg$_a$	nu-	//nu-// 4.6.4
3MSg/NA⟶3MSg$_b$	(w)anu-	//w$_2$an-nu-// 7.21.6
3FSg/N^{g}ARA⟶3MSg$_a$	n^{g}unu-	//n^{g}i-nu-// 3.5.5
3FSg/N^{g}ARA⟶3MSg$_b$	(w)an^{g}unu-	//w$_2$an-n^{g}i-nu-//
[direct]		
1Sg⟶3MSg$_a$	n^{g}anu-	//n^{g}a-nu-// 5.14.5
1Sg⟶3MSg$_b$	n^{g}anu-	//n^{g}a-w$_2$an-nu-// 1.15.5
1ExFDu⟶3MSg$_a$	nu:n^{g}unu-	//nV:-n^{g}i-nu-// TNT 30, 32
1ExFDu⟶3MSg$_b$	na:n^{g}unu-	//nV:-w$_2$an-n^{g}i-nu-// TNT 32
1ExPl⟶3MSg$_a$	nu:nu-	//nV:-nu-// 50.1.4
1ExPl⟶3MSg$_b$	na:nu-	//nV:-w$_2$an-nu-//
1InDu⟶3MSg$_a$	nanu-	//na-nu-//
1InDu⟶3MSg$_b$	nanu-	//na-w$_2$an-nu-// 13.15.2
1InFTr⟶3MSg$_a$	n^{g}u:n^{g}unu-	//n^{g}V:-n^{g}i-nu-//
1InFTr⟶3MSg$_b$	n^{g}a:n^{g}unu-	//n^{g}V:-w$_2$an-n^{g}i-nu-//
1InPl⟶3MSg$_a$	n^{g}u:nu-	//n^{g}V:-nu-// MT 11
1InPl⟶3MSg$_b$	n^{g}a:nu-	//n^{g}V:-w$_2$an-nu-// 17.9.4
2Sg⟶3MSg$_a$	nunu-	//nun-nu-// 5.15.5, 90.2.3
2Sg⟶3MSg$_b$	banu-	//ba-nu-// 171.1.2
2FDu⟶3MSg$_a$	nu:n^{g}unu-	//na-w$_2$V-n^{g}i-nu-// 17.9.6
2FDu⟶3MSg$_b$	numbun^{g}unu-	//na-w$_2$an-w$_2$V-n^{g}i-nu-//
2Pl⟶3MSg$_a$	nu:nu-	//na-w$_2$V-nu-//
2Pl⟶3MSg$_b$	numbunu-	//na-w$_2$an-w$_2$V-nu-//
3FDu⟶3MSg$_a$	wun^{g}unu-	//w$_2$V-n^{g}i-nu-// 3.7.2
3FDu⟶3MSg$_b$	(w)ambun^{g}unu-	//w$_2$an-w$_2$V-n^{g}i-nu-// TNT 32
3Pl⟶3MSg$_a$	wunu-	//w$_2$V-nu-// 5.17.6
3Pl⟶3MSg$_b$	(w)ambunu-	//w$_2$an-w$_2$V-nu-// 3.2.5

Note: 1ExPl subsumes 1ExMDu, 1InPl subsumes 1InMTr, 2Pl subsumes 2MDu, and 3Pl subsumes 3MDu in this paradigm.

TABLE 9-11

NA Object Prefixes

[inverse]

ANA→NA$_a$ ANA→NA$_b$	(same as for 3MSg object, Table 9-10, but with option of using nonhuman→nonhuman prefix /ø-/; exx. are ANA→NA$_a$ /nin^{g}gu-/ in 101.3.5, and MANA→NA$_a$ /ø-/ in 37.2.1.)	
MANA→NA$_a$ MANA→NA$_b$		

[equipollent]

3MSg/NA→NA$_a$	ni-	//ni-// 18.19.2
3MSg/NA→NA$_b$	(w)ani-	//w$_2$an-ni-//
3FSg/N^{g}ARA→NA$_a$	n^{g}ini-	//n^{g}i-ni-// 13.1.3
3FSg/N^{g}ARA→NA$_b$	(w)an^{g}ini-	//w$_2$an-n^{g}i-ni-//

[direct]

1Sg→NA$_a$	n^{g}ani-	//n^{g}a-ni-// 18.19.5
1Sg→NA$_b$	n^{g}ani-	//n^{g}a-w$_2$an-ni-// 62.2.1
1ExFDu→NA$_a$	ni:n^{g}ini-	//nV:-n^{g}i-ni-//
1ExFDu→NA$_b$	na:n^{g}ini-	//nV:-w$_2$an-n^{g}i-ni-//
1ExPl→NA$_a$	ni:ni-	//nV:-ni-// 42.5.2
1ExPl→NA$_b$	na:ni-	//nV:-w$_2$an-ni-// 100.7.4
1InDu→NA$_a$	nani-	//na-ni-//
1InDu→NA$_b$	nani-	//na-w$_2$an-ni-// 11.10.3
1InFTr→NA$_a$	n^{g}i:n^{g}ini-	//n^{g}V:-n^{g}i-ni-//
1InFTr→NA$_b$	n^{g}a:n^{g}ini-	//n^{g}V:-w$_2$an-n^{g}i-ni-//
1InPl→NA$_a$	n^{g}i:ni-	//n^{g}V:-ni-// TNT 16
1InPl→NA$_b$	n^{g}a:ni-	//n^{g}V:-w$_2$an-ni-// 167.2.4
2Sg→NA$_a$	nini-	//nun-ni-//
2Sg→NA$_b$	bani-	//ba-ni-//
2FDu→NA$_a$	ni:n^{g}ini-	//na-w$_2$V-n^{g}i-ni-//
2FDu→NA$_b$	nimbin^{g}ini-	//na-w$_2$an-w$_2$V-n^{g}i-ni-//
2Pl→NA$_a$	ni:ni-	//na-w$_2$V-ni-//
2Pl→NA$_b$	nimbini-	//na-w$_2$an-w$_2$V-ni-//
3FDu→NA$_a$	win^{g}ini-	//w$_2$V-n^{g}i-ni-// 11.11.1
3FDu→NA$_b$	(w)ambin^{g}ini-	//w$_2$an-w$_2$V-n^{g}i-ni-//
3Pl/WARA→NA$_a$	wini-	//w$_2$V-ni-// 166.1.3
3Pl/WARA→NA$_b$	(w)ambini-	//w$_2$an-w$_2$V-ni-// 100.4.1

Notes: For WARA→NA$_{ab}$ the nonhuman→nonhuman prefix /ø-/ is also possible. 1ExPl subsumes 1ExMDu, 1InPl subsumes 1InMTr, 2Pl subsumes 2MDu, and 3Pl subsumes 3MDu in this paradigm.

TABLE 9-12

3FSg/N^{g}ARA Object Prefixes

[inverse]

ANA→3FSg/N^{g}ARA$_a$	n^{g}in^{g}gu-	//n^{g}i-N-w$_1$u-// 25.6.1
ANA→3FSg/N^{g}ARA$_b$	(w)an^{g}in^{g}gu-	//w$_2$an-n^{g}i-N-w$_1$u-// TNT 23
MANA→3FSg/N^{g}ARA$_a$	n^{g}ima-	//n^{g}i-N-ma-//
MANA→3FSg/N^{g}ARA$_b$	(w)an^{g}ima-	//w$_2$an-n^{g}i-N-ma-//

[equipollent]

3MSg/NA→"$_a$	n^{g}u-	//n^{g}u-// 1.6.2, TNT 10
3MSg/NA→"$_b$	(w)an^{g}u-	//w$_2$an-n^{g}u-//
3FSg/N^{g}ARA→"$_a$	n^{g}u-	//n^{g}u-// 6.3.3
3FSg/N^{g}ARA→"$_b$	(w)an^{g}u-	//w$_2$an-n^{g}u-// 80.2.6

[direct]

1Sg→3FSg/N^{g}ARA$_a$	n^{g}an^{g}u-	//n^{g}a-n^{g}u-// 111.1.1
1Sg→3FSg/N^{g}ARA$_b$	n^{g}an^{g}u-	//n^{g}a-w$_2$an-n^{g}u-// 7.8.2
1ExPl→"$_a$	nirin^{g}a-	//nV:-ri-n^{g}a-// 117.6.1
1ExPl→"$_b$	na:n^{g}u-	//nV:-w$_2$an-n^{g}u-// 17.13.6
1InDu→"$_a$	nan^{g}u-	//na-n^{g}u-//
1InDu→"$_b$	nan^{g}u-	//na-w$_2$an-n^{g}u-//
1InPl→"$_a$	n^{g}irin^{g}a-	//n^{g}V:-ri-n^{g}a-// MT 26
1InPl→"$_b$	n^{g}a:n^{g}u-	//n^{g}V:-w$_2$an-n^{g}u-//
2Sg→3FSg/N^{g}ARA$_a$	nun^{g}u-	//nun-n^{g}u-// 4.1.3
2Sg→3FSg/N^{g}ARA$_b$	ban^{g}u-	//ba-n^{g}u-//
2Pl→3FSg/N^{g}ARA$_a$	nirin^{g}a-	//na-w$_2$V-ri-n^{g}a-//
2Pl→3FSg/N^{g}ARA$_b$	nimbirin^{g}a-	//na-w$_2$an-w$_2$V-ri-n^{g}a-//
3Pl/WARA→"$_a$	wirin^{g}a-	//w$_2$V-ri-n^{g}a-// 5.16.5
3Pl/WARA→"$_b$	(w)ambirin^{g}a-	//w$_2$an-w$_2$V-ri-n^{g}a-// 86.1.1

Notes: For nonhuman subject on N^{g}ARA object, the nonhuman→nonhuman prefix /ø-/ is also possible. 1InTr, and the Du of other persons, is included in the corresponding Pl for subject categories in this paradigm.

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TABLE 9-13

ANA$_ø$ Object Prefixes

[equipollent]

ANA/MANA→ANA$_{ø\text{-}ab}$	ø-	//ø-//

[direct]

(identical to corresponding intransitive prefixes, Table 9-1, except for option of using /ø-/ for nonhuman→nonhuman; see textual citations in Table 9-1 marked "ANA$_ø$" at far right.)

TABLE 9-14

ANA_{wu} Object Prefixes

[equipollent]		
ANA/MANA→ANA_{wu-ab}	∅-	//∅-// 5.11.4, 35.12.3, 43.3.5 (also MT 16, 21)
[direct]		
1Sg→ANA_{wu-a}	n^gawu-	//n^ga-w_1u-// 5.17.2
1Sg→ANA_{wu-b}	n^gan^{g}gu-	//n^ga-$w_2$an-w_1u-// 7.8.3
1ExMDu→ANA_{wu-a}	ni:niwu-	//nV:-ni-w_1u-// 20.9.3
1ExMDu→ANA_{wu-b}	na:niwu-	//nV:-$w_2$an-ni-w_1u-// 165.1.1
1ExFDu→ANA_{wu-a}	ni:n^giwu-	//nV:-n^gi-w_1u-//
1ExFDu→ANA_{wu-b}	na:n^giwu-	//nV:-$w_2$an-n^gi-w_1u-//
1ExPl→ANA_{wu-a}	niri-	//nV:-ri-∅-// 166.2.1
1ExPl→ANA_{wu-b}	na:n^ggu-	//nV:-$w_2$an-w_1u-// 163.2.4
1InDu→ANA_{wu-a}	nawu-	//na-w_1u-//
1InDu→ANA_{wu-b}	nan^{g}gu-	//na-$w_2$an-w_1u-// 65.1.5
1InMTr→ANA_{wu-a}	n^gi:niwu-	//n^gV:-ni-w_1u-//
1InMTr→ANA_{wu-b}	n^ga:niwu-	//n^gV:-$w_2$an-ni-w_1u-//
1InFTr→ANA_{wu-a}	n^gi:n^giwu-	//n^gV:-n^gi-w_1u-//
1InFTr→ANA_{wu-b}	n^ga:n^giwu-	//n^gV:-$w_2$an-n^gi-w_1u-//
1InPl→ANA_{wu-a}	n^giri-	//n^gV:-ri-∅-// 18.9.5
1InPl→ANA_{wu-b}	n^ga:n^ggu-	//n^gV:-$w_2$an-w_1u-//
2Sg→ANA_{wu-a}	nun^{g}gu-	//nun-w_1u-// 7.12.2
2Sg→ANA_{wu-b}	bawu-	//ba-w_1u-// 5.12.7
2MDu→ANA_{wu-a}	ni:niwu-	//na-w_2V-ni-w_1u-//
2MDu→ANA_{wu-b}	nimbiniwu-	//na-$w_2$an-w_2V-ni-w_1u-// 61.1.6
2FDu→ANA_{wu-a}	ni:n^giwu-	//na-w_2V-n^gi-w_1u-//
2FDu→ANA_{wu-b}	nimbin^{g}iwu-	//na-$w_2$an-w_2V-n^gi-w_1u-//
2Pl→ANA_{wu-a}	niri-	//na-w_2V-ri-∅-// 162.20.3
2Pl→ANA_{wu-b}	nimbiri-	//na-$w_2$an-w_2V-ri-∅-// 65.14.4/5
3MSg/NA→ANA_{wu-a}	niwu-	//ni-w_1u-// 1.3.4
3MSg/NA→ANA_{wu-b}	(w)aniwu-	//$w_2$an-ni-w_1u-// 7.21.5
3MDu→ANA_{wu-a}	winiwu-	//w_2V-ni-w_1u-// 163.19.2
3MDu→ANA_{wu-b}	(w)ambiniwu-	//$w_2$an-w_2V-ni-w_1u-//
3FSg/N^gARA→ANA_{wu-a}	n^giwu-	//n^gi-w_1u-// 5.16.3
3FSg/N^gARA→ANA_{wu-b}	(w)an^{g}iwu-	//$w_2$an-n^gi-w_1u-// 7.6.3
3FDu→ANA_{wu-a}	win^{g}iwu-	//w_2V-n^gi-w_1u-// 12.4.2
3FDu→ANA_{wu-b}	(w)ambin^{g}iwu-	//$w_2$an-w_2V-n^gi-w_1u-//
3Pl/WARA→ANA_{wu-a}	wiri-	//w_2V-ri-∅-// 9.5.2
3Pl/WARA→ANA_{wu-b}	(w)ambiri-	//$w_2$an-w_2V-ri-∅-// 165.1.8

Note: As with other nonhuman→nonhuman combinations, there is the option of using /∅-/ with NA, N^gARA, or WARA subject.

TABLE 9-15

MANA Object Prefixes

[equipollent]		
ANA/MANA→$MANA_{ab}$	∅-	//∅-// 162.22.3
[direct]		
1Sg→$MANA_a$	n^gama-	//n^ga-ma-// 111.1.3
1Sg→$MANA_b$	n^gama-	//n^ga-$w_2$an-ma-// 7.19.4
1ExMDu→$MANA_a$	ni:nima-	//nV:-ni-ma-//
1ExMDu→$MANA_b$	na:nima-	//nV:-$w_2$an-ni-ma-// 69.2.4
1ExFDu→$MANA_a$	ni:n^gima-	//nV:-n^gi-ma-//
1ExFDu→$MANA_b$	na:n^gima-	//nV:-$w_2$an-n^gi-ma-// 13.24.2
1ExPl→$MANA_a$	nirima-	//nV:-ri-ma-// 162.20.5
1ExPl→$MANA_b$	na:ma-	//nV:-$w_2$an-ma-//
1InDu→$MANA_a$	nama-	//na-ma-//
1InDu→$MANA_b$	nama-	//na-$w_2$an-ma-// 13.11.3
1InMTr→$MANA_a$	n^gi:nima-	//n^gV:-ni-ma-//
1InMTr→$MANA_b$	n^ga:nima-	//n^gV:-$w_2$an-ni-ma-//
1InFTr→$MANA_a$	n^gi:n^gima-	//n^gV:-n^gi-ma-//
1InFTr→$MANA_b$	n^ga:n^gima-	//n^gV:-$w_2$an-n^gi-ma-//
1InPl→$MANA_a$	n^girima-	//n^gV:-ri-ma-// TNT 5
1InPl→$MANA_b$	n^ga:ma-	//n^gV:-$w_2$an-ma-// 69.15.3
2Sg→$MANA_a$	numa-	//nun-ma-// 11.7.2
2Sg→$MANA_b$	bama-	//ba-ma-// 4.7.2
2MDu→$MANA_a$	ni:nima-	//na-w_2V-ni-ma-//
2MDu→$MANA_b$	nimbinima-	//na-$w_2$an-w_2V-ni-ma-//
2FDu→$MANA_a$	ni:n^gima-	//na-w_2V-n^gi-ma-//
2FDu→$MANA_b$	nimbin^{g}ima-	//na-$w_2$an-w_2V-n^gi-ma-//
2Pl→$MANA_a$	nirima-	//na-w_2V-ri-ma-//
2Pl→$MANA_b$	nimbirima-	//na-$w_2$an-w_2V-ri-ma-// 163.3.4
3MSg/NA→$MANA_a$	nima-	//ni-ma-// 1.5.4
3MSg/NA→$MANA_b$	(w)anima-	//$w_2$an-ni-ma-// 11.7.1
3FSg/N^gARA→$MANA_a$	n^gima-	//n^gi-ma-// 7.2.4
3FSg/N^gARA→$MANA_b$	(w)an^{g}ima-	//$w_2$an-n^gi-ma-// 162.27.5
3MDu→$MANA_a$	winima-	//w_2V-ni-ma-// 20.16.1
3MDu→$MANA_b$	(w)ambinima-	//$w_2$an-w_2V-ni-ma-// 164.1.5
3FDu→$MANA_a$	win^{g}ima-	//w_2V-n^gi-ma-// 6.1.2
3FDu→$MANA_b$	(w)ambin^{g}ima-	//$w_2$an-w_2V-n^gi-ma-// MT 26
3Pl/WARA→$MANA_a$	wirima-	//w_2V-ri-ma-// 1.10.6
3Pl/WARA→$MANA_b$	(w)ambirima-	//$w_2$an-w_2V-ri-ma-// 120.2.3

Note: For nonhuman→nonhuman, prefix /∅-/ is also possible.

9.3 Formal internal analysis of pronominal prefixes.

It is possible to analyse the pronominal prefixes using the "underlying" representations suggested within double slashes //...// in the tables. Such an analysis requires considerable abstractness, and presupposes a large number of rules, both phonological and morphological, linking the various prefixes together into a total system. Such an analysis will be attempted here, and a reasonably elegant result can be obtained. However, I make no strong claims about the psychological reality of this analysis.

First, we will examine the intransitive prefixes (Table 9-1) to identify the full form of each PM (pronominal marker), some of which may contain more than one component morpheme. Analysis of the transitive (two-place) pronominal prefixes will begin with the working assumption that each of them can be analysed as a combination of a subject PM and an object PM related to the simple intransitive forms. However, we will be on the lookout for allomorphic variations, categorial neutralisations, morpheme deletions, reorderings, and insertion of relational morphemes. If we cannot derive a particular transitive pronominal prefix from two PMs plus these operations, we recognise an unanalysable portmanteau morpheme.

In other words, we basically take the intransitive forms as starting points and try to generate the transitive forms from them. The situation is complicated by the fact that both intransitive and transitive pronominal prefixes occur in A and B series, and it is also necessary to analyse the morphemes used to make this series distinction.

In the intransitive forms, the A and B forms show at first sight a range of phonological relationships:

$1Sg_a$	/n^ga-/	vs.	$1Sg_b$	/n^gan-/
$1ExMDu_a$	/ni:ni-/	vs.	$1ExMDu_b$	/na:ni-/
$2MDu_a$	/ni:ni-/	vs.	$2MDu_b$	/nimbini-/
$MANA_a$	/ma-/	vs.	$MANA_b$	/(w)ama-/

However, all four of these pairs can be accounted for by positing a B series morpheme //-$w_2$an-// added to the A form, as long as we are careful to put the B morpheme in the correct position: at the end in $1Sg_b$, at the beginning in $MANA_b$, and in the middle in the two dual forms shown. Fortunately, further analysis of the overall system supports recognition of a number of component morphemes each with a particular left-to-right "slot," and //-$w_2$an-// fits nicely into this analysis. 1st/2nd person markers are leftmost, followed by //-$w_2$an-//, while number and gender markers as well as 3rd person NC markers are rightmost. $1ExMDu_b$ /na:ni-/ is analysable as //nV:-$w_2$an-ni-// with 1st exclusive, then B, then a masculine marker (also implying dual number), while $2MDu_b$ /nimbini-/ is //na-$w_2$an-w_2V-ni-// with 2nd nonsingular, B, a nonsingular morpheme, and masculine.

In this fashion we can account for all A vs. B alternations in Table 9-1, except for the obviously suppletive $2Sg_a$ /nun-/ vs. $2Sg_b$ /ba-/. It would seem that /nun-/ might be analysed as //nu-n-//, cf. 1→$2Sg_a$ /n^gunu-/ (Table 9-2), presumably //n^ga-nu-//, but this segmentation is synchronically shaky and we will just write /nun-/ without morpheme boundaries.

TABLE 9-16

Structure of Basic PMs

PM	A form (Table 9-1)	morphemic labels
1Sg	//n^ga-//	1Sg-
1ExMDu	//nV:-ni-//	1ExNonsg-M-
1ExFDu	//nV:-n^gi-//	1ExNonsg-F-
1ExPl	//nV:-ru-//	1ExNonsg-Pl-
1InDu	//na-//	1InDu-
1InMTr	//n^gV:-ni-//	1InNondu-M-
1InFTr	//n^gV:-n^gi-//	1InNondu-F-
1InPl	//n^gV:-ru-//	1InNondu-Pl-
2Sg	//nun-//	2SgA-
[B form	//ba-//	2SgB-]
2MDu	//na-w_2V-ni-//	2Nonsg-Nonsg-M-
2FDu	//na-w_2V-n^gi-//	2Nonsg-Nonsg-F-
2Pl	//na-w_2V-ru-//	2Nonsg-Nonsg-Pl-
3MSg	//ni-//	M-
NA	//ni-//	M-
3FSg	//n^gi-//	F-
N^gARA	//n^gi-//	F-
3MDu	//w_2V-ni-//	Nonsg-M-
3FDu	//w_2V-n^gi-//	Nonsg-F-
3Pl	//w_2V-ru-//	Nonsg-Pl-
WARA	//w_2V-ru-//	Nonsg-Pl-
ANA	//w_1u-//	ANA-
MANA	//ma-//	MANA-

- -

In Table 9-16, above, we present a tentative analysis of the various PMs, based on their intransitive forms. Each component morpheme showing up in the underlying analysis is assigned a label; thus /n^ga-/ is 1Sg-, /-w_2V-/ is -Nonsg-, /-ru-/ is -Pl-, etc. The 1st/2nd person forms all begin with a person marker also distinguishing singular (or dual in the case of 1st inclusive) from another form for larger number. Note that 1ExNonsg-, for example, is a label for a single morpheme, as is 1InNondu- and 2Nonsg-. 2nd nonsingular forms also involve a /-w_2V-/ morpheme labeled -Nonsg- which is not used with 1st person forms. 1ExDu and 2Du additionally have a final gender marker (-M- or -F-), which is also used in the (optional) Tr (trial) forms for 1st inclusive. The plural forms of all 1st/2nd categories have a morpheme /-ru-/ labeled -Pl-.

In the 3rd person forms, we have some nonhuman/human syncretisms: NA is merged with 3MSg, N^gARA with 3FSg, and WARA with 3Pl. 3MDu and 3FDu have the Nonsg- morpheme (already seen with 2nd person) followed by gender-marking -M- or -F-, and 3Pl (also WARA) have the structure Nonsg-Pl-. Note that there is no 3rd person initial prefix parallel to those of 1st/2nd persons. Aside from these nonsingular 3rd person forms, the others (i.e., 3rd singular or with number unmarked) consist just of a NC morpheme (including M-, F-).

The rule for positioning the B morpheme in these simple PMs is, again, just after the 1st/2nd person initial prefix if present, otherwise initially. Hence:

$1Sg_b$	is	1Sg - B	
$1ExMDu_b$	"	1ExNonsg- B	- M -
$2MDu_b$	"	2Nonsg - B - Nonsg	- M -
$3MDu_b$	"	B - Nonsg	- M -
$MANA_b$	"	B	- MANA-

9.4 Direct, inverse, and equipollent transitive prefixes.

Before continuing our formal analysis, it is necessary to describe some respects in which the transitive (two-place) prefixes differ from intransitive ones.

The most important is the distinction between direct, inverse, and equipollent. It is possible to establish a partial hierarchy of pronominal markers (PMs), corresponding in part to left-to-right "slot" positions (suggested in the schema at the top of this page), with 1st/2nd person first, 3Pl (and WARA) next, then 3MSg/NA and 3FSg/N^gARA, and finally the lowest-ranking categories ANA and MANA. In a transitive combination, we say that the complete pronominal prefix is direct if the subject is higher-ranking than the object, inverse if the object outranks the subject, and equipollent if the two are in the same hierarchical class.

The component morphemes constituting the subject and object PMs are generally rearranged in such a way that each morpheme goes into its own natural "slot" (if not deleted). Thus, both in 1Sg⟶ANA (direct) and ANA⟶1Sg (inverse), the 1Sg- morpheme comes first and the -ANA- morpheme last. This means that the two transitive combinations are threatened with homophony. One solution is to use special subject vs. object allomorphs for the various morphemes, but while there is a little of this (notably with 3MSg and with 3FSg/N^gARA) it is not extensive. Instead, the basic mechanism for distinguishing direct forms from inverse counterparts is the addition of Inverse morpheme //-N-// to the latter. Hence $1Sg \longrightarrow ANA_{wu\text{-}a}$ /n^ga-w_1u-/ vs. $ANA \longrightarrow 1Sg_a$ //n^ga-N-w_1u-// ⟶ /n^gan^{g}gu-/ (with Hardening P-18 of //w_1// to /g/, then Nasal Assimilation P-27). The morpheme consists of a nasal archiphoneme which is always followed by a consonant and thus must assimilate in position or (before another nasal) be deleted by Nasal-Deletion P-30. It also has an ablaut effect on some preceding vowels (changing them to /a/ or /a:/), cf. V-Ablaut P-38, part (a).

As we will see later, in some transitive combinations a subject PM including gender-marker -M- or -F- may be split up so that it sandwiches the object PM between its two separated parts (see the Gender-Hopping rule, below). In this event, even though the subject PM outranks the object PM, Inverse //-N-// occurs at the boundary between the object PM and the following -M- or -F- associated with the subject PM. It is as though, in becoming separated from the rest of the subject PM, the -M- or -F- acquires the hierarchical status of a 3MSg or 3FSg PM (which are expressed solely by -M- and -F-, respectively, cf. Table 9-16), so that this detached subject PM segment is locally lower than the object PM.

The Inverse morpheme may follow the B morpheme in the same prefix if there is an intervening morpheme separating them. An example from Table 9-9 is 1ExMDu⟶$3Pl/WARA_b$ //nV:-$w_2$an-w_2V-N-ni-//, analysable as 1ExNonsg-B-Nonsg-Inverse-M-. This form also exemplifies the point of the preceding paragraph about local Inverse marking in a semantically direct combination; the 1ExMDu PM is represented by the initial 1ExNonsg- morpheme and by the final -M- morpheme flanking the object PM expressed by -Nonsg-, with Inverse morpheme inserted between higher-ranking -Nonsg- (i.e., 3Pl) and lower-ranking -M-.

More often, when B morpheme and Inverse morpheme co-occur there is no intervening morpheme to separate them. In this event, the Inverse morpheme precedes the B morpheme, hence //-N-$w_2$an-// in the B forms of Tables 9-3 through 9-6, and 9-8).

Equipollent combinations tend to be unanalysable portmanteaus or else mildly irregular combinations with a hazily discernible structure. The distinction between direct and equipollent forms is in some cases fuzzy.

9.5 Categorial neutralisations in transitive prefixes.

The neutralisations which can be gleaned from the tables are the result of a) deep, systematic neutralisations, and b) surface neutralisations due to minor morphological rules deleting or changing a given component morpheme in some contexts. In this section we deal with the systematic neutralisations.

First, in each pronominal person, the maximal three-way number opposition is reduced to two in object PMs. For 1st inclusive the residual opposition is 1InDu vs. 1InPl (3+), while for 1st exclusive, 2nd, and 3rd persons the residual opposition is Sg vs. Pl (including Du).

There is no similar across-the-boards absorption of Du/Tr categories by corresponding Pl categories in subject PMs. However, such an absorption does occur in the special case where the object PM is 3FSg/N^gARA (see Table 9-12).

These two neutralisations can be described formally by saying that the relevant Du/Tr categories are absorbed by corresponding Pl categories. The operation seems to involve PMs as a whole rather than being lower-level morphemic readjustments.

Du/Tr Absorption

Du/Tr PMs (except 1InDu) are replaced by corresponding Pl PMs a) as object markers (with any subject), and b) as subject markers if the object is 3FSg/N^gARA.

More severe neutralisations occur in 1st⟶2nd and 2nd⟶1st transitive prefixes (Table 9-2). Even after part (a) of Du/Tr Absorption, we should expect eight different 1st⟶2nd combinations (subject PMs 1Sg, 1ExMDu, 1ExFDu, 1ExPl all combining with object PMs 2Sg and 2Pl), and similarly eight 2nd⟶1st combinations for a total of sixteen, each additionally having A and B variants for a total of thirty-two. In fact, Table 9-2 shows only two 1st⟶2nd categories (each with A and B forms) and only two 2nd⟶1st (with no A vs. B distinction), if we disregard phonological variants.

As can be seen by inspecting Table 9-2, all 1st person number (and gender) categories are merged in the presence of a 2nd person PM, regardless of which is subject and which is object. Since Du/Tr Absorption accounts for only a limited part of this neutralisation (and that only for object PM), a special rule is needed. In addition, the 2nd person PMs in the table have only a Sg vs. (2+) Pl opposition as subject PMs (as well as object PMs).

Although the 1st⟶2nd and 2nd⟶1st prefixes are, at best, structurally opaque, by examining 1⟶$2Sg_a$ /n^gunu-/ and 1⟶$2Pl_a$ /n^gana-/ we can tentatively say that the 1st person neutralisation is of the form 1ExPl⟶1Sg, since the initial morpheme seems to be 1Sg morpheme //n^ga-// in both forms. The other morphemes are $2Sg_a$ /-nu-/ (cf. $2Sg_a$ /nun-/ as intransitive prefix) and 2Nonsg /-na-/.

1st⟶2nd and 2nd⟶1st Neutralisation

a) In these combinations 1Sg, 1ExMDu, 1ExFDu, and 1ExPl are merged into a single 1st person category, which in some 1st⟶2nd forms is identified formally with 1Sg;
b) 2MDu and 2FDu are absorbed into 2Pl in these combinations not only as object PM (cf. Du/Tr Absorption rule) but also as subject PM.

9.6 Portmanteaus.

Portmanteaus, i.e., unanalysable transitive pronominal prefixes, are limited to equipollent combinations--those where subject PM and object PM are in the same pronominal category or at least in the same hierarchical set (see below). Not all equipollent prefixes are portmanteaus, however.

The four types of equipollent combination are these:

a) 1st⟶2nd and 2nd⟶1st
b) 3Pl/WARA⟶3Pl/WARA
c) 3Sg⟶3Sg (with 3MSg/NA and/or 3FSg/N^gARA)
d) ANA or MANA ⟶ ANA or MANA

In the case of 3Pl/WARA⟶$3Pl/WARA_a$ /wara-/, it is possible to account for the surface form by positing underlying subject and object PMs both of the form -Nonsg-Pl-, with various morpheme-deletion rules (see below) then applying. We do not consider these to be portmanteaus.

In type (c), representative A forms are 3FSg/N^gARA⟶$3MSg_a$ /n^gunu-/, 3MSg/NA⟶$3MSg_a$ /nu-/, and 3FSg/N^gARA or 3MSg/NA⟶ $3FSg/N^gARA_a$ /n^gu-/. The first of these has the structure F-M- (F subject, M object), while the other two consist of just the object PM, either M- or F-. Since it is easy to identify the morphemes, and to account for outputs by a few deletion rules, we do not consider these portmanteaus. (Vowel quality in these morphemes is dealt with below under Allomorph Assignment.)

Type (d) prefixes are of the form /∅-/ in both A and B series. Since ANA and MANA have basic nonzero PMs (Table 9-16), except that $ANA_∅$ has /-∅-/ as object (but not subject) PM form, we must analyse the /∅-/ transitive prefix either as a portmanteau, or as the product of a mutual-destruction deletion rule applying when subject and object PMs of these low-ranking categories come together. I prefer to analyse it as a portmanteau, since I interpret the

use of /∅-/ as reflecting competition of the subject and object PMs for the same morpheme slot. (I would prefer a mutual-destruction rule if there were any evidence at all that the two PMs occupied distinct slots.) Moreover, the /∅-/ is optionally extended to other nonhuman⟶nonhuman combinations, e.g., as an alternative to 3Pl/WARA⟶$3Pl/WARA_a$ prefix /wara-/ just in case both subject and object are (nonhuman) WARA instead of (human) 3Pl.

In the 1st⟶2nd and 2nd⟶1st combinations (Table 9-2), the small number of forms contributes to the lack of structural transparence (cf. the neutralisation rule discussed on the preceding page). Let us see what we can squeeze out of them.

1⟶$2Sg_a$ /n^gunu-/ and 1⟶$2Pl_a$ /n^gana-/ seem to contain 1Sg /n^ga-/ plus $2Sg_a$ /-nu-/ or 2Nonsg /-na-/. The corresponding B series forms are, respectively, /(w)a-/ and /(n^g)anamba-/. Here /(w)a-/ seems to be a special $2Sg_b$ allomorph, cf. intransitive $2Sg_b$ /ba-/ (Table 9-1) and $2Sg_b$ object allomorph in inverse forms /a-/ (Table 9-7). The alternation between /b/, /w/, and /∅/ is phonologically irregular in the absence of any conditioning segments, but elsewhere in the language /w/ (i.e., $/w_2/$) becomes /b/ after stop or nasal by Hardening P-18, and some alternations of /w/ (including $/w_2/$ in a few cases) with zero are also found (see phonological rules P-4 and especially P-11 and P-12). The analysis of /(n^g)anamba-/ is complicated by the variation in forms; if the initial velar nasal is present for a given speaker, we can analyse this as an extension of the corresponding A form /n^gana-/ (i.e., formally 1Sg-2Nonsg-), the extension itself perhaps consisting of some nasal element /-N-/ and /-w_2a-/ (the latter related to $2Sg_b$ /ba-/, /(w)a-/, /a-/ just mentioned). However, even if we can tentatively identify component morphemes in the B forms /(w)a-/ and /(n^g)anamba-/, this identification is at best fuzzy because of phonological irregularities, and /(n^g)anamba-/ in particular has a morphemic composition which has no parallels elsewhere in the pronominal prefix system.

2Sg⟶1_{ab} /numba-/ or /nimba-/ is likewise hard to analyse; note that the A and B forms are identical. We might hazard the suggestion that the analysis is /nV-N-w_2a-/ with 1ExNonsg-, some nasal morpheme, then -$2Sg_b$-. However, this /-N-/ segment is as mysterious as the one in /(n^g)anamba-/ (//(n^g)a-na-N-w_2a-//). It cannot easily be identified as Inverse //-N-// since 1ExNonsg-morpheme //nV-// elsewhere ablauts to /na-/ before Inverse //-N-// (rule P-38), and since overall the 1st⟶2nd and 2nd⟶1st forms do not have clear indications of belonging to the direct/inverse subsystems. Indeed, it might be more reasonable to take /numba-/ as $2Sg_a$ /nun-/ (as in Table 9-1) followed by $2Sg_b$ /-w_2a-/, which would at least account for the form /numba-/ better; but the variant /nimba-/ shows that this analysis is not very real to native speakers.

2Pl⟶1_{ab} /n^giri-/ is also anomalous. If forced to interpret it, I would suggest that it involves a formal fusion of the 1st and 2nd person PMs into a form associated with 1InPl, cf. $1InPl_a$ intransitive /n^guru-/, and $1InPl_a$ transitive subject PM /n^giri-/ in such combinations as 1InPl⟶$MANA_a$ /n^girima-/. Alternatively, we could take 2Pl⟶1_{ab} /n^giri-/ as 1Sg //n^ga-// plus a residual -Pl-

allomorph /-ri-/ being what is left of a 2Pl PM (2Nonsg-Nonsg-Pl-) following some morpheme deletions.

Because of the small number of 1st⟶2nd and 2nd⟶1st forms and the difficulties we have had in analysing them, it is quite reasonable to assume that speakers just learn them as units, with perhaps a hazy idea about the internal structure of some of them. We may therefore think of them as portmanteaus or as semi-portmanteaus; i.e., as having no synchronic internal structure or as having just hints thereof.

Moving to a higher level of interpretation, we may observe that a great many languages with bound subject and object pronominals show extensive irregularities in 1st⟶2nd and 2nd⟶1st combinations, with frequent use of portmanteaus, deletion of one of the pronominals, replacement of a pronominal by an indefinite morpheme, neutralisation of one pronominal with 3rd person, unusual reshapings such as subject-object "number harmony" (Ngandi), etc. These devices may be interpreted cross-linguistically as ways of mitigating or skewing direct representations of interactions between speaker and addressee, which are highly sensitive pragmatically in all cultures. Thus, while I interpret nonhuman⟶nonhuman /∅-/ as a portmanteau motivated by competition of two morphemes for a single slot, I interpret 1st⟶2nd and 2nd⟶1st portmanteaus and semi-portmanteaus as motivated primarily by pragmatic considerations, even though grammaticalized and thus not manipulated because of situational pragmatic nuances.

9.7 The pronominal hierarchy and morpheme ordering rules.

The hierarchical relationship between the subject and object PMs in a transitive prefix affects both morpheme ordering and the use of Inverse //-N-//; it is also indirectly related to the usage of portmanteaus since these are limited to a subset of equipollent combinations.

Leaving out nonpronominal morphemes (Inverse, B), the component morphemes in a complex pronominal end up on the surface in the following order:

person marker - Nonsg/Pl - gender marker - NC marker

In this formula, "person marker" refers only to nonzero 1st and 2nd person morphemes; a pronominal prefix consisting only of 3rd person PMs has this slot vacant. -Nonsg- and -Pl- refer to the morphemes /-w_2V-/ and /-rV-/, respectively; cf. Table 9-16 for their distribution in basic PMs. Gender markers are -M- (also used for NA class, with some allomorphic distinctions) and -F-, and NC markers (in the present discussion) are ANA and MANA only (elsewhere we use "NC" in a broader sense).

Some of the four slots shown can actually contain two morphemes. Some 1st⟶2nd and 2nd⟶1st forms can be analysed as having both a 1st person and 2nd person morpheme (§9.6, above); there may be two -Pl- and/or -Nonsg- morphemes; and as for gender markers, -F- may precede -M-.

If we associate this left-to-right slot arrangement with the hierarchy used in the direct/inverse/equipollent system, we simply

say that the morphemes in the five slots constitute a descending hierarchy (left associated with high on the hierarchy, right with low), and that a PM as a whole has a hierarchical status based on its highest-ranking component morpheme. In view of the structure of basic PMs shown in Table 9-16, this effectively generates the following hierarchical classes in descending order:

X_1: {1Sg, 1ExMDu, 1ExFDu, 1ExPl
1InDu, 1InMTr, 1InFTr, 1InPl
2Sg, 2MDu, 2FDu, 2Pl

X_2: 3Pl [including WARA]

X_3: {3MSg [including NA]
3FSg [including N^gARA]

X_4: {ANA
MANA

Although there are perhaps a number of ways to generate the surface transitive prefixes from the basic PMs of Table 9-16, we will begin with a simple rule ordering the (entire) PMs relative to each other, and will then account for output forms by means of other rules moving, deleting, or changing individual component morphemes.

Main Ordering Rule

In a transitive combination involving PMs of different hierarchical classes (cf. formula above), the high-ranking PM precedes the low-ranking PM. If the two PMs are in the same hierarchical class, if the result is not a portmanteau (see §9.6), the subject PM precedes the object PM.

Thus, MANA morpheme /-ma-/ follows PMs of X_1, X_2, or X_3 class regardless of whether /-ma-/ specifies the subject or object. On the other hand, 1Sg /n^ga-/ precedes all third person (X_2, X_3, X_4) PMs regardless of case relationship.

The second part of the rule, affecting PM order in equipollent combinations, has few surface effects. This is because many equipollent prefixes are unanalysable portmanteaus, and others like 3Pl/WARA⟶3Pl/WARA and 3FSg/N^gARA⟶3FSg/N^gARA have subject and object PMs of the same pronominal category (which makes it impossible to determine which is subject and which object unless case-specified morpheme allomorphs are visible).

Those equipollent prefixes which do seem to show subject PM preceding object PM are 1st⟶2nd A series forms like 1⟶$2Sg_a$ /n^gunu-/ (Table 9-2), and 3FSg/N^gARA⟶3MSg/NA forms like 3FSg/N^gARA⟶$3MSg_a$ /n^gunu-/ (Table 9-10); the homophony of these two illustrative prefixes is accidental.

The outputs of the Main Ordering Rule need further adjustments before becoming surface forms. For example, after this rule the 2MDu⟶3Pl combination would have the form

$$[\text{2Nonsg-Nonsg-M-}]_{subj} + [\text{-Nonsg-Pl-}]_{obj}$$

(cf. Table 9-16). However, gender marker -M- may not precede -Nonsg- or -Pl-. Some anomalies of this type are resolved indirectly,

insofar as miscellaneous morepheme-deletion rules (see below) eliminate some of the morphemes; in this particular combination, the -Pl- morpheme in the 3Pl object PM is dropped. However, there are still some residual incorrect morpheme orderings, viz., those where a gender marker -M- or -F- (no exx. involving NA or $N^{g}ARA$ marker) in the subject PM is still to the left of an object PM containing the -Nonsg- morpheme. In this situation, a rule is needed to locate the -M- or -F- morpheme to the right of the -Nonsg- morpheme. Thus the 2MDu⟶3Pl combination, whose form immediately after the Main Ordering Rule was represented schematically above, ends up in this form after the later reordering rule (and another minor rule deleting -Pl- in the object PM):

$$[2Nonsg\text{-}Nonsg\text{-}]_{subj} + [\text{-}Nonsg\text{-}]_{obj} + [\text{-}M\text{-}]_{subj}$$

Note that the subject PM is now split into two parts, flanking the object PM. The final sequence -Nonsg-M- (or -Nonsg-F-) can never be wholly contained in the object PM, since -M- and -F- combine with -Nonsg- inside a single PM only in Dual (and 1InTr) PMs, but Du (and 1InTr) categories are absorbed into (3+) Pl categories as object PMs (see Du/Tr Absorption, above). Therefore, this hopping of gender marker -M- or -F- to the right of an object PM containing -Nonsg- never creates ambiguity as to which PM the gender marker belongs to.

Gender-Hopping

Gender marker -M- or -F- (there are no exx. involving NA or $N^{g}ARA$ class) as a component in a subject PM which (after the Main Ordering Rule) precedes an object PM containing -Nonsg-Pl-, is shifted to the right of this object PM.

The forms affected by this rule are those with 1ExDu, 1InTr, 2Du, or 3Du subject with 3Pl object. The corresponding inverse forms like 3Pl⟶2MDu are not involved, since these Du and Tr categories are absorbed into corresponding plurals as object markers, hence they never have a gender marker -M- or -F-.

Forms like 3MSg/NA⟶$3Pl_a$ /wani-/ (i.e., Nonsg-M- along with inserted Inverse morpheme) also have the -M- or -F- marker (here M /-ni-/) after the Nonsg- morpheme representing the object PM, but in these cases the ordering is already accounted for by the Main Ordering Rule (rather than by Gender-Hopping).

Forms directly affected by Gender-Hopping will in all cases also have the -Inverse- morpheme inserted between the object PM (which will be reduced to -Nonsg- after the -Pl- morpheme is dropped by a deletion rule) and the shifted -M- or -F-; cf. the formal statement of Inverse-Insertion, below, and our earlier remarks (§9.4, above) on local hierarchical asymmetries.

9.8 B-Insertion and Inverse-Insertion.

The effects of these rules, which insert nonpronominal morphemes into pronominal prefixes, have been informally sketched above (§9.3, §9.4). We now state them more formally, pointing out that they should apply after the Main Ordering Rule and Gender-Hopping.

B-Insertion

To convert the simple (A series) form of any pronominal prefix into the corresponding B series form, add the -B- morpheme /-$w_2$an-/ to the right of any 1st/2nd person marker (see §9.7, beginning) but to the left of any other pronominal morpheme. Exceptions: -B- is not used with portmanteaus or semiportmanteaus (/Ø-/ for nonhuman⟶nonhuman, also the 1st⟶2nd and 2nd⟶1st prefixes), and is not used in direct or inverse combinations including a 2Sg PM other than 2Sg⟶ $3Pl/WARA_b$, since 2Sg in most combinations has its own suppletive B form.

For schematic exx. showing the relative location of the -B- morpheme, see end of §9.3.

Inverse-Insertion

If an object PM is followed by a lower-ranking subject PM, insert Inverse /-N-/ between them (see hierarchy X_1 through X_4 in §9.7). Also, if Gender-Hopping has applied so that a gender marker -M- or -F- has become detached from the rest of a high-ranking subject PM and has been shifted to the right of an object PM (which in all relevant cases is 3Pl/WARA), insert Inverse /-N-/ between the object PM and the following gender marker. Presence of -B- morpheme in the prefix has no effect on Inverse-Insertion; if the -B- morpheme happens to occur at the same boundary where the Inverse morpheme is inserted, Inverse precedes -B- (i.e., Inverse is always at the end of the relevant object PM).

The tables for transitive prefixes clearly identify the inverse combinations as opposed to direct or equipollent. For example, Tables 9-3 through 9-8 consist entirely of inverse prefixes. The exx. involving Gender-Hopping are in Table 9-9 (forms with Du or Tr subject, except for 1InDu). The combination //-N-$w_2$an-// (-Inverse-B-) is seen in the B series forms of Tables 9-3 through 9-6 and 9-8.

9.9 Deletions of component morphemes within pronominal prefixes.

The -Pl- morpheme /-rV-/, which is part of the basic form of several PMs (Table 9-16) is subject to a number of rules deleting it in particular local morphemic environments. These deletions cause only minor functional problems, since 1st/2nd person markers already have some number marking, and since 2Pl and 3Pl (=WARA) contain the -Nonsg- morpheme, which usually remains behind after deletion of -Pl-.

Pl-Deletion

The -Pl- morpheme in a PM is deleted

a) directly preceding -Nonsg-;
b) directly preceding -M- (including NA class sense);
c) directly preceding -Inverse- (except in 1InPl form);
d) after -Inverse-Nonsg-___ (i.e., as inverse 3Pl subject);
e) in object PM after -B-Nonsg-___ with 1st/2nd subject;
f) directly after -B- (if directly before nonzero object morpheme still within the pronominal prefix).

It would be tedious to give a lengthy exposition of reasons for these formulations so we will just refer to the relevant prefixes affected by each part of Pl-Deletion.

Part (a) applies when -Pl- at the end of one PM is followed by another PM beginning with -Nonsg- (i.e., 3Pl/WARA). The exx. are in Table 9-9 (3Pl/WARA object), e.g., forms with 1ExPl, 2Pl, and 3Pl/WARA subject. The sequence -Nonsg-Pl-][-Nonsg-Pl- in some of these forms (][marking PM boundary) becomes -Nonsg-][-Nonsg-Pl-.

Part (b) operates in 3Pl/WARA$\rightarrow$3MSg$_a$ /wunu-/ and a few closely parallel forms. We might expect */wurunu-/ (i.e., Nonsg-Pl-][-M-), cf. 3Pl/WARA$\rightarrow$3FSg/N^{g}ARA$_a$ /wirin^{g}a-/. Part (b) is needed only for a handful of direct forms like this; inverse counterparts like 3MSg/NA$\rightarrow$3Pl/WARA$_a$ /wani-/ (Nonsg-]Inverse[-M-) show deletion of -Pl- by part (c).

Part (c) accounts for the absence of -Pl- in object PMs in inverse forms; see tables 9-4, 9-8, and the inverse section of 9-9. The exception is that the 1InPl PM, which ends in -Pl-, retains it (at this stage) before Inverse /-N-/ (Table 9-6), though these forms are subject to an optional late phonological adjustment deleting -Pl- with compensatory lengthening of preceding vowel. (Compensatory lengthening is associated with none of the parts of the present Pl-Deletion rule).

Part (d) accounts for the reduction of the 3Pl (=WARA) PM from -Nonsg-Pl- to just -Nonsg- as subject of an inverse combination, hence after -Inverse-. The exx. are the forms ending in /...mbi-/ (i.e., -Inverse-Nonsg-) for 3Pl/WARA subject with various 1st/2nd objects in Tables 9-3 to 9-8.

Part (e) likewise trims 3Pl/WARA from -Nonsg-Pl- to just -Nonsg- as object PM after the B morpheme. The exx. are in the direct section of Table 9-9. Thus 1Sg$\rightarrow$3Pl/WARA$_b$ /n^{g}amba-/ consists of 1Sg-]B[-Nonsg-, whereas the corresponding A series form is /n^{g}ara-/, i.e., 1Sg-][-Nonsg-Pl-. It is apparently necessary to specify that the subject is 1st/2nd person, since 3Pl/WARA$\rightarrow$3Pl/WARA$_b$ is /(w)ambara-/, obviously just B morpheme added to the A series form /wara-/ with no loss of -Pl- morpheme. (This restriction might be unnecessary if we analyse /wara-/ and /(w)ambara-/ as having -Nonsg-Pl- as subject, rather than object, PM, but this would cause other difficulties.)

Part (f) applies to B forms with 1ExPl or 1InPl subject and either 3FSg/N^{g}ARA, MANA, or ANA$_{wu}$ object (perhaps vacuously 3MSg and NA object, but not ANA$_\emptyset$ object with zero object PM). For example, in Table 9-12 we find 1ExPl$\rightarrow$3FSg/N^{g}ARA$_a$ /nirin^{g}a-/ analysable as 1ExNonsg-Pl-][-F-, but the B form is /na:n^{g}u-/, analysable as 1ExNonsg-]B[-F-. (We disregard differences in the -F- allomorphs here.) This part of the rule specifies that deletion occurs only when there is another (nonzero) pronominal morpheme within the pronominal prefix, here -F-. If -Pl- follows -B- but there is no following pronominal morpheme, deletion does not occur (instead, a later rule converts -Pl- into -Nonsg-).

Nonsg-Deletion
Delete -Nonsg- as part of 2Pl object PM before Inverse morpheme (cf. Table 9-8).

We now turn to the rule deleting gender markers.

Gender-Marker Deletion
a) -M- (including NA class marker) is deleted before another -M- (including NA) or -F- (including N^{g}ARA);
b) -F- (including N^{g}ARA class marker) is deleted before another -F- (including N^{g}ARA).

We can see part (a) operating in 3MSg/NA$\rightarrow$3MSg$_a$ /nu-/ (Table 9-10) and 3MSg/NA$\rightarrow$NA$_a$/ni-/ (Table 9-11), where the surviving morpheme is that designating the object PM; it is also seen in 3MSg/NA$\rightarrow$3FSg/N^{g}ARA$_a$ /n^{g}u-/ (Table 9-12), which consists in form simply of an object allomorph of -F-. Part (b) operates in 3FSg/N^{g}ARA$\rightarrow$3FSg/N^{g}ARA$_a$ /n^{g}u-/ (Table 9-12), which is thus homophonous and structurally identical to the preceding form. However, note 3FSg/N^{g}ARA$\rightarrow$3MSg$_a$ /n^{g}unu-/ (Table 9-10) and the similar 3FSg/N^{g}ARA$\rightarrow$NA$_a$ /n^{g}ini-/ (Table 9-11), where we have -F- followed by -M- (or NA variant).

The asymmetry between the two parts of the rule is also responsible for the occurrence of distinct forms for 1ExFDu, 1InFTr, 2FDu, and 3FDu subject acting on 3MSg object (Table 9-10) or NA object (Table 9-11), but the absence of corresponding MDu or MTr subject forms (these are subsumed under 1ExPl, 1InPl, 2Pl, and 3Pl with these object categories). It is reasonable to suppose that such MDu and MTr subject forms "exist," but are indistinguishable on the surface from Pl subject forms after Gender-Marker Deletion (and part b of Plural-Deletion).

The remaining morpheme deletions involve the two subclasses of the ANA noun class, ANA$\emptyset$ and ANA$_{wu}$. The two subclasses are distinguished only within the pronominal prefix system, and only in object PMs. (As intransitive or transitive subject they share a form /-w$_1$u-/, except in the /$\emptyset$-/ portmanteau when subject and object are both in ANA or MANA class.)

The object form of ANA$\emptyset$ is consistently zero, with the result that transitive X$\rightarrow$ANA$\emptyset$ for some pronominal category X (other than ANA or MANA) is identical to the intransitive form for X. Thus the intransitive table 9-1 doubles as the table for ANA$\emptyset$ object. It seems best to take the object PM for ANA$\emptyset$ as zero from the beginning rather than proposing a deletion rule.

On the other hand, the object PM for ANA$_{wu}$ is /-w$_1$u-/ in some forms and /-$\emptyset$-/ in others, and in this instance it does seem best to account for the zero variant by an actual deletion rule (rather than an allomorphic specification). The /-$\emptyset$-/ variant occurs after -Pl- morpheme /-rV-/, i.e., in combination with Pl subject. However, the resulting ANA$\emptyset$ and ANA$_{wu}$ object forms are not identical. Exx. are 3Pl/WARA$\rightarrow$ANA$\emptyset$-$_a$ /wuru-/ (Table 9-1, also intransitive 3Pl/WARA$_a$) and 3Pl/WARA$\rightarrow$ANA$_{wu}$-$_a$ /wiri-/ (Table 9-14). The latter shows the same allomorph /-ri-/ of -Pl- found in forms with nonzero NC marker or gender marker for object: 3Pl/WARA$\rightarrow$3FSg/N^{g}ARA$_a$ /wirin^{g}a-/ (Table 9-12), 3Pl/WARA$\rightarrow$MANA$_a$ /wirima-/ (Table 9-15). Therefore the /-$\emptyset$-/ of ANA$_{wu}$ acts like a nonzero NC marker, while the /-$\emptyset$-/ of ANA$\emptyset$ leaves no imprint, even indirectly.

ANA$_{wu}$ Object Deletion
After allomorphs are assigned, delete ANA$_{wu}$ object marker following -Pl-.

9.10 A morpheme conversion rule (-Pl- becomes -Nonsg-).

In the formulation of Pl-Deletion in the preceding section, part (f) states that -Pl- morpheme /-rV-/ is deleted when directly after the B morpheme and directly before a nonzero object PM. If -Pl- follows -B- but there is no nonzero object PM after it, -Pl- is not deleted by Pl-Deletion. However, it is subject to a rule converting it from -Pl- into -Nonsg-.

Pl-to-Nonsg Conversion
When the sequence -B-Pl- occurs at the end of the whole pronominal prefix, convert -Pl- into -Nonsg-.

When the relevant PM is 2Pl or 3Pl, the sequence -B-Pl- cannot occur since there is already a -Nonsg- morpheme separating these two in the B forms (2Nonsg-B-Nonsg-Pl-, B-Nonsg-Pl-, respectively).

However, consider $1ExPl_a$ /nuru-/, i.e., 1ExNonsg-Pl-, and its B counterpart /na:mbu-/, which I analyse as 1ExNonsg-B-Nonsg- //nV:-$w_2$an-w_2u-//. Similarly with $1InPl_a$ /n^guru-/, $1InPl_b$ /n^ga:mbu-/. (These are also used as transitives with $ANA_\emptyset$ object, Table 9-1.) Such forms require the conversion rule indicated.

This rule is probably motivated by the phonological awkwardness of a putative sequence */-$w_2$an-rV-/. Hardening P-18 does have a rule //r//⟶/d/ after stop or nasal, but it is unproductive, applying only to a handful of morphemes. Also, if $1ExPl_a$ /nuru-/ had a B variant like *//nV:-$w_2$an-ru-//⟶*/nundu-/, with the large set of verbs beginning in vowels (or in the Benefactive or Comitative derivational prefix) we would end up with homophony with $2Sg_a$ /nun-/ after the latter triggers Pronominal d-Insertion P-20, as in //nun=abi-n^y//⟶/nund=a:bi-n^y/ 'You[Sg] jumped'.

9.11 Allomorph-Assignment for component morphemes.

We have been using schematic labels like 1Sg-, -Nonsg-, and 1InNontr- for the various pronominal morphemes used in these prefixes. Some, however, have two or more allomorphs depending on grammatical function and morphemic environment. For example, -Pl- is /-rV-/, with contextual allomorphs /-ru-/, /-ra-/, and /-ri-/. It is now necessary to detail such allomorphic variation. We begin with person markers, then discuss -Nonsg- and -Pl-, then gender and NC markers (for this terminology see §9.7).

Person Marker Allomorphs

1Sg-	/n^ga-/.
1ExNonsg-	subject /nV:-/; inverse object /nV-/.
1InDu-	/na-/.
1InNondu-	/n^gV:-/.
2SgA-	subject /nun-/; inverse object /nu-/ or /nun-/ (no way to tell); object /-nu-/ in 1⟶$2Sg_a$ /n^gu-nu-/. [Replaced by 2SgB- as subject marker in 2Sg⟶$3Pl/WARA_a$ /ba-ra-/.]
2SgB-	subject /ba-/; inverse object /a-/. [These forms obscurely related to portmanteau 1⟶$2Sg_b$ /(w)a-/.]
2Nonsg-	/na-/, though underlying /a/ vowel seen only in 1⟶$2Pl_a$ /n^ga-na-/.

Note that the person markers here represent single morphemes, not complete PMs. The forms of 1Sg- and 1InDu- are quite transparent from the tables, though 1Sg- is assimilated to /n^gu-/ in 1⟶$2Sg_a$ /n^gu-nu-/ by V-Assimilation P-37 (part i). For 1ExNonsg- we distinguish subject /nV:-/ from (inverse) object form /nV-/ because of such length oppositions as $1ExMDu_a$ /ni:-ni-/ (with -M- morpheme) vs. 3MSg/NA⟶$1ExMDu_a$ /na-[N-]ni-/. On the surface, the long vowel of /nV:-/ is shortened to /nV-/ before Pl /-rV-/ by Nonsg-Shortening P-41; we cannot account for inverse object form /nV-/ by a similar shortening rule since it is inconsistent with 1InNondu- forms.

1InNondu- is taken here as /n^gV:-/ with long vowel, but is subject to the same shortening by P-41 before /-rV-/. Forms with this category as inverse object (Table 9-6) show long vowel, so we have no evidence for a distinction between subject and (inverse) object allomorphs like that for 1ExNonsg-.

Both 1ExNonsg- /nV:-/ or /nV-/ and 1InNondu- /n^gV:-/ acquire their surface vowel quality secondarily, either by V-Assimilation P-37 or (before Inverse /-N-/) by V-Ablaut P-38.

2Nonsg- is represented as /na-/, though the only direct evidence for the /a/ vowel is 1⟶$2Pl_a$ /n^ga-na-/. In all other combinations, the representation /nV-/ would be appropriate, with surface vowel quality determined by P-37 or P-38 as with 1ExNonsg- and 1InNondu-. Note that as a complete PM, 2Pl (also 2MDu, 2FDu) begins with the morphemes 2Nonsg-Nonsg- (/na-w_2V-/), with a second -Nonsg- morpheme not used with 1st exclusive or inclusive.

2SgA- has a predominant form /nun-/ seen in subject forms. Inverse object forms begin with //nu-N-// including Inverse //-N-//; because of Nasal-Deletion P-30 the first morpheme could just as easily be //nun-// as //nu-//, but we cannot tell (Table 9-7 arbitrarily shows //nu-//). The simple form /-nu-/ is seen in 1⟶$2Sg_a$ /n^gu-nu-/, the only combination in which -2SgA- is noninitial. In Tables 9-7 and 9-11 we see the underlying //u// becoming /i/ by V-Assimilation P-37, part g.

2SgB- has a common form /ba-/ used as subject marker, with inverse object variant /a-/ (Table 9-7).

In one situation, however, /ba-/ is extended to apply in A as well as B forms. This is 2Sg⟶3Pl/WARA (Table 9-9), where the A form is /ba-ra-/ and the B form /ba-m-ba-/. In its usual role as a specifically B form for 2Sg, /ba-/ does not co-occur with the regular B morpheme /-$w_2$an-/, but in the 2Sg⟶3Pl/WARA combination the B morpheme is added to /ba-/ in the B form to keep this distinct from the A counterpart. (The presence of the B morpheme then triggers Pl-to-Nonsg Conversion, §9.10.)

The analysis we have presented of the underlying forms of person markers is, in part, speculative because these morphemes in some cases do not occur finally within the pronominal prefix. Alternative analyses particularly of 1ExNonsg-, 1InNondu-, and 2Nonsg- are possible. For 1InNondu- in particular, it might be possible to interpret the length alternation /n^ga-ra-.../ vs. /n^ga:-.../ in Table 9-6, attested clearly with 3MSg/NA subject but perhaps present with other subjects, as a special case of rV-Truncation P-36, a rule presently formulated to apply only at the end of the entire pronominal prefix (hence not in Table 9-6).

-Nonsg- and -Pl- Allomorphs

-Nonsg- nonfinally in pronominal prefix /-w_2V-/; finally /-w_2a-/ in object function, /-w_2u-/ as intransitive subject (or subject with zero $ANA_\emptyset$ object PM), or /-w_2i-/ as transitive subject with nonzero object PM.

-Pl- nonfinally in pronominal prefix /-ri-/ in transitive subject function or /-rV-/ before Inverse morpheme in object function; finally /-ra-/ in object function, /-ru-/ for intransitive subject (or transitive subject with zero $ANA_\emptyset$ PM).

Forms marked as having /V/ acquire surface vowel quality by V-Assimilation P-37 or (before Inverse morpheme) V-Ablaut P-38. In those cases where vowel quality is determined directly by the allomorph rule itself, we notice an association in both morphemes of /a/ with transitive object, /i/ with transitive subject, and /u/ with intransitive subject, with the stipulation that transitives with $ANA_\emptyset$ object are treated like intransitives. Exx. with /a/ for object are in Table 9-9 (direct and equipollent sections); exx. with /i/ for transitive subject are 3Pl/WARA subject forms (among others) in Tables 9-3 to 9-8 (/-w_2i-/) and 9-12, 9-14, and 9-15 (/-ri-/). Exx. with /u/ in intransitive function are in Table 9-1, viz., B forms of 1ExPl and 1InPl (/-w_2u-/) and both forms of 3Pl/WARA (/-ru-/).

Gender Marker Allomorphs

-M- /-ni-/ in subject function and before Inverse morpheme in object function; /-nu-/ at end of pronominal prefix as object in direct forms.

(-NA-) [NA class merged with -M- in pronominal prefix morphology except that morpheme is invariably /-ni-/, never */-nu-/.]

-F- nonfinally in pronominal prefix always /-n^gi-/ (transitive subject or inverse object); finally /-n^gi-/ for subject, /-n^ga-/ for object if preceded by Pl /-ri-/, otherwise /-n^gu-/ for object. [N^gARA class totally merged with -F-.]

Both -M- and -F- show a general preference for /i/ vowel, which is always found (in underlying forms) when the morpheme is nonfinal within the pronominal prefix. For the sequence /-n^gu-nu-/ (/-F-M-/) I assume underlying //-n^gi-nu-// with V-Assimilation P-37, part h. When the -M- or -F- morpheme is final in object function, the vowel becomes /u/, except that -F- shows /a/ after Pl /-ri-/ (note that /a/ is associated with object function with -Nonsg- and -Pl- as well, cf. top of this page). The NA class marker, which I have treated in this chapter as a special case of -M-, is actually distinguished from -M- by avoiding the /-nu-/ object allomorph, hence the difference between Table 9-10 and 9-11. (There is no similar division between -F- and N^gARA.)

It remains only to specify forms of the nonhuman NC categories ANA and MANA.

Nonhuman NC Allomorphs

ANA_{wu} /-w_1u-/ in all functions (but subject to deletion by the late rule ANA_{wu} Object Deletion).

$ANA_\emptyset$ /-w_1u-/ for transitive or intransitive subject; zero /-$\emptyset$-/ for object in direct forms.

MANA /-ma-/ (invariable).

9.12 Nominative-accusative or ergative-absolutive patterning?

In general, the system of pronominal prefixes does not fit nicely into either nominative-accusative or ergative-absolutive patterns. This is because the major structural feature of the system is the direct/inverse/equipollent division and the associated ordering rules based on pronominal category rather than case function.

However, there are a number of details suggesting a tendency toward nominative-accusative patterning with respect to allomorphic rules; relevant morphemes here are 1ExNonsg-, 2SgB-, -M-, -F- (including N^gARA), and $ANA_\emptyset$. In addition, the rule of ANA_{wu} Object Deletion may be mentioned, and deletion of -Pl- before Inverse morpheme //-N-// (Pl-Deletion, part c) tends to produce special shortened object PMs (for 1ExPl, 2Pl, and 3Pl). These features generally set off object as a special category distinct from subject (intransitive/transitive).

On the other hand, many other pronominal morphemes have the same form for subject and object (1Sg, 1InDu, NA, MANA), and some (Pl, Nonsg) have distinct forms for all three of intransitive subject, transitive subject, and object.

Chapter 10

Verbal derivational affixes

10.1 General.

In this chapter we are concerned with a smallish number of basic derivational prefixes and suffixes used with verbs (and to a limited extent with some nouns). It should be noted immediately that there is no sharp distinction between the derivational elements, especially prefixes, dealt with here and the more specialised elements covered in Chapter 14 under compounding.

The elements covered in the present chapter are generally associated with verbal voice, hence indirectly with case marking of associated NPs. This is rather obvious in most instances, but not so in the case of Multiple prefixes like /-w$_1$ara-/. However, under closer analysis even the Multiple prefixes turn out to be connected with grammatical relations in one way or other.

We will present, one by one, the basic derivational affixes as follows: Benefactive prefix (§10.2), Comitative prefix (§10.3), Multiple prefixes (§10.4), Reflexive suffix (§10.5), Reciprocal suffix (§10.6), Causative suffix (§10.7); suffixes deriving verbs from (mainly) adjectival nouns, Inchoative (§10.8) and Factitive (§10.9); miscellaneous minor derivational suffixes (§10.10); and ordering and logical relationships involving combinations of two or more derivational affixes (§10.11).

It should be noted that some of the morpheme labels indicate only the most usual function, and that further analysis shows a more interesting meaning and/or a multiplicity of functions. For example, some Refl verb forms are actually antipassives rather than passive-like forms, and some Caus verbs really involve promotion to object.

10.2 Benefactive /-aG-/ or /-wa:G-/.

The most common Benef prefix is /-aG-/, positioned after the pronominal prefix but before anything else. Since the pronominal prefix usually ends in a short vowel, VV-Contraction P-49 applies, as in //n^{g}anu-aG=amaja-y//→/n^{g}ana:-'=gamaji-∅/ 'I stole (it) from him'. The //G// always disappears from the surface by Stop-Deletion P-29, but before being deleted it may trigger various effects,

including insertion of /g/ at the beginning of a vowel-initial following morpheme by Velar-Insertion P-8 (as in the ex. just given), and hardens following //w_2 lh r y w_1// to /b dh d j g/ by Hardening P-18 in other exx. When preceded by one of the few pronominal prefixes ending in //n//, the output is affected by Pronominal d-Insertion (including vowel lengthening), as in //n^gan-aG=amaja-i// →/$n^g$and-a:=gamaji:-'/ 'I will steal (it) from it(ANA$_\emptyset$ class)'.

There is a less common variant /-wa:G-/, whose surface realisation is /-wa:-/, or after /i/-vowel usually /-ya:-/ (by w_1-Deletion P-9 and then y-Insertion P-10), with the same behaviour of final //G// as in the previous allomorph.

It should be noted that there is a compounding initial /-aG-/ or /-a-/ 'ground, earth' which should be distinguished carefully from the major allomorph of the Benef morpheme.

The Benef is a high-frequency form which recognises a dative NP, which might be specified by an independent NP in Allative-Dative case with suffix /-$w_1$uy/ (optionally replaced by Nominative zero), in the verb itself. The pronominal prefix must be in the transitive series (even if the verb stem in question is otherwise intransitive), and the "object" marker in the pronominal prefix refers to the dative NP. If the verb stem is already transitive before Benef is added, the "underlying" direct object is dropped from the pronominal prefix and replaced by the dative object. However, the direct object may show up as an independent NP (ordinarily in Nominative case, as is regular for direct objects), and may also be indexed indirectly in the verb itself, e.g., by the Multiple derivational prefix or by some compound initial associated with objects.

The basic relationships between simple and Benef verb forms, and their case frames, are these (NPs deletable, word-order variable):

a) input stem is intransitive

input: NP_i-$\emptyset$ $Pron_i$=Verb

Benef form: NP_i-$\emptyset$ NP_j-$w_1$uy $Pron_i$→$Pron_j$-aG=Verb

b) input stem is transitive

input: NP_i-$\emptyset$ NP_j-$\emptyset$ $Pron_i$→$Pron_j$=Verb

Benef form: NP_i-$\emptyset$ NP_j-$\emptyset$ NP_k-$w_1$uy $Pron_i$→$Pron_k$-aG=Verb

Benef forms are mentioned in dictionary entries for verbs if attested in the texts; the Benef form is so productive that it would be inappropriate to list all verbs with which it is compatible.

For exx. involving intransitive stems see the following in dictionary entries: /-a-n^gu=bura-/ or /-wa:-n^gu=bura-/ (with n^gu-Epenthesis P-1 before stop) 'sit for' (i.e., have proprietary control or interest in), also cpd. /-a-damar-n^gu=bura-/ and cpd. /-a-gurin^y-n^gu=bura-/, both 'to be fond of'; /-wa:=dha-/ from /=lha-/ 'to stand' meaning 'to stand for, to wait for'; /-a=dhida-/ 'to go through (surface)' from /=lhida-/ (add citation TNT 18 to those in entry); /-a=min^{y}jaldha-/ 'to be suspicious of' from /=min^{y}jaldha-/ 'to be suspicious'; /-a-n^gu=dir(i)=n^gawi-'-/ 'to be afraid of' from /-dir(i)=n^gawi-'-/ 'to be afraid' s.v. /=n^gawi-'-/; /-a=n^gurga-/ 'to hunt turtles for'; /-a=daga-/ 'to go ahead of' from /=raga-/ 'to go in front'; /-a=diga-/ 'to dig for (person)'

from /=riga-/; /-a=diyaldha-/ 'to get angry at' from /=riyaldha-/ 'to get angry'; /-a=gada-/ 'to shout to/at' from /=ada-/; /-a=galima-/ 'to get water for (person)' from /=$w_1$alima-/ 'to get water' (additional refs. are TNT 18, MT 10); /-a=ga:lhuda-/ 'to clear ground for (person)' from /=w_1a:lhuda-/ (add TNT 13); /-a=gamaja-/ 'to steal from (person)' from /=amaja-/ 'to steal' (add TNT 7); /-a=bann^{g}a-/ 'to dance for (person)' from /=$w_2$ann^{g}a-/; /-a=bann^{g}arayi-/ 'to shield (someone)' from /=$w_2$ann^{g}arayi-/ 'to use shield (e.g., to defend oneself)'; /-a=garan^{g}ga-/ 'to look for, watch out for' from /=$w_1$aran^{g}ga-/ (add MT 15rdp, MT 17rdp); /-a=gayi(j)gi-/ 'to perform(play) for (person)' from /=$w_1$ayi(j)gi-/; /-a=biln^{g}in^{y}ja-/ 'to build fire for (person, or food to be cooked)' (add TNT 21) from /=$w_2$iln^{g}in^{y}ja-/; /-a-guri=ja-/ 'to obey (someone)' from //-aG-$w_1$urij=ya-// s.v. /=ya-/ 'to go'; and /-a=jigula-/ 'to be (somewhere) waiting for (someone)' (add MT 14). The above entries usually list textual occurrences in NMET, to which we have just added a few references to Hughes' texts. Some others not mentioned in the dictionary but which are now attested in Hughes' texts are these: /-a-bu=na-/ 'to make campfire for' (TNT 3) from compound /-w_2u=na-/ listed s.v. /=na-/ 'to burn' (/=na-/ by itself is transitive but /-w_2u=na-/ is intransitive); /-a=dulgulha-/ 'to make a shelter for' (MT 10) from /=rulgulha-/; /-a=gambula-/ 'to be shy towards' (MT 5) from /=ambula-/ 'to be shy, ashamed'; and /-a=bida-/ 'to go up [tree] for (i.e., to get)' (TNT 30 "winibirdinj", i.e., /wini:-'=bidi-n^y/ 'they[MDu] went up tree to get it[honey, ANA$_\emptyset$]).

The number of transitive input verb stems is somewhat greater than the number of intransitives just described. Exx. mentioned in dictionary entries are /-a-n^gu=guguda-/ 'to usurp from'; /-a=dhalwulha-/ or /-wa:=dhalwulha-/ meaning either 'to soak (something) for (person)' (132.9.2) or 'to soak (container, dative)' (with objects in container as implicit direct object, 116.11.3) from /=lhalwulha-/; /-wa:=dhida-/ 'to close off (entrance) for (someone, dative); to keep (someone) out' from /=dhida-/ (via intermediate //=lhida-//); /-a-n^gu=juluba-/ 'to hide (something) from (person, dative)'; /-a=dharga-/ 'to send (it) to (someone, dative)' (add TNT 13, MT 6) from /=lharga-/; /-a=dhurwa-/ 'to make string for' from /=lhurwa-/; /-a=ma-/ 'to take (something) from (someone, dative)'; /-a=ma:jga-/ 'to make (it) for (someone, dative)'; /-a-dhal=ma:ndha-/ 'to make country[cpd. initial //-lhal-//] for (someone, dative)'; /-a=ma:ruga-/ 'to refuse (it) to (someone, dat.)'; /-a-dhan=mula-/ 'to sit on wound[cpd. initial //-lhan-//] of (someone, dat.)'; /-wa:=munduwa-/ 'to divide or sort (things) for (someone, dat.)'; /-a=na-/ 'to cook (something) for (someone, dat.)'; /-a=da-/ 'to spear (it) for (someone, dat.)' from /=ra-/; /-a=dabali-/ 'to bring (it/him) out for (someone, dat.)' (add TNT 9) from /=rabali-/; /-a=dagu-/ reduplicated as /-ada:-'=dagu-/ 'to guess (in game)' (add TNT 17, MT 12) from /=ragu-/ 'to look for'; /-a-gan^{g}a=ran^{g}ara-/ 'to wait in camp[cpd. initial //-an^{g}a-//] for (people, dat.)'; /-a=balga-/ 'to pound (something) for' from /=$w_2$alga-/; /-a=banaga-/ 'to hold [harpoon or rope attached to it] for (dugong/turtle, dat.)' (111.1.2ff.) from /=$w_2$anaga-/ (harpoon appears to be dat. object of same form in TNT 3, MT 4); /-a-dha=gararja-/ 'to pour (something) into the mouth[//-lhaG-//] of (someone, dat.)', from /=ararja-/; /-a=garwargu-/ 'to carry or

drag for' from /=w_1/$w_2$arwargu-/; /-a=bu-/ 'to hit or kill (someone) who is a close relative of (someone, dat.)' (add TNT 18) from /=w_2u-/; /-a=guriyi-/ or /-a=buriyi-/ 'to lift (it) up for' from /=w_1/$w_2$uriyi-/; /-a=jaba-/ 'to put (it) in for' (add TNT 30rdp) from /=yaba-/; /-a=jarbuma-/ 'to snatch from' from /=yarbuma-/; /-a=jari-/ to take (it) away from (someone, dat.)' from /=yari-/ 'to take (it) away'; and /-a=gin^{y}ga-/ 'to finish (it) for' from /=in^{y}ga-/. For textual refs. see the dictionary entries and the additions just made.

Additional forms involving transitive inputs for which we can now cite Hughes' texts are /-a=dhan^{g}arma-/ 'to find (something) of (someone, dat.)' (TNT 18) from /=lhan^{g}arma-/; /-a-manda=n^{g}arga-/ 'to get too many' (TNT 28, 29) from /=n^{g}arga-/ 'to win big, get lots' plus cpd. initial; /-a=ganmarda-/ 'to crave (something) of (someone, dat.)' (TNT 9, 34) from /=$w_1$anmarda-/ 'to crave (it)'; /-a-gay=arara-/ 'to make nest[//-ay-//] for' (TNT 17) from /=arara-/; /-a=bargu-/ 'to carry (it) on shoulder for' (TNT 9) from /=$w_2$argu-/; /-a=ga:ru-/ 'to leave (it) for' (TNT 7) from /=a:ru-/; /-a=ga:yu-/ 'to cut (it) up for' (MT 26, twice) from /=a:yu-/, also cpd. /-a-dhan^{g}gu=wa:yu-/ 'to cut up meat[//-lhan^{g}gu-//] for' from same root (MT 26); /-a=gudha-/ 'to put up platform for' (TNT 17rdp) from /=w_1/$w_2$udha-/'; /-a-jama=yami-jga-/ or /-wa:-jama=yami-jga-/ 'to do (it) thus to (dative)' (TNT 13) from internal rdp. of /=yami-jga-/, a derivative of /=yama-/ 'to do thus'.

The above exx. of Benef forms from intransitive and transitive input stems show a range of dative meanings, including beneficiary, adverse beneficiary (i.e., who is hurt rather than helped), source (as in 'take from', usually associated with adverse beneficiary), addressee ('to shout at'), owner or possessor (of implicit direct object), and object of emotion ('be afraid of', 'be suspicious of', etc.). In the great majority of cases the dative object (which is cross-referenced in the verb as object marker, before Benef prefix) is human, but there are some counterexamples and this is not a rigorous condition on grammaticality. Thus in 69.4.3 we have an ex. with 'to shout for [spear]', /nima:-'=gada-n^{g}i/ 'he shouted for it', where the Benef object is not the beneficiary but the object which the shouting was intended to produce (the same Benef form with /-a=gada-/ more often means 'to shout to [someone]'). Similarly, one of the exx. involving 'to soak, immerse' has 'dillybag' as Benef object, the sense being that the dillybag is the container in which cycad nuts are soaked: /wiri-ya:=dhalwulha-n^{g}i/ 'they soaked (cycads) in it (dillybag, dative)' (116.11.3), where the pronominal prefix is 3Pl→ANA$_{wu}$-a and must therefore have as Benef object 'dillybag' (ANA$_{wu}$ class) rather than 'cycad' (MANA class). This ex. could also be interpreted as 'they soaked its (cycads)' with the possessor sense.

There are a few problematic exx. which I cannot fully explain but will mention: /-a=jarba-/ from /=yarba-/ 'to run' occurs several times (16.10.2, 16.20.2; TNT 11, 13, and 29; MT 6) in similar contexts involving wind blowing for someone, but the forms (sometimes intrans.?) and senses are difficult; /-a=gama:mi-/ seems to be intransitive and have the same meaning as simplex /=ama:mi-/; use of Benef unclear in /-wa:=badawadad-ga-/ 'to make strong' (45.6.3rdp, 45.8.1rdp) and /-a-gara:='lali-/ 'to pick up all' (TNT 24) from /$w_2$adawadad/ and

/=alali-/; likewise for /-a=burdha-/ 'to bury' (163.4.2rdp) from /=$w_2$urdha-/. Finally, /-a=ganbi-/ 'to do (it) for' (TNT 13) is ambiguous as to being based on transitive input /=$w_1$anbi-/ or its intrans. (Refl) form (with antipassive meaning) /=$w_1$anbi-'-/.

There are occasional exx. of Benef /-aG-/ with adjectival nouns (NAdj) rather than verbs. /mamaga/ 'set aside, reserved' has a form /-a=mamaga/ used with transitive pronominal prefix, as in /ni:n^{g}iwa:-'=mamaga/ 'we[ExFDu] have it[ANA$_{wu}$] reserved' (13.23.4). This combinations makes sense semantically, but I have been less successful understanding "wurragarrarlgarl" (/wura:-'-gara:='lgal/) 'they [were] all separate' and "nigarrarlgarl" (/ni:-'=gara:='lgal/) 'he [was] separate' (TNT 7), from /$w_1$algal/ 'separate, distinct' with Multiple /-$w_1$ara-/. This passage also contains "niwagarrarlgarl", which seems to be /ni-wa:-gara:='lgal/ with the long /-wa:G-/ allomorph of Benef.

Usually, derivational prefixes (as opposed to pronominal prefixes) pattern like compound initials, e.g., in determining allomorphs of following verb stems of some types. In the case of Benef, this is true for phonological processes affecting pre-surface forms of stem-initial consonants. Thus /=dhida-/ 'to block off', which becomes presurface /=lhida-/ when directly preceded by a derivational prefix or compound initial (/-gari=lhida-/ 'to shut off from behind'), does in fact become //=lhida-// after Benef /-aG-/ or /-wa:G-/, though because of the //G// in the Benef, the //lh// ends up as /dh/ by Hardening P-18, hence /-wa:=dhida-/. The presurface form must be //-wa:G=lhida-//, however, since //-wa:G=dhida-// would have triggered n^{g}u-Epenthesis P-1, giving incorrect */-wa:-n^{g}u=dhida-/.

However, in the case of /=w_2u-/ 'to hit, kill' and its suppletive replacement /=$w_2$adja-/ used after compound initials and (most) derivational prefixes, Benef /-aG-/ produces /-a=bu-/, based on the uncompounded form /=w_2u-/. (Compare /-$w_1$ara=wadja-/ 'to hit all' with Multiple prefix /-$w_1$ara-/.)

Benef co-occurs in the same verb form with some other voice-changing morphemes, including Refl, Recip, and Caus suffixes; it also co-occurs with Mult. These combinations raise problems of derivational layering since, for example, the benefactive of a reciprocal ('they hit each other for me') is not the same thing semantically as the reciprocal of a benefactive ('they hit [it] for each other'). For these matters see §10.11, below.

Benef does not appear to co-occur with Comit.

10.3 Comitative /-an^{y}ji-/.

Like Benef /-aG-/, the Comit prefix occurs directly after the pronominal prefix of the verb, preceding the verb stem; Benef and Comit do not appear to co-occur.

Comit means 'with' in the accompanying, rather than instrumental, sense. However, the comitative NP is not pronominally cross-referenced in the verb, though it may occur as an independent NP (in zero, i.e., Nominative case) in the larger clause. Thus the morphology of the verb is not affected (whereas Benef /-aG-/ requires that an object marker with dative sense be included in the verb's pronominal prefix).

A schematic representation of the simplex and Comit forms of intransitive verb stems is this:

input: NP_i-Ø $Pron_i$=Verb

Comit: NP_i-Ø NP_j-Ø $Pron_i$-Comit=Verb

As usual, word order is variable and the independent NPs are only optional.

Indeed, the vast majority of attested Comit forms involve intransitive stems. Exx. listed in the dictionary (under the entry for the simplex stem) are /-an^{y}ji-wara=wara-/ 'to go crookedly (e.g., in zigzag) with' from /=w$_2$ara-/, in dictionary as /=bara-/; /-an^{y}ji-n^{g}u=bura-/ 'to sit with' (also euphemism for 'to copulate with' 44.3.3) showing n^{g}u-Epenthesis P-1 before stem with initial stop (additional citations are MT 25, TNT 28); /-an^{y}ji-n^{g}u=dhirida-/ 'to go down with'; /-an^{y}ji=lha-/ 'to stand with'; /-an^{y}ji=lalagi-'-/ 'to get up (and go) with'; /-an^{y}ji=n^{g}ama-/ 'to swim with'; /-an^{y}ji:='gi-/ 'to go back with' from /=a:gi-/ with VV-Contraction P-49 (add TNT 7, MT 15 and 25); /-an^{y}ji=wala-/ 'to arrive with' from /=w$_2$ala-/; /-an^{y}ji=wayama-/ 'to keep going with' (add TNT 8rdp); /-an^{y}ji=wuwalga-/ 'to run (up) with'; /-an^{y}ji=ya-/ 'to go with' (add TNT 28 and 28rdp); /-an^{y}ji=yarba-/ 'to run or move quickly with'; and /-an^{y}ji=yi-/ 'to sleep with' (add MT 30rdp). Additional intrans. exx. which can now be cited from Hughes' texts only are /-an^{y}ji=lhira-/ 'to hang on (cling) with' (MT 23), /-an^{y}ji=rabala-/ 'to come out with' (TNT 7, 25), /-an^{y}ji=wunma-/ '(flock) to fly with' (TNT 24), and /-an^{y}ji=yabi-'-/ 'to go in with' (TNT 24).

The only clearly attested transitive ex. is /-an^{y}ji=nima-/ 'to hold X with Y', where X is the regular direct object (cross-referenced in the transitive pronominal prefix) and Y is the comitative NP. In 112.4.6 we have /nirin^{g}a:-'n^{y}ji=nima-na/ 'we hold it[dugong which has just been harpooned] next to it[our canoe]'. The other attestation of this combination is 163.22.4, namely /nin^{g}ga:-'n^{y}ji=nima:-'/, which I tentatively gloss as 'it[water] held him with it[boat or sail of boat]', or more loosely as 'he got into the water with it'. There is one other probable transitive form in the texts: /wura:-'n^{y}ji=yan^{g}a-ni/ 'they heard of it[honey] with [trees?]' 142.1.1, assuming that //wuru-// is here 3Pl/WARA--> ANA$_{Ø-a}$ prefix (rather than intrans. 3Pl/WARA$_a$), retaining the regular transitivity of /=yan^{g}a-/ 'to hear'.

Examination of textual passages shows that the comitative NP (overt or covert as independent NP) may be either human, nonhuman animate, or inanimate. As our lists above show, the most common combinations involve intransitive verbs of motion, along with a few intrans. verbs of stance ('sit, stand').

For the occasional combination of /-an^{y}ji-/ with a following numeral, as in /an^{y}ji-yan^{y}ja:bu-n^{y}un^g/ '[man] having one [wife]', see §14.13.

A few simplex verb stems involve accompaniment semantically: /=adalaga:ga-/ 'to go with (person)' (95.8.8); /=garma-/ 'to want to go with (person)' (MT 28) and intrans. /=garma-ja-/ 'to want to go along'; /=mangarwu-/ 'to take (e.g., child) along' (35.13.3). However, these are far less common than Comit verb forms.

There are a number of other derivational prefixes, all much less common than /-an^{y}ji-/, which resemble it semantically to some extent. These are mentioned in §10.10, below. The relevant ones are:

/-an^{g}gara-/ 'together'
/-albun^{g}uN-/ 'both together'
/-ilbuN-/ (used in word meaning 'twins')
/-ambirwir-/ 'close together'
/-w$_1$aji-/ '(all) mixed together'

Most of these occur in a small number of combinations only.

The Multiple prefixes ('all', 'both') discussed in the following section may sometimes, in context, overlap functionally with Comit, especially since the Comit is usually limited to intransitive verbs while some Mult prefixes lack this restriction.

10.4 Multiple prefixes: /-n^{g}aran-/ or /-n^{g}araG-/, /-w$_1$ara-/ or /-w$_1$araG-/, /-lhagara-/, /-w$_1$aragara-/, /-w$_2$algara-/.

In this section we discuss an assortment of prefixes, collectively labeled Multiple, which emphasise multiplicity of agents, objects, or locations of a verbal event or situation. The usual translation is 'all' or sometimes 'all over', 'all around', etc.; in contexts involving two entities the translation may be 'both'. As with English 'all' and 'both', the Mult prefixes are optional and emphatic. The common ones are /-n^{g}aran-/ (or /-n^{g}araG-/) and /-w$_1$ara-/ (variant /-w$_1$araG-/), while the three others are characteristic of a handful of verb stems each.

/-w$_1$ara-/ (or /-w$_1$araG-/) is sometimes used as a more or less meaningless "unmarked" compound initial for some verbs which regularly require a compound initial, when no semantically specific compound initial is used; see §14.10.

In addition to their uses as general-purpose Mult prefixes, /-n^{g}aran-/ and /-w$_1$ara-/ can be used as defective (bound) noun roots, requiring preceding NC$_{der}$ prefix (§4.9). The meaning is 'pile, heap' in both cases, and variants /-n^{g}araG-/ and /-w$_1$araG-/ are not used (at least not regularly) in this meaning. The forms with ANA NC$_{der}$ and optional initial NC$_{infl}$ prefixes are /(an-)u-n^{g}aran/ and /(an-)u-gara/ 'heap[of ANA class substance]', the NC$_{der}$ prefix here being //-uG-//. As usual with such defective noun roots, they can be used as compound initials (meaning 'heap'), and the Mult function ('all', 'both', 'all over') is essentially an extension of this compound-initial usage. However, it is advisable to distinguish the 'heap' compound initials from the Mult prefixes, since the use of allomorphic variants is different in the two types, and especially since there are some grammatical differences. The Mult function is much more common than the compound-initial function for these items.

Beginning with /-n^{g}aran-/ and /-n^{g}araG-/, we may make the following essential points: a) in the sense 'heap' the form is normally /-n^{g}aran-/, while in Mult function the form is usually /-n^{g}araG-/ with /-n^{g}aran-/ as uncommon free variant (the //G// disappears by Stop-Deletion P-29 but often affects the beginning of the following morpheme by Hardening P-18, or before underlying vowel by Velar-Insertion P-8); b) in the sense 'heap' the reference is normally to intransitive subject or transitive object (as usual

for semantically concrete compound initials, see Chapter 14), while in Mult function the reference is to multiplicity of intransitive subject only; c) the spatial sense 'all over, all around' which is possible with Mult /-$w_1$ara-/ is not possible with /-n^garan-/ or /-n^garaG-/ as Mult prefix.

Exx. which seem to involve /-n^garan-/ 'heap' are these: /-n^garan-n^gu=dhurma-/ 'to crush heap' (118.3.4), /-n^garan-n^gu=gudi-/ 'to dig up heap' (elicited), /-n^garan-julu=yula-/ 'to stir up (yam slices)' with internal reduplication (125.9.2), and /-n^garan=julug-/ '[to be] thin bunch [of yam slices]' (125.7.3) with predicative NAdj. Note that the exx. with verbs involve direct object function. A fifth apparent ex., /-n^garan=gulguldha-/ 'to cut up [honeycomb]' (142.5.4), may involve the sense 'heap [i.e., quantity of honey]' or may involve confusion between /-n^garan-/ 'heap' and another cpd. initial /-n^garag-/ 'honey, honeycomb'. Since, as compound initial, /-n^garag-/ 'honey' is phonologically indistinguishable from /-n^garaG-/ Mult allomorph, it may be that the two forms are becoming formally confused, so that even the /-n^garan-/ allomorph ('heap' or Mult) is extended sporadically to mean 'honey'.

Having filtered out these cpd. initials, the remaining cases of /-n^garaG-/ or occasionally /-n^garan-/ can be identified as Mult, though perhaps there are a few cases where 'heap' is an arguably possible gloss. The Mult exx. appear to specifically emphasise multiplicity of intransitive subject in all instances. (This includes some intransitivised Refl forms, and some intransitives with Benef; see §10.11.)

Since some of the same verbs are attested both with /-n^garaG-/ and /-$w_1$ara-/ (or their variants), let us look first at these doublets to try to understand the differences between the two Mult prefixes with intransitives (we show below that /-$w_1$ara-/ may also be used for object multiplicity and spatial multiplicity with transitives, while /-n^garaG-/ is not).

Available doublets are these: /=rabala-/ or internal rdp. /-raba=rabala-/ 'to come out', /-n^gara=dabala-/ 43.15.1 'they[ghosts] came out' and TNT 3 'they[people] all came out', rdp. form /-n^gara-daba=rabala-/ MT 18 'they[two boys] both came out', vs. /-$w_1$ara-raba=rabala-/ 29.12.3 '[seaweed, cuttlefish shells, and other shore debris] all came out'; /=rabi-/ 'to fall', /-n^gara=dabi-/ 65.3.4 'we both fell', vs. /-$w_1$ara=rabi-/ 36.2.2 (also 60.3.2, 60.3.3rdp, 98.6.5, 98.8.3, and MT 8) '[rain] to fall' (usual word for 'to rain'); /=a:gi-/ 'to go back', /-n^gara=ga:gi-/ 'to all go back' (35.9.1 stingrays in myth, MT 15 and 15rdp humanoid spirits) and variant /-n^garan=ga:gi-/ 166.29.1 'we all went back', vs. /-$w_1$ara:='gi-/ 116.10.2 'they[people] all went back'; /=$w_2$ala-/ 'to arrive', /-n^gara=bala-/ 'they all arrived, lots of them arrived' (40.8.1ff. ghosts, 52.4.2 and 166.17.4 people) vs. /-$w_1$ara=wala-/ 161.26.2 'it[equipment] all arrived'; Refl /=$w_1$anbi-'-/ 'to do', /-n^gara=ganbi-'-/ MT 7 'they[two dogs in myth] both did it', vs. /-$w_1$ara=anbi-/ 138.4.1 'it[liquid extracted from strychnine nuts] does it'; /=ya-/ 'to go', /-n^gara=ja-/ 'to all go' (18.22.1 Catfish people in myth, 20.4.1 two King Brown snakes in myth, 20.15.1rdp ditto, 35.12.1 several types of rays in myth) vs. /-$w_1$ara=ya-/ 'to go all around' (132.11.6).

These exx. suggest that /-n^garaG-/ emphasises multiplicity of human or other consciously acting agents, while /-$w_1$ara-/ indicates multiplicity or large quantity of inanimate or otherwise nonvolitional entities, and may also have spatial sense 'all over, all around'. The list just given includes just one exception with /-$w_1$ara-/ used with human agent ('to go back'), though perhaps here the sense intended was 'all over'. Moreover, consideration of exx. of /-n^garaG-/ and of /-$w_1$ara-/ with other verbs (i.e., those which do not have attested doublets showing contrastive uses of the two) supports the view that /-n^garaG-/ indicates multiplicity of volitional actors while /-$w_1$ara-/ indicates multiplicity or quantity of nonvolitional entities or spatial distribution of actions.

Further exx. of /-n^garaG-/ are mentioned in dictionary entries, usually with textual citations, as follows: /=buguwugunu:-'-ma-/ 'to look away', /=garaja-/ 'to jump', /=jalburda-/ 'to jump in water', Refl /=julubi-'-/ 'to hide', /=lhida-/ 'to go through surface', /=lan^{g}aba:bi-/ 'to bob up and down', /=lima-/ 'to veer off', /=manji-/ 'to bathe', /=ralha-/ '(bird, etc.) to land', /=abi-/ 'to jump', /=adada-/ 'to go up slope' (add MT 15), /=$w_1$allha-/ 'to float, be lightweight', /=ambargala-/ '(group) to sit together', /=ambulwi-/ 'to be born', /=ani-/ 'come![imperative]', /=$w_2$an^{y}gala-/ '[fish] to move around', loanword /=$w_2$ardha-/ 'to work', /=$w_1$arar-bu-/ '[fish] to jump around' (in 24.1.2 note emendation of "r" to /r/), /=yabi-'-/ (Refl) 'to go in', /=yaldha-/ 'to go past, slip past' (add MT 14), /=yama-/ 'to say'. We may add a few others now attested in Hughes' texts: /-$w_1$ala=n^gu-/ 'to drink' (MT 18, s.v. /=n^gu-/), /=raga-/ 'to go in front, be first' (TNT 3), Refl /=$w_1$urami-'-/ 'to go in circle' (MT 4), /=riga-/ 'to dig' (MT 18), /=yambi-/ 'to speak' (TNT 26).

Since all of our textual attestations of /-n^garaG-/ involve intransitive verbs, and we have no ex. of this prefix (except in the sense 'heap' in the form /-n^garan-/) with transitive verb, we conclude that this is a grammatically significant fact.

We now focus on /-$w_1$ara-/, including the occasional variant /-$w_1$araG-/ (the two are not distinguishable before nasals or /l l r/, in which case we presume /-$w_1$ara-/). We have already pointed out that intransitive verbs which can take either /-n^garaG-/ or /-$w_1$ara-/ use the latter for multiplicity or quantity of nonvolitional (mostly inanimate) entity, or for spatial distribution ('all around').

Additional intransitive /-$w_1$ara-/ forms given in dictionary entries (usually with text citations) are /-$w_1$ara=wilwila-/ 'shake all over' (s.v. /=bilwila-/); /-$w_1$ara-n^gu=burā-/ 'all to sit' (146.1.2 bark of tree, MT 11 water, cf. /-n^gara-n^gu=bura-/ for volutional actor, including MT 11 in addition to already given citations); /-$w_1$ara-maya=maya-/ 'to sing [several things]' (emend gloss for 167.16.1 accordingly); /-$w_1$ara=n^gambi-/ 'all to bathe' (95.3.4 emus); /-$w_1$ara=galhalha-/ 'shake spear in spear-thrower' with /-$w_1$araG-/ and /=$w_1$alhalha-/; /-$w_1$ara-gallha:='llha-/ 'all float' (100.2.5 ants) with /-$w_1$araG-/ and internal rdp. of /=$w_1$allha-/; /-$w_1$ara:-'mba:='mbada-/ 'all to burst' with internal rdp.; /-$w_1$ara=warbarlha-/ 'be stiff all over'; /-$w_1$ara=ya:ra-/ 'to be refreshed all over'; /-$w_1$ara=yarba-/ 'to run all over'. New exx. from Hughes' texts include /-$w_1$ara=radbi-dha-/ '[canoe] be all

tied up' (TNT 9); /-w$_1$ara=yi-/ 'to both sleep' (TNT 24, mythical actors; this form much less common than /-lhagara=yi-/, see below).

There are a number of exx. of /-w$_1$ara-/ or /-w$_1$araG-/ with intransitivised Refl or Recip verb. However, it is difficult to determine whether /-w$_1$ara-/ is used here because it may relate to (surface) intrans. subject, or because it can occur with the related trans. simplex (referring to object or spatial distribution); see §10.11 for exx. and discussion.

There are many exx. of /-w$_1$ara-/ or /-w$_1$araG-/ with transitive verbs. The meaning is multiplicity of direct object (not, e.g., Benef object), or spatial distribution. Exx. listed in the dictionary (under the entry for the stem) are /-w$_1$ara=waruma-/ (s.v. /=baruma-/) 'to wrap all up'; /-w$_1$ara-n^{g}u=bura-/ 'to put down all' (add TNT 31, MT 21); /-w$_1$ara-n^{g}u=du:lwi-/ 'to sing for all (totems)'; /-w$_1$ara-n^{g}u=juluba-/ 'to hide all' (add TNT 25); /-w$_1$ara=lha-/ 'to chop lots/all'; /-w$_1$ara=lhalwulha-/ 'to soak all'; /-w$_1$ara=lharga-/ 'to swallow (or send) all'; /-w$_1$ara=lhulhuwi-/ 'to pile up'; /-w$_1$ara=lhurwa-/ 'to make rope'; /-w$_1$ara=maga-/ 'to wrap all'; /-w$_1$ara=maga-/ 'to tell lots of things to' (conjugation different from preceding item; /-w$_1$ara-/ in last ex. refers to things told rather than to addressees, though addressee is treated as morphological object, see 13.30.3); /-w$_1$ara=ma:jga-/ 'to make lots'; /-w$_1$ara=ma:ndha-/ 'to make lots' (add TNT 8 and 26rdp); internal rdp. /-w$_1$ara-maya=maya-/ 'to name lots/all'; /-w$_1$ara=na-/ 'to burn all' (add TNT 13); /-w$_1$ara=nara-/ 'to wait for all'; /-w$_1$ara=n^{g}arga-/ 'to win big, get lots of'; /-w$_1$ara=(w)aba-/ 'to wrap all' (all TNT 26); /-w$_1$ara=wadja-/ 'to hit all, to hit all over' (add TNT 1); /-w$_1$ara=wadji-wu-/ 'to punish (by hitting)'; /-w$_1$ara=wa:la-/ or /-w$_1$ara=ga:la-/ 'to put all together'; internal rdp. /-w$_1$ara-walga=walga-/ 'to pound all'; /-w$_1$ara:='mbamadha-/ 'to cover up all'; /-w$_1$ara=wanaga-/ 'to hold or have all'; /-w$_1$ara-n^{g}u-dhan^y=bara-/ and /-w$_1$ara-wad=bara-/ 'to throw down all' (cpds. ending in /=w$_2$ara-/); Caus /-w$_1$ara=wawalhi-jga-/ 'to open up all'; /-w$_1$ara=wawayiwa-/ 'to break all over'; /-w$_1$ara=widhi-/ 'to carry all'; /-w$_1$ara=wildha-/ 'to touch or bump all'; /-w$_1$ara=wuldha-/ 'to cut all'; /-w$_1$ara=wurlha-/ 'to rub all (or all over)'; /-w$_1$ara=wurdha-/ 'to cover, bury' (4.3.4 rope buried in sand); /-w$_1$ara=yaba-/ 'to put or load all in' (add TNT 17rdp and 23rdp); /-w$_1$ara=yar-bu-/ 'to wash all'; /=yura-/ 'to take all away' (add MT 21). Additional items not in the dictionary but attested in Hughes' texts are /-w$_1$ara-n^{g}u=buddha-/ 'to cook all' (TNT 21); /-w$_1$ara-n^{g}u=jalburdi-/ 'to put all in water' (MT 6); /-w$_1$ara=lhan^{g}arma-/ 'to reach or find all' (MT 3 rays, MT 14 boomerangs hitting boy and dog); /-w$_1$ara=ma-/ 'to get or take all' (TNT 7, MT 9); /-w$_1$ara=mindaga-/ 'to hurt all over' (MT 13 ?); /-w$_1$ara=munduga-/ 'to gather all' (MT 14 and 22); Caus /-w$_1$ara=rabi-jga-/ 'to cause it all to fall' (TNT 26); /-w$_1$ara=rad-bu-/ 'to tie up all' (TNT 26 with unusual reduplicated Past$_1$); /-w$_1$ara:='dadi-/ 'to take all up slope' from /=adadi-/ (TNT 36); /-w$_1$ara:='gamba-/ 'to roast all' (MT 26); Caus /-w$_1$ara:='gi-jgi-/ 'to take all back' (TNT 25 and 26); /-w$_1$ara:='nbi-/ 'to do to all' from /=w$_1$anbi-/ (TNT 3); /-w$_1$ara=gurya-/ 'to pour all' (TNT 2) from /-w$_1$araG-/ and /=w$_1$urya-/; /-w$_1$ara=yarawa-/ 'to throw all' (MT 26); /-w$_1$ara=yijga-/ 'to point to all' (TNT 25); and /-w$_1$ara-n^{g}u-ba=jiyi-/ 'to show all to' (TNT 24) from /=yiyi-/ focusing on direct object.

In general, multiplicity of semantic object and spatial distribution are fairly interchangeable, so in many of the exx. just mentioned more than one gloss is possible (in different contexts). When the sense is object multiplicity, the object in question is normally nonhuman; this is not an absolute rule, but it is unusual for any Mult prefix to be used for human object (except in spatial distribution sense, as in 'he hit me all over').

Related to this is the fact that /-w$_1$ara-/, in its object multiplicity usage, refers to semantic direct object (patient) even when the object marked in the verb's pronominal prefix is the semantic indirect object. For example, the final ex. on the preceding page, 'to show all to', has the viewer as object in the pronominal prefix, but Mult /-w$_1$ara-/ indicates multiplicity of things shown (at least in the relevant textual ex.). This is also the case with /-w$_1$ara=maga-/ 'to tell lots of things to', also mentioned on the preceding page. As pointed out in §10.11, when /-w$_1$ara-/ is preceded by Benef /-aG-/ (§10.2), so that the pronominal prefix must have an indirect object as the object marker, /-w$_1$ara-/ again refers not to this semantic indirect object but to the semantic (or underlying) direct object. Moreover, some intransitive verbs which have "transitive" sense (implying acting on some entity) seem to have Mult /-w$_1$ara-/ focus on the implied object or product, as in the previously cited /-w$_1$ara-maya=maya-/ 'to sing [several things]' (not *'all [singers] to sing'). /-w$_1$ara-/ thus provides evidence for a level of pre-morphological, essentially semantic grammatical relations. See also §15.9.

/-w$_1$ara-/ or variant /-w$_1$araG-/ may also co-occur with NAdj, generally in predicative function (i.e., with intransitive pronominal prefix). Exx. are /-w$_1$ara-n^{g}u=bujurbujur/ 28.5.4/5pred, /-w$_1$ara-n^{g}u-=ji:ji/ 28.7.1pred, and /-w$_1$ara-gundagunda/, all meaning basically 'to be diseased (visibly)'; antonym /-w$_1$ara-maji-maji/ 43.10.6 'healed'; /-w$_1$ara-n^{g}u=jarmayarmaj/ '[all] to be long' (66.1.3/4pred), /-w$_1$ara=lharan^g/ '[all] be ripe or cooked' (TNT 25pred), /-w$_1$ara=marbuy/ 'to know much' (54.1.6pred), /-w$_1$ara=waba:ru/ '[all] to be smooth-skinned' (125.5.3pred), /-w$_1$ara:-'mbalaman/ '[all] good' (100.7.5, 143.1.5), /-w$_1$ara=gurag/ '[all] left aside' from //-w$_1$araG=w$_1$urag// (126.4.3pred, 143.13.3pred), /-w$_1$ara-guril/ 'rotten' from //-w$_1$araG-w$_1$uril//, and /-w$_1$ara=gayag/ '[all] to be bad-tasting' (64.6.2) from //-w$_1$araG=w$_1$ayag//. Note the range of meanings contributed by the Mult prefix here.

/-w$_1$ara-/ is not normally used with nonadjectival (common) nouns (Nc), but it may occur with a small number of flora-fauna life-form terms meaning 'all kinds of', as in /-w$_1$ara-n^{g}urudhu/ 'all kinds of land animals', /-w$_1$ara-n^{g}ujija/ 'all kinds of fish', and /-w$_1$ara-maln^{g}ar/ 'all kinds of small rays' (e.g., for the latter see 109.3.1, 109.7.3). See §4.17 on this point. We can also get /-w$_1$ara-/ with /-algur-yan^{g}i/ 'lots'; see end of §13.3. These forms are not predicative.

We now give a complete set of known cases of allomorph /-w$_1$araG-/ instead of /-w$_1$ara-/, most of them already mentioned in the lists above:

/=w$_1$alhalha-/ 'to shake spear' ⟶ /-w$_1$ara=galhalha-/
/=w$_1$a:la-/ 'to combine' optionally ⟶ /-w$_1$ara=ga:la-/

/=$w_1$allha-/ 'to float' → /-$w_1$ara=gallha-/ (or internal rdp. /-$w_1$ara-gallha:='llha-/
/w_1a$\underline{l}$a$\underline{l}$ij/ 'wet'[NAdj] → /-$w_1$ara-ga$\underline{l}$a$\underline{l}$ij/
/=$w_1$aya-/ 'to be hurt' → /-$w_1$ara=gaya-/
/$w_1$ayag/ 'bad-tasting' → /-$w_1$ara-gayag/
/w_1u$\underline{r}$ag/ 'left aside'[NAdj] → /-$w_1$ara-gu$\underline{r}$ag/
/w_1u$\underline{r}$il/ 'rotten' → /-$w_1$ara-gu$\underline{r}$il/
/=w_1u$\underline{r}$ya-/ 'to pour on' → /-$w_1$ara=gu$\underline{r}$ya-/

Note that all known exx. involve /w_1/ → /g/ at the beginning of the following stem, by Hardening P-18.

It remains to mention a handful of minor Mult prefix forms, each used with one or two roots only.

/-lhagara-/ is used with /=yi-/ 'to sleep', its Caus form /=ya-n^gi-jga-/ 'to put (someone) to sleep', and /=n^gawi-'-/ 'to die'; see dictionary entries for textual exx. (of which there are many). The prefix indicates multiplicity of sleepers or deceased; note that /-lhagara-/ thus expresses the semantic similarity between 'to sleep' and 'to die'. Perhaps by analogy to /-lhagara=ya-n^gi-jga-/ 'to put [all] to sleep', we have an ex. of /-lhagara=lha-n^gi-jga-/ 'to make [all] stand up' (MT 28), though /-lhagara-/ is not attested with the simplex root /=lha-/ 'to stand' (cf. below). Except for the Caus forms, /-lhagara-/ occurs (with 'sleep' and 'die') where we might expect /-n^garaG-/, but where perhaps /-n^garaG-/ is avoided because of its implication of voluntary control.

/-$w_1$aragara-/ (historically, a frozen reduplication) is used with /=lha-/ 'to stand, to stand up' (many textual citations given in dictionary s.v. /=lha-/). In the cpd. /-$\underline{l}$an^g-garagara=lha-/ 62.7.2/3 'to stand up in the form of clouds[/-$\underline{l}$aN-/]', it appears that /-$w_1$aragara-/ is closely bound to the verb root, so the cpd. initial precedes the entire sequence (this is unusual with Mult prefixes, though occasionally attested with /-$w_1$ara-/).

/-$w_1$aragara-/ is also used with transitive /=a:ru-/ 'to leave, abandon' (several textual citations s.v. /=a:ru-/, to which we may add TNT 29 and perhaps MT 22). The reference is to multiplicity of direct object, rather than agent, hence 'to leave [them] all'. Cpd. /-n^gara$\underline{n}$-garagara:='ru-/ 'to leave all the honey', where /-n^gara$\underline{n}$-/ is used instead of the more correct /-n^garag-/ 'honey', shows the same adhesion of /-$w_1$aragara-/ to verb root just noted for /-$w_1$aragara=lha-/. Although 'to stand' and 'to leave' do not constitute a natural semantic subgroup, the subject of 'stand' and the object of 'leave' have the common feature of being positionally stable.

Another uncommon Mult prefix is /-$w_2$algara-/, variant /-$w_2$algaragara-/, used only with /=ra-/ 'to quarrel angrily with, shout at'; in the texts the one citable form happens to be the Recip /-$w_2$algara=ra-wa-n^yji-/ 'to wail (or shout) at each other' 71.16.1.

The various Mult prefixes function morphologically much like compound initials, e.g., in triggering use of compound-final allomorphs (due to suppletion or morphophonemic rules) of following stems. However, /=w_2u-/ 'to hit' and its suppletive compound-final replacement /=$w_2$adja-/ have an unusual pattern: in the regular

transitive form we get Mult /-$w_1$ara=wadja-/ 'to hit all' (or 'to hit all over'), but in the Recip we get /-$w_1$ara=wi-n^yji-/ 'to all (or both) hit each other' (textual citations in the respective dictionary entries). Thus /-$w_1$ara-/ acts as a compound initial in the transitive but not Recip forms.

This concludes our factual exposition of matters involving the Mult prefixes. A few words are in order about the relationship between these morphemes and other markers of plurality. Except for human nouns, number is not specified in the basic inflectional apparatus of nouns (NC prefixes) or verbs (pronominal prefixes). There are a few number suppletions, but not many. Mult prefixes, which are optional (usually emphatic), therefore often represent the only way to mark any kind of plurality for nonhuman NPs. This explains why a morpheme like /-$w_1$ara-/ is useful, since it permits an overt specification of plurality (as one of its meanings) for nonhuman intransitive subjects and direct objects. Even /-n^garaG-/, which is used for mostly human intransitive subjects and is thus more likely to be redundant, can be used with some nonhuman NPs and may thus be the only marker of subject plurality in the clause. Even when redundant (in that plurality is already marked), these Mult prefixes have emphatic functions, for example indicating that all members of a group engaged in some action, and of course the spatial sense is a bonus.

In addition to the Mult forms we have mentioned, there are plural derivational markers, generally with irregular, lexically controlled distribution. For nouns see §4.16 and the discussion of collective reduplication in §4.14; for verbs (using some of the same morphemes) see §14.20.

10.5 Reflexive suffix //-i-//.

In our analysis, Refl verb forms like /=dhidi-'-/ 'to be shut off' from transitive /=dhida-/ 'to shut off, block' are represented as consisting of the underlying (input) transitive plus suffix //-i-//, with part (a) of VV-Contraction P-49 applying to the underlying vowel sequence at the boundary. However, since the resulting vowel is not always long, the basic effect of reflexivising the verb is to change the stem-final vowel to surface /i/ and to require inflectional suffixes of the I_1 class (Table 11-2). In other words, the asymmetrical derivational layering relating input to Refl verb form is not overtly obvious in the same way as it is for all other derivations discussed in this chapter.

We should also mention that some other derivation-like relationships consist solely of altering inflectional classes. In §11.8 we discuss intransitive N^gA_1 vs. transitive A_2 pairs like N^gA_1 /=bura-/ 'to sit' and A_2 /=bura-/ 'to put down' (with different inflectional endings), and also some cases of intransitive A_2 vs. transitive I_1 like /=ja$\underline{l}$burda-/ 'to plunge in (water)' and /=ja$\underline{l}$burdi-/ 'to put into water'. Note that this latter alternation (limited to about three roots) is the opposite of alternations between transitive A_2 verbs like /=ma:$\underline{n}$dha-/ 'to make' and their Refl counterparts like /=ma:$\underline{n}$dhi-'-/.

Refl verb forms function to derive mediopassive intransitive stems from input transitives. This label is designed to include

reflexive actions like 'to coil self up' and 'to gouge out one's own eye(s)', and also agentless passives like 'to be shut off', whether specifying actions or resulting states.

While this description applies to the majority of attested Refl forms, a minority have a different meaning: antipassive (or, following Dixon, false reflexive). In this usage, the underlying transitive loses its direct object, not its agent. The antipassive usage is limited to a few verbs; those I am aware of are these:

/=magi-'-/ 'to tell story' < /=maga-/ 'to tell (person)'
/=$w_1$anbi-'-/ 'to do it' < /=$w_1$anbi-/ 'to do (it)'
/=$w_1$urami-'-/ 'to go around' < /=$w_1$urama-/ 'to go around (it)'
/=yalgiwi-'-/ 'to go past' < /=yalgiwa-/ 'to pass (it)'
/-yimun^y=dharmi-'-/ 'to track' < /-yimun^y=dharma-/ 'to track (it) by smell' (/=lharma-/)

There are also a few irregular Refl forms including some with intransitive inputs. The intrans. input type is seen in /=adabadaba:dhi-'-/ and /=adabadaba:dha-/(A_2), both 'to be long time'; /=$w_2$alhi-'-/ 'to have opening, gape' if from /=$w_2$awalha-/ 'to be open' (for uncompounded /=$w_2$alhi-'-/ see now TNT 5); and /-ga=garaji-'-/ (frozen rdp., synchronically reduplicated as /-ga-ga=garaji-'-/) 'to jump (at someone)' related to /=garaja-/ 'to jump'. Other semantically irregular Refl forms are /=din^{g}gi-'-/ 'to be pleased or sated' from /=din^{g}ga-/ 'to copy, imitate'; /=manbagi-'-/ 'to get lots, get a big one' from /=manbaga-/ 'to do (e.g., spear) repeatedly to'; frozen rdp. /-rawa=ra-wi-'-/ 'to train, practice' from /=ra-wu-/ 'to try (it)'.

It can be seen that, both phonologically and semantically, Refl forms differ from other derivations--phonologically because the Refl suffix is not overtly clearly segmentable, semantically because of a fairly high degree of lexically conditioned functional variation.

However, the mediopassive function (described above) is by far the most common. Some exx. with representative glosses (usually there are two or more contextually valid English glosses) are:

/=barumi-'-/ 'coil self up' or 'be coiled' < /=baruma-/ A_1
/=dhurmi-'-/ 'be squeezed' (also 'be rusty') < /=dhurma-/ A_1
/=jiji-bi-'-/ 'to hide self, be hidden' < /=jiji-bu-/ MA_1
/=lhamalhami-'-/ 'boast' < /=lhamalhama-/ 'praise' A_3
/=n^{g}andi-'-/ 'sink in water' < /=n^{g}anda-/ A_2
/=balhi-'-/ 'to cut self up' < /=balhu-/ U_1
/=a:yi-'-/ " < /=a:yu-/ U_1
/=bajirijirin^{g}i-'-/ 'to poke self in eye' < /=bajirijirin^{g}a-/ YA
/=w_1/$w_2$arwarwi-'-/ 'be dragged' < /=w_1/$w_2$arwarwu-/ RA
/=yu-n^{g}i-'-/ 'grow, be produced' < /=yu-/
/=ni-'-/ 'see self' < /=na-/

Others can be found in other dictionary entries, and in the tables of Chapter 11.

Pursuing our point that Refl forms are vulnerable to lexical specialisation, we should mention that a few Refl forms are high-frequency stems, rather more common than the supposedly underlying transitive. The two best exx. are /=lalagi-'-/ 'to get up' (also loosely 'to get up and go') < /=lalaga-/ 'to raise', and /=n^{g}awi-'-/ 'to die, be covered up' from /=n^{g}awa-/ 'to cover up'. /=n^{g}awi-'-/ is

also irregular in permitting Nonpast$_1$ allomorph /-n^g/, usually characteristic of the I_2 class (other Refl forms are I_1), hence /=n^{g}awa-'-n^g/ with V-Ablaut P-38 converting //i// into /a/.

While the Refl is basically a productive formation (for trans. roots), it appears that some verbs do not regularly take this derivation. For ex., /=ra-/ 'to spear, to throw spears at' (one of the most common verbs in my texts) is never attested with Refl; to express the sense 'be speared' either a different verb is used, or the Recip (§10.6) is used, hence /=ri-n^{y}ji-/ 'spear self' (usual meaning: 'spear each other'). In general, monosyllabic verb roots either do not have or make little use of Refl derivations. In addition, verbs already of the I_1 class usually do not have distinct Refl forms (which in most cases would differ formally only in having intrans. rather than trans. pronominal prefixes).

For /=na-/ 'to burn' there is an intrans. counterpart /=nagi-/ 'to be on fire', possibly a Refl form based on an extended stem */=na-n^{g}a-/ (cf. augmented Nonpast$_2$ /=na-n^{g}a-na/ 'burns[trans.]') with (dissimilatory) denasalisation of */n^g/ to /g/; for a similar irregular denasalisation cf. P-23.

In addition to adding Refl /-i-/ to a transitive root, a few other lexicalised trans./intrans. stem doublets are created by usage of minor suffixes /-ja-/ and /-dha-/ (§10.10). In addition, for indefinite agent one can use transitive forms with 3Pl/WARA subject marker in verbs (WARA is indistinguishable from 3Pl in pronominal prefixes, and in any event can be used for indefinite human collectivity, §4.10, §4.12).

10.6 Reciprocal suffix /-n^{y}ji-/.

Recip verb forms with suffix /-n^{y}ji-/ (before which the root-final vowel may change to /i/ by V-Fronting P-50, depending on verb class) are derivatives inflected with endings of the I_2 class (Table 11-2).

As our label suggests, Recip forms often indicate reciprocal transitive activity, as in /=na-n^{y}ji-/ 'to see each other', /=ri-n^{y}ji-/ 'to spear each other' (/=ra-/), /=adhuga-n^{y}ji-/ 'to stab or wound each other', and /=yalgiwa-n^{y}ji-/ 'to pass by each other'. In this sense, two or more agents each engage in the action, and they are also the objects of the component actions (X sees Y, Y sees X).

However, there are also other meanings, and the Recip is somewhat different from similarly labeled forms in other languages. To begin with, there is a unilinear collective sense (A→B→C...) in which the individual component actions are one-way but in which they add up (like links in a chain) in such a way that all parties can be thought of as collectively associated by the actions. Good exx. of this, referring to extended patrifiliative and matrifiliative sequences, are /=lhama-n^{y}ji-/ 'to beget each other' (i.e., to form a patriline like FaFa→Fa→Ego→Ch→SoCh) and /=yaba-n^{y}ji-/ 'to give birth to each other' (i.e., to form a matriline like MoMo→Mo→Ego→Ch→DaCh). In exx. like /=ja:du-ga-n^{y}ji-/ 'to finish[kill] each other off' (s.v. /ja:dug/ in dictionary), this unilinear characteristic of component events may also be discerned, though less clearly. There is also a high-frequency, lexically

specialised Recip form /=lharma-n^{y}ji-/ 'to chase each other' which may also mean simply 'to be engaged in a chase' (subject may be plural for both chaser and chased, may be just chaser, or may be just chased). This is often expanded with Comit prefix as /-an^{y}ji=lharma-n^{y}ji-/ 'to be engaged in a chase with (the other party)'. In this instance, the Recip derivative focuses on the joint involvement of the chaser and chased in the activity, and does not usually have the expected sense 'chase each other' (which in most contexts is illogical).

In addition, Recip derivatives may simply indicate joint involvement, and in this sense the component events may be intransitive, as long as the combination of component events (with different agents) forms some kind of a larger pattern. Usually the translation is with 'together'. Thus /=lhagarari-n^{y}ji-/ '(group) to make noises together'; /=lidi-n^{y}ji-/ '[dogs] to frolic together'; /=milhi-n^{y}ji-/ 'to shine together', /=n^{g}andardi-n^{y}ji-/ 'to snore together'.

If the underived transitive input verb normally takes a semantic indirect object as the object marker in the pronominal prefix, the Recip derivative (in reciprocal-transitive-activity or unilinear-collective sense) is also associated with the relationship between agent and indirect object: /=yi-/ 'to give to, to provide to', Recip /=yi-n^{y}ji-/ 'to give to each other, to share'. For similar patterns with Benef derivatives as inputs to Recip, see §10.11.

As mentioned in §10.5, since some verbs (mostly monosyllabic roots) seem to avoid the Refl suffix, occasionally a morphological Recip is used in reflexive sense: /=w$_2$a-n^{g}i-n^{y}ji-/ 'to bite self' or 'to bite each other' from /=w$_2$a-/; /=ri-n^{y}ji-/ 'to spear self' or 'to spear each other' from /=ra-/. In the case of /=yaba-/ 'to give birth to' or 'to put inside', in the latter sense we get a distinction between Refl /=yabi-'-/ 'to enter (dwelling, etc.)' and Recip /=yaba-n^{y}ji-/ 'to get into vehicle (e.g., canoe)' (both Refl and Recip may take singular subjects; for unilinear-collective 'to give birth to each other' cf. above).

Parallel to the five or so cases of lexicalised antipassive sense for Refl verbs (§10.5), we seem to get antipassive (Dixon's "false reciprocal") sense in /=w$_2$argu-ri-n^{y}ji-/, which can mean 'to carry (unspecified load)' as in 59.10.2 as well as 'to carry each other (on shoulders)'; note that the latter sense is semantically awkward since carrying on shoulder is intrinsically nonreciprocal.

Idiomatic sense is found in /=argi-n^{y}ji-/ 'to engage in a race' from /=argi-/ 'to pull', and perhaps in /=munduwa-n^{y}ji-/ 'to assemble, meet' from /=munduwa-/ 'to examine, sort'. Phonological irregularity is seen in /=jurjurga-n^{y}ji-/ 'to push each other' from /=ju(r)jurgi-/ (note shift of /i/ to /a/) and in /=w$_2$ula-gi-n^{y}ji-/ 'to be paired, [two] to be together' from /=w$_2$ula-ga-/ (root /w$_2$ula-/) 'to do [something] twice to' (/-ga-/ has A$_1$ paradigm and thus should not shift /a/ to /i/ before /-n^{y}ji-/).

To indicate 'to become X together' (X some NAdj designating an adjectival quality), it seems that the NAdj is first converted into a transitive (factitive) verb with /-w$_1$a-/ (§10.9) and then Recip is added: /bujbuj/ 'withered, dried' → /=bujbuj-ga-/ 'to wither [something]' → /=bujbuj-ga-n^{y}ji-/ 'to become withered together' (108.2.1).

The Recip formation is rather productive; there are many verbs which do not have it but this seems to be because it would not make much sense logically with them (rather than because of arbitrary lexical restrictions). Often a Nunggubuyu Recip form corresponds to a distinctive English lexical item: /=w$_2$i-n^{y}ji-/ 'to hit each other, fight' (/=w$_2$u-/); /=ri-n^{y}ji-/ 'to spear each other, have spear fight'; /=lhan^{g}arma-n^{y}ji-/ 'reach or find each other, meet'; /=ra-(w)a-n^{y}ji-/ 'to swear at each other, quarrel'; /=yardi-n^{y}ji-/ 'to touch each other, be closely bunched'; /=w$_1$uruma-n^{y}ji-/ 'to buzz around each other, swarm'; /=a:ru-n^{y}ji-/ 'to abandon one another, disperse'.

Occasionally, however, a semantically reciprocal expression may be achieved by simply repeating the transitive verb with different subject and object (A verbs B, B verbs A), perhaps with an additional clause containing /n^{g}un^{y}ju-n^{g}un^{y}ju/ 'alike, equally, reciprocally'. An ex. is 78.1.7/8 ('...he [gives] his niece, [an] exchange, they are reciprocal, he will give [her] to them; they will give [a wife] to him, and as for him he will give [his niece] to them, [an] exchange').

For information on co-occurrence of Recip with other derivational affixes (and logical relationships in these combinations), see §10.11.

10.7 Causative suffix /-jga-/, /-jgi-/.

The usual Caus suffix is /-jga-/, though there is a rare, archaic variant /-jgi-/. The input stem to which the suffix is added is usually an intransitive verb stem.

It is possible that /-jga-/ is really /-j-/, a nominalising suffix (§14.16) plus Factitive /-w$_1$a-/, which is added to NAdj to create a transitive verb ('to cause to be[come] NAdj'). However, this analysis (while perhaps correct historically) is very doubtful synchronically, since /-j/ is now rare as a nominaliser and since when it does occur as such it sometimes has phonological effects (such as changing the root-final vowel to /u/) which are absent with /-jga-/. The regular phonological effect of /-jga-/ (and /-jgi-/) is to change the preceding root-final vowel to /i/ by V-Fronting P-50.

The only exx. of /-jgi-/ are these:

/=a:gi-jgi-/ 'to send back' < /=a:gi-/ 'to go back'

/=rabali-jgi-/ 'to take out' < /=rabala-/ 'to come out'

We should also mention /=ya:rijgi-/ 'to transport, convey', which may be related to /=ya-/ 'to go' (Nonpast$_2$ /=ya:-ri:/ with apparent *-ra- augment). In the case of /=rabali-jgi-/, the variant /=rabali-jga-/ is also attested, but another form /=rabali-/ 'to take out' is more common than either (for trans. /i/ corresponding to intrans. /a/, see §11.8).

In addition to the /i/ vs. /a/ alternation just mentioned, we should add that causative-like forms from intransitives of the N^{g}A$_1$ verb class (§11.8 and Table 11-4), many of which are stance verbs like 'to sit', are commonly created simply by using A$_2$ instead of N^{g}A$_1$ inflectional paradigm: /=bura-/ 'to sit[N^{g}A$_1$]' or 'to put down [A$_2$]', etc.

We now turn to a closer examination of the meaning and distribution of /-jga-/. The most usual meaning is causal/permissive, hence 'to make [it/him] VERB' or 'to let [it/him] VERB'. The verb

to which /-jga-/ is added is normally intransitive, but the Caus derivative is transitive, with the causal/permissive agent the subject and the underlying downstairs subject becoming direct object. Syntactically, the /-jga-/ Caus verb is like a lexical transitive verb (e.g., regarding case marking of independent NPs in the clause). (For combinations of /-jga-/ with other derivational affixes, see §10.11, below.)

For the phonology and stem-augmentation of roots before /-jga-/, see the paradigms in Chapter 11. Some exx. of Caus forms in causal/permissive sense are: /=lha-n^{g}i-jga-/ 'to erect' < /=lha-/ 'to stand' N^{g}A$_2$; /=dhadharbi-(j)ga-/ 'to cause to shift position' < /=dhadharbi-/ I$_1$; /=dhiridi-jga-/ 'to take [it] down' < /=dhirida-/ 'to go down' A$_2$; /=murmbuli-jga-/ 'to heat' < /=murmbula-/ 'to be hot' A$_2$; /=n^{g}an^{y}ga-yi-jga-/ 'to cause to breathe' < /=n^{g}an^{y}ga-/ YA; /=yarami-jga-/ 'to chase away' < /=yarama-/ 'to flee' A$_1$. Labels like N^{g}A$_2$ and I$_1$ indicate inflectional class of input verb (Chapter 11).

Apparent exx. of Caus from transitive input are these: /=guldhi-jga-/ 'to ruin things for' < /=guldha-/ 'to make [culprit] face punishment ordeal'; /=milgi-jga-/ 'to cause [someone] to do it to all of them' < /=milga-/ 'to do it to all of them'. However, in one or two exx. which might look like Caus from trans. root, it may be that the form is really of the type Verb-Refl-Caus, where the Refl has no surface phonological effect (Refl basically shows up as change of verb-final vowel to /i/, but this is done anyway before /-jga-/ by V-Fronting P-50). Thus /=n^{g}andi-jga-/ 'to cause [someone, something] to sink in water' (MT 30), which may look superficially as /-jga-/ added to trans. /=n^{g}anda-/ 'to throw [it/him] into water', but which is semantically /-jga-/ added to Refl /=n^{g}andi-'-/ 'to sink in water' (attested as such TNT 15 and 37, and with a cpd. initial also MT 30). Since //=n^{g}anda-i-jga-// with Refl suffix is also phonologically compatible with the output /=n^{g}andi-jga-/, it is reasonable to assume that this really is Verb-Refl-Caus, and hence rewrite it as /=n^{g}andi-'-jga-/.

While there are thus very few real exx. of trans. verb input, there are other unusual formations. There are a few apparent exx. of /-jga-/ added directly to noun roots, although the regular way to make a transitive (factitive) verb out of a noun is to add Fact /-w$_1$a-/ (§10.9). The attested exx. are /(-a)-n^{g}un^{y}ju=n^{g}un^{y}ji-jga-/ 'to recognise' from /n^{g}un^{y}ju/ 'equal, alike'; /-lhud=gari-jga-/ 66.3.4 'to make [someone] deaf' from /lhud-gari/ 'deaf' (cf. 67.2.2) with root //ari//; and /=w$_2$ungali-jga-/ 'to induce [someone] to exchange' from abstract noun /wungali/ 'exchange, trading'.

In addition to the causal/permissive sense, of which a few exx. have been given above (more can be found in dictionary entries), there is a promotion-to-object usage of /-jga-/ with some verbs. In this usage, there is an underlying intrans. verb with just an agent in its case frame; the derived Caus form keeps this NP as agent but adds a direct object (the pronominal prefix before the Caus verb stem must now be transitive). The only clear exx. of this are these: /=w$_2$ann^{g}i-jga-/ 'to dance [totemic dance] of [totem, dir. obj.]' from /=w$_2$ann^{g}a-/ 'to dance'; /=yami-jga-/ 'to say [quotation] to [someone, dir. obj.]' from /=yama-/ 'to say [quotation]'; /=yamin^{g}gari-jga-/ 'to do what to [someone, dir. obj.]?' from interrogative verb /=yamin^{g}gari-/ 'to do what?' (§13.9).

There is no other derivational affix used in this promotion-to-object function. However, a few verbs can be used in either intrans. or (object-promoted) trans. function with no change in suffixation; the pronominal prefix, however, must mark both subject and object in the object-promoted form. The exx. are /=yambi-/ 'to speak' or 'to speak to [someone]'; /=milgi-/ 'to travel, visit' or 'to visit [someone, dir. obj.]'; /=maya-/ 'to sing' or 'to call [someone by name, usually based on a songword]'; /=w$_2$ann^{g}a-/ 'to dance' or 'to tread on' (for /=w$_2$ann^{g}i-jga-/ cf. above). It is less easy to find such underived intrans./trans. doublets where the trans. form has causal/permissive sense; we can cite only /=munduga-/ 'to come together, assemble' and 'to gather [them] into heap or group'.

A semantic pattern which does not fit into the above categories is seen in /=lalma-/ 'to dawn' (with nonhuman ANA class subject) and Caus /=lalmi-jga-/ 'to stay up until dawn' (human trans. subject, ANA class marker as direct object).

Caus /-jga-/ creates derived stems which have A$_1$ inflectional endings (Table 11-1), while uncommon variant /-jgi-/ has I$_1$ endings (Table 11-2). The /j/ in /-jga-/ and perhaps /-jgi-/ is sometimes dropped (compare P-26, Palatal-Deletion) but even so it may leave behind an indirect effect since the root-final vowel which precedes it is fronted to /i/ by V-Fronting P-50 if it is not already /i/.

10.8 Inchoative verbalising suffixes /-ma-/, /-w$_1$i-'-/, /-w$_2$i-/, /-dhi-/.

These suffixes, of which /-ma-/ is by far the most common, convert nouns (normally NAdj, §4.2) into intransitive verbs which can be glossed 'to become X' or 'to be X'. These verbalised forms most often indicate processes rather than states, so the term "Inchoative" (abbrev. Inch) is used.

An NAdj like /run^{g}gal/ 'big' can be described as having nominal, partially verbalised, and fully verbalised forms:

nominal:	/ana-run^{g}gal/ 'the big one[ANA class]'
partially verbalised:	/wu=run^{g}gal/ 'it[ANA] is/was big'
fully verbalised:	/wu=run^{g}gal-ma-n^{y}/ 'it became big'

The partially verbalised form shows intransitive pronominal prefix (as opposed to optional NC$_{infl}$ prefix in nominal function), but has no verbal inflectional suffix. The fully verbalised form has the same intrans. pronominal prefix but also has /-ma-/ and an inflectional suffix, here Past$_1$ (for Past Punctual Positive).

Derivatives with /-ma-/ take inflections of the A$_1$ class (Table 11-1, below). Other Inch suffixes, /-w$_1$i-'-/ (really the Refl of Factitive /-w$_1$a-/, §10.9), /-w$_2$i-/, /-dhi-/ have endings of I$_1$ class (Table 11-2).

The partially verbalised form shown above is referred to in this grammar as predicative NAdj (§4.2 and elsewhere). It indicates a quality or state rather than a process. The Inch verbalisation usually (but not always) indicates a process, whether completed or not; less often it too may indicate a state.

The distinction between predicative NAdj and Inch verbalisation

is partly neutralised in negative contexts. Thus, to say 'it was not big', we cannot use an unsuffixed predicative NAdj, but must use the appropriate form of Inch /-ma-/ even when referring to a state:

/wa:='ri an^{g}gu=run^{g}gal-ma:-'/ 'it was not big'

Here we begin with Neg word (acting as a preverb) /wa:='ri/, then add the Past Negative form of the Inch verb, changing the pronominal prefix from A series /w$_1$u-/ to B series /an^{g}gu-/ and using the Past$_2$ inflectional suffix (see Chapter 8 for the interaction of these affixal slots). For more details on negation, see §15.6, including Table 15-1.

The most productive Inch suffix is /-ma-/, and there are many Inch/Fact pairs like /=run^{g}gal-ma-/ 'to become big' and /=run^{g}gal-wa-/ 'to make [it] big' (for /-w$_1$a-/ see §10.9). The exx. which can be cited from the dictionary are these: /=bujbuj-ma-/ 'dry out, become dried or withered'; /=bulbar-ma-/ 'become dark red'; /=bun^{g}gawa-ma-/ 'become boss', /=dadar-ma-/ 'become dried up or burnt' (/dadarg/), /=lhara-ma-/ 'become ready to eat, ripe, cooked' (/lharan^{g}/), /=maji-ma-/ 'become healed', /=marbuy-ma-/ 'learn, become knowing', /=nini-ma-/ 'become soft or fine' (/ninig/), /=n^{g}ambara-ma-/ 'grow up, become adult', /=run^{g}gal-ma-/ 'grow, increase, become big', /=w$_2$adawadan-ma-/ 'become tough, strong', /=w$_2$adbir-ma-/ 'dry up', /=ala:di-ma-/ 'become bad' (rare in this form), /=an^{y}baj-ma-/ 'change, become different', /=w$_1$aya-ma-/ 'become bitter, taste bad' (/w$_1$ayag/), /=w$_2$iri-ma-/ 'become alive, come back to life, be (still) alive', /=w$_2$ulbul-ma-/ 'become dry', /=yiwan^{g}gu-ma-/ 'get old', and /=yiwun^{y}-ma-/ 'become cool' (/yiwuj/).

Since some NAdj, in nominal function, show special affixes or other stem-changes for gender and/or number, we have to ask whether these are carried over into Inch forms, or whether only the simplest form of the NAdj stem is used in the Inch. In general, such extra stem-changes are likely to be redundant in verbalisations, since verbs have a fairly complete set of noun class categories in their pronominal prefixes (and can, if necessary, mark plurality even for nonhuman NCs by using a Multiple prefix, §10.4).

There are some exx. showing that carryover of special stem-changes is possible in Inch forms. For ex., alongside /=n^{g}ambara-ma-/ 'become adult' in the list above, we can cite a special FSg form /-n^{g}ari=n^{g}ambara-ma-/ 'become adult woman' 74.2.1, compare NAdj forms /n^{g}ambara/ 'adult (esp. male)' and /n^{g}ari-n^{g}ambara/ 'adult female'. Similarly, a Pl marker /mij-/ used with some NAdj (§4.15) can be carried over into Inch forms, hence /-mi=jiwan^{g}gu-ma-/ 71.32.3 'become old men', cf. /=yiwan^{g}gu-ma-/ in the list above (in dictionary entry s.v. /yiwan^{g}gu/, correct /-wa-/ to /-ma-/ in the plural Inch form cited). We do not wish to imply that such stem-change carryover is obligatory; indeed, even in nominal function some pluralisers, especially reduplication, are optional.

From Hughes' texts we can add /-mara=mundur-ma-/ MT 5 'to have one's hand[/maran^{g}/] get heavy'; our attestation of /=w$_2$iri-ma-/ 'become alive' in the list above is also from Hughes (TNT 3).

In a few cases, /-ma-/ is added to a noun which would otherwise be considered a common noun (Nc) rather than NAdj, since the noun does not seem to occur as (unsuffixed) predicative NAdj. The exx.

which can be cited are these:

/=n^{g}agara-ma-/ '[sky] clear up' < /n^{g}agara/ 'bone'
/=n^{g}urudhu-ma-/ 'become bird/animal' < /n^{g}urudhu/ 'bird/animal'
/=adharwara-ma-/ 'become dusk' < /adharwara/ 'dusk'
/=arara-ma-/ 'become daytime' < /arara/ 'daytime'
/-run^{g}=arbidi-ma-/ 'behave any way' < /arbidi/ 'any way' §12.14

The first of these shows sharp semantic shift, but /n^{g}agara/ 'bone' in NC$_{der}$ form /(an-)u-n^{g}agara/ can also mean 'clear sky'. Note that this, and two of the four other forms, refer to weather and time of day (all taking ANA class subject marker).

A form /=n^{y}in^{y}i-ma-/ 'become fat, obese' is possibly a frozen combination involving /-ma-/, but the simplex is not recorded. It is likely that many other A$_1$ class verbs ending in /ma-/ are historically Inch forms.

It is important to distinguish Inch /-ma-/ from transitive verb /=ma-/ 'to get, pick up, take' (inflectional class A$_3$). The two are distinguishable by respective usage of intransitive vs. trans. pronominal prefixes, and by having different paradigms (Chapter 11).

Despite the relative productivity of /-ma-/, there are some NAdj stems which do not permit it, or in any event prefer another Inch formation. For a number of stems, the usual Inch is formally the Refl form of Fact /-w$_1$a-/, hence /-w$_1$i-'-/:

/=ja:du-gi-'-/ 'become finished' < /ja:dug/
/=milyir-gi-'-/ 'become decorated' < /milyir/
/=ala:di-wi-'-/ 'become bad' < /ala:di/
/=an^{y}baj-gi-'-/ or /=an^{y}bij-gi-'-/ 'change' < /an^{y}baj/ cf. P-50

In /=milyir-gi-'-/ we see the occasional use of /-ga-/ instead of /-w$_1$a-/ even when no preceding stop or nasal is present to induce Hardening P-18. For /=ala:di-wi-'-/ the pronunciation is often /=ala:di-yi-'-/ by P-9 and P-10.

The form in /-w$_1$i-'-/ is also found in a few combinations which are not real semantic inchoatives from NAdj, and one can make the general point that /-w$_1$i-'-/ is a fairly flexible verbaliser. The stem may be a nonadjectival noun and the meaning is sometimes unpredictable:

/=bagumid-gi-'-/ 'commit theft' < /bagumid/ 'thief'
/=jambar-gi-'-/ 'believe; be true[MT 23]' < /jambarg/ 'true'
/=in^{y}gala-gi-'-/ 'take shortcut' < /in^{y}galag/ 'shortcut'
/=min^{y}n^{g}al-gi-'-/ 'go through crack' < /min^{y}n^{g}alg/ 'crack'
/=aln^{g}a-wi-'-/ 'get bogged in mud' < /aln^{g}a/ 'mud'
/=yimun^{y}-gi-'-/ 'sniff from distance' < /yimun^{y}/ 'snout'

A similar formation may be detected in /=lhagugulhanun^{y}gi-/ 'eat snack', cf. bound (defective) noun root /-w$_1$ugulhanun^{y}-/ 'small intestines' (often eaten as light meal after killing animal); the verb may include /lhaG-/ 'mouth' (archaic compound initial).

From Hughes we may mention /=n^{g}urudhu-wi-'-/ 'become bird/animal' (MT 17) as an equivalent to Inch /=n^{g}urudhu-ma-/ already cited. There is also a common form /=malala:di-wi-'-/ 'be/become ignorant (of something)', which is however really a frozen combination involving /=ala:di-wi-'-/ 'become bad' (above, this page).

Actually, in those cases where the surface form of the suffix is /-wi-'-/ (with no Hardening P-18 to /-gi-'-/), there is some ambiguity as to whether the suffix is really the Refl of Fact /-w$_1$a-/

or a distinct Inch allomorph /-w_2i-/. The latter is clearly distinguishable in a few exx. involving a preceding stop, which triggers //w_2// → /b/ by Hardening P-18. (By contrast, //-w_1i-'-// becomes /-gi-'-/ in this environment.) The exx. of /-w_2i-/ are:

/=nini-bi-/ 'become soft' < /ninig/
/=n^{g}ulun^{g}ulu-bi-/ 'be/become fast' < /n^{g}ulun^{g}ulug/ (TNT 8, 23)
/=$w_1$uruguri-bi-/ 'be slow' < /$w_1$uruguri-/

There is also a verb /=yidur-bi-/ in MT 7 ("-yirdurrbina," Nonpast$_2$ form) meaning something like 'be on bridge of nose' from /yidurg/ 'bridge of nose', but the exact sense is not clear.

It is conceivable that /-w_2i-/ could be thought of as the Refl of /=w_2u-/ 'to hit, kill', which is also used with little specific meaning as a compound final in "auxiliary" function (allowing a preceding uninflectable root to be inflected verbally); see §14.4. However, the actual forms shown above do not resemble the usual /=w_2u-/ compounds, which are almost all action verbs rather than verbalisations of NAdj.

Our final Inch allomorph is /-dhi-/. This is the surface allomorph whether the preceding root ends in a vowel or in a stop or nasal; n^{g}u-Epenthesis P-1 does not apply in the case of preceding stop or nasal (P-1 applies between prefixes and roots, and between compounded roots, but not between final root and suffixes).

The forms are:

/=buga-dhi-/ 'become old' < /bugag/
/=yiwan^{g}gu-dhi-/ 'become old' < /yiwan^{g}gu/
/=lamumun-dhi-/ 'be/become stubborn' < /lamumun^g/
/=abulu-dhi-/ 'become muddy, dirty' < /abulu/ (TNT 2)

Although /-w_2i-/ and /-dhi-/ are obviously unproductive, lexicalised allomorphs, note that there is a degree of semantic patterning (/-w_2i-/ applying to motion, /-dhi-/ to aging).

Finally, we recall that Fact-Recip /-w_1a-n^{y}ji-/ may be used for joint or collective inchoative sense: /=bujbuj-ga-n^{y}ji-/ '[several] to become withered together' 108.2.1. In the case of /=didid-ga-n^{y}ji-/ 'become firm/tight', this form seems to be used even with singular referent.

10.9 Factitive /-w_1a-/, /-ga-/.

This suffix, like Inch suffixes (§10.8, above), is a verbaliser which is usually added to adjectival noun roots (NAdj)..It differs from Inch in that the resulting verb is transitive, and is of the type '[X] make [Y] Adj', i.e., '[X] cause [Y] to be/become Adj'.

The suffix is usually representable as /-w_1a-/, automatically becoming /-ga-/ after stop or nasal by Hardening P-18. However, there are a number of cases of /-ga-/ even after roots not ending in stop or nasal, so we must posit both allomorphs as underlying. The exx. of underlying //-ga-// are these:

/=bandhara-ga-/ 'put [it] in middle' < /bandhara/ 'middle'
/=gagar-ga-/ 'lighten [it]' < /gagar/ 'lightweight'
/=gulin^{g}a-ga-/ 'steer [boat]' < /gulin^{g}a/ 'rudder'
/=milyir-ga-/ 'decorate [it]' < /milyir/ 'decorated'
/=mundur-ga-/ 'be too heavy for [him]' < /mundur/ 'heavy'
/=ambal-ga-/ 'hit [it/him] with thrown object' < /ambal/ 'head'

/=arara-ga-/ 'expose, illuminate' < /arara/ 'daytime'
/=arwar-ga-/ 'put [it] on top' < /arwar/ '[on] top'
/=$w_2$ayway-ga-/ 'flatten' < /$w_2$ayway/ 'flat'
/=$w_2$iri-ga-/ 'keep alive, save life of' < /$w_2$iri/ 'alive'
/=$w_2$iriwiri-ga-/ 'isolate, make alone' < /$w_2$iriwiri/ 'alone'
/=$w_2$ula-ga-/ 'repeat [action] to [him]' < /$w_2$ula-/ 'two'
/=$w_1$ulmur-ga-/ 'circumcise' < /$w_1$ulmur/ 'bachelor'
/=$w_2$ulun^{g}a-ga-/ 'put [it] in middle' < /$w_2$ulun^{g}a/ 'middle'
/=$w_1$uril-ga-/ 'make [it] rotten' < /$w_1$uril/ 'rottenness'
/=yarayara-ga-/ 'make [it/him] skinny' < /yarayara/ 'thin'

Items in this list not in dictionary entries for the noun roots are /=bandhara-ga-/ (TNT 17), /=$w_1$ulmur-ga-/ (TNT 23).

Exx. of surface /-ga-/ which is from //-w_1a-// via Hardening P-18 include /=bujbuj-ga-/ 'dry [it] out', /=ja:du-ga-/ 'finish [it/them] off' (/ja:dug/), and /=mann^{g}ul-ga-/ 'make [it] sacred' (/mann^{g}ulg/), among many others. Surface /-wa-/ is seen in /=gadhuwa-wa-/ 'renew', /=garayara-wa-/ 'clean', and /=marbuy-wa-/ 'teach, cause to know', among many others.

The exx. already given show that "factitive" is not always the correct grammatical function of /-w_1a-/ or /-ga-/. In some cases the input stem is a nonadjectival noun ('middle', 'rudder', 'head', 'daytime', '[on] top', the resulting verb indicating some activity associated with this concept. Others are these:

/=galij-ga-/ 'make fun of' < /galij/ 'fun'
/=lirbi-wa-/ 'fool with, take lightly' < /lirbi/ 'joking'
/=min^{y}n^{g}an^{g}a-wa-/ '[sleep] to overtake' < /min^{y}n^{g}an^{g}a/ 'sleep'
/=muwaj-ga-/ 'give name to [him]' < /muwaj/ 'name[d]'
/=al(w)ur-wa-/ 'make [bark fibre]' < /al(w)ur/ 'bark fibre'
/=$w_1$ubuy-wa-/ 'translate into Nungg.' < /$w_1$ubuy/ 'Nunggubuyu'
/=$w_1$ur-ga-/ 'set bushfire' < /wurg/ 'bushfire'

However, the dominant usage is factitive. Further exx. are:

/=dhadhan-ga-/ 'put holes in' < /dhadhan/ 'having holes'
/=didid-ga-/ 'make [it] tight, firm' < /didid/ 'tight, firm'
/=damadhan-ga-/ 'fill [it]' < /damadhan/ 'full'
/=jambar-ga-/ 'make [it] true' < /jambarg/ 'true'
/=ji:bu-ga-/ 'bring [them] together' < /ji:bug/ 'nearby'
/=lhagal-ga-/ 'break [it] into bits' < /lhagalg/ 'fine'
/=lhamba:mbur-ga-/ 'restrain [fighter]' < /lhamba:mburg/ 'quiet'
/=mamalan^g-ga-/ 'improve' < /mamalan^g/ 'good'
/=mindi-ga-/ 'slow [it] down' < /mindig/ 'slow'
/=mun^{y}ur-ga-/ 'soften [it]' < /mun^{y}ur(g)/ 'soft'
/=nini-ga-/ 'soften [it]' < /ninig/ 'soft'
/=nunul-ga-/ 'make [it] rotten' < /nunulg/ 'rotten'
/=w_1/$w_2$aba:ru-wa-/ 'clean surface of' < /w_1/$w_2$aba:ru/ 'smooth'
/=$w_2$adawadad-ga-/ 'strengthen' < /$w_2$adawadad/ 'strong'
/=ala:di-wa-/ 'worsen [it]' < /ala:di/ 'bad'
/=andhur-ga-/ 'straighten [it]' < /andhurg/ 'straight'
/=ari-wa-/ 'make [it] disappear' < /ari/ 'not present'
/=$w_1$aya-ga-/ 'make [it] bad-tasting' < /$w_1$ayag/ 'bitter'
/=$w_2$ulbul-wa-/ 'dry [it]' < /$w_2$ulbul/ 'dry'
/=$w_2$uluguli-ga-/ 'prettify [it]' < /$w_2$ulugulig/ 'pretty'
/=yaraga-wa-/ 'make [it] thin' < /yaraga/ 'thin'
/=yiwuj-ga-/ 'refresh [him]' < /yiwuj/ 'refreshed'
/=yulu-ga-/ 'make [it/him] thin' < /yulug/ 'thin'

Semantic shifts are seen in /=lharan^{g}-ga-/ 'talk to [person] with strong words, chew [him] out' from /lharan^{g}/ 'ready to eat, ripe, cooked'; /=midijala-ga-/ 'tease [him]' from /midijalag/ 'prone to teasing [others]', and the aforementioned /=mundur-ga-/ 'be too heavy for [him, direct object]' from /mundur/ 'heavy'.

Irregular shift of //aj// to /ij/ in stem before //-w$_1$a-// is found in /=jarmayarmij-ga-/ 'to lengthen [it]' from /jarmayarmaj/ 'long, tall'; /=an^{y}bij-ga-/ (alongside /=an^{y}baj-ga-/) 'change [it]' from /an^{y}baj/ 'different, other'; and /=w$_2$ulan^{y}bij-ga-/ 'make three of [dir. obj.]' from /w$_2$ulan^{y}baj/ 'three' (contains /an^{y}baj/). See P-50, part (e).

Usually there is a corresponding intransitive verbalisation with Inch /-ma-/ (§10.8), but sometimes the stem avoids /-ma-/ and takes some other Inch suffix, so the parallelism is not perfect.

Derivatives including /-w$_1$a-/ or /-ga-/ take inflectional endings of A$_1$ class (Table 11-1).

For the use of /-w$_1$a-/ with kin-term roots, e.g., /=gulgu-wa-/ '[X] to marry [Y]' from /gulgu/ 'spouse', see §5.12. (Such kinship verbs have no intransitive counterparts with /-ma-/.)

10.10 Minor derivational affixes: 'together' prefixes /-an^{g}gara-/, /-albun^{g}uN-/, /-ilbuN-/, /-ambirwir-/, /-w$_1$aji-/; suffixes /-ja-/, /-dha-/, /-mi-/.

In this section we discuss minor derivational affixes. First, there is a group of derivational prefixes (some acting like compound initials to the extent these two formal categories are distinguishable) meaning roughly 'together'; second, there is a small set of suffixes found in some intrans./trans. stem-pairs.

The 'together' prefixes may be compared with the Comit prefix /-an^{y}ji-/ (§10.3). However, the Comit is generally productive, while the 'together' prefixes are lexically specialised (at least we can only cite a few combinations involving them). The forms are these:

/-an^{g}gara-/ 'together'
- /-an^{g}gara-n^{g}u=bura-/ 'sit together' 36.3.1rdp
- /-an^{g}gara=ya-/ 'go together' 19.1.4, 139.1.4, TNT 15

/-albun^{g}uN-/ 'both together'
- /-albun^{g}un^{y}=jaryara-/ 'both go down' TNT 5 (/=jaryara-/)
- /-albun^{g}un^{y}=ja-/ 'both go together' (/=ya-/)

/-ilbuN-/
- /ilbum-bula-wa:/ 'twins[noun]' from /w$_2$ula-wa:/ 'two'

/-ambirwir-/ 'close together'
- /-ambirwir=lha-/ 'stand close together'

/-w$_1$aji-/ '(all) mixed together' (119.2.6
- /-w$_1$aji=yaba-/ 'put [it, dir. obj.] in with others'
- /-w$_1$aji=yala-/ 'put [it] with water and other things' 119.5.3

The infrequency of most of these forms is due to the existence of other mechanisms for expressing similar categories. Aside from the Comit (§10.3), see lexical items mentioned under "TOGETHER" in the English-Nunggubuyu index (p. 305 of the dictionary).

/-an^{g}gara-/ and /-albun^{g}uN-/, perhaps also /-ambirwir-/, seem (so far as we can tell) to be limited to intransitives, as is usually the case with Comit /-an^{y}ji-/. However, note that /-w$_1$aji-/ occurs

in transitives and indicates the togetherness of the direct object with other implied (but not grammatical) objects. (See discussion of /-an^{y}ji=nima-/ in §10.3).

/-ilbuN-/ is presently attested only in the noun compound 'twins'; we list it here because of its semantic affinity to the others, and because it might be possible to use it (rarely) with verb stems.

The minor derivational suffixes /-ja-/ and /-dha-/ are attested in the following forms:

a) /-ja-/ N^{g}A$_1$ intransitive verb (antipassive)
- /=binima-ja-/ 'hide[intr.]' < /=binima-/ 'hide behind'
- /=da:ra-ja-/ 'yearn' < /da:rawa/ 'thief'
- /=garma-ja-/ 'want to go along' < /=garma-/ 'want to join'
- /=margira-ja-/ 'be jealous' < /=margira-/ 'be jealous of'

b) /-dha-/ N^{g}A$_1$ intransitive verb (stative)
- /=radbi-dha-/ 'be tied up' < /=rad-bu-/ 'tie up'
- /=lhagardha-/ 'be in rows' < /-lhagarG-/ 'row'

c) /-ja-/ A$_2$ intransitive verb (semantically active)
- /=yala-ja-/ 'eat meat' < /yalaj/ 'meat'
- /=dha:gada-ja-/ 'eat vegetables' < /dha:gadaj/ 'veg.'

d) /-dha-/ A$_2$ intransitive verb (active)
- /=dirwu-dha-/ 'jump into water' < /dirwu!/ 'jump!'

I am inclined not to group the two /-ja-/ morphemes in (a) and (c), since they differ in inflectional class (N^{g}A$_1$ paradigm vs. A$_2$ paradigm, see Chapter 11). The morpheme in (c), for one thing, could be represented as //-ya-// with Hardening P-18 after stop. Historically, the suffix in (c) might be *-jV- 'to eat' found in some nearby languages (Mara, Anindilyakwa), though it is more likely to be thematising *-dhu- (cf. Ngandi -dakidi-du- 'to eat vegetables', cognate with one of the Nunggubuyu forms shown). Similarly, the /-dha-/ morphemes in (b) and (d) should be distinguished.

On the other hand, /-ja-/ in (a) and /-dha-/ in (b) seem to be essentially the same morpheme (functionally), though perhaps some differences can be discerned. The exx. of /-ja-/ in (a) which are related to a transitive verb (shown on the right) indicate that the /-ja-/ is an antipassive (cf. "false reflexive" antipassive usage of Refl, §10.5); that is, the direct object of 'hide behind [it]', 'want to join [them]', and 'be jealous of [him]', is grammatically eliminated (though implied) in the /-ja-/ intransitive form. The two /-dha-/ forms in (b) have a simple stative/mediopassive sense. However, since there are few forms to analyse it is difficult to draw firm conclusions.

The forms /dirwu!/ (root form, §12.2) and inflectable verb /=dirwu-dha-/ may be recent borrowings from local creole English (though based on neighbouring Aboriginal languages); there are several other Nunggubuyu verbs for this meaning: /=jalburda-/, /-n^{g}alba=walga-/.

We should also mention /=mun^{g}gala-dha-/, which can be intrans. with N^{g}A$_1$ inflections meaning 'be/go up on platform (or in tree)', cf. type (b) above, or trans. with A$_2$ inflection meaning 'put [him] up on platform (or in tree)'. Here both intrans. and trans. forms have /-dha-/; the alternation of intrans. N^{g}A$_1$ and trans. A$_2$ paradigm is common for verbs of stance (§11.8). The verbs are from noun /mun^{g}gala/ 'platform; place to sit up in tree'.

An isolated example /=w$_1$adha:ṛi-mi-/ 'to say "no!" rejecting request' shows an otherwise unattested suffix /-mi-/; compare /=w$_1$adha:ṛi-/ (same meaning, but optionally transitive with other person as direct object).

10.11 Combinations of two or more derivational affixes.

The problem posed here is the combinability of various derivational prefixes and suffixes discussed in preceding sections, and the logic of such combinations. For example, is the Benef-Recip combination semantically the benefactive of a reciprocal, or the reciprocal of a benefactive?

The easy cases are those involving two derivational suffixes, since in this situation the logical ordering always matches the linear order of affixes.

Leaving aside combinations involving Fact and Inch, the suffix combinations attested are these:

Verb-Recip-Caus-
- /-maṛa-n^{g}u=ḍururuga-n^{y}ji-jga-/ 'cause hands[/maṛan^g/] to be [held] out straight'
- /=milhi-n^{y}ji-jga-/ 'cause [them] to shine together' (/=milha-/)
- /=yaba-n^{y}ji-jga-/ 'cause [him] to enter vehicle' (cf. §10.6)
- /=yalgiwa-n^{y}ji-jga-/ 'cause [them] to pass each other'

Verb-Refl-Caus-
- /=n^{g}aṇḍi-'-jga-/ 'cause to sink' MT 30 < /=n^{g}aṇḍi-'-/
- /=n^{g}awi-'-jga-/ 'cause to die' (see next section, below)
- /=yabi-'-jga-/ 'put [it] in]' 50.6.1, 52.5.7rdp, etc.

Verb-Caus-Recip-
- /=n^{g}awi-'-jga-n^{y}ji-/ 'cause each other to die' 47.17.5rdp (includes Refl before Caus, see preceding list)
- /-n^{y}i=ṛa-wi-jga-n^{y}ji-/ 'exchange curses' 157.12.7
- /=yami-jga-n^{y}ji-/ 'say to each other/to self' 7.8.1, etc.

Verb-Caus-Refl-
- /=yami-jgi-'-/ 'say to oneself' 47.4.4 (/=yama-/)

It should be noted that these combinations are not very common; the above list is probably exhaustive for my data, and most of these forms are not attested in the texts. The combination Refl-Caus has the characteristic that the Refl suffix has no surface phonological effect; the assumption that Refl is there is based on meaning (and on the fact that Caus is generally added to intrans. inputs). The three Refl-Caus combinations exemplified involve high-frequency, probably lexicalised Refl forms.

Inch and Fact verbalisations from (mainly) NAdj inputs are treated like other intrans. and trans. verbs with regard to further derivation. Fact forms permit these derivations:

NAdj-Fact-Refl-
- (see /-w$_1$i-'-/, discussed in §10.8)

NAdj-Fact-Recip-
- /=bujbuj-ga-n^{y}ji-/ 'become withered together' 108.2.1rdp.
- /=diḍiḍ-ga-n^{y}ji-/ 'become firm, tight' (see end of §10.8)
- /-aganimij=galij-ga-n^{y}ji-/ (root /galij/) 'be unperturbed'
- /=ja:du-ga-n^{y}ji-/ 'finish each other off' 47.9.3 (/ja:dug/)
- /=marbuy-wa-n^{y}ji-/ 'inform/teach each other' 47.4.1

Inch forms do not regularly take further suffixal derivations. It is conceivable that the combination NAdj-Inch-Recip- could occur with Recip meaning 'together', but this is not attested, and we have an attestation of /-w$_1$a-n^{y}ji-/ (-Fact-Recip-) in this sense in the last list above (with /bujbuj/). We do not seem to get the sequence NAdj-Inch-Caus-, since this would mean 'cause [it] to become [adjective]', which is expressed more simply by NAdj-Fact-.

We now look at combinations of two prefixes. We have already mentioned that Benef and Comit seem to occur in the same slot, and no combinations of the two are attested (though each is separately attested many times). However, both Benef and Comit are attested with following Mult affix. With Benef-Mult the Mult allomorph attested is mostly /-w$_1$ara-/, with Comit the only attested form is with /-n^{g}araG-/.

Benef-Mult-Verb with /-w$_1$ara-/
- /-a-gara-n^{g}u=bura-/ 'put [them] all down for' 59.2.7
- /-a-gara:='lali-/ 'pick up all' TNT 24 (/=alali-/)
- /-a-gara=wun^{y}ja-/ 'suck [it] all for' 139.9.2
- /-a-gara=yaṛi-/ 'take [them] all away from' MT 5
- /-a-gara=yuṛa-/ 'take [them] all for/from' 40.9.2/4
- /-a-gara=yu-/ 'make lots of [them] for' 59.1.2ff.

Benef-Mult-Verb with /-n^{g}araG-/
- /-a-n^{g}ara=ja-/ 'go for [e.g., honey]' (/=ya-/) [elicited]

Comit-Mult-Verb with /-n^{g}araG-/
- /-an^{y}ji-n^{g}ara=ja-/ 'all go with [it]' (/=ya-/) [elicited]

The Benef exx. show that the Mult prefix is part of an inner derivational layer which pays no attention to the Benef morpheme (or the change in object markers which Benef requires). Although the exx. with /-a-gara-/ (//w$_1$// --> /g/ by P-18) all involve underlying transitives whose direct object is bumped out of the pronominal prefix by the original indirect (dative) object, the /-w$_1$ara-/ Mult morpheme in all cases marks multiplicity of direct (not indirect) object, exactly as it would if Benef had not been added. Thus /-a-gara-n^{g}u=bura-/ (for /-n^{g}u-/ see P-1) 'put [them] all down for [him, Benef object]' is based on /-w$_1$ara-n^{g}u=bura-/ 'put [them] all down', and ditto for the other exx.

Similarly, the Benef-Mult-Verb form with /-n^{g}araG-/ shows a secondary Benef overlay on the underlying Mult intransitive /-n^{g}ara=ja-/ '[all] go', where /-n^{g}araG-/ is the characteristic Mult prefix form for human intransitive subject.

The sequence Comit-Mult is rare, and the one ex. shown was obtained by direct elicitation. The multiplicity indicated by /-n^{g}araG-/ is that of the intrans. subject, as it would be without Comit. We conclude overall that, as with suffixes, derivational layering for prefix-prefix combinations coincides with linear order (moving away from the root).

Combinations of a prefix and a suffix are more difficult, since often either derivational layering would be plausible, but there is no way to differentiate the two layerings by juggling the order.

We begin with combinations involving Mult.

Mult-Verb-Recip
- /-w$_1$ara=wi-n^{y}ji-/ 'hit each other all over' 44.2.1
- /-w$_1$ara-wuṛugu=wuṛama-n^{y}ji-/ 'all follow each other around pond[wuṛugu]' TNT 28

BB

Mult-Verb-Refl
/-n^{g}ara-n^{g}u=julubi-'-/ 'all jump in' 65.9.5/6
/-n^{g}ara=lalagi-'-/ 'all get up' MT 14
/-n^{g}ara=ganbi-'-/ 'all do it' MT 7 (/=w$_1$anbi-/ is root)
/-n^{g}aran=gurami-'-/ 'all go in circle' MT 4 (/=w$_1$urama-/)
/-w$_1$ara=mayi-'-/ 'be called [several names]' 82.1.1/6 (/=maya-/)
/-w$_1$ara=guryi-'-/ 'pour all over selves, douse selves' 139.2.3
(root is /=w$_1$urya-/ with /-w$_1$araG-/ Mult)

Mult-Verb-Caus
/-w$_1$ara:='ndarmi-jga-/ 'cause [it] to shake all over' 4.7.2
/-w$_1$ara=wawalhi-jga-/ 'cause [them] to be open' 139.11.4
/-w$_1$ara:='bi-jga-/ 'make [it] jump' (?) 167.6.1
/-w$_1$ara=rabi-jga-/ 'cause [them] all to fall' TNT 26rdp
/-lhagara=ya-n^{g}i-jga-/ 'put [them] all to sleep' 55.5.5

Some of the exx. in the above lists (which are all the exx. I have) suggest a derivational layering Mult-[Verb-Suffix], with Mult added to an already suffixally derived stem. We can see this because of the fact that Mult allomorphs are, in part, restricted by grammatical relations, with /-n^{g}araG-/ effectively limited to intrans. subject, while /-w$_1$ara-/ is normal for transitive object and for some (mainly inanimate or at least nonvolitional) intrans. subject.

Note, then, that four of the Mult-Verb-Refl exx. involve Mult allomorph /-n^{g}araG-/, which suggests that Mult is added after the following stem has been formed. The two exx. with /-w$_1$ara-/ (or /-w$_1$araG-/) are ambiguous as to whether Mult is added before or after the verb is intransitivised, since this Mult allomorph is possible in both (lexical) intransitives and transitives.

A similar argument for Mult-[Verb-Suffix] as the derivational layering comes from consideration of Mult-Verb-Recip combinations. Although /-w$_1$ara-/ itself is ambiguous in this respect, the ex. /-w$_1$ara=wi-n^{y}ji-/ 'hit each other all over' shows root /=w$_2$u-/ 'to hit' (//u// --> /i/ by V-Fronting P-50) instead of its suppletive replacement /=w$_2$adja-/. The latter is used in compound-final position, and the derivative /-w$_1$ara=wadja-/ 'to hit all over' shows that Mult /-w$_1$ara-/ is treated as a compound initial in this context. If the layering were *[Mult-Verb]-Recip, we would expect */-w$_1$ara=wadji-n^{y}ji-/. Instead we get /-w$_1$ara=wi-n^{y}ji-/, which appears to be the Mult prefix added to regular Recip /=w$_2$i-n^{y}ji-/.

The exx. with Mult-Verb-Caus are difficult to interpret in terms of layering, but the absence of Mult allomorph /-n^{g}araG-/ suggests that the surface transitivity of the Verb-Caus combination prevents usage of this Mult prefix form. That /-lhagara-/ is the Mult allomorph in /-lhagara=ya-n^{g}i-jga-/ 'put [them] all to sleep', cf. intrans. /-lhagara=yi-/ 'all sleep', merely suggests that the lexically restricted Mult allomorph /-lhagara-/ is like /-w$_1$ara-/ rather than like /-n^{g}araG-/ in being able to focus on trans. object as well as intrans. subject. In sum, with allowance for several ambiguous (indeterminate) instances, the generalisation is that Mult prefixes are an outer derivational layer, following suffixal derivations.

Let us now look at combinations involving Comit prefix (which can precede Mult) and some derivational suffix:

Comit-Verb-Recip
/-an^{y}ji=lharma-n^{y}ji-/ 'be involved in chase' 37.4.3ff.

Comit-Verb-Refl
/-an^{y}ji=lalagi-'-/ 'get up (and go) with' 44.2.7, etc.
/-an^{y}ji-w$_2$ad=bari-'-/ 'drop down with' (?) 157.9.6

The one Comit-Verb-Recip combination is hard to interpret, since it may take singular subject (for chaser or chased; often the verb is repeated so that both chaser and chased are subjects in sequence) and in general seems to be a frozen, idiomatic formation. Of the two Comit-Verb-Refl forms, the second is hard to interpret (in its textual occurrence), but the first, /-an^{y}ji=lalagi-'-/, is comfortably interpretable as Comit-[Verb-Refl], cf. /=lalagi-'-/ 'to get up' (Refl of /=lalaga-/ 'to raise'). Recall that Comit is only rarely used with transitive verbs (§10.3), and it would be difficult to concoct a combination involving Comit and /=lalaga-/ 'to raise'. The absence of the combination Comit-Verb-Caus from our data is a further suggestion that Comit is an outer derivational layer, again because Comit is rare with transitive stems. This conforms with our previous conclusion that Mult prefixes are an outer derivational layer vis-à-vis derivational suffixes.

We now consider combinations involving Benef prefix and one of the derivational suffixes:

Benef-Verb-Recip
/-a=gadi-n^{y}ji-/ 'shout to each other' 47.2.5 (/=ada-/)
/-a-n^{g}u=bura-n^{y}ji-/ 'put down for each other' 69.6.3
/-a=dharga-n^{y}ji-/ 'send to each other' 47.5.1 (/=lharga-/; textual citation has variant suffixal form)
/-a=na-n^{y}ji-/ 'face each other' 69.14.1rdp (/=na-/ 'see')
/-a=diyaldhi-n^{y}ji-/ 'get angry at each other' 42.3.4 (/=riyaldha-/ 'get angry', intrans.)
/-a-dan^{g}gal=n^{g}arayi-n^{y}ji-/ 'avert gaze from each other' 76.2.3

Benef-Verb-Refl
/-a-n^{g}u=jambar-gi-'-/ 'believe [him]' < /=jambar-gi-'-/ 'believe'
/-a-n^{g}u=julubi-'-/ 'hide from [him]' TNT 31
/-a-n^{g}u-dir=n^{g}awi-'-/ 'be afraid of [him]' 47.8.5ff.
/-a=badi-'-/ 'tap sticks for oneself' 28.10.3 (/=w$_2$ada-/)

Benef-Verb-Caus
/-a-jama=yami-jga-/ 'tell [him]' (?) TNT 13

Since the final (Benef-Verb-Caus) ex. is textually problematic, we disregard it; we would assume, though, that Benef combined with Caus would not be problematic logically. The more interesting cases should be the Benef combinations with intransitivisers Recip and Refl.

In striking contrast to the behaviour of the other derivational prefixes Mult and Comit, in the clearly analysable instances Benef constitutes the inner derivational layer vis-à-vis Recip suffix. To add one other ex. to those above, from /=lharma-/ 'to chase; to perform [ritual]' we get Benef /-a=dharma-/ '[X] to perform for [Y]', then /-a=dharma-n^{y}ji-/ '[X and Y] to perform for each other' by adding Recip. The meaning is not '[X and Y] to chase each other for [Z]', which would indicate that Recip was the inner layer. Another ex., using a compound initial, is /-yiga=lharma-/ 'to follow [fire]',

Benef /-a-jiga=lharma-/ 46.1.3 '[X] to follow fire of [Y], [X] to track [Y] by following his bushfires', then Recip of Benef /-a-jiga=lharma-n^{y}ji-/ '[X and Y] to follow each other's fires, to find each other in the bush by heading for each other's fires' 46.1.1.

However, with Benef-Verb-Refl the usual situation is that Refl is the inner layer and Benef the outer; hence we end up with a surface transitive verb with transitive pronominal prefix. The first three exx. listed in the relevant series (preceding page) are of the type just described; thus /=julubi-'-/ 'to hide' (intrans. Refl), Benef /-a=julubi-'-/ 'to hide from [him]' (with transitive pronominal suffix). The apparent counterex., if correctly interpreted, is /-a=badi-'-/ 'to tap sticks for oneself', a surface transitive (Refl of Benef, not Benef of Refl, semantically).

Our conclusion is that two consecutive prefixes, or two suffixes, are derivationally layered according to their relative distance from the verb root; when there is a derivational prefix and suffix, to the extent that we can tell, Mult and Comit prefixes are added after derivational suffixes; Benef is added before Recip suffix and rarely before Refl, and is added in most cases after Refl.

Chapter 11

Verbal inflectional suffixes

11.1 General.

The role of inflectional suffixes within the larger system of verbal categories was discussed in Chapter 8, see especially Table 8-2. As noted there, the suffixal categories are not always glossable in isolation since they combine with the choice between A and B pronominal prefix series and other grammatical markers to produce the tense-aspect-mood-negativity forms. The suffixal distinctions are referred to as:

$Past_1$	$Nonpast_1$	Evitative
$Past_2$	$Nonpast_2$	
	$Nonpast_3$	

In this chapter we are concerned only with the formal analysis of suffixal paradigms for the various verb classes. We are not here concerned with semantic patterns; however, we may mention that $Past_1$ and $Nonpast_1$ share a (partial) association with punctual aspect, and likewise show strong formal resemblances (/-n^{g}/ and /-n^{y}/ being the only suffix allomorphs in both categories, §11.7).

The paradigms also show the forms of basic derivations: Refl (§10.5), Recip (§10.6), and Caus (§10.7).

11.2 Verb classes.

A large number of inflectional classes can be distinguished on the basis of suffixal forms, though sometimes two classes differ only in one or two categories. There are also a number of verbs, mostly high-frequency monosyllabic roots, which have special paradigms.

It is convenient to distinguish some classes on the basis of a characteristic augment used in a subset of inflected forms. For them, the augment provides the name of the class (N class, YA class, RA class), though in some cases a single augment forms more than one class which therefore must be differentiated by subscripts ($N^{g}A_1$, $N^{g}A_2$, $N^{g}A_3$; MA_1, MA_2).

Aside from the augment classes, and the mostly monosyllabic-root special paradigms, we distinguish a number of classes each characterised by a particular stem-final vowel (/a/, /i/, /u/). With final

TABLE 11-1

Classes with Stem-Final /a/

	A_1	A_2	A_3	/=lha-/ 'to chop'
$Past_1$	Xa-n^y	Xi-n^y	Xi-n^y	=lhi-n^y
$Past_2$	Xa:-'	Xa-n^gi	Xa-n^gi	=lha-n^gi
$Nonpast_1$	Xa-n^g	Xa-n^g	Xa-n^g	=lhi-n^y
$Nonpast_2$	Xa-na	Xi:-'	Xa-ni	=lha-ni
$Nonpast_3$	Xi-Ø	Xi-Ø	Xi-Ø	=lhi:-Ø
Evit	Xa-n^gun	Xa-n^gan	Xa-n^gan	=lha-n^gan
Refl	Xi-'-	Xi-'-	Xi-'-	---
Recip	Xa-n^yji-	Xi-n^yji-	Xa-n^yji-	---
Caus	Xi-jga-	Xi-jga-	Xi-jga-	---

TABLE 11-2

Classes with Stem-Final /i/

	I_1	I_2
$Past_1$	Xi-n^y	Xi-n^y
$Past_2$	Xi:-ni [P-45]	Xi:-ni [P-45]
$Nonpast_1$	Xi-n^y	Xa-n^g
$Nonpast_2$	Xi:-na [P-45]	Xi:-na [P-45]
$Nonpast_3$	Xi-Ø	Xi-Ø
Evit	Xi-n^gun	Xi-n^gun
Refl	Xi-'-	Xi-'-
Recip	Xi-n^yji-	Xi-n^yji-
Caus	Xi-jga-	Xi-jga-

Note: vowel length not always heard in $Past_2$ and $Nonpast_2$

/a/ vowel we distinguish A_1, A_2, and A_3 classes (Table 11-1), with another verb, /=lha-/ 'to chop' (not /=lha-/ 'to stand') having a closely related paradigm. For final /i/ vowel we have just two classes, I_1 and I_2 (Table 11-2), differing in only one form ($Nonpast_1$). For final /u/ the number of stems is tiny, and the "classes" shown in Table 11-3, below, contain just one or two roots apiece. (In the tables, /Xa-/, /Xi-/, etc., are stems.)

Even aside from different stem-final vowels, the classes with /a/ all differ in suffixation from the classes in /i/ (A_1 resembles I_2 but differs in the $Past_2$). However, U_2 is nearly identical in suffixation to A_1, and U_3 could likewise be merged with I_2.

TABLE 11-3

Classes with Stem-Final /u/

	U_1	U_2	U_3	U_4
$Past_1$	Xu-n^y	Xu-n^y	Xi-n^y	Xa-n^g
$Past_2$	Xu:-'	Xu:-'	Xu-ni	Xu-ni
$Nonpast_1$	Xa-n^g	Xu-n^y	Xa-n^g	Xa-n^g
$Nonpast_2$	Xu-na	Xu-na	Xu-na	Xu-na
$Nonpast_3$	Xu:-' / Xi-Ø	Xu:-'	Xi-Ø	Xi-Ø
Evit	Xu-n^gun	Xu-n^gun	Xu-n^gun	Xu-n^gun
Refl	Xi-'-	Xi-'-	---	---
Recip	Xi-n^yji-	Xu-n^yji-	---	Xu-n^yji-
Caus	---	---	Xi-jga-	---

Roots: U_1 /=balhu-/ 'to cut up', /=a:yu-/ 'to cut up'
U_2 /=a:ru-/ 'to leave, abandon'
U_3 /=rugu-/ 'to weep'
U_4 /=ragu-/ 'to search for'

TABLE 11-4

Augment Classes: N and YA

	N	YA	/=ra-/ 'to spear'
$Past_1$	Xa-n^g	Xa-n^g / Xa-ya-n^y	/=ra-n^g/
$Past_2$	Xa-n-di	Xa:-'-ni / Xa-wa:-'	/=ra-ni/
$Nonpast_1$	Xa-n^g	Xa-ya-n^g	/=ra-ya-n^g/
$Nonpast_2$	Xa-n-ji:	Xa:-'-na	/=ra-yi:/
$Nonpast_3$	Xi-Ø	Xa-yi-Ø / Xa-wi-Ø	/=ra-yi-Ø/
Evit	Xa-n-jan	Xa:-'-n^gun	/=ra-yan/
Refl	Xi-'-	---	[same as Recip]
Recip	Xa-n^yji-	Xa:-'-n^yji-	/=ri-n^yji-/
Caus	Xi-jga-	---	---

Note: For YA class, forms in Xa:-'- may have variants in Xa-wa-.

TABLE 11-5

Classes with Augment -n^ga-

	N^gA_1	N^gA_2	N^gA_3	N^gA_4
$Past_1$	Xa-n^ga-n^y	XV-n^ga-n^y	Xa-n^g	Xu-n^y
$Past_2$	Xi-∅	{Xa-y Xi-∅	XV-n^ga:-'	Xu-n^ga:-'
$Nonpast_1$	Xa-n^ga-n^g	XV-n^ga-n^g	Xa-n^g	Xa-n^g
$Nonpast_2$	Xa:-'	Xa-ra	XV-n^ga-na	Xu-n^ga-na
$Nonpast_3$	Xa-n^gi-∅	XV-n^gi-∅	Xi-∅	Xu:-'
Evit	Xa-n	Xa-n	XV-n^ga-n^gun	Xu-n^ga-n^gun
Refl	---	---	XV-n^gi-'-	---
Recip	Xi-n^yji-	---	XV-n^gi-n^yji-	---
Caus	Xa-n^gi-jga-	Xa-n^gi-jga-	---	---

Note: V represents underlying root-final vowel.
Roots: N^gA_2 /=lha-/ 'to stand', /=yi-/ 'to sleep', and /=bilya-/ 'to tilt' (cf. rule P-32);
N^gA_3 /=w_2a-/ 'to bite', /=na-/ 'to burn[trans.]', and /=yu-/ 'to carve out, produce';
N^gA_4 /=$w_2$arn^{g}ayu-/ 'to pity'

TABLE 11-6

Classes with Augments -ma-, -ra-

	MA_1	MA_2	RA	/=$w_2$idhi-/ 'to carry'
$Past_1$	Xa-n^g	Xa-n^y	Xu-ri-n^y	/=$w_2$idhi-ri-n^y/
$Past_2$	Xi-ni	Xi-ni	{Xa-y Xu-ra-n^gi	{/=$w_2$idhi-ri-∅/ /=$w_2$idhi-ya-y/ /=$w_2$idhi-ra-n^gi/
$Nonpast_1$	Xi-n^y	Xi-n^y	Xu-ra-n^g	/=$w_2$idhi-ra-n^g/
$Nonpast_2$	Xu-ma-na	Xu-ma-na	Xu:-'	---
$Nonpast_3$	Xu:-'	Xu:-'	Xu-ri-∅	/=$w_2$idhi-ri-∅/
Evit	Xu-ma-n^gun	Xu-ma-n^gun	Xu-ra-n^gan	/=$w_2$idhi-ra-n^gan/
Refl	Xi-'- [see note]	Xi-'-	---	---
Recip	Xi-n^yji-	Xa-n^yji-	Xu-ri-n^yji-	/=$w_2$idhi-ri-n^yji-/
Caus	---	---	---	---

Note: MA_1 consists of /=w_2u-/ 'to hit' and most of its compounds including "auxiliary" compounds, while MA_2 consists of a few of its compounds; simple /=w_2u-/ uses Recip as Refl.

TABLE 11-7

Verbs with $Nonpast_2$ -yi:-

	/=na-/ 'to see'	/=n^gu-/ 'to eat'	/=yan^{g}a-/ 'to hear'	/=yi-/, /-Cpd=u-/ 'to give' [cf. P-4]
$Past_1$	/=na-n^y/	/=n^ga-n^g/	/=yan^{g}a-n^g/	{/=ya-n^y/ /-Cpd=a-n^y/
$Past_2$	/=na-ni/	/=n^gu-ni/	/=yan^{g}a-ni/	{/=i-ni/ /-Cpd=u-ni/
$Nonpast_1$	/=na-n^g/	/=n^ga-n^g/	/=yan^{g}a-n^g/	{/=i-n^y/ /-Cpd=u-n^y/
$Nonpast_2$	/=na-yi:/	/=n^gu-yi:/	/=yan^{g}a-yi:/	{/=i-yi:/ [cf. P-47] /-Cpd=u-yi:/
$Nonpast_3$	/=ni-∅/ [cf. P-44]	/=n^gi-∅/ [cf. P-44]	/=yan^{g}i-∅/	{/=yu:-'/ /-Cpd=u:-'/
Evit	/=na-yan/	/=n^gu-yan/	/=yan^{g}a-yan/	{/=i-yan/ /-Cpd=u-yan/
Refl	/=ni-'-/	/=n^gi-'-/	/=yan^{g}i-'-/	---
Recip	/=na-n^yji-/	/=n^gu-n^yji-/	/=yan^{g}a-n^yji-/	{/=yi-n^yji-/ /-Cpd=u-n^yji-/
Caus	---	---	---	---

TABLE 11-8

Suppletive /=ya(:)-/, /=ruma-/ 'to go'

$Past_1$	/=ruma-n^y/
$Past_2$	/=ya-n^ggi/
$Nonpast_1$	/=ruma-n^g/
$Nonpast_2$	/=ya:-ri:/ [cf. P-45]
$Nonpast_3$	/=rumi-∅/
Evit	/=ya-n^ggan/
Refl	---
Recip	---
Caus	(/=ya:rijgi-/ 'to transport')

In the augment classes, the forms which actually have the augment have the structure /=ROOT-Augment-Suffix/ vs. the remaining forms with just /=ROOT-Suffix/. It is possible to characterise such paradigms as composite, with the augmented subsystem showing final suffixes characteristic of one of the productive classes, so that the augment itself can be said to produce a (derived) stem of the relevant larger class. The unaugmented forms of the augmented classes may likewise be partially characterisable in terms of one of the larger classes.

The augments seem to take suffixes of the larger classes as follows:

/-ya-/ and variant /-(w)a-/ take suffixes of A_1
/-n^ga-/ takes suffixes of A_1
/-ma-/ takes suffixes of A_1
/-ra-/ takes suffixes of A_2

In addition, forms with augment /-N-/ (nasal segment realised as /-n-/ in relevant forms) contain suffixes like those of the verbs in Table 11-7 with some phonological changes: for /Xa-n-di/ vs. /XV-ni/ in Table 11-7 see rule P-23, and for /y/ alternating with /j/ see P-18.

Classification of the residual (unaugmented) subsystems of these augmented classes is most feasible when the unaugmented forms include $Past_2$ and $Nonpast_2$, which are overall the most variable (thus most diagnostically useful) suffix categories. This is the case with N^gA_1, N^gA_2, RA, and ($Past_2$ only) MA_1/MA_2. However, the unaugmented forms of these classes do not fit into any of the fully unaugmented paradigms, and if we look at all of the unaugmented forms of MA_1/MA_2 we get the same result. On the other hand, unaugmented $Past_2$ /-y/ and $Nonpast_2$ /-ra/ or vowel lengthening for N^gA_1, N^gA_2, and RA classes do suggest that these classes are related to each other (if not to any of the larger classes).

11.3 Identification of suffix allomorphs.

For $Past_1$ the suffix forms (excluding augments) are /-n^y/ and /-n^g/, the former occurring in the large classes (including all unaugmented classes ending in /a/ and /i/). V-Fronting P-50 applies in some but not all cases before /-n^y/, changing //a// or //u// to /i/ before the laminoalveolar nasal; for example, the rule applies in A_2 to A_4 and to U_3, but not to A_1 or to U_1 and U_2. Before /-n^g/, a high vowel is lowered to /a/ in all classes by V-Ablaut P-38, part b.

$Nonpast_1$, which like $Past_1$ is associated with punctual aspect, has the same allomorphs /-n^y/ and /-n^g/ with the same phonological characteristics. However, several classes have different allomorphs for $Past_1$ and $Nonpast_1$, either having $Past_1$ /-n^y/ and $Nonpast_1$ /-n^g/ or the opposite. Allomorph /-n^g/ is more common for $Nonpast_1$ than for $Past_1$, so several important classes have $Past_1$ /-n^y/ vs. $Nonpast_1$ /-n^g/ (A_1, A_2, A_3, I_2, U_1, U_3). The opposite is seen with MA_1 and MA_2. $Past_1$ = $Nonpast_1$ /-n^y/ is found in the important I_1 class and also in U_2, while $Past_1$ = $Nonpast_1$ /-n^g/ occurs in U_4, some augmented forms, and some paradigms in Table 11-7.

For $Past_2$ and $Nonpast_2$, we begin by noting that some forms seem to involve lengthening of final stem vowel ($Past_2$ of A_1, U_1, U_2 and

$Nonpast_2$ of A_2, N^gA_1, and RA). In these cases the surface long vowel which ends the word has the quality of the underlying stem-final vowel, except for the $Nonpast_2$ of A_2 where we get /Xi:-'/ from stem //Xa-//. For this A_2 form we take the suffix as //-i// with VV-Contraction P-49 giving //Xa-i//⟶/Xi:-'/. In the other cases, we could perhaps set up an underlying suffix //-V// with unspecified vowel combining with preceding //V_1// to give /V_1:/; or we can set up suffix allomorphs with vowels which happen to have the same quality as the stem-final vowel, e.g., with //Xa-a//⟶/Xa:-'/ and //Xu-u//⟶/Xu:-'/. There is no conclusive argument either way, but I prefer the latter, since VV-Contraction P-49 generally produces long vowels with the surface quality of the second (not first) underlying vowel when the first vowel is //a// or //u//.

Other mild phonological difficulties with $Past_2$ forms are seen with N^gA_1 and N^gA_2 (Table 11-5), where we take the basic form of the suffix as //-y//, with //Xa-y// becoming /Xi-Ø/ by V-Fronting P-51 and then iy-Contraction P-15 in N^gA_1 and sometimes in N^gA_2. As for /Xa-n-di/, $Past_2$ of the N class (Table 11-4), we have suggested that this is //Xa-N-ni// with //-ni// dissimilating from the preceding nasal by Denasalisation P-23. This leads us to the following array of paired $Past_2$ and $Nonpast_2$ allomorphs.

$Past_2$	/-n^gi/	-- $Nonpast_2$	/-ni/, /-i/	A_2/A_3
	/-V/	------	/-na/	A_1, U_1/U_2
	/-ni/	------	"	I_1/I_2, U_3/U_4
	"	------	/-yi:/	N, Table 11-7
	/-y/	------	/-ra/, /-V/	N^gA_1/N^gA_2, RA

These $Past_2$/$Nonpast_2$ pairings are highly significant in identifying the inflectional classes, though some classes (I_1 and I_2, for example) are differentiated only by other suffix categories.

The associated $Nonpast_2$ allomorphs /-ni/ and /-i/ for A_3 and A_2, respectively, are synchronically distinct but historically identical. The same is true for $Nonpast_2$ variants /-ra/ and /-V/, while $Past_2$ /-V/ in other classes is probably also from *-ra. Note that some forms, like /-ni/ and /-V/, occur both as $Past_2$ and $Nonpast_2$ allomorphs, though not within a single class. Note also that, whereas $Past_1$ and $Nonpast_1$ suffixes always consist of a nasal consonant, all $Past_2$ and $Nonpast_2$ allomorphs end in vowel or semivowel. (In the above formulae, /-V/ should be thought of as representing a short vowel homorganic to the stem-final vowel, either //-a// or //-u//.)

The $Nonpast_3$ is always /Xi-Ø/ for unaugmented roots ending in /a/ or /i/, and the same form occurs for some roots ending in /u/. It is possible to identify the suffix as //-y// with obligatory V-Fronting P-50 and iy-Contraction P-15, though the analysis would be more clearly supported if the semivowel remained on the surface in at least some forms (as does //-y// for $Past_2$). Most verbs with stem-final /u/, however, have $Nonpast_3$ /Xu:-'/ with long vowel (we make the usual caveat here about the unreliable phonetic realisation of length), and we therefore recognise //-u// as a $Nonpast_3$ allomorph which usually occurs after stem-final /u/ (but also seems to occur with /=yi-/ 'to give', Table 11-7).

The remaining inflectional form is the Evitative, which with the basic unaugmented classes is either /-n^{g}un/ (A_1 and all I and U classes) or /-n^{g}an/ (A_2 and A_3). In augmented classes, if the Evit suffix follows the augment the Evit allomorph is that of the class which the augment itself is associated with, thus /-n^{g}un/ with YA, N^gA_3/N^gA_4, and MA_1/MA_2 but /-n^{g}an/ with RA. There is also an Evit allomorph /-yan/ (Tables 11-4 and -7) and another one /-n/ (Table 11-5 and perhaps -8 depending on segmentation).

11.4 Identification of stem-final vowel.

In most cases it is fairly easy to identify the (underlying) final vowel of stems of a given class, with surface variation in one or two forms explained by some phonological rule. However, there are a few cases where the decision is nontrivial.

Examination of Table 11-1 shows that classes A_2 and A_3 actually have stem /Xa-/ (i.e., ending in /a/) in a few forms: $Past_2$, $Nonpast_1$, Evit, and for A_3 only $Nonpast_2$ in addition. The majority of forms (including derivations) actually show /Xi-/ or /Xi:-/. However, the /Xi(:)-/ forms can all be accounted for by V-Fronting P-50 ($Past_1$, $Nonpast_3$, Recip, Caus) or VV-Contraction P-49 (Refl, for A_2 also $Nonpast_2$). The /Xa-/ forms, on the other hand, cannot all be explained away (though the $Nonpast_1$ /Xa-n^g/ would be expected anyway because of V-Ablaut P-38, part b). The Evit form /Xa-n^{g}an/ in particular is diagnostic since in other classes /Xi-/ or /Xu-/ occurs before Evit allomorph /-n^{g}un/.

Some U verbs (Table 11-3) show a variety of surface stem-finals but the /Xi-/ and /Xa-/ variants can be explained as due to V-Ablaut P-38 or one of the other rules just mentioned, while /Xu-/ in $Past_2$, Evit, and (sometimes) other forms cannot be accounted for by rules and must be underlying.

In Table 11-5 (N^gA classes), the form of the stem before the augment /-n^{g}a-/ is taken as diagnostic, since depending on the verb we can have /Xa-n^{g}a-/, /Xi-n^{g}a-/, or /Xu-n^{g}a-/. In the case of N^gA_2, however, the root /=yi-/ 'to sleep' (augmented /=yi-n^{g}a-/) is probably in a synchronically ambivalent position, since the unaugmented forms behave as though the root were /=ya-/ ($Past_2$ /=ya-y/, $Nonpast_2$ /=ya-ra/, Evit /=ya-n/, and in Causative /=ya-n^{g}i-jga-/ the /Xa-/ form is found even before the augment. The only way to handle this with a single base form /=yi-/ is to have V-Ablaut P-38 (a collection of irregular, morphologically conditioned vocalic changes) apply liberally to this paradigm.

In the closely related MA_1/MA_2 group (Table 11-6), we go with /Xu-/ as basic representation because we get /Xu-/ before augment /-ma-/ ($Nonpast_2$, Evit) and in $Nonpast_3$ /Xu:-'/ from //Xu-u//. /Xa-/ in $Past_1$ must be due to V-Ablaut P-38, while /Xi-/ is due to V-Fronting P-50 ($Nonpast_1$, Recip), VV-Contraction P-49 (Refl), or V-Assimilation P-37 ($Past_2$).

Choosing an underlying representation for 'to give' (Table 11-7) is difficult. Somewhat arbitrarily I choose /=yi-/, becoming /=i-/ in several forms by Homorganic Semivowel-Deletion P-4, though the $Past_1$ points to /=ya-/ and the $Nonpast_3$ to /=yu-/. In most compounds the best underlying form is /=(w_1)u-/, however.

11.5 YA class augments.

The augment in the YA class (Table 11-4) seems to be /-ya-/ in $Past_1$ (in augmented variant) and $Nonpast_1$. In $Past_1$, unaugmented /Xa-n^g/ is quite a bit more common in my data than augmented /Xa-ya-n^y/, though both occur in texts.

In a number of other forms, such as $Nonpast_2$ /Xa:-'-na/, the augment is realised lengthening of the stem-final /a/ to /a:/, sometimes with a variant pronunciation like /Xa-a-na/ with an extra vocalic prominence. The best representation for the augment here is /-wa-/ because of the tendency for /w/ to be dropped in this position (cf. rule P-9 in particular). Moreover, in the $Past_2$ we have either /Xa:-'-ni/ or /Xa-wa:-'/, where /-wa-/ is clearly the augment in the second variant and is compatible with the first variant.

In the $Nonpast_3$ we have indicated that /Xa-wi-Ø/ and /Xa-yi-Ø/ both occur. We can think of this as a choice between /-wa-/ and /-ya-/ augments, each followed by //-y//, but it is also possible to think of /Xa-yi-Ø/ as a low-level variant of /Xa-wi-Ø/.

The inflectional endings following /-wa-/ augment, as noted earlier, are basically those of the A_1 class, but $Past_2$ variant /Xa:-'-ni/ (which is more common than /Xa-wa:-'/ is an exception, since $Past_2$ /-ni/ occurs normally with I and U verbs (and a few monosyllable roots) rather than with the main A verb classes.

11.6 Suppletive verbs: 'to come', 'to go'.

A root /=ani-/ 'to come' is used only in future forms (involving $Nonpast_1$ or $Nonpast_2$) in imperative sense (§8.5). In other senses there is no verb with this meaning, and the verb glossed 'to go' is used for all directions of motion (perhaps with a demonstrative adverb).

The forms of 'to go' are given in Table 11-8, and it is clear that two basic roots are involved. One is /=ruma-/, with what appears to be A_1 endings ($Past_1$, $Nonpast_1$, Evit). The other root is seen in $Past_2$ /=ya-n^{g}gi/, Evit /=ya-n^{g}gan/, $Nonpast_2$ /=ya:-ri:/, and also in the (synchronically) somewhat dissociated Causative /=ya:rijgi-/ 'to transport'.

The phonology of the second set of forms is problematic. It is possible to think of /=ya-n^{g}gi/ and /=ya-n^{g}gan/ as //=ya-n^g-// plus inflectional suffix allomorphs //-Ci// and //-Can// where //C// becomes /g/ to assimilate to the preceding /-n^g-/. (In other paradigms the $Past_2$ is /-ni/, /-n^{g}i/, etc., while Evit is /-n^{g}an/, /-yan/, etc.) Perhaps the best analysis is to set up the suffixes as //-n^{g}i// and //-n^{g}an// (both independently attested), and allow the minor rule of Denasalisation P-23 to give //n^g// → /g/. However, it is doubtful that speakers have any clear internal analysis of these 'go' forms in view of the small number of /=ya(:)-/ forms and the absence of close parallels for this phonological interpretation.

$Nonpast_2$ /=ya:-ri:/ could be taken as having augment /-ra-/ (with A_2 suffix /-i/), but again the segmentation is synchronically dubious. We have set up an ad hoc rule to lengthen /=ya-/ to /=ya:-/ (P-45, part a). Causative /=ya:rijgi-/ may once have had a similar structure but is now rather frozen.

11.7 Aspectual subsystems in the inflectional affixation.

It is perhaps worth making explicit that some of the paradigms seem to be divisible into a "punctual" subsystem and a "continuous" subsystem. We have already mentioned that $Past_1$ and $Nonpast_1$, which both have punctual sense (except where aspect is neutralised, as with $Nonpast_1$ in present negative sense), are expressed by suffixes /-n^g/ or /-n^y/ consisting just of a nasal, while the other categories (except Evit, which is clearly outside the aspectual system) end in vowel or (occasionally) semivowel /-y/. However, we are here concerned with another piece of evidence, this time the distribution of augments.

In Table 11-5, we make the curious observation that the presence/absence of augment /-n^ga-/ in N^gA_1/N^gA_2 is exactly the opposite of that for N^gA_3/N^gA_4, at least in the six basic inflectional categories. On this basis, we can group the six categories into two subsystems:

"punctual" subsystem	"continuous" subsystem
$Past_1$	$Past_2$
$Nonpast_1$	$Nonpast_2$
$Nonpast_3$	Evit

(Note that $Nonpast_3$ and Evit never have a specific aspectual sense, hence the quotations marks around "punctual" and "continuous.")

The same partition occurs in the choice of two suppletive roots for 'to go' (Table 11-8), with /=ruma-/ ("punctual") vs. /=ya(:)-/ ("continuous").

This partition may occur in the N class (Table 11-4), since /-N-/ augment is clearly present in $Past_2$, $Nonpast_2$, and Evit, is clearly absent in $Nonpast_3$, and is arguably absent in $Past_1$ and $Nonpast_1$ (where, however, one could conceivably posit /-N-/ which is then zeroed before another nasal consonant).

In the YA class (Table 11-4), the clear cases of augment /-ya-/ are in $Past_1$ and $Nonpast_1$, with possible optional occurrence also in $Nonpast_3$ (assuming that /Xa-yi-Ø/ is not a low-level variant derived from /Xa-wi-Ø/). Clear cases of augment /-wa-/ are in the three "continuous" inflected forms.

A slightly different but related pattern is seen with MA_1/MA_2 (Table 11-6), where augment /-ma-/ occurs in $Nonpast_2$ and Evit, while no augment occurs in the other four basic inflections. A rather different pattern occurs in the RA class (same table), where augment /-ra-/ occurs in the three "punctual" forms, but is also obligatory in the Evit and occurs in one variant of $Past_2$.

Overall, then, there is a repeatedly manifested bifurcation of the six basic inflected forms expressed through stem suppletion and distribution of augment, though in a couple of augment classes a small amount of regrouping is found.

The most puzzling detail is the association of $Nonpast_3$ (basically, future negative) with the "punctual" subsystem. While I have no explanation, it might be mentioned that $Nonpast_1$ (rather than $Nonpast_2$) is the form used in present negative verbs, so that there seems to be an association of punctual with negative in the nonpast verbal system.

11.8 Assignment of verbs to inflectional classes.

Some associations between inflectional classes and transitivity types are trivial in that they have to do with the fact that some derivational suffixes are inflected in particular classes: Refl /-i-/ is I_1, Recip /-n^yji-/ is I_2, while Caus /-jga-/, Inchoative /-ma-/, and Factitive /-w_1a-/ are A_1 (Chapter 10).

Leaving aside such derived stems, there are only a few clear associations of inflectional classes with transitivity categories or with semantics. The most significant patterns involve the N^gA_1 and RA classes.

N^gA_1 consists predominantly of intransitive verbs of position (stance) and related notions, e.g., /=bura-/ 'to sit'. That this is grammatically significant is suggested by the fact that about one-third of the attested intransitive N^gA_1 verbs have a corresponding transitive formed simply by changing the endings to those of the A_2 class (which is elsewhere divided between transitive and intransitive stems): /=bura-/ 'to put down' (i.e., 'to cause to sit').

The RA class consists of a small number of transitive verbs of transporting (chiefly carrying) and thus has a semantic basis.

In the remainder of this section we give general statistics about inflectional class composition, along with lists of stems in the smaller classes.

The large unaugmented classes are the following, shown with the number of stems (excluding obviously derived ones) up to p. 120 of the dictionary:

A_1 (78) A_2 (122) A_3 (13) I_1 (42) I_2 (10)

These figures indicate that A_2 is the predominant class, especially since no high-frequency derivational suffixes feed into this class. Moreover, A_3 is closely associated with A_2 and is basically the variant of A_2 used with roots ending in /...ma-/ and sometimes /...ba-/. The A_1 statistic is perhaps misleading, since many of these exx., while not transparently derived, may be (etymological) derivatives involving a suffix like /-ma-/ or /-w_1a-/.

Indeed, the 78 exx. of A_1 up to p. 120 consist predominantly of stems ending in /...ga-/, /...wa-/, and /...ma-/, which could be analysed as having a suffix /-w_1a-/ or /-ma-/. However, there are also some stems for which no derivational analysis of this sort is possible, e.g., /=$w_2$ann^{g}a-/ 'to dance', /=yaba-/ 'to put in', and /=maya-/ 'to sing; to call[name]'.

For the most part, A_2 stems are unanalysable, even though this class consists largely of stems which historically contain a kind of thematising augment (cf. Ngandi augment /-dhu-/). In a small percentage of cases, vestiges of this segmentation can still be found in Nunggubuyu. One type of example involves root forms (§12.2) like /jalg!/, associated with A_2 verb /=yaldha-/ 'to go past'. Another vestige is the occurrence for a few such stems of a variant form (often with specialised meaning) which is historically (but not synchronically) a reduplication, e.g., /=$w_2$urlha-/ 'to sink, drown' and /=$w_2$urwurlha-/ 'to slow down'. (The regular reduplication of /=$w_2$urlha-/ by rule P-2 is /-$w_2$urlhu=$w_2$urlha-/.)

The vast majority of A_2 stems end in a (nonnasal) coronal

consonant plus /a/, hence /...la-/, /...lha-/, /...l̲a-/, /...da-/, /...dha-/, /...d̲a-/, /...ja-/, /...ra-/, /...r̲a-/. There are also a few ending in /...ya-/, with a semivowel articulated close to the coronal region: /=w$_1$arya-/ 'to carve', /=w$_1$ur̲ya-/ 'to pour on', /=w$_1$aya-/ 'to be hurt', etc. The only clear counterexx. involve final /...Cba-/, the exx. being /=lhan^{g}ad̲ba-/ 'to reach, overtake', /=lhar̲ba-/ 'to carve', /=mud̲ad̲ba-/ 'to be silent', and /=n^{g}ad̲ba-/ 'to be out of sight'. The dictionary also lists /=bul̲ma-/ 'to taste sweet' as A_2 (perhaps this should be checked by someone in the field).

Although A_2 as a whole has no specific association with transitivity, there is a set of about twenty intransitive N^gA_1 stems which have transitive (causative) A_2 counterparts, another ex. being /=r̲ira-/ 'to become dried out[N^gA_1]; to dry (something) out[A_2]'. On the other hand, there are a few pairs with intransitive A_2 inflection and transitive I_1 inflection:

intr.	/=jal̲burda-/ 'to plunge in (water)'
tr.	/=jal̲burdi-/ 'to put into water'
intr.	/=r̲abala-/ 'to come out'
tr.	/=r̲abali-/ 'to take out'
intr.	/=agal̲awaja-/ 'to go across'
tr.	/=agal̲awaji-/ 'to take across'

In a few A_2 stems we can identify /-ja-/ or /-dha-/ §10.10 as a minor derivational suffix: /=garma-/ 'to want to go with' (A_3, transitive) vs. /=garma-ja-/ 'to want to go along' (A_2, intransitive); noun /dha:gad̲aj/ 'vegetables', verb /=dha:gad̲a-ja-/ 'to eat vegetables' (A_2); root form /d̲irwu!/ 'jump into water', verb /=d̲irwu-dha-/. Another unproductive derivational relationship involves A_2 verb and associated noun in /...u/ or /...uj/: noun /l̲an^{g}galu/ 'freshwater fish', verb /=l̲an^{g}gala-/ '(freshwater fish) to rise from mud'; verb /=n^{g}al̲n^{g}ala-/ 'to be white or shiny', NAdj /n^{g}al-n^{g}al̲n^{g}alu-j/ 'white, shiny', cf. also goanna sp. term /r̲ulbu-n^{g}al̲n^{g}alu/ (i.e., 'shiny-backed one'). Sometimes an A_2 stem has an associated abstractive noun (historically the verb stem minus the former thematic augment): /=n^{g}and̲arda-/ 'to snore', noun /n^{g}and̲arg/ 'snoring'. See §14.15, §14.21.

For A_2 inflection with many recent English (creole) loanwords, see Appendix A.

The only monosyllabic A_2 stem is /=da-/ 'to defecate'. However, /=lha-/ 'to chop' (Table 11-1) and A_3 /=ma-/ 'to pick up, get' are monosyllabic stems with paradigms similar to that of A_2.

Most of the A_3 verbs in the dictionary end in /...ma-/ and might be etymological compounds involving /=ma-/ 'to pick up'. The exception is /=yar̲ba-/ 'to run' (Nonpast$_2$ /=yar̲ba-ni/). A full list of other A_3 stems (i.e., those ending in /...ma-/) is this (for glosses see dictionary entries): /=bagawulma-/, /=dhawil̲il̲ima-/, /=garma-/, /=guguma-/, /=lhamalhama-/, /=lharma-/, /=lharmadharma-/, /=lhun^{y}ma-/, /=l̲irbi-ma-/ (cf. noun /l̲irbi/), /=l̲ul̲uma-/, /=manma-/, /=ma:rma-/, /=n^{y}in^y-ma-/, /=agar̲ama-/, /=w$_2$albalma-/, /=w$_1$ama-/, /=ambalwir̲ima-/, /=w$_1$amunma-/, /=w$_2$ayama-/, /=w$_2$iririma-/, /=w$_1$uruma-/, /=w$_2$uyubuyama-/, and /=yuwuruma-/. Total in class: 25.

The I_1 and I_2 classes are most often intransitive, but this is probably because many of them end (at least historically) in Refl /-i-/ or Recip /-n^{y}ji-/. I_1 includes a number of transitive or agentive stems which probably do not contain Refl /-i-/ even etymologically: /=jujurgi-/ 'to push', /=d̲u:l̲wi-/ 'to sing (totem) of', /=ga:dhi-/ 'to dig with hands', /=lhari-/ 'to untie'. Indeed, in the middle of the preceding page we mentioned a few stem pairs with I_1 transitive (causative) vs. A_2 intransitive. We can also cite one such pair where the intransitive form is N^gA_1: /=w$_1$al̲adhi-/ 'to put across[I_1]', /=w$_1$al̲adha-/ 'to lie across[N^gA_1]'.

Many of the I_2 stems listed in the dictionary as being not internally analysable (synchronically) do end in /...n^{y}ji-/ and are probably thus historically reciprocal verbs; exx. are /=balbin^{y}ji-/ '(group) to split up' and /=d̲in^{g}an^{y}ji-/ 'to converse'. It is not clear whether this applies also to I_2 /=n^{g}an^{y}ji-/ 'to vomit'. Exx. of I_2 verbs which seem to have other bases are hard to find: we can cite /=n^{g}ambi-/ 'to bathe', /=al̲alibi-/ 'to turn over (carcass)', and /=yiyin^{y}mi-/ 'to call out "yi!"'.

A few verbs appear to fluctuate between I_1 and I_2 (the only consistent difference between the two classes being the Nonpast$_1$ allomorph, /-n^y/ vs. /-n^g/): /=mal̲ambi-/ 'to shudder', /=yambi-/ 'to speak', /=n^{g}awi-'-/ 'to die' (irregular Refl of /=n^{g}awa-/ 'to cover up'), /=w$_1$awan^{g}gi-/ 'to listen'. In the case of /=yambi-/ it is possible that I_2 is used in the transitive sense 'to speak to (someone)' while either I_1 or I_2 is used for the intransitive sense 'to speak' (for intransitive see /=yambi-n^y/ 76.2.5 vs. /=yamba-n^g/ 77.2.4, both Nonpast$_1$ in Future Punctual Positive usage). For /=n^{g}awi-'-/, there are indications that /=n^{g}awa-'-n^g/ is favoured for Future Punctual Positive (71.24.4, 17.14.6, 90.1.5) and /=n^{g}awi-'-n^y/ for Present Negative (71.32.1, 71.33.1), though more textual exx. are needed to prove this; this would mean that for this stem the Nonpast$_1$ would have to be split up into two forms depending on the larger verbal function.

Interrogative verb /=yamin^{g}gari-/ is basically I_2 (hence Nonpast$_1$ /=yamin^{g}gara-n^g/, but also has an irregularly shortened Past$_1$ /=yamin^{g}ga-n^g/ (13.38.3).

Turning now to the N augment class, we find a total of about 30 stems, some of which probably contain (etymologically) an old verb root *=ga- 'to carry', though sometimes with unrelated sense. The list is: /=d̲iwiriwa-/ (also A_1 and MA_1), /=d̲ulwa-/ (cf. noun /d̲u:l/), /=lha:ga-/, /-lhaga:ga-/, /lha:n^{g}urn^{g}a-/ (cf. noun root /-lhan^{g}urg/), /=lharga-/, /-lhawanga-/, /-lhawiwa-/ (also A_1, MA), /-lhulwunga-/, /=mal̲ga-/, /=munga-/, /=n^{g}ala:ga-/, /=n^{g}urga-/, /=n^{g}uyuga-/, /=r̲an^{y}juga-/, /=r̲iga-/, /=ad̲alaga:ga-/, /=w$_2$aga-/ (also A_1), /=agabijga-/ (also A_1), /=agadharga-/, /=ajilga-/, /=ajirbarga-/, /=w$_2$a:lga-/, /=w$_2$al̲ara-/, /=(w$_1$)ar̲a-/ (also A_1, YA), /=w$_2$arga-/, /=yãra-/, and /=ĩjga-/ (see dictionary for glosses).

I have a little over 20 stems of the YA augment class, several (but not all) involving some physical impingement on objects, like /=buya-/ 'to blow on', /=l̲al̲a-/ 'to peel, shell, skin', and /=mir̲a-/ 'to rub briskly in hand', but cf. /=jal̲n^{g}a-/ 'to escape from'. Others: /=bajirijirin^{g}a-/, /=da-/, /=gujuguja-/, /=lhan^{g}aya-/, /=maga-/, /=mara-/ (also /=maraa-/ A_1), /=murura-/, /=n^{g}an^{y}ga-/, /=r̲aga-/, /=r̲alga-/, /=ra-/, /=an^{g}gara-/, /=(w$_1$)ar̲a-/ (also A_1, N), /=(w$_1$)ara-/, /=yirin^{g}a-/.

In the N^gA_1 class, the stems which have transitive (causative) A_2 counterparts are these: /=bura-/, /=burda-/, /=lhalwulha-/, /=mun^{g}gala-dha-/ (cf. noun /mun^{g}gala/), /=mun^{y}mulha-/, /=murgulha-/, /=murunda-/, /=rira-/, /=abin^{y}burda-/, /=w$_1$ala:lara-/, /=w$_1$alaldha-/, /=andhadha-/, /=w$_1$aramilba:ladha-/, /=w$_2$udha-/, /=yadha-/, and /=yaljira-/. We have noted before that /=w$_1$aladha-/ 'to lie across, be broadside' has I_1 /=w$_1$aladhi-/ as its transitive counterpart. A_2 /=margira-/ 'to be jealous of' is the transitive counterpart of N^gA_1 /=margira-ja-/ 'to be jealous', though here the transitive is not of the causative variety; cf. also A_1 /=binima-/ 'to hide behind (tree, etc.)' and intransitive N^gA_1 /=binima-ja-/ 'to hide'. The unproductive element /-ja-/ or /-dha-/ seen in some of the N^gA_1 stems is also present in /=da:ra-ja-/ 'to lust for' (cf. noun /da:rawa/ 'thief'), /=lhagardha-/ 'to form lines' (cf. compound initial /-lhagarG-/), /=radbidha-/ 'to be tied up' (irregular Refl of MA_1 /=rad-bu-/ 'to tie up'), and /=mun^{g}gala-dha-/ 'to be up tree', all of which are N^gA_1 (though the last of these also has a transitive A_2 counterpart from the same stem).

Other N^gA_1 stems in the dictionary are /=bara-/ (really //=w$_2$ara-//), /=dara-/, /=dilin^{g}iriya-/, /=lhadbara-/, /=lhagararara-/, /=lhalawuda-/, /=lhan^{g}araladha-/, /=lharara-/, /=lhardha-/, /=lhira-/, /-lhirilhirilha-/, /=landhirn^{g}inda-/, /=lilhadbara-/, /=madhan^{g}ulun^{g}uliya-/, /=madharara-/, /=manimaja-/, /=mawaladha-/, /=n^{g}a:budha-/, /=n^{g}ala-/, /=n^{g}ardha-/, /=n^{y}arginda-/, /=rardha-/, /=ridha-/, /=amaja-/, /=ambagira-/, /=ambidha-/, /-ambulwaddha-/, /=w$_2$an^{g}gira-/, /=w$_2$an^{y}ja-/, /=w$_2$uda-/, /=w$_1$ulunda-/, /=w$_2$unda-/, /=yirira-/, and /=yiwanda-/. Total in class: 57.

The MA_1 and MA_2 classes are closely associated formally. The MA_2 type is rare: the clearest ex. is /=w$_2$adji-wu-/ 'to strike, hurt', though a few of the stems listed as MA_1 may also permit MA_2 variants.

The dominant MA_1 type consists of "auxiliary compounds" (§14.4) ending in /-w$_2$u-/ (cf. /=w$_2$u-/ 'to hit, kill'); there is usually no close semantic connection with hitting or killing. In true compounds involving 'to hit, kill' (e.g., with body-part compound initial), /=w$_2$u-/ is replaced by suppletive /=w$_2$adja-/

The attested MA_1 stems are /=dhabidbu-/, /=diwiri-wu-/ (also A_1, N), /=galin^{y}bar-wu-/, /=gala-bu-/, /=jiji-bu-/, /=jir-wu-/ (cf. noun root /-jir/), /=lhaga-bu-/, /=lhaj-bu-/, /=lhalm-bu-/ (cf. noun root /-lhaln^g/), /=lham-bu-/, /=lhawi-wu-/ (also A_1, N), /=lhilhir-wu-/, /=lhilgi-wu-/, /=lhungi-wu-/ (also A_1), /=lal-bu-/, /=lililiri-bu-/, /=lin^{y}gi-wu-/, /=lir-wu-/, /=mad-bu-/, /=marya-wu-/, /=min-bu-/, /=n^{g}ar-bu-/, /=rad-bu-/, /=ran^{g}a-wu-/, /=ran^{g}ga-wu-/ (may be "true" compound semantically), /=ra-wu-/, /=ru-bu-/, /=adbar-wu-/, /=wad-bu-/, /=aj-bu-/, /=w$_2$al-bu-/, /=w$_2$an-bu-/, /=andhar-wu-/, /=anar-bu-/, /=w$_1$/w$_2$aradar-wu-/, /=w$_1$arar-bu-/, /=w$_2$argad-bu-/ (noun /w$_2$argad/), /=w$_2$aya-wu-/, /=w$_2$ililil-bu-/, /=w$_1$ulu-bu-/ (cf. noun /wulug/), /=w$_1$ulin^{y}gi-wu-/, /=wunal-bu-/ (noun /wunalg/), /=w$_1$/w$_2$urbar-wu-/, /=wur-wu-/, /=ya:li-bu-/, /=yalyal-wu-/, /=yar-bu-/, /=yinur-wu-/, /=yin-bu-/ (also A_2), and /=yi-wu-/.

Occasional fluctuation between A_1 and MA_1 is probably related to the existence of MA_2, which has some A_1-type endings.

11.9 Textual attestations (selected).

The analysis in this chapter, and assignments of stems to classes (see dictionary entries), are based on direct elicitation rather than textual occurrences for obvious reasons. In this section, though, we will mention occurrences of forms in the more uncommon or irregular paradigms.

In U_1 with /=balhu-/ and /=a:yu-/ (both 'to cut up') we have $Past_1$ /=balhu-n^y/ 10.10.2, $Past_2$ /=balhu:-'/ 162.24.6 and /=a:yu:-'/ 149.2.2, $Nonpast_1$ /=balha-n^g/ 106.4.1, $Nonpast_2$ /=balhu-na/ 112.5.4 and /=a:yu-na/ 112.5.4.

For U_2 the sole verb, /=a:ru-/ 'to abandon' has $Past_1$ /=a:ru-n^y/ 3.2.4, $Past_2$ /=a:ru:-'/ 5.13.4, $Nonpast_2$ /=a:ru-na/ 109.5.5, and Evit /=a:ru-n^{g}un/ 13.12.3.

For U_3 /=rugu-/ 'to weep' we have $Past_1$ /=rugi-n^y/ 43.3.1 and $Past_2$ /=rugu-ni/ 41.17.1.

For U_4 /=ragu-/ 'to look for' we have $Past_2$ /=ragu-ni/, $Nonpast_1$ /=raga-n^g/ 121.3.8, $Nonpast_2$ /=ragu-na/ 29.9.1, and Evit /=ragu-n^{g}un/ 40.14.2.

For YA, many stems are attested in one or more forms. $Past_1$ variant /Xa-n^g/ is attested as /=n^{g}an^{y}ga-n^g/ 'breathed' 17.7.5 and several times as /=raga-n^g/ 'preceded, went first' 163.17.6, 163.24.1, MT 18 and 31, TNT 3; the other $Past_1$ variant /Xa-ya-n^y/ is attested once as /=raga-ya-n^y/ 'went first' TNT 32. $Past_2$ variant /Xa-wa:-'/ does not occur in the texts, while variant /Xa:-'-ni/ has a number of attestations: /=raga:-'-ni/ 'went first' 59.2.1, /=n^{g}an^{y}ga:-'-ni/ 'breathed' 71.10.1, /=lala:-'-ni/ 'peeled', etc. For $Nonpast_1$ /Xa-ya-n^g/ see /=ralga-ya-n^g/ 'will open' 7.21.5. $Nonpast_2$ /Xa:-'-na/ is repeatedly attested, e.g., /=raga:-'-na/ 74.4.4, /=lala:-'-na/ 155.1.1, /=ra:-'-na/ 'swears at' 7.18.4. Evit /Xa:-'-n^{g}un/ is seen in /=ra:-'-n^{g}un/ 163.17.5.

The verb /=ra-/ 'to spear' (Table 11-4) has these forms: $Past_1$ /=ra-n^g/ 3.4.2, $Past_2$ /=ra-ni/ 3.1.5, $Nonpast_1$ /=ra-ya-n^g/ 12.5.4, $Nonpast_2$ /=ra-yi:/ 17.13.6, $Nonpast_3$ /=ra-yi-Ø/ 11.7.2. Most of these occur many times in the texts.

For N^gA_1, most of the forms are attested many times but with different stems. We might mention that Recip /Xi-n^{y}ji-/, though shown in Table 11-5, is usually not possible because the verbs in this class are intransitive. However, /=lhagararara-/ 'to make noise' does have Recip /=lhagararari-n^{y}ji-/ in the sense 'to make noise together'.

In N^gA_2, /=bilya-/ is unattested except in Caus /=bilya-n^{g}i-jga-/ 161.7.4. The two common roots, /=lha-/ 'to stand' and /=yi-/ 'to sleep', are well attested: $Past_1$ /=lha-n^{g}a-n^y/ 9.9.2 and /=yi-n^{g}a-n^y/ 4.5.4, $Past_2$ /=lha-y/ 13.40.2 sometimes becoming /=lhi-Ø/ in compounds as in 65.3.3 and 166.1.5, also /=ya-y/ 4.4.1, $Nonpast_1$ /=lha-n^{g}a-n^g/ 17.12.2, $Nonpast_3$ /=lha-ra/ 7.19.2 and /=ya-ra/ 56.1.6, and $Nonpast_3$ /=lha-n^{g}i-Ø/ 77.2.2.

For N^gA_3 we cite /=na-/ 'to burn', /=w$_2$a-/ 'to bite', and /=yu-/ 'to carve out, produce' as follows: $Past_1$ /=na-n^g/ 163.17.1 and /=w$_2$a-n^g/ 162.13.5, $Past_2$ /=na-n^{g}a:-'/ 5.20.2, /=w$_2$a-n^{g}a:-'/ 15.6.2, and /=yu-n^{g}a:-'/ 13.8.1, $Nonpast_1$ /=na-n^g/ 109.3.3, /=w$_2$a-n^g/ 5.14.5, and /=ya-n^g/ 58.2.5, $Nonpast_2$ /=na-n^{g}a-na/ 65.14.4, /=w$_2$a-n^{g}a-na/ 15.6.1, and /=yu-n^{g}a-na/ 58.2.5.

N^gA_4 /=$w_2$arn^{g}ayu-/ 'to pity' is found in the texts only as $Past_1$ /=$w_2$arn^{g}ayu-n^y/ 17.12.5.

The RA class happens to show up in our texts in past forms only: $Past_1$ /=$w_2$argu-ri-n^y/ 'carried' 3.7.1 (also 99.3.4), $Past_2$ variant /=w_2Xu-ra-n^{g}i/ unattested but other variant /Xa-y/ common as in /=$w_2$arga-y/ 151.2.1 (also 157.9.3, 157.10.2), /=armun^{g}ga-y/ 'carried' 157.8.1, /=w_1/$w_2$arwarwa-y/ 'carried' 157.9.2 (also 145.1.3 and TNT 25), and /=mangarwa-y/ 'took along' 35.13.3.

The related paradigm of /=$w_2$idhi-/ 'to carry under arm' (Table 11-6) is attested as $Past_1$ /=$w_2$idhi-ri-n^y/ 40.12.2, $Past_2$ variant /=$w_2$idhi-ya-y/ 5.18.3 and 157.9.2 and variant /=$w_2$idhi-ra-n^{g}i/ 37.3.5 and 147.1.2/4 and variant /=$w_2$idhi-ri-Ø/ 147.1.2.

The four stems in Table 11-7 have these attestations among many others: $Past_1$ /=na-n^y/ 'saw' 5.16.5, /=n^{g}a-n^g/ 'ate' 1.2.6, /=yan^{g}a-n^g/ 'heard' 8.2.2, /=ya-n^y/ 'gave' 5.17.6 (compound /-maran^g=a-n^y/ 4.6.3); $Past_2$ /=na-ni/ 5.15.5, /=n^{g}u-ni/ 3.5.4, /=yan^{g}a-ni/ 7.6.2, /=i-ni/ 13.28.2 (compound /-ran^{g}ga=wu-ni/ 40.10.3); $Nonpast_1$ /=na-n^g/ 4.8.3, /=n^{g}a-n^g/ 7.8.2, /=i-n^y/ 78.1.5; $Nonpast_2$ /=na-yi:/ 13.42.2, /=n^{g}u-yi:/ 17.9.4, /=yan^{g}a-yi:/ 7.20.2, /=i-yi:/ 112.2.2; $Nonpast_3$ /=ni:-'/ 42.6.4, /=n^{g}i:-'/ 17.9.6, /=yu:-'/ MT 26.

Finally, for suppletive 'to go' (Table 11-8) we have $Past_1$ /=ruma-n^y/ 4.6.2, $Past_2$ /=ya-n^{g}gi/ 1.2.2, $Nonpast_1$ /=ruma-n^g/ 9.4.1, $Nonpast_2$ /=ya:-ri:/ 12.1.4, $Nonpast_3$ /=rumi-Ø/ 20.19.3.

In our attestation listings above, we have concentrated on the six basic inflectional (rather than derivational) forms. Derivatives such as Refl, Recip, and Caus are listed in the dictionary entries with textual citations where available.

Chapter 12

Particles and postpositions

12.1 Definitions: particle, postposition, enclitic particle.

A particle is a form which occurs as a separate word, which has no internal morphological structure, and is unable to take any further affixation. An enclitic particle is a particle which, in addition, must occur after some other word (with no intervening pause), the best example being /yamba/ 'because' (§12.15).

A postposition is a similar element which, however, is formally attached as a final-position suffix to another word, so that phonological rules (specifically, those applying to underlying consonant clusters at boundaries, including deletions and assimilations of the consonant[s] before the boundary and/or Hardening P-18 of the consonant after the boundary) may apply.

The majority of particles of any grammatical or discourse interest are treated in the present chapter. This includes the important class of particles known as verbal root forms (§12.2). There is also a section on postpositions (§12.21), although these have already been introduced (e.g., §4.32).

For negative particles /girjag!/ and /yagi/, along with the other negative element /wa:='ri/, see §8.2 and §15.6.

For yes/no interrogative particles /yu:ga/ and /aliyun^g/, along with tag-question particle /ala/ used to elicit confirmation or approval (with a suggestion or imperative), see §13.1.

For Vocative pronouns, including one (2Sg /guwaj!/) which might be analysed as a particle, see §6.7.

12.2 Verbal root forms.

The expression verbal root form or just root form is a technical term for a set of particles which are associated semantically, and in some cases formally, with verbs. (In the dictionary they are indicated by the abbreviation Rf.) They are pronounced as interjections and do not co-occur inside a clause with other constituents, though they frequently occur in juxtaposition to an ordinary clause which may contain an inflected form of the associated verb stem.

Table 12-1, below, gives a fairly complete inventory.

TABLE 12-1

Root Forms

root form	verb[s]	gloss
badabad!	=garaja-, =abi-	jump; move quickly
baj!	" "	jump; shift position quickly
bid!	[several]	run, dart, move quicly
burj!	=$w_2$urja-	clap [hands]
dhawad!	=lhawadba-, =rabala-	come out into the open
dhid!	=dhida-	close off, block, stop
dhid!	=lhida-	go through (mud, etc.)
dhud!	=ralha-	land (e.g., bird, stone in air)
dirj!	=dirja-	defecate (esp., with splattering)
dad!	=rad-bu-	tie up
dirwu!	=dirwu-dha-, etc.	jump into water
dul!	=na-, =la:dha-	catch fire, set fire
gab!	=mudadba- // =n^gu-	shut up // eat, swallow
gad!	=w_2a-	bite
gud!	=gudga-	prod, poke
gudbij!	=bilharga-	grab, seize
guj!	=gujguji-	lift up
jalbur!	=jalburda-, etc.	jump into water
jalg!	=yaldha-	go past, slip away
jarg!	=adhuga-	stab, jab, harpoon
jaw!~jan^{g}gaw!	=ma-	pick up
juj!, juy!	=ya-	go
julub!	=juluba-	jump in, hide in (something)
jurg!	=ju(r)jurgi-	push, drive ahead, propel
n^gam!	=n^gu-	eat
wa!	=$w_2$ala-	arrive
wil!	=$w_2$ilbila-	fly

- -

We note, to begin with, that the favourite initial consonants are stops /b dh d d g j/. In some cases the associated verb stem is cognate but begins with the corresponding (homorganic) continuant, cf. /burj!/, /dhid!/, /dad!/, /jalg!/. (/jarg!/ is probably related to the verb /=yarda-/ 'to poke, start up [motor], blame, touch', though there has apparently been a partial semantic divergence.) Although the root forms are now clearly distinct lexical items, in some cases they are (historically) precisely the roots (minus thematising augment such as *-dhu- or *-dha-) of the corresponding verbs; the root forms but not the verbs retain the archaic phonological representation of the stem.

As for the final consonants, note that labials /b m/ are fairly common. This is despite the fact that labials are virtually never found as final segments elsewhere in the language (excluding other interjections).

The root forms are pronounced forcefully, as interjections. They are normally pronounced with very short vowels, though occasionally one of the bisyllabic root forms shows stylistic (narrative) lengthening of the second syllable.

Since the root forms focus exclusively on the verbal action, they are neutral with regard to voice categories, and can thus be used with no formal change to indicate a transitivised or intransitivised (e.g., causative or reflexive) variant of the action designated. They are also unmarked for pronominal category of subject (and object).

In some cases, the root form is arguably referring not to the entire action, rather to a sound or noise produced by the action; there may thus be a fuzzy boundary between root forms and the general class of interjections referring specifically to sounds. Some exx. in Table 12-1 might be /burj!/, /dhud!/ (compare English thud!), /dirj!/, /n^gam!/, perhaps even /wil!/.

The basic usage of root forms is as interjectional abbreviations of what would otherwise be an ordinary clause with inflected verb. The root forms also usually suggest instantaneous or at least relatively brief events, and have a dramatic quality which makes them popular in narratives. For this reason they are often used (redundantly) in juxtaposition to the corresponding verb. Some exx. of such juxtaposition are /dhid!/ with /=lhida-/ 9.13.2, /wa!/ with /=$w_2$ala-/ 40.15.4 (compare later /wa!/ by itself, 40.16.3), /gud!/ with /=gudga-/ 43.14.4, and /dhid!/ with /=dhida-/ 43.12.4 (and 43.13.4). Additional exx. of root forms in the absence of the corresponding verb are /jan^{g}gaw!/ 13.32.1 and /jalbur!/ 30.5.5.

Some of these root forms occur typically in a rapidly-spoken series. This is the case with /wil!/ 'to fly', hence /wil! wil! wil! .../ 13.32.3-5. It is also true with /n^gam!/ 'to eat' (114.4.6, 114.7.4), which is not used in any other fashion and is thus not closely parallel to most of the other root forms.

Root forms can occasionally be used as imperatives, though this is not their most usual function. In the meaning 'to shut up', this is the usual function, however, of /gab!/.

Root forms are listed separately in the dictionary with textual attestations, so we omit further documentation here.

A number of interjections which appear to refer primarily to noises as such, and are therefore not discussed here, are listed on p. 336 of the dictionary; some of these might possibly be reanalysed as similar to root forms (in that they are associated with specific activities, such as hitting tapsticks).

12.3 /adaba/ or /aba/ 'now, then' (immediate).

The particle /adaba/ and its shortened variant /aba/ occur hundreds of times in the texts. They are often clause-initial but may also occur elsewhere (e.g., after the verb); the form /aba/ is perhaps most often clause-initial.

The basic meaning is temporal immediacy (close sequence) linking the present clause (or rather, the event it describes) with the preceding clause, or with the "now" of the speech event. In past tense narrative sequences, we can translate with 'then'. If the reference time is the "now" of the speech event, the translation is (unstressed) 'now' with present or future predication ('I am going now', 'I will go now') and '[to have] just' with past predication ('He went now' = 'He has just gone').

In narratives, however, /adaba/ may do more than just indicate temporal relationships among clauses. It may also serve as a (weak) framing device, foregrounding the event in the new clause in contrast to the preceding. Usually there is no major shift in perspective or topic--just a weak highlighting of the new event. (We might compare English sentence-initial narrative now, but the Nunggubuyu particle has rather weaker framing effect.)

Since /adaba/ can be found on perhaps every page of the texts, we omit a long list of exx. In the first text of NMET we can cite 1.1.3, 1.2.1/4/6/9, 1.3.3/5, 1.6.2/3/4/5, 1.8.12, 1.9.4, 1.10.3/6/7. An ex. with future verb is 12.5.4.

That /adaba/ is not a NAdv, rather an uninflectable particle, is shown by the fact that no NC prefix is added in negative contexts, as in 10.2.3. (This is a standard test for particle vs. NAdv, §4.8). In addition, /adaba/ never takes a postpositional suffix.

For a much stronger framing particle, cf. /araga/ (§12.7, below). Conjunctive /mari/ and /n^ga/ (next section) 'and' should also be thought of as roughly similar particles, though they have somewhat different discourse effects.

A more explicit temporal sequence of two events, often implying a greater lapse of time between them, is expressed by demonstrative expressions like /an-uba-ni:-'la-wala/ 'after that' (§7.8, §7.31) beginning the second clause, by particle /wurugu/ 'later' in the second clause (§12.5), or occasionally by adding Ablative /-$w_1$ala/ to the predicate of the first clause in the sense 'after' (§16.6). There is also a particle /n^gijan^g/ 'more, again' (§12.6).

We sometimes find /adaba/ in a clause also containing another particle, but there do not appear to be any recurrent, fixed combinations of particles including /adaba/.

A NAdv (adverbial noun) which might be mentioned in connection with /adaba/ on grounds of partial semantic similarity is /lha:lhag/ 'a short time [ago/from now]'. In context it may mean 'just a moment ago', 'just a moment before', 'very soon', 'on the verge of', 'just about to'. It is much more emphatic in specifying close temporal sequencing than is /adaba/, and may also indicate unactualised (impending) events.

The NAdv /yimbaj/ 'today' (in narratives also 'that same day') has a more general sense 'these days' (in opposition to the remote past), and hence occurs in some contexts as a translation of English now. It should be distinguished from /adaba/, which does not have this usage.

12.4 /mari/ or /n^ga/ 'and'.

The most neutral 'and' particle (i.e., conjunction) is /mari/. This is a syntactically flexible particle which can link conjoined NPs, clauses, or other constituents.

For example, a common way of conjoining two NPs is to insert /mari/ between them; intonationally, /mari/ belongs with the second conjunct (like English and but unlike Japanese to). Exx. are 10.2.1, 14.8.2, 14.12.2. The NPs may have case markers, as in 42.1.1, where both nouns have Relative suffix /-yin^{y}un^g/.

In extended lists, /mari/ is optionally used between any two of the conjuncts, but the tendency is to make little use of /mari/ in this situation, except perhaps after a slight pause somewhere in the list. The end of such a list is typically indicated by the form /da-ni:-'la-yun^g-gala-waj/ or a variant thereof in list-summative function (§7.9).

For further remarks on conjunction (especially of NPs, including instances involving an NP and a pronoun), see §15.7.

In narratives, /mari/ is moderately common as a clause-initial particle, though it is not obligatory in narrative event sequences. Among many exx. we may cite 7.15.2, 11.9.1, and 13.16.2. Although we cannot present a unified analysis accounting for all text tokens, we can say that /mari/ may have weak framing functions, highlighting the event in the new clause. There is thus some discourse-functional similarity to /adaba/ (preceding section), but of the two, /mari/ is more likely to occur when the conjoined narrative clauses are uttered in rapid succession, while /adaba/ seems to be favoured by a breath-group pause. We may also mention that /mari/ is common with following verbal root form (§12.2), as in /mari gudbij!/ 10.18.2-3 '...and [he] grab[bed her]!' (cf. also 14.19.1 [p. 102 of NMET, emending "14.18" to "14.19"], 16.14.3/4).

There are occasions, though not many, in the texts where /mari/ does not occur at the beginning of the new conjunct (NP, clause, etc.). In such cases we must be aware of the possibility that /mari/ was intended to go at the beginning of an additional conjunct which was cut off (false start, self-repair, etc.). In 28.6.3 we have /n^gi-ga n^gi=bujurbujur yamba mari/ 'as-for-her she-was-diseased because and' with a pause after /mari/, but it seems reasonable to think that this was a hesitation pause rather than a regular intonational break, and the material after the pause can reasonably be construed as a clause conjoined to this one. However, in 69.3.5 we have /mari/ at the end of a (quoted) clause which can be construed as conjoined to preceding clauses (within the quotation); here we might gloss /mari/ as an emphatic 'furthermore'. In 64.9.3 we have /mari/ between a man's name (grammatical subject) and the verb of the clause, but it may be that this is a case of repair (so that the man's name by itself represents a false start after which the clause was begun anew; this is supported by the fact that the man's name was repeated after the verb). In general, /mari/ is uncommon except at the beginning of the new conjunct; some apparent textual counterexx. are misleading; the few real counterexx. seem to involve emphatic finality.

/mari/ often co-occurs with other particles. A very common combination is /mari n^ga/, which we discuss below. In other combinations, /mari/ precedes the other particle (in all recurrent combinations) with some exceptions involving /n^gijan^g/ 'more, again' (§12.6), hence /n^gijan^g mari/ 166.14.2. With /wurugu/ 'later' (§12.5) we have /mari wurugu/ 7.21.2, and all three particles occur together as /mari n^gijan^g wurugu/ 43.4.3; for /mari yin^{g}ga/ 98.2.1 cf. §12.7.

The particle /n^ga/ is more difficult to describe than /mari/. Whereas /mari/ is a relatively neutral conjoiner, /n^ga/ implies a natural continuity between the two conjuncts. In terms of placement (including intonation), /n^ga/ may be at the end of the first

conjunct or at the beginning of the second in those cases where the boundary is clear.

/n^{g}a/ is not used for simple conjunction of NPs. It can be used with two demonstratives indicating locations, but in this case does not refer to the abstract conjunction of the locations but to the distance between them, usually conceived of as beginning in one spot and proceeding to the other. For the most common usage of this type of expression (i.e., in specifying distance), see §7.28.

The more common usage of /n^{g}a/ in the texts is to link two clauses. One very common sequence is the following:

[Verb$_1$] [Rdp-Verb$_1$::: n^{g}a] [Verb$_2$]

The brackets represent clauses (which may also contain additional words, not shown). An event represented by Verb$_1$ is introduced, usually in unreduplicated form, either punctual or continuous aspect. After a pause, prolongation of this event (or situation) is indicated by a reduplicated (hence also continuous aspect) form of the same verb with stylistic lengthening of the final syllable. This verb is followed in the same breath group by /n^{g}a/, then with or without a short pause a new verb (Verb$_2$) introduces the next event. The reduplicated verb (which is often pronounced with continuous high pitch, with pitch falling to low on /n^{g}a/) is backgrounded in discourse terms, in somewhat the same way imperfective clauses are often backgrounded in European languages (e.g., Spanish), and the reduplicated verb plus /n^{g}a/ provide a clear discourse frame which highlights the following new verb (Verb$_2$). Among many textual exx. we may mention 13.8.1 (cf. preceding material beginning around 13.7.3), 4.5.3 (where Verb$_2$ is replaced by a predicative NAdj), and 5.11.5-6.

The schema shown just above is merely intended to be representative, and there are many syntactic variations on the same basic principle. Sometimes the repeated Verb$_1$ is not reduplicated; sometimes the first occurrence of Verb$_1$ and/or the occurrence of Verb$_2$ is reduplicated. Sometimes the stylistic lengthening (:::) before /n^{g}a/ is omitted, or applies to an intervening word (e.g., a demonstrative, as in 5.3.5). Frequently, instead of Verb$_2$, the word immediately following /n^{g}a/ is a demonstrative (pronoun or adverb, but referring to locations rather than entities), which is often itself followed by a verb (Verb$_2$) after a pause. A typical schema might be this:

... [he-kept-going n^{g}a] [there, he-stopped]

In this type of sequence, /n^{g}a/ typically has low pitch, the demonstrative (there) has clause-initial high pitch but may be uttered with no real pause, and the following verb (he-stopped) may require a pause just before it. Some textual exx. of this schema or some variation on it: 1.6.8-9, 5.7.3, 5.16.2 (with place name instead of demonstrative), 5.18.3, and 6.3.2. The measure-of-distance construction with /n^{g}un^{y}ju ... n^{g}a .../ plus demonstratives is also related (§7.28).

A close parallel to the preceding is the predication of recognition, of which the following schema is representative:

[he-looked n^{g}a] [there, she-sat]

In this case, there may be represented in Nunggubuyu by either a demonstrative adverb like /da-ji/ 'there' or /ba-gu/ 'there[Anaph]' (§7.12), or a predicative demonstrative pronoun (§7.2, §7.4), often in the Immediate demonstrative category. The whole construction often corresponds to English 'He saw her' or 'He noticed her'. A few exx.: 1.3.2-3, 10.13.2, 16.11.2. A similar example involving listening instead of looking is in 162.6.3.

There are many other specific schemata in which /n^{g}a/ can occur. For example, in 16.2.2 and thereafter in the same text, we find expressions of this type:

[he-fished n^{g}a] [no!][they-were-small]

(i.e., 'He tried fishing [there], but all he could get were small ones.') Here the negative word is the particle /girjag!/, and since the accompanying clause (they-were-small) is not within the scope of the negation we show it as a separate clause, but it is related to /girjag!/ (i.e., as an explanation or elaboration) in much the same way she-sat elaborates on there in the preceding ex.

The general sense of /n^{g}a/ which emerges from all this is the notion of natural continuity between the two conjuncts. The second conjunct is typically represented as a result or outcome of the event or attempt described by the preceding conjunct, or at least as an event into which the first conjunct led. (The result may be unfavourable, as in the 'fish' example.) By contrast, /mari/ is more neutral as to intrinsic relationships among the conjuncts.

Often we get both conjunctions together, the regular order being /mari n^{g}a/. This expression is normally clause-initial and is not used to conjoin two NPs, for example. Among dozens of textual exx. we may cite 1.2.5, 2.1.5, 7.9.3, 7.15.3/4, and 11.8.1/2.

Less often /n^{g}a/ combines with some other particle. The attested combinations are these: /n^{g}a araga/ 'suddenly' (§12.7) 16.4.5, 43.16.1, 43.3.1, 43.14.1, but /araga n^{g}a/ 21.6.1, 163.15.1-2; /n^{g}ijan^{g} n^{g}a/ 'more' (cf. §12.6) 10.17.4, 13.37.3/4, 14.18.3, 16.13.3-5, 19.8.2; /wurugu n^{g}a/ 'later' (cf. §12.5) 13.30.2; /n^{g}a wi:ya!/ 'and that is all' (cf. §12.17) 10.18.5; /aba n^{g}a/ 'now' (cf. §12.3) 14.15.1; /yin^{g}ga n^{g}a/ (§12.7) 161.15.3; /n^{g}a yigaj/ and /n^{g}a n^{g}ubindi/ (§12.8). Further, in 16.19.5 we have the sequence /n^{g}a juy!/ 'and go[ing]' with root form related to the sense 'to go', but this is in the context 'from [place n.] they went, and [arrived at ...]', showing motion between points resembling that in one of the verbal schemata shown above. In general, /mari/ rather than /n^{g}a/ is used with root forms. (For root forms in general see §12.2.)

Note that in our 'fish' ex. (this page, above), /n^{g}a/ is translated into English as 'but' (adversative). Cf. also 14.18.3 and 15.1.4 for similar exx. The explicitly adversative 'but' particle is /yagu/ (§12.10).

Occasionally, /n^{g}a/ occurs between the 'if'-clause (protasis) and 'then'-clause (apodosis) of a conditional: 4.7.1 and 13.33.2 (both simple conditionals with verbs in future form and with /-maji:/ 'if' on the protasis verb). For more on conditionals in general see §16.7.

There are occasions where /n^{g}a/ is not necessarily conjunctive. When it follows a demonstrative form (Locative DemAdv or a DemPro), /n^{g}a/ does not necessarily conjoin it to a following phrase or clause, but may merely emphasise the demonstrative. I believe that this is the case in 16.20.3/4 with /da-nu:-' n^{g}a/ 'right there [on your head]', although one might argue from inspecting this ex. that the /n^{g}a/ does involve the transition to the next phrase. In any event, in unrecorded conversation I have heard similar combinations with high pitch falling to fairly low by the final syllable of the demonstrative, then high pitch on the /n^{g}a/, often with no following material. In view of the virtual absence of clear textual exx., I cannot analyse this pattern in depth. There are other, more common ways of emphasising such demonstratives, e.g., use of suffix /-miri/ (§7.19).

12.5 /wurugu/ 'later'.

This particle has a comparatively straightforward meaning 'later, afterward'. It passes the tests for particle status, including inability to take postpositions and avoidance of NC prefix even in negative contexts (an ex. of /wurugu/ in negative context is in MT 9); another is 48.1.3/4/5.

This particle can combine with other particles. We mentioned /mari wurugu/ and /wurugu n^{g}a/ in the previous section (it is likely that /n^{g}a wurugu/ also occurs). We can cite /n^{g}ijan^{g} wurugu/ (cf. next section) 'again later' or 'more later' 21.9.1, 21.10.1, 33.1.2, 43.4.3 (with preceding /mari/), 43.5.2/4, 52.5.2/3, 163.19.2/3, showing this order to be consistent. There is also an ex. of /wurugu yin^{g}ga/ (cf. §12.7) 'later' (with anticipation nuance) 71.2.4.

Additional exx. of /wurugu/ are 7.6.1/2, 13.13.4, 37.2.4 (if not mistranscribed), 47.12.7, 55.9.2, 69.5.1, 69.7.4/6, 71.18.1, 73.5.5, 106.3.1/2, 116.8.2, 143.10.3, 157.7.2, 161.1.4, 161.3.4, 161.20.2, 161.32.4, 162.7.5, 162.14.1, 163.14.2, 165.1.1.

A competing form (not a particle) is /an-uba-ni:-'la-wala/ 'after that' (§7.8, §7.31).

12.6 /n^{g}ijan^{g}/ 'more, again, further'.

This is a rather common particle with a variety of (translation) meanings. Exx. showing lack of NC prefix even in negative context are 21.10.2, 47.9.5, and 88.3.2. It never occurs with postpositions.

Overall this particle occurs at a rate of about one token every two pp. of the texts in NMET (based on the first 19 texts). A few exx. showing contextual meaning: 7.10.5-6 [the stone was not there any more]; 7.18.1 [now I will tell the story of brolga too]; 8.4.1 [the "devil" died, again it got up] (cf. also 8.5.1/3); 10.12.3 [he was cutting his eye, again he was cutting his (other?) eye]; 12.8.1 [(having not fully closed their eyes the first time) then they really closed their eyes again]; 13.1.3 [meat ants dig out holes on one side, again on the other side they dig out holes]; 13.7.1 [that's the story of meat ants, (now) another (story) more: ...]. The Nunggubuyu particle has the general sense of emphasising the additive quality of an event or object. In the case of verbs, it indicates repetition rather than mere continuation.

In 69.8.5-6 we have /n^{g}ijan^{g}/ twice in a list; I suspect that it functions here as a filler enabling the speaker to think of the names of additional items.

Of the combinations of particles including /n^{g}ijan^{g}/, the one recurrent one is /n^{g}ijan^{g} wurugu/, mentioned with citations in the preceding section. Other, less common but attested, combinations are these:

/aba n^{g}ijan^{g}/ 19.4.3; /n^{g}ijan^{g} adaba/ 7.18.1, 19.5.1 (cf. §12.3);
/n^{g}ijan^{g} n^{g}a/ and /n^{g}ijan^{g} mari/ (§12.3 has citations);
/yin^{g}ga n^{g}ijan^{g}/ 13.28.2 (cf. following section).

One final note on translation of /n^{g}ijan^{g}/: while it can have an additive sense when attached (usually preceding) a NP or other constituent (in a list or other sequence), by itself it does not have the sense of incrementing a quantity (cf. English more as in Give me some more!). That is, it does not directly correspond to French davantage, for example. Its central meaning is 'again, another time', or in some contexts 'in addition [to the preceding]'. It normally indicates a new, separate repetition of an event or a new event or entity, rather than a continuing, steady increase.

12.7 Anticipatory /yin^{g}ga/, /araga/ 'suddenly', /giya!/ 'look out!'.

In this section we deal with three particles whose excitement value is greater than that of the particles discussed so far.

Particle /yin^{g}ga/ occurs about 100 times in the texts of NMET. It never takes affixes, though I cannot cite an ex. in a negative context showing absence of NC prefix (for semantic reasons it is unlikely to occur in negative contexts). The basic meaning involves anticipation/imminence of some event, but it is necessary to go into finer detail; there are many contextual translations into English.

First, we observe that /yin^{g}ga/ frequently co-occurs with /warubaj/ 'nearby, close', especially when the context involves motion (so that arrival is imminent): 8.3.3, 8.5.1, 17.4.4, 17.5.1, 161.7.1. Similarly, /yin^{g}ga/ occurs in contexts where the word /warubaj/ happens to be absent but where something is approaching or arriving: 1.2.3, 13.9.4, 13.28.2, 13.19.2, 42.5.4, 42.5.5, 45.3.2 (birth), 45.3.3 (birth), 45.10.4, 48.2.3, 161.15.3, 161.20.4 (arriving), 162.5.2, and perhaps 45.6.3.

Similarly, /yin^{g}ga/ is frequently found in juxtaposition to an NAdv or verb indicating time of day. A frequent combination involves a form of /=lalma-/ in the sense 'to dawn': 4.4.1 (twice), 4.5.4, 9.12.4, 71.24.1. Others are 4.3.4 and 4.4.4 (late afternoon), 13.18.3 (early morning), 13.19.2 (already cited above, involving late afternoon as well as approaching), 40.12.1 (star), 52.5.5 (mid-morning), 55.7.2 (getting dark), and 65.12.3 (birds singing, i.e., early morning). In these cases, the contribution of /yin^{g}ga/ is not to indicate that the time of day indicated is imminent, rather that it has arrived (after a wait).

Looking at combinations of /yin^{g}ga/ with contexts not involving approaching/arriving or time of day, we again find a range of meanings involving either the imminence of a not-yet-realised event (which may in some cases not be realised at all), or the actualisation

of an event which has been anticipated (and waited for). Under the category of imminence we include the following:

a) exx. of the type 'was about to' with juxtaposed Past Potential verb to which Purposive /-yun^{g}guyun^{g}/ is added (§16.5) are 11.7.1 ('he was about to spear it, but...'), 12.7.2 (similar ex.).

b) exx. like the preceding but without /-yun^{g}guyun^{g}/ on the Past Pot verb: 7.13.2 ('she was about to hit her').

c) exx. of the type 'is about to' involving a Future verb: 34.5.4 ('I in turn am about to [swim]', with verb omitted because obvious in context of story).

d) cases where /yin^{g}ga/ is translated 'nearly, almost' not in temporal sense but in sense of an event (recognition, bumping, etc.) which almost happened but did not: 43.11.5 ('devils nearly heard them escaping [devils were asleep]'), 43.12.4 ('nearly bumped').

e) exx. where /yin^{g}ga/ plus verb indicates that an attempt is made to accomplish the event: 13.40.2 ('they nearly [i.e., tried to] pull themselves out, but no!').

f) exx. where /yin^{g}ga/ indicates that a location is very near the boundary of some zone, although motion crossing the zone is not (necessarily) involved or expected: 21.3.4 ('she was still in Yirija-moiety territory [but on the edge of the other moiety's territory]').

g) exx. involving desire for something which is nearly within one's grasp: 44.3.2 ('buffalo was anxious to find shade'), 44.4.2 ('then buffalo saw some [hoped-for] shade').

h) in conversational contexts, /yin^{g}ga/ may simply express the speaker's desire for something and may function as an appeal: 40.9.1 ('let your daughters go over there', or 'how about having your daughters go over there?'), 40.10.1 ('Mother! How about some wood?').

i) exx. involving a durative event which will soon have a conclusion: 43.4.2 ('tree was falling, so they flew away'), twice in 43.5.3 ('tree was falling and about to be tied up, so again he ran away').

In the cases just described, /yin^{g}ga/ is juxtaposed to the expression (usually a verb) which directly specifies the anticipated or imminent event. However, there is another usage in which /yin^{g}ga/ is formally juxtaposed to an expression indicating a backgrounded (e.g., preparatory) event or situation, but appears to look forward to a more important or dramatic impending event. The discourse function in these exx. is to build up suspense, providing a maximally dramatic frame for the later event. (When the later event itself is expressed, it often involves a verbal root form, see §12.2, and/or the dramatising particle /araga/ 'suddenly!', treated in this section, below.)

Exx. clearly or tentatively analysed as involving this look-ahead imminence are these: 4.5.3/4 ('they slept, they slept [some more], finally it dawned'), 4.6.1 ('she left, [then] he have him the rope'), 7.13.1 ('she picked up a stick and was going to hit her'), 10.9.5 ('she poked through the mud again, then she cut him in half at the waist'), 13.36.1 ('he hooked spear to woomera, then he was about to spear it, but suddenly they shouted:...'), 13.37.3/4/5 ('[he said] "Close your eyes!", then one closed her eyes, and the other closed hers, they closed their eyes tight, [then he speared both of them]),

13.38.1 ('one spear was standing here, another was standing there, he speared the two women [with them]'), 36.5.1 ('dragonfly wanted the burrow, it[burrow] was like this, dragonfly lifted it'; this analysis represents reinterpretation of this sequence vis-à-vis the translation in NMET); other exx. are 43.11.7, 65.3.3, 65.12.6, 71.5.1, 162.13.3, 167.13.1, 167.20.1. Underlining above indicates the clauses to which /yin^{g}ga/ is formally juxtaposed.

The exx. involving approaching or nearness given at the beginning of this section may, in many cases, be compared with the look-ahead imminence exx. just given, insofar as they imply an eventual arrival at the destination.

The final large class of exx. involve actualisation of anticipated (waited-for) event. We have already seen this as the basic sense of combinations with /yin^{g}ga/ and an expression indicating time of day ('dawn', etc.). A fairly large number of other textual exx. can be cited; English translations will involve an expression like '[wait] until', 'eventually', 'finally', 'at last', or even 'as soon as'. Actually, we can see on a little reflection that this class of exx. is somewhat similar to the look-ahead imminence type. Thus '[wait] until' implies some (unspecified) event or state beyond that indicated in the phrase itself (e.g., 'we waited until today to wash the clothing'). The only difference between the look-ahead and actualisation instances is the particular perspective adopted.

Exx. from NMET which I have coded as actualisations are these: 4.4.2, 5.12.7, 13.20.2, 51.2.5, 55.11.2, 60.3.3, 65.6.2, 71.15.4, 74.2.3/4/7, 92.4.1, 98.8.7, 101.3.3, 108.6.1 ('as soon as'), 115.4.2/5, 115.5.6, 115.6.3, 143.9.5, 160.1.6, 161.18.3, and 167.1.3 (season of year).

There are a few sparsely-attested combinations of /yin^{g}ga/ with another particle. The only interesting one is /yin^{g}ga muga/, which is used twice in contexts involving a person's misidentification of something: 13.10.1 ('they did that, [making] it look like an animal'), 21.2.1 ('King-Brown[-snake] went along thinking that he was still in Mandha:yun^{g}-moiety territory'). For /muga/ see §12.11.

Other combinations of /yin^{g}ga/ and another particle show the same senses already described for /yin^{g}ga/. In addition to /wurugu yin^{g}ga/ (§12.5), we can cite /aba yin^{g}ga/ 143.8.2 (cf. §12.3), /mari yin^{g}ga/ 98.2.1, /yin^{g}ga n^{g}a/ 161.15.3, and /mari n^{g}a yin^{g}ga/ 71.13.2 (cf. §12.4).

We now turn to particle /araga/ 'suddenly!'. This is an emphatic particle which dramatises a sudden and usually important event, and it is common in action texts. We have about 60 exx. in NMET. Since it is typical for clauses involving /araga/ to be preceded (and framed) by other clauses giving background, /araga/ often combines with conjunctive particle /n^{g}a/ 'and' (§12.4), cf. English 'and all of a sudden': /n^{g}a araga/ 16.4.5, 43.3.1, 43.14.1, 43.16.1, with alternative order /araga n^{g}a/ 21.6.1, 163.15.1-2. There do not appear to be any other significant combinations of particles including /araga/.

Other exx. of /araga/ are 9.4.4, 10.17.2, 13.24.3, 13.27.4, 13.36.2, 14.7.2, 15.9.4, 16.12.2, 16.13.6, 16.14.1, 19.6.2, 21.6.3/4, 21.7.2/3, 22.5.1, 25.4.3, 25.5.2, 33.5.3, 35.5.1, 37.3.6 (two),

43.3.2, 43.7.2, 43.16.2, 71.13.3 (two), 95.9.5 (two), 119.2.1, 161.2.1, 161.3.2, 161.7.3/5, 161.9.3, 162.9.2, 162.13.1, 162.14.2/3, 162.18.1, 162.24.5, 163.2.1, 163.13.4, 163.15.3, 163.17.1/3, 166.9.4, 166.13.3, 167.12.2, 167.13.1, 167.17.4, 167.18.1. The usage of /araga/ is straightforward and we dispense with further analysis.

To conclude this section, we mention the (interjection-like) particle /giya!/, pronounced /giyao:::!/ (for the stylistic lengthening and vocalic development cf. rule P-39, Chapter 3). This means 'watch out!' or 'beware!', and has a reduplicated form /giya-giyao:::!/ as well. There are no textual attestations.

For another (more common) way of expressing warnings, cf. the Evitative verb forms discussed in §8.7.

12.8 Confirmative particles: /yigaj/, /n^{g}ubindi/.

The prototypical context for using particle /yigaj/ is this: the speaker has previously claimed that some object or phenomenon is present, and is now able to actually point it out. (Cf. English 'There!', or 'There! I told you so!'.) There is often an implication that the original claim was considered dubious by addressees.

The exx. in NMET are these: 11.6.5 (twice, once with preceding /n^{g}a/ 'and'), 14.6.4 (within narrative perspective), 15.10.3, 18.21.3, 40.1.6 (preceded by /n^{g}a/), 40.13.5, 42.5.2, 47.23.2, 50.2.5, 65.15.6, 104.3.4 (preceded by /n^{g}a/), 116.12.3, 143.6.1, 143.11.1, 144.2.4, 157.6.1, 162.6.4. The spatial localisation of something which has come into view is emphasised in some of these exx., but there are a few which involve some other kind of emphasis. It appears that in all instances, the speaker is strongly calling something to the attention of addressees. Often English imperative 'look!' can act as a contextual translation.

Another particle, /n^{g}ubindi/, is less common and attested only a few times in the texts. The exx. are these: 95.2.6 ('they-looked and indeed there-it-was!', where 'and' is /n^{g}a/); 162.6.3 ('we-listened, and indeed there-he-was he-whined'); 162.7.3 ('he-looked and there-it-was indeed it-faced-us'); 166.17.3 ('they-saw-fire::: indeed they-all-arrived', where ::: marks stylistic lengthening).

These exx. suggest that /n^{g}ubindi/ is fairly similar to /yigaj/, indicating actual arrival or appearance (within the field of vision) of something previously farther away. Three of the four exx. of /n^{g}ubindi/ involve a verb indicating an attempt to perceive ('look', 'listen') along with particle /n^{g}a/ 'and' (cf. §12.4); note that /n^{g}a/ is also fairly common with /yigaj/ in the exx. listed above.

Since there seems to be little difference between /yigaj/ and the less common /n^{g}ubindi/, it may be that there are differences among speakers regarding whether /n^{g}ubindi/ is productively used. All four textual exx. of /n^{g}ubindi/ are from one speaker.

Cf. also postposition /-w$_{2}$indi:yun^{g}/ 'really' (§12.21).

12.9 Exhortative particles: /jiri/, /wili/, /n^{g}a:ban^{g}/, /ma/.

None of these particles occurs in the texts in NMET, though one, /n^{g}a:ban^{g}/, occurs in one of Hughes' texts (TNT 7). The meanings, so far as I can determine them from elicitation and observing conversations, are these:

/jiri!/: (urging someone to carry out action: 'go on!');
/wili!/: (urging cooperative activity: 'let's!');
/n^{g}a:ban^{g}!/: (similar to /jiri!/; may be used to child);
/ma!/: (urging someone to give something: 'hand it over!').

The rarity of these particles from texts indicates not only that they are not especially common, but also that they are used in the give-and-take of conversations rather than in narratives.

Concerning /wili/, we note that Future 1st person inclusive verbs are normally interpreted as exhortative anyway, so /wili/ is redundant except as an occasional emphatic reinforcer.

Similarly, 2nd person Future verb forms, though not always imperative in force, are commonly interpreted as imperatives or at least suggestions (when there is no interrogative marker present).

Both 1st and 2nd person verb forms with exhortative or imperative force can be made emphatic using other devices: 2nd person Future verbs with imperative force can sometimes be made more pressing by using Punctual rather than Continuous inflectional suffix; both 1st and 2nd person forms can be made emphatic by adding postposition /-w$_{2}$indi:yun^{g}/ (§12.21) 'really'; and mitigating particles like /ãla/ (§13.1) which are often used to soften imperatives and 1st inclusive suggestions may be omitted.

12.10 Concessive /wulguy/, Adversative /yagu/.

Particle /wulguy/ was noticed in unrecorded materials as a concessive particle similar to English 'admittedly'. That is, it is used to concede a background point, while maintaining another main point which is slightly inconsistent with it. Perhaps a closer approximation to the Nunggubuyu nuance would be 'It's quite true that...', a formula often used in English to frame a background point which is just about to be downplayed ('It's true that you're doing a good job, but we just can't afford to give you a raise right now').

The actual textual exx. in NMET are not easy to analyse, since in some cases the implication of tension between backgrounded and main points is not clearly present. In 42.5.2, despite some syntactic fragmentation, there is an opposition present which suggests a translation with 'although' ('although we hunt green turtles, they can see us coming if the water is clear [and thus escape]'). The other exx. are from a single text (166.21.1, 166.26.4, 166.27.1), and all involve /wulguy/ added to an expression meaning 'many [people]', apparently as a reinforcer (i.e., 'quite a lot').

Particle /wulguy/ appears to be an enclitic, hence it always follows some other constituent; by contrast, particles in earlier sections can generally occur initially in phrase groups.

A much more common particle is /yagu/, for which English 'but' is often the simplest translation. However, it is also the usual Nunggubuyu counterpart to English 'or', and there are textual exx. in which it is difficult to translate at all.

Exx. translated with 'but' involve transitions among clauses which are logically adversative to each other in some way. The exx. in NMET are these: 7.3.4 ('she dug sedges but only briefly'), 13.11.4 ('we could step on it, but maybe it would then...', with /ari/ 'maybe', cf. §12.11), 14.9.4 ('they$_{i}$ were Mandha:yun^{g} moiety, but

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the others$_j$ were Yirija moiety'), 42.4.5 ('turtle$_i$ poked dugong$_j$, but [as for] him$_i$, she$_j$ just grazed him$_i$'), 45.3.3 twice ('she gave birth to babies but they were crocodiles', with /yin^{g}ga/ §12.7 in same clauses), 65.6.3 ('we looked, but there was nothing'), 69.7.2 ('but they didn't [just] argue, they fought'), 69.9.4 twice ('he was wounded on his side but he was still alive, but he was wounded there'), 69.16.4 ('but no!, it was a lie'), 100.7.3 ('green ants are still around, but nobody wants to eat them [any more]'), 117.4.3 ('we ate /wulida/ palm shoots, but their taste is bad'), 119.8.3/4 ('it has fruits, but we don't eat them'), 121.3.5 ('we used to eat them, but not nowadays'), 156.4.3 ('they eat it, but it tastes bad'), 164.3.6 ('we would [normally] go by land, but because of the floods we go by water', in same clause with /yamba/ 'because' §12.15).

Exx. glossed with 'or' are those involving alternative (rather than incompatible) objects or predications. Both inclusive and exclusive 'or' can be expressed by /yagu/ in Nunggubuyu, though in most instances the distinction is not contextually significant. Exx. of /yagu/ translatable as 'or' are 9.7.2 ('feathered-stick or devil song'), 14.2.3 (list of fish names), 50.3.6, 50.7.1 (twice), 51.3.4 (three), 52.3.3/5 (five; may involve moiety opposition as well as list sequence), 58.3.3 (twice), 71.12.5 ('through stringybark trees or whatchamacallit [trees]'), 71.23.4 twice ('along here or here or here', with demonstratives referring to different locations), 71.33.3, 72.2.5, 74.4.2 twice ('four or five or two'), 76.1.6 ('will go to mother's mother's clan country or to sister's child's country'), 88.3.5 twice ('of Madayin [ritual] or Ru:l [ritual] or ordinary clan songs', where Madayin and Ru:l are near synonyms), 88.3.7 ('will spear him or stab him'), 106.1.4, 114.10.2, 117.2.4, 146.1.3 ('made bed with grass or with sand'), 163.17.3 ('spinifex grass or any kind of grass'), 170.1.6. Perhaps 62.1.6 and 63.4.2 belong here also.

This still leaves us with a substantial residue of textual occurrences which do not mean simply 'but' or 'or'. Some of these can be clarified by observing that the adversative sense of /yagu/ can apply not only to logical incompatibility or poor logical fit among juxtaposed propositions, but also to speaker's challenging a point or presupposition made by addressee; in other words, the adversative quality applies to interactional situations as well as to logical relationships among clauses and other constituents. Exx. where the speaker appears to be challenging or contradicting the addressee are 5.8.1 (Gecko accusing Emu of stealing Little Boy and lying about this), 13.36.4 (Old Woman accuses Crow of wanting to spear her and lying about this), 15.14.2 ('But this person [whom you have killed] is our relative!'), 15.14.4 (reply to preceding, 'But I thought he was someone else!'), 34.5.1/2/3 (four exx., Moon calls out to Native Cat who has pretended to drown in water 'Are you out there somewhere? Are you out there? Are you tricking me?'), 143.12.6 (speaker interrupts other speaker to make a correction). In this usage, /yagu/ may occur in any position in the clause and is often medial or final, especially when strongly asserting a correction or contradiction rather than merely expressing doubt or suspicion.

A special case of the preceding type involves reassuring the addressee rather than challenging him/her. Exx. of this or closely related subtype are 15.8.2 ('it's just us[InDu]', i.e., 'it's just

me here with you', said after other person had expressed alarm), 40.5.3/4 (straying persons telling spirits of dead, 'No, we're not dead [i.e., coming to join you], we just strayed off course'), 163.17.3 ('it's just me!').

/yagu/ may also be used to express self-contradiction (i.e., to contradict something which the speaker has just said). This is not very common (except with /(w)a:n^g/, see below), mainly because there is another particle /gada!/ §12.19 which is regularly used in self-repairs). However, 10.17.2 may be an ex. of /yagu/ in self-repair function, since /n^{g}unu=na-n^y/ 'she saw him' seems to be implicitly retracted (as premature for this point of the story) by the next clause 'but she was just poking around blindly'.

On the other hand, in the specific combination /(w)a:n^g yagu/ the particle /yagu/ is very common. This phrase simply functions as a stronger, more emphatically self-critical, variant of /(w)a:n^g/ 'whatchamacallit?' (§13.10), used when the speaker cannot remember a place name or other expression. Among many exx. in NMET we may mention 11.2.2, 18.6.3, 18.7.8, 18.9.1, 18.15.2/3, 20.1.5, and 20.2.7. The usual pronunciation is /(w)a:n^g jagu/, with /yagu/ irregularly undergoing Hardening P-18 due to the nasal concluding the preceding word; in other combinations /yagu/ does not show this treatment. In 20.2.6 we have different word-order: /yagu a-wa:n^g/ (with NC prefix /a-/); in 18.20.5 we have just /yagu/ with /(w)a:n^g/ implied.

This still leaves us with a residue of not-yet-explained cases of /yagu/. Many of the remaining instances involve contexts where something is recognised or makes an appearance. Translation with 'but' is not suitable (in English) since there is no adversative relationship among propositions; perhaps we should suggest that a sudden or unexpected appearance of a character is thought of by Nunggubuyu as adversatively related to his previous absence or invisibility. (Note that the 'it's us!' and 'it's me!' exx. [paragraph ending on top of this page] are a link between this type and earlier ones.) The exx. I have in mind are these: 28.12.1, 28.16.3, 65.10.2 ('we listened, and the didjeridus burst into sound'), 106.1.3 ('they go and they see them [rays]'), 166.19.3 ('there was a long line of boys [heading this way] and they arrived'), perhaps also 124.2.4 ('they took it out from the oven and it was done[fully cooked]').

A number of other cases which still remain to be accounted for involve an act of destruction, where /yagu/ seems to emphasise suddenness and negative consequences: 33.5.1 (survivors wondering what destruction Mosquitoes had committed and why), 34.7.3 ('he ruined them', i.e., caused death to occur to humans), 71.16.2 ('murderous sorcerors have killed him'). Some similar exx. were given at the beginning of our discussion of /yagu/ since they involve an explicitly adversative relationship among juxtaposed clauses.

The final residue of instances of /yagu/ is this: 41.8.1 ('some$_i$ were over here, some$_j$ were over here' with /yagu/ in first clause, apparently an anticipatory adversative looking ahead to next clause), 43.12.5 ('he almost nudged devil [which would have awoken him] and was making noises [which also could have awoken devil]), 47.5.3/4 (both anticipatory and retrospective [mutual] adversative relation: 'they$_i$ wanted it but they$_j$ didn't want it so they$_j$ didn't go', with

/yagu/ in both of first two clauses), 47.19.3 ('I will go, early morning around dawn, I will go fishing' with /yagu/ in time expression), 55,10.4 ('they dispersed [from meeting]', with contrast to their coming together for the meeting), 100.4.1 ('sometimes they did not want to eat green ants and [so] did not break off [branches and nest]'), 113.2.5/6 ('just us men went, we wanted the women with us however, we took them with us'), 170.1.1 ('[sometimes] there was no orchid [for pigment fixative], they couldn't get any' with /yagu/ at the end of the first clause).

As is often the case with Nunggubuyu particles and other forms, there is a certain common thread linking the uses of /yagu/, but the complex of uses as a whole is quite distinct from anything in English and translation is exceptionally difficult.

Among other Nunggubuyu forms whose meaning partially overlaps with that of /yagu/, we will single out the particles /araga/ 'suddenly' (§12.7), self-correcting /gada/ (§12.19), and perhaps /yaga:/ (§12.12). In addition, conjunctive /mari/ and /n^{g}a/ (§12.4) may be used to link clauses which have a partly adversative relationship (or to introduce a clause indicating a sudden and dramatic event), as well as other types of clause combination. Finally, negative interjection particle /girjag!/ (§8.2 and §15.6) may be used by itself to indicate the failure of an attempt or expectation (e.g., 'He was fishing and no!' can mean 'He was fishing but didn't catch anything').

12.11 Dubitatives /ari/, /muga/, /n^{g}a:lhug/.

These three particles, of which /n^{g}a:lhug/ is by far the least common, are used in contexts involving expressions of doubt about the truth of some proposition.

/n^{g}a:lhug/ appears to resemble English interrogative 'Really?', expressing surprise at something just said and perhaps requesting confirmation. It does not occur in my texts but was recorded in Hughes' texts (MT 11, TNT 13 and 18).

Particle /ari/ means 'maybe, perhaps'. The co-occurring (or implicit) proposition is offered as a possibility, and the speaker does not express strong opinions on its likelihood or unlikelihood.

Frequently we get a particle-combination /ari muga/ in roughly the same sense, though in this case the speaker seems to favour the likelihood or at least plausibility of the proposition. Attested exx. are 7.8.1, 35.5.2, 120.2.5, 162.17.4, 162.20.1 (twice).

The exx. of /ari/ without /muga/ are these: 5.15.5, 7.12.1 ('maybe it's you!'), 10.11.3/4, 13.11.3/4, 13.36.4 (with /yagu/, cf. preceding section), 18.9.5, 18.10.5, 20.16.2, 28.17.1, 62.1.5, 69.14.3 ('How about a fight?'), 69.15.1, 71.8.2, 119.1.5 (with following /n^{g}a/, cf. §12.4), 161.19.2 (with 'whatchamacallit?'), 164.2.4 ('because we might not return' with preceding enclitic /yamba/ 'because', §12.15), 164.2.5. The exx. include cases of prospective but uncertain future events/states, as indicated by the glosses just given, but also past events about which the speaker is not certain (e.g., 5.15.5 'I wonder if you sent him away'). On the other hand, /ari/ is not comparable to high-frequency "evidential" elements in languages which require it for non-eyewitness reports; hence we have only about 25 exx. of /ari/ in NMET.

/muga/ is more difficult to interpret than /ari/, mainly because there are differences between its meaning when used alone and its meaning in combination with other particles. We have just mentioned /ari muga/ 'maybe' (or 'it could be that...') with textual exx.; here the basic meaning is provided by /ari/ 'maybe'. In addition, there is a combination /yin^{g}ga muga/ indicating mistaken recognition or misleading appearance (hence translatable as 'thinking [incorrectly] that it was a ...' or 'it seem[-s/-ed (falsely)] that...'); we have mentioned this in §12.7 (the exx. are 13.10.1, 21.2.1, and we may add MT 29 with similar meaning).

The exx. of /muga/ by itself, however, seem to lack this dubitative or false-identification sense. In 163.3.1 ('sounds like the car is coming up') the proposition is less uncertain than my gloss might suggest. In a number of other exx. there does not appear to be any uncertainty at all, and /muga/ may be translated as 'indeed' or 'even', acting as an emphatic particle (often indicating surprise that the event occurred rather than doubt about it). The sense in these exx. is "dubitative" in the special sense that the event was not expectable in advance: 7.4.1 ('she [surprisingly] concealed the food'), 14.9.1 ('they had that woman as their mother-in-law [taboo relationship, hence they should not have been interacting with her]'), 16.1.4 ('he was going along killing crabs, in an old bark canoe [not a modern wooden canoe], paddling along'), 43.6.4 ('devil was chasing them, they perched in tree, they had put body paint on each other indeed'), 47.16.5 ('All right, we'll go'), 47.19.5 (difficult to interpret, apparently: 'Thursday [or rather] indeed tomorrow, Wednesday, I'll go'), 161.19.3 ('Boy! Did we do a lot of loading!'), 162.4.2 ('Moon stood here indeed, to the west'). The exx. from Hughes' texts (MT 19 and 21, TNT 1) also seem to express surprise but the syntax is not clear in two of the cases.

There is thus a resemblance to confirmative /yigaj/ and /n^{g}ubindi/ (§12.8). However, these two particles tend to be used when the event or object in question is suddenly manifested (usually visually). /muga/ involves a similar forceful assertion but has nothing to do with sudden manifestation.

12.12 /yaga:/.

This particle occurs about 35 times in NMET and a handful of times in Hughes' texts (MT 7 and 11, TNT 5 and 7). It is used as an apparently optional adjunct to specifications of identity or location, and to interrogatives (mostly WH rather than yes/no); it also occurs in Similative phrases ('like X', 'similar to X'). It allows no affixes and has the same form in negative contexts (18.6.4, 42.5.2).

The interrogative cases in the texts include some where /yaga:/ is used by itself (with final rising intonation), in contexts where the explicit interrogative would be 'where (is...)?' or 'how far away (is...)?' (1.4.4, 2.3.2, 2.3.4). Other exx. involve an additional interrogative word: 5.15.4 ('where did he go?'), 7.11.4 ('who?'), 18.9.4 ('where/how far is that place?'), 20.17.1 ('what do you [think]?', with interrogative verb /=yamin^{g}gari-/ §13.9), 47.2.3 ('what are you doing?' with same verb), 52.1.1 ('where shall we go?'),

69.4.4 ('How about it, do you want a spear?', with yes/no interrogative particle /yu:ga/ §13.1), 161.2.3 (also /yaga: yu:ga/ apparently in yes/no question, but passage is broken).

In noninterrogative contexts, /yaga:/ accompanies an expression (usually predicative) specifying identity or location (hence possible answers to WH interrogatives). The exx. coded in this fashion are 3.7.7/8 ('you are a thief' with demonstrative; for similar exx. from variants of the same story see 5.18.4, 5.19.2/3, and TNT 7), 13.27.4 ('he heard them say its name, barracuda [though pretending not to]', with particle /araga/ 'suddenly' §12.7), with negation 18.6.4 ('it is not an island, [it is] mainland', with /yaga:/ in first part), 18.13.7 ('[it was] people [who] shouted'), 20.5.4 ('this is us' with /-waj/ form of pronoun, §6.9, and demonstrative pronoun with /yaga:/ between them; for similar exx. with /-waj/ Emphatic pronoun see 20.6.2, 20.10.2, 20.14.2, 20.15.5), 42.5.2 ('there is nothing', somewhat broken segment), 100.4.2 ('this one, long ago they liked it'), and 162.11.1 ('there they all stand'). Some other exx. which could possibly be construed in this way are 11.12.3 ('Crow now has black on his back'), 69.16.3 ('we did [that] to it, we discussed it'), 103.2.1 ('they eat it, [it is] over that way'), 109.4.5 ('then we went with [it], [in] the shade we ate it'), and 162.6.4 (with particle /yigaj/ 'indeed' §12.8). In some of this last list of exx. I have difficulty construing the sense of /yaga:/, and it may be that in some instances it merely reinforces the verb rather than focusing attention on the identity of a referent.

There are also some exx. involving /yaga:/ in a Similative context, with particle /n^{g}un^{y}ju/ (§12.13) and/or Similative case suffix /-yi:/ (§4.29), both meaning 'like, similar to'. The exx. are 45.7.4 ('like goanna lizards cover [themselves] up'), 62.2.6 ('like dugong'), 112.6.3 ('they cut it up like a bullock'), 122.1.6 ('like rope, it is like that'), and from Hughes' texts TNT 5 we have /n^{g}un^{y}ju n^{g}irima=wann^{g}a-na-yi: yaga:/ 'like we step on it', with /-yi:/ added to the verb (§16.6).

While it is difficult to identify a clear function for /yaga:/ combining the interrogative, identity/location, and similarity subtypes, at least in the first two of these subtypes the particle seems to function as a slightly emphatic copula-like linker between a referential NP and a predicate (including WH-interrogative) or other focal expression. However, this is only an approximation, and there are a number of exx. where /yaga:/ occurs by itself or occurs finally or initially in the clause. In addition, /yaga:/ is optional (i.e., presumably emphatic) in the interrogative, identity/location, and similarity expressions where it occurs, and indeed occurs in much less than half of the total of such expressions in the texts.

Functionally overlapping particles include /yagu/ (§12.10) in some of its uses (recognition/appearance) and /yigaj/ (§12.8), though the overlap is minor in each case. For explicitly interrogative particles see §13.1.

12.13 Similative /n^{g}un^{y}ju/ 'like, as'.

This stem usually occurs with no affixes, but unlike the true particles it sometimes shows morphology characteristic of an adjectival noun (NAdj, §4.2). In NAdj function it is most often reduplicated as /n^{g}un^{y}ju-n^{g}un^{y}ju/ and is often in predicative form with intransitive pronominal prefix, as in /wu:-n^{g}un^{y}ju=n^{g}un^{y}ju/ 'they are equal' (translatable in context as adverb 'reciprocally, equally') 78.1.7 (cf. 73.3.4, and with compound initial 17.14.5). For other derivatives see the dictionary under /n^{g}un^{y}ju/.

On the other hand, /n^{g}un^{y}ju/ appears to act as a particle (phrase- or clause-initial) in constructions involving similarity. With noun X, the full similative construction is /n^{g}un^{y}ju NC-X-yi:/ with Similative case suffix /-yi:/ added to the noun (which usually has a NC prefix, for nonhuman nouns often in Punctual form, §4.8, §4.29). However, this may be abbreviated to /n^{g}un^{y}ju NC-X/ or to /NC-X-yi:/, since either /n^{g}un^{y}ju/ or /-yi:/ alone is sufficient to indicate the sense. Exx. with /n^{g}un^{y}ju NC-X-yi:/ are 10.15.6-7, 13.8.2, 88.1.3, 112.6.2-3, 113.2.1-2 (with demonstrative intervening). Likewise, with an inflected verb V (including pronominal prefix and inflectional suffix) we can get /n^{g}un^{y}ju V-yi:/ 'just as...', hence /ni=waran^{g}ga-n^{y} aba n^{g}un^{y}ju a:-'-ni wura:='ran^{g}ga-na-yi:/ 'he-looked [i.e., could see] then, like this[place] they-look[can see]' 10.12.5-6. Exx. of /n^{g}un^{y}ju/ without /-yi:/ suffix are 14.1.1 ('[place$_1$], like [place$_2$]') and 113.6.1 ('we ate [roots of] /wudun^{y}manji/ plant, like whatchamacallit, [like] potatoes'); here the punctual form of the prefix (in 113.6.1) implies covert presence of case suffix. There are also exx. of /n^{g}un^{y}ju/ at the beginning or sometimes the end of a clause, translatable 'so that' or 'just as': 13.26.2 ('just as they hid [it] from him, he hid [something] from them'), 13.35.3 ('"You two keep your eyes shut, while I (i.e., so I can) spear it"'), 14.9.2 ('[they$_i$ acted] like those Yirija people$_j$ do'). A specific subordinated clause which /n^{g}un^{y}ju/ may be associated with (aside from verb with /-yi:/, cf. above), is that with Purposive suffix /-yun^{g}guyun^{g}/ on the predicate (or other constituent): 4.8.1 ('[shake the rope] so that I will know'), 69.13.2 ('we taught each other so that we all knew it', though here /n^{g}un^{y}ju/ comes at the end of the latter clause and may mean 'equally' as an alternative to 'so that'), and 89.2.2 ('he$_i$ will spear the policeman$_j$, so that they$_k$ will not chase him$_i$ [and give him$_i$] trouble').

Another closely related construction in which /n^{g}un^{y}ju/ occurs is the /n^{g}un^{y}ju X n^{g}a Y/ construction, literally 'like [from] X [i.e., here] and [over to] Y [i.e., a designated point some distance away]', used in indications of approximate absolute distance; for discussion and exx. see §7.28.

/n^{g}un^{y}ju/ can also be used in the expression /n^{g}un^{y}ju a-yan^{g}i/, literally 'like what?' but used (as a rhetorical question) to mean 'lots of, a great quantity of [something]'. Exx. are 59.5.3, 95.1.3, 97.3.2/3, 139.11.3 (cf. discussion of /yan^{g}i/, §13.3).

/n^{g}un^{y}ju/ betrays its covert status as NAdj (rather than true particle) occasionally even when used in contexts of similarity or purposive goal. In 65.15.1 we have Purposive case suffix /-yun^{g}guyun^{g}/ attached to /n^{g}un^{y}ju-/ itself rather than to the predicative expression which follows (and which indicates the goal): /n^{g}un^{y}ju-yun^{g}guyun^{g}, numburu=ma:lambur-bugij/ 'so that you[Pl] will be all right'. True particles never take case suffixes or other affixes. (However, I can cite no exx. of /n^{g}un^{y}ju/ meaning 'like' or 'so that' showing NC prefix or postposition on /n^{g}un^{y}ju/.)

12.14 /arbidi/ 'anyway' (noun).

This element is morphologically a noun, specifically an NAdv (§4.3). We discuss it in this chapter since its grammatical function is similar to that of the true particles, and because there is no other obvious chapter to put it in.

The gloss 'anyway' is to be taken in a maximally broad sense, and in particular contexts we can translate /arbidi/ as 'any kind', 'in no special way', or 'indiscriminate[ly]'. In all cases the point is that some (explicit or implicit) restriction is suspended.

Exx. showing NC prefix /ana-/ in negative or other contexts: 68.1.6 (pos.), 106.4.2 (neg.), 106.5.5 (neg.), 71.32.1 (neg.). In 117.6.6 it might seem that unprefixed /arbidi/ is in a negative clause, but actually it is logically part of the following positive clause. /arbidi/ also co-occurs with postposition /-wˀugij/ 'still, only' (§12.21), as in 73.7.3, 87.1.6, 112.8.3, 117.6.6, and 123.3.1. We have /arbidi-yinʸunᵍ/ with Relative case suffix (§4.30) in 68.2.3.

The contexts in which /arbidi/ occurs can be represented schematically as follows (we include the exx. with affixes just mentioned): 10.17.3 ('she poked around in mud indiscriminately [i.e., not directly at the man]'), 57.3.1/3 ('anyone can hear it', or 'they can hear it freely'), 68.1.6 and 68.2.3 ('we do not sing secret ritual songs [in public], but we sing public clan songs freely'), 71.32.1 ('we do not die without reason'), 73.7.1/3 ('nowadays young people behave however they like'), 84.1.3 ('they can kill dogs freely [if the dogs do not have ritual names]'), 87.1.6 ('they are called by any name [e.g., nicknames instead of true names]'), 106.4.2 and 106.5.5 ('they do not just butcher it any way [there is a special way to do it]'), 112.6.2 and 112.8.2 ('now they butcher it as they wish'), 112.8.3 ('they distribute it to whomever they want'), 117.2.4 ('tree sp.$_1$, tree sp.$_2$, any kind [of paperbark tree], tree sp.$_3$'), 117.6.6 ('they didn't cook it, we just ate it as it was [without cooking]'), 119.2.6 ('they just mix them together [not sorting them]'), 143.4.3 ('[one type of honey bee] just goes into the [hole in the] ground [i.e., doesn't build nest in tree]'), 156.3.5 ('they just spread it out flat, not putting a hole [opening] in it').

Note the variety (and complexity) of English translations in context; the Nunggubuyu term serves as a very general indefinite element.

For additional derivatives see the dictionary entry.

12.15 Enclitic /yamba/ 'because'.

This is a relatively common particle; I count just over 50 exx. in NMET. The meaning is identical to that of English 'because' (with co-occurring clause), or less often 'because of' (with co-occurring noun). The distinction between 'because' and 'because of' is probably syntactically meaningless in Nunggubuyu, since while English 'because of X' is formally an adverbial phrase bound to the matrix clause, in Nunggubuyu such an expression (/X yamba/) can always be construed as a separate clause with X as (nonverbal) predicate. Thus in 164.3.6 /yagu gu:gu yamba/ 'because of the water[gu:gu]' is syntactically construable as 'because [there is] water'.

That /yamba/ is a true particle is shown by the fact that it never takes affixes and thus remains unaffected by negative contexts (17.13.5, 20.19.3, 47.13.2/4, 164.2.4). Although it is always an enclitic following some other word, it cannot be considered a postpositional suffix (§12.21) because its initial semivowel is never hardened to /j/ after stop or nasal at the end of the preceding word.

Since /yamba/ is the best-attested of the enclitic particles (most other particles are positionally freer and may occur at the beginning of a clause or breath group), we will look fairly closely at its syntax. In general, /yamba/ is a second-position enclitic, meaning that it comes after the first true constituent in the clause or breath group (there must be no pause before /yamba/). However, it is necessary to define what we mean by "constituent" for this purpose (and we will see some counterexx. anyway).

The most common word-type to which /yamba/ is cliticised is, of course, inflected verbs. While /yamba/ is sometimes cliticised to a nonpredicative constituent, there does appear to be a clear preference for having the verb or other predicative nucleus in initial position with /yamba/ directly following it (an exception is that negative particles and Negative /wa:='ri/ are commonly initial and are thus commonly followed by /yamba/ with the verb itself coming later). Exx. of /yamba/ following inflected verb: 4.5.5, 9.12.5, 17.12.5, 28.16.4, 29.6.4, 37.5.6, 41.22.2, 42.5.6, 42.6.5, 67.1.5/6, 67.3.4, 79.2.4, 113.1.2. This may also be the case in 4.8.2 if 'because' is logically associated with 'you go out' rather than with 'you see them' (in which case my translation should be emended). Exx. involving a clause (or breath-group) initial predicate other than an inflected verb (i.e., a predicative DemPro, §7.4; a NAdj in predicative form with intransitive pronominal prefix, §4.2) are these: 9.4.3 (DemPro), 29.7.2 (NAdj), 47.8.1/3 (NAdj, then DemPro), 55.11.1 (NAdj), 65.6.4 (NAdj), 66.3.6 (NAdj), 68.3.3/8 (NAdj). /yamba/ directly follows negative /wa:='ri/ in 17.13.5, 47.13.2/4; it follows negative /yagi/ in 20.19.3, 164.2.4.

There are other cases where /yamba/ follows a noun or pronoun with is not strictly predicative in form, but appears to function as (nonverbal) predicate or at least to be rather highly focal: 19.4.3 ('grass-sp. because he-ate-it', i.e., 'because he ate [that] grass sp.'), 66.2.2 ('short because that[MSg]', i.e., 'because that [man] was short'), 73.2.2 ('mission because nowadays', i.e., 'because [we have] the mission now').

Further exx. of the above types can be adduced, differing only in that another particle is present (preceding /yamba/). The other particles in question therefore do not count as constituents for purposes of determining the position of /yamba/. The following particles are attested in such combinations (recall, though, that negative particles like /yagi/ do count as constituents):

/adaba/ or /aba/ 'now' (§12.3): 71.34.3 /aba mangimangi-wugij yamba.../ 'because now [they use] bone points still...'; 73.6.5 /ana-lha:wu adaba yamba wa:='nʸbij-gi-'-nʸ/ 'because now words(/lha:wu/) have changed'.

/wurugu/ 'later' (§12.5): 47.12.7 /wurugu nᵍa-dan=gayi-nʸ yamba ana:-'-ni ana-yimbaj/ 'because since then I have gotten sick today'.

/yagu/ (§12.10): /yagu gu:gu yamba/ 164.3.6.
/n^{g}ijan^{g}/ (§12.6): /n^{g}ijan^{g} wu=wi_libi_lin^{g}i:-na yamba/ 47.10.1.

Personal pronouns may, however, function as constituents and thus have /yamba/ cliticised to them; the pronoun is clause-initial in this situation but is not necessarily focal. Exx. are 29.13.4 after Emphatic pronoun in /-waj/, 79.2.3 after simple pronoun, and 90.2.6 after simple pronoun.

However, our second-position-after-constituent rule for the location of /yamba/ does not always work, even after specifying that (non-negative) particles are not constituents in this sense. There are a certain number of textual exx. where /yamba/ directly follows the verb or other predicative nucleus even when this is noninitial in its clause (and when there is no conspicuous pause before this nucleus); there are some exx. where /yamba/ seems to have been put at the end of the whole clause; and there are one or two other difficult exx.

Position after (noninitial) verb or other predicate: 13.40.4, 15.14.4, 28.6.3. Position at the end of entire clause: 47.22.3, 68.5.2 (here main body of clause is in English, so there is a reason for keeping /yamba/ separate), 73.6.2, 90.2.5 (despite punctuation).

In 121.3.6, /_adaba wara-munu-munan^{g}a-yin^{y}un^{g} marya-wugij yamba ya:-ni nuru=n^{g}u-yi:/ 'now because we eat[=n^{g}u-] food[marya-] of white men[-munan^{g}a-] here[ya:-ni]', it could be argued that /yamba/ really is in second position since particle /_adaba/ 'now' is not a constituent; this involves taking /wara-munu-munan^{g}a-yin^{y}un^{g}/ 'of white men' as forming a constituent along with the possessed noun /marya-/ 'food'. However, Relative (including genitive) nouns with /-yin^{y}un^{g}/ certainly do not consistently combine with possessed nouns to form close-knit NP constituents, and this particular ex. could have been rephrased with, say, the Relative noun following /marya-wugij yamba/, at least in another context where the focus was a little different.

In 58.3.5 ('"/jangu!/" they-say because', i.e., 'because they say "jangu"'), it appears that the direct quotation is disregarded and /yamba/ 'because' is put after the main verb.

In 16.16.2 we have the unusual combination of /yamba/ with a WH interrogative /yan^{g}i/; the sense seems to be 'because you have killed [and eaten] something' with /yan^{g}i/ having an indefinite rather than directly interrogative function.

There are no high-frequency other elements meaning 'because' or 'because of'. However, case suffix /-mira:dhu/ may mean 'resulting from' (§4.28), and it is occasionally used with verbs as a subordinator (§16.6).

12.16 Emotive exclamations: /_aduga/, /an^{y}jawalayun^{g}/.

/_aduga!/ is an exclamation of pleasure and surprise, used as an affectionate word with children. It does not occur in the texts but was observed in actual interactions.

/an^{y}jawalayun^{g}/ 'poor fellow!' is an exclamation of pity (e.g., for someone who has just died) or of fond, nostalgic reminiscence (recalling someone long dead, or seeing someone after a long separation). It was heard frequently, but does not occur in NMET. Hughes' texts have two instances (TNT 9 and 32), transcribed by

him as "nganjjawarlayung" and "anjjawarlayun" (a "g" should presumably have been added at the end of the second transcription), which would be /(n^{g})an^{y}jawa_layun^{g}/ with retroflexed /_l/. I heard the form as /an^{y}jawalayun^{g}/. This form is used as an exclamation rather than as a regular NP within a clause, and thus lacks nominal affixes (in my data and the textual exx.).

12.17 Terminal particle /wi:ya!/ 'that's all'.

The particle /wi:ya!/ is commonly used to indicate the conclusion of a narrative or conversation. It may take the special lengthening and vocalic coloring of ordinary words used as interjections (see phonological rule P-39), and become /wi:yao!/ or /wi:yao:::!/; this is now regarded by Nunggubuyu as their equivalent of English good-bye!.

There are a great many exx. of /wi:ya!/ in NMET, since it was often used by narrators to indicate that the story was finished (so that the tape recorder should be turned off). A few exx., some showing co-occurrence with /_adaba/ 'now' (§12.3) or /n^{g}a/ 'and' (§12.4), are 2.6.5, 9.13.6 (/wi:ya _adaba/), 10.18.5 (/n^{g}a wi:ya/), 11.12.5 (/wi:ya _adaba/), 13.18.2, 14.19.5, 16.23.5, 17.16.5, and 18.22.6 (/wi:ya _adaba/). For the 'good-bye' sense see 18.14.3/5, 20.14.7, 20.15.8, which are within quotations.

For /wi:ya!/ indicating that some activity (other than telling a story) is over, see 9.12.4, 18.22.3, and 41.22.1; these occurrences are within quoted segments.

These are only a few of the many textual exx. which could be cited.

It should be noted briefly that some neighboring languages make extensive use of the 'that's all' particle linking paragraph-like discourse chunks in narratives (Dhuwal bili, Mara guda, etc.), often occurring as an unstressed clause-final enclitic or as a clause-initial conjunction. This usage is not found in Nunggubuyu.

12.18 Affirmative particles: /yao!/, /i!/.

There are two particles which mean 'yes!', either confirming a fact (answering a yes/no question) or indicating acceptance/acquiescence to a suggestion or imperative. One is /yao!/ or /yo!/, which is always pronounced with the [o] vowel characteristic of interjections to which phonological rule P-39 has applied; we might set up /ya/ as underlying representation, but it never occurs except with the [o] quality of the vowel.

It is debatable whether this is a fully traditional Nunggubuyu form or whether it came in by diffusion. The form is used in a number of local Aboriginal languages and also commonly in the local English creole, where there is another variant /yowey!/. My feeling is that the form /yo!/ was a regionally widespread form which was used in Nunggubuyu prior to white contact, but I am not certain.

A few exx. of /yo!/ or a variant are 11.5.3, 12.4.6, 13.31.3, and 20.7.3. Creole /yowey!/ occurs in 20.18.1 in a text narrated by a Mara-Nunggubuyu bilingual who had lived farther south much of his life.

The other form is /i!/, pronounced with nasalisation (which does not otherwise occur with vowels in Nunggubuyu except perhaps as a

low-level phonetic anticipation of a following nasal consonant). I can determine no consistent difference in usage from this form to /yo!/. An ex. of /i!/ 'yes!' is 20.17.6. It should be noted, though, that phonetically similar (but unnasalised) segments like /i:!/ or /yi!/ are used in some contexts either as meaningless fillers in narratives, or as shouts (including ritual exclamations); see, e.g., 13.36.2, 20.5.2.

The most neutral negative particle is /girjag!/, used only as an interjection and never having other constituents or clauses within its scope. Other negative elements, /wa:='ri/ and (Future or Potential, including imperative) /yagi/, may be used either in isolation or with accompanying clauses or other constituents; see §8.2 and §15.6.

12.19 Self-correcting /gada!/.

This exclamation is used to indicate that the speaker has made a mistake; it is normally followed by a correction. It can thus often be translated as self-correcting 'I mean,...', but the Nunggubuyu form has no syntactic relationship to the correction which follows.

In 12.7.3 we get /gada! gada! gada!/ showing (occasional, not frequent) repetition of the particle for emphasis. In this particular textual ex., we can translate 'Oops!' following an (ostensibly) accidental physical movement. Most textual occurrences, however, involve verbal rather than physical mistakes; a few of the many exx. are 10.14.2, 13.9.2, 13.12.3, 15.5.5, 16.18.1, 16.19.3, 20.2.3, 21.9.5, 24.3.6, 29.11.4, 29.12.5, 40.6.1, 40.11.1.

A stronger expression indicating that speaker (or anyone else) has erred involves a verb like /=ajarga-/ 'to miss' or a compound like /-mij=gajarga-/ 'to miss word', 'to get word wrong' (25.12.5).

/gada!/ is quite distinct from /wa:n^{g}/ and variants, 'whatchama-callit?', which is used when the speaker is trying to think of a word or name but can't find it. See §13.10.

12.20 Exclamations: /gao!/, /way!/, /gay!/, /yay!/, /gaga!/, /yagay!/.

In this section we mention a few interjections used to indicate surprise, danger, etc.

Particle /gao!/, exhibiting [o]-coloured ending (see phonological rule P-39), is used among persons walking together (but some distance apart) in the bush as a recognition signal. One person uses it, and the others (who are not far away but may be out of sight due to vegetation or some obstruction) answer with the same form. Less often the form is just /ga!/. An ex. is 52.6.4; see also 3.2.1, 5.1.4, and 5.2.5 with vocative kin terms alongside (child lost in bushland vainly calling out to locate parents).

In 14.7.2 we have /way!/ as an exclamation of surprise (and possibly fear) at the instant of suddenly noticing other persons present. It is possible that /ay!/ 94.2.3 is a variant of the same element.

Particle /gay!/ occurs in 14.18.2 as lengthened /ga:::y!/ as the mother (on shore) desperately tries to call to her daughter (who is being kidnapped by two men in a canoe); it seems to involve both the attention-getting of /gao!/ and a note of urgency/danger.

Particle /yay!/ occurs in 52.6.4 as a standardised ritual shout; it occurs in 18.9.4 as well with unclear function. There are, of course, a number of other ritual shouts (used to punctuate segments of ritual singing or orating, or for other purposes), and we will omit discussion of them here; see dictionary s.v. /jangu!/, /birgar!/, /=yiyin^{y}mi-/.

In 25.5.1 we have an exclamation /gaga!/ used as a man suddenly realises he is in the presence of his tabooed "mothers-in-law." It may really involve a kind of impromptu stammering rather than a conventional exclamation here.

In 71.24.3 we have three rapidly-repeated instances of /yagay!/ 'ouch!', an exclamation of pain.

12.21 Postpositions: /-w$_2$ugij/, /-maji:/, /-maga:/, /-magi/, /-w$_2$indi:yun^{g}/, /-lhan^{g}u/.

A postposition is a suffix which occurs in final position, following a word which is already fully inflected. It is like an enclitic (cf. discussion of /yamba/, §12.15), but differs in that phonological rules may apply at the boundary. Thus /-w$_2$ugij/ and /-w$_2$indi:yun^{g}/ change //w$_2$// to /b/ after stop or nasal by Hardening P-18, //lh// becomes /dh/ by the same rule in /-lhan^{g}u/, and the suffix-initial /m/ of the other postpositions often induces deletion of a preceding nasal like /n^{g}/ by Nasal-Deletion P-30. By contrast, the /y/ of enclitic /yamba/ 'because' is not affected by the preceding word.

Postposition /-w$_2$ugij/ 'still, only, nothing but' is quite common with both nouns and pronouns, where the meaning is often exclusive 'only', and with demonstratives and verbs, where the meaning is often 'still, continuously'. For nouns see §4.32, for personal pronouns §6.13, for demonstratives §7.30. The postposition cannot be added to other particles, except negative /yagi/ (and non-particle negative word /wa:='ri/).

/-w$_2$ugij/ is also very common with verbs (not exemplified in previous sections); I count about 35 instances with verbs (not including predicative NAdj) in the first 200 pp. of NMET. A few exx. are 1.5.8 ('"..." it said only', or perhaps more idiomatically here '"..." it said just like the other had said'), 1.6.6 ('he went in the direction of the dirtied water, he was still going in the direction of the dirtied water'), 5.5.3 ('she hid inside, [and] he was still going along'), 7.9.2 ('we are not full, we are always still hungry'), 7.10.2 ('it got dark and she was still unaware of what had happened'), 13.4.2 ('they[ants] always do that' or 'they keep doing that'), 13.26.1 ('he still pretended not to notice them'), 14.4.3 ('she kept sitting there'), 14.13.5 ('she kept going along with it'), 14.18.1[p. 101] ('they were still paddling'), 16.20.1 ('they kept listening').

Because the sense is often 'still', /-w$_2$ugij/ tends to be added to verbs in Continuous aspect (for Past and Future, which distinguish Continuous from Punctual aspect). However, there are a fair number of cases involving /-w$_2$ugij/ on a punctual verb: 1.10.4 ('he came out and gave [the boys] back to the people'), 16.14.2 ('he$_i$ looked and there he$_j$ was crouching; he$_j$ got back up'), 21.7.3 ('King-Brown snake [encountering Python] suddenly coiled himself back up and retreated'). If I interpret these exx. correctly, /-w$_2$ugij/ here

indicates return or retreat to a former position (note that there is a similarity to the meaning 'still', the difference being whether or not the position/action is uninterrupted).

/-w$_2$ugij/ is not very common in negative contexts. A form like /wa:='ri/ in the sense 'there is none, it is absent' can take /-w$_2$ugij/ to form /wa:='ri-wugij/ 'there is still none'. /-w$_2$ugij/ can be added to /wa:='ri/ or /yagi/ as negative elements with other constituents or a predicate in their scope, but the combination is infrequent. In 47.22.7 we have /-w$_2$ugij/ being added to the inflected verb rather than to /wa:='ri/ ('I regularly did not listen [to myths of other clans than my own]').

In general, it can be said that /-w$_2$ugij/ is added to the verb (or other predicate) when logically encompassing the action or state designated by this predicate. When it is logically associated with a particular constituent (as in 'I eat only vegetables'), it is added to that constituent. It may also be added to two or more words in the same clause (e.g., 40.14.3).

Other elements in the language which have roughly overlapping functions may be briefly mentioned. Continuous aspect in verbs, especially with initial reduplication (rule P-2), is related to the sense 'still, continuously' of /-w$_2$ugij/. For the sense 'back' (reverting to former state or location), cf. Retrospective Pergressive case suffix /-w$_1$aj/ 'back at/through' (§4.23). Cf. also various indications of discourse-anaphoric status in the demonstrative system including Anaph root (§7.1), Concrete suffix /-u/ (§7.6), and Absolute /-yun^g/ (§7.7). Relevant lexical items include NAdj /dhagij/ 'same (as before)' and some uses of /an^{y}ja:bugij/ 'one', cf. also /w$_2$iriwiri/ 'alone, by oneself'.

Postposition /-maji:/ 'if' is used in conditionals. It is often found on a verb or other predicate, but may be added to other constituents in the clause (or to more than one) without much difference in meaning. We discuss conditionals with more details and references in §16.7.

Postposition /-maga:/ is also found chiefly with predicative words such as verbs, but can occur with nouns. It is possible to identify a number of distinct contexts in which this postposition is used.

First, /-maga:/ is obligatory as a suffix on a predicative NAdj in Present Negative form with Negative element /wa:='ri/, the form being /wa:='ri Pron=NAdj-maga:/ with pronominal prefix (B series as usual with Present Negative). Thus /wa:='ri an^{g}i:='dhara-maga:/ 'they[meat ants] are not few' (i.e., they are abundant) 13.6.4. In 19.9.3 we have two similar exx., though one word with /-maga:/ is really a demonstrative adverb taking /-maga:/ apparently in "sympathy" with the juxtaposed NAdj with /-maga:/. For more information on negation in general see §15.6.

Secondly, /-maga:/ is used frequently with either the protasis ('if'-clause) or apodosis ('then'-clause) of a counterfactual conditional construction (e.g., 'if I had seen him, I would have killed him'). The verbs in question are typically in Past Potential form. Postposition /-maga:/ is not obligatory in either clause but is quite common; it is often added to the predicative word (e.g., verb) but may be added to another constituent.

The exx. of /-maga:/ in counterfactuals (§16.7) are these: both protasis and apodosis in 164.3.5 ('if the ground were hard, we would go by truck', with /-maga:/ in the apodosis added to the noun 'truck' following another postposition /-w$_2$ugij/); with protasis 161.33.2 ('if they had done it, the houses would have been big'); with apodosis in 120.6.2 ('if it had gotten into their eyes, they would have been permanently unable to see', where the apodosis involves a predicative NAdj 'permanent' with /-maga:/ and also /-maga:/ added to Negative particle /yagi-/ preceding 'see').

Another Past Potential form with /-maga:/ in the same clause in the sense 'should have' (closely associated formally in Nunggubuyu with counterfactual conditionals) is found 168.7.2 ('we should have spoken a different language to you'), with /-maga:/ added to the nonpredicative NAdj 'different, other' which begins the clause.

While the usage of /-maga:/ with Present Negative of predicative NAdj, and with Past Potential verbs (chiefly in counterfactuals), is grammatically significant, these two types account for only a small fraction of the total number of instances of /-maga:/ in the texts. Compared with the 3 cases of predicative NAdj and the 6 cases of Past Potential clauses just mentioned, we have 67 instances of /-maga:/ in what I will call its narrative function. In this (optional) usage, /-maga:/ is added to a verb or other predicate, occasionally to some other constituent, in a clause which is not specifically foregrounded in discourse terms and is typically either a repetition (echo) of a preceding clause setting up a subsequent new (foregrounded) predication, or a clause functioning as one in a series of (usually identical) repeated clauses (with no reference to any following event). This type of echo clause is typically expressed in Nunggubuyu by a verb in Continuous aspect (e.g., 'He sat down[Punctual]. He was sitting:::, [then] he got [Punctual]'), and often has stylistic lengthening. Accordingly, /-maga:/ in narrative usage correlates very significantly with Continuous aspect, often additionally with reduplication marking prolongation or repetition and often with stylistic lengthening. Indeed, I can find no ex. of narrative /-maga:/ with Punctual verb, as compared with 30 instances with unreduplicated Past Continuous verb and 29 with reduplicated Past Continuous verb (there are also 5 with predicative NAdj, which do not mark aspect, and 3 with /-maga:/ attached to noun or demonstrative).

The exx. of unreduplicated Past Continuous with /-maga:/ are 1.1.5 (two), 1.4.4, 3.1.4, 11.3.4, 18.7.5, 25.1.3, 25.2.1, 37.5.3, 37.6.1/4/5, 44.2.6, 44.4.1, 45.3.4, 45.5.1, 45.11.4, 143.5.2, 143.8.4, 143.9.1/3/6, 143.10.1, 143.13.4, 143.14.3, 143.15.3/5, 157.9.2/3, 157.14.3. Those with added reduplication are 1.5.3 (two), 3.1.5/6, 3.3.1, 11.4.1/2, 25.1.4, 25.2.1/3 (three), 25.3.1, 37.6.2, 44.2.2, 44.3.2/4, 44.4.1/2/4/5/6, 45.6.3, 143.5.6, 143.8.2, 143.9.4, 157.8.3, 157.9.1. The 5 cases with predicative NAdj are all part of a single repeated series in 119.3.1-5. The remaining three cases are /da-gi:-'la-maga:/ 'there it [was] coming', a predicative demonstrative form, in 45.6.2, where this form is sandwiched between two repetitions of Past Continuous 'she closed [hole] up for it' with no pause; and /a:-maga: a-gara-maga:/ 'the whatchamacallit?, the hole[burrow]' 37.4.6 with /-maga:/ in a context involving flanking

repetitions of a Past Continuous verb ('it went in[hole]') indicating rapid repetition of the action, and with an immediately preceding NP repetition /a-gara-waj a-gara-waj/ 'in hole, in hole'.

It is obvious that all of these instances of narrative /-maga:/ cohere in their association with Continuous aspect (not a single Punctual ex.), and in their association with non-foregrounding of the clause due to status as part of a series or more generally as a backgrounded clause used to set up and frame a following clause specifying a new (often Punctual) event. In addition, all of these cases of narrative /-maga:/ occur in certain types of texts, and are predominantly associated with certain narrators who use /-maga:/ as a stylistic feature. In NMET texts 1 to 45 are myths (hence with strong narrative patterning), and 66% of our cases of narrative /-maga:/ occur in them (44 out of 67) although they take up only about 42% of the volume (by pages). The remaining 34% of our cases occur in only three of the non-myth texts 46 to 171, namely texts 119, 143, and 157 (I may have missed a handful of other cases but even with allowance for this the distributional pattern is striking). Text 119 has the 5 exx. with predicative NAdj in a single passage involving multiple repetitions of the same clause (indicating actual repetitions), the speaker being a man who made extreme usage of narrative stylistic devices in many of his texts; texts 143 and 157 are two of the four texts contributed by the only female speaker recorded, who spoke rapidly and with great fluency and seems to have been prone to use narrative /-maga:/.

Our next postposition is Evitative /-magi/. This is typically used with an already Evitative verb form ('lest...'), either being added to the verb or going on some other constituent. Since in evitative sense, the $Nonpast_3$ (usually Future Negative) can be used in place of the Evitative verb form, /-magi/ is not always redundant ($Nonpast_3$ plus /-magi/ is interpreted as evitative semantically). In addition, /-magi/ could be added to a predicative NAdj or demonstrative pronoun (word classes which have no Evitative inflectional form), and would not be redundant in this case either. For more discussion and exx. see §8.7 (for Evitative inflectional suffixes in verbs see the paradigms in Chapter 11).

Postposition /-$w_2$indi:yun^g/ 'really' is an emphatic morpheme which shows up now and then on verbs or other words. Unlike /-maji:/ 'if' and Evitative /-magi/, which can be added somewhat arbitrarily to the verb or to any other conveniently available word (in either case having the entire clause as their scope), /-$w_2$indi:yun^g/ is logically associated with the word it is attached to.

/-$w_2$indi:yun^g/ with verb is found in 12.7.5 (imperative '[This time] really close your eyes!', i.e., without peeking), 17.7.1 ('He went through all the way'), 69.9.5 ('they really riddled him with spears'), 162.8.1 ('[now] the dog was really yelping'), and from Hughes' texts two in MT 22 (including one imperative) and one MT 31. The instances not involving suffixation to a verb are 87.1.2 ('[it is] really true', with noun 'truth' perhaps in predicative function), 98.3.6 ('[it was] real fat', i.e., deliciously fatty meat), and 161.4.2 ('a real big one [i.e., fight]').

There is no other morpheme meaning 'really, very', emphasising extreme or maximum status. For this reason, the relatively small

number of textual exx. of /-$w_2$indi:yun^g/ may seem surprising. However, there are a number of other devices available for marking this kind of emphasis. First, for a number of key adjectival concepts ('big', 'tall', etc.), there are suppletive stems which automatically emphasise maximum or extreme quality (cf. English huge, gigantic, tiny). Secondly, for verbs (i.e., actions) it is possible to achieve this emphasis by repetition, use of aspectual forms implying completion, use of some particles like /araga/ 'suddenly' (§12.7), or use of a follow-up predication explicitly marking finality ('He went along, he arrived').

The final postposition is /-lhan^{g}u/, although we might have some reservations about classifying it in the same category as the other postpositions mentioned in this section. This element is an emphatic pluraliser but is sharply restricted morphologically and tends to occur in a small number of fixed expressions. It occurs primarily with nouns, and is discussed in this connection in §4.17. It is also attested (but rare) with demonstratives; see §7.30. We have no exx. of this morpheme with verbs and this combination appears to be ungrammatical; the derivational morpheme used with verbs to emphasise plurality is prefix /-$w_1$ara-/ or one of the other phonologically similar prefixes which we collectively label "Multiple" (§10.4).

In general, it is not possible to have two postpositions in the same word, so the question of relative ordering among postpositions does not (usually) apply. However, this is not absolutely true. We do have one ex. of the combination /-$w_2$ugij-maga:/ 164.3.5 ('if the ground were still hard'), where /-$w_2$ugij-/ means 'still' and /-maga:/ is used in connection with counterfactual conditional construction. It is likely that a much larger textual corpus would show an occasional similar example in which an "outer" postposition whose grammatical function applies to the whole clause (/-maji:/ 'if', /-magi/ 'lest', or /-maga:/ in counterfactual or narrative function) is added on top of an "inner" postposition whose logical scope is focused on the particular word in question (/-$w_2$ugij/, perhaps also /-$w_2$indi:yun^g/, probably also /-lhan^{g}u/). Again, though, we observe the extreme rarity of such combinations in what is already a rather extensive text collection.

EE

Chapter 13

Interrogatives

13.1 Yes/no particles: /yu:ga/, /aliyun^{g}/, /ala/.

Yes/no questions may be formed by adding an uninflectable particle to what is otherwise an ordinary (declarative) clause.

The most common such particle is /yu:ga/. It may precede the queried clause, may follow it (in this case often functioning as a tag question), or may occur by itself as a one-word question when the content of the query is obvious in context (cf. English 'Well, how about it?'). In addition, as we will see in the next section, /yu:ga/ may be added to a clause already containing a WH interrogative word. In general, /yu:ga/ is syntactically peripheral to the clause (if any) which it occurs with, and is often separated from it by a short pause. Occasionally it is best translated not as a direct question, but as an expression of the speaker's uncertainty ('I wonder whether...'), or as an appeal ('how about it?').

Some textual exx. (other than those co-occurring with a WH word): 13.27.2, 13.28.1, 13.30.1/2, 13.31.1/3 (all of these so far meaning 'is it X?' with noun X), 16.18.1 and 18.11.3/6 (tags), 18.12.7, 18.14.2/5, 18.18.3, and 18.22.4 (tag-like requests for confirmation), 20.6.2 (difficult ex.), 20.6.5 (confirmation), 20.7.3 (apparently a tag), 20.8.5 ('is that so?'), 20.8.6, 20.10.6, 20.11.4, and 20.15.7 (these exx. unclear), 21.7.1 ('I wonder'), 34.5.3/4 (yes/no, or perhaps 'I wonder whether'), 34.7.4 (tag), 40.5.2 (yes/no), 69.2.4 ('how about it?'), 69.4.4 (yes/no), 161.2.3 ('how about it?').

The sense 'how about it?' (appeal) is not very common; see discussion of /ala/, below. Similarly, /yu:ga/ is not common with imperatives (i.e., future verbs with imperative force), since here also /ala/ is preferred, but Hughes has one ex. of /yu:ga/ with imperative (MT 12).

The particle /aliyun^{g}/ is appreciably less common than /yu:ga/, but is attested a number of times. It is similar to /yu:ga/ in meaning, but seems slightly stronger in force. In 11.5.1-3, for example, Crow asks 'Is this (/yu:ga/) a coolamon?', gets a negative answer, then asks 'Is it (/aliyun^{g}/) string?', and finally 'Is it (/aliyun^{g}/) a bandicoot?'. The nuance here is that the speaker is

not merely asking for confirmation of a probably correct statement, as typically with /yu:ga/, but rather is quite unsure of the correctness of the queried statement.

This analysis of the difference between /yu:ga/ and /aliyun^{g}/ is tentative. The other exx. of /aliyun^{g}/ in the texts are 28.8.1, 40.5.3, 143.11.2, 143.15.5, and 163.13.1, including a few which seem to act as tags. However, /aliyun^{g}/ does not seem to be used as a reinforcer for a WH word.

The particle /ala/ is used after an imperative or a suggestion, requests confirmation or approval from the addressee, and can be thought of as a pragmatic mitigator. It can be roughly translated as a tag 'all right?', as in 'Sit down, all right?' or 'I will go now, all right?'. (More or less equivalent translations such as 'Why don't you sit down?' are also possible.)

This particle is not as common in texts as in ordinary conversations, but we can cite it in 10.4.3 (imperative), 11.6.6 (with 1Sg future), and 20.17.6 ('let's sit down, all right?'). In 14.11.2 we find it in an atypical usage as a yes/no tag.

Another yes/no tag, /n^{g}i/ 20.11.4, is not really a Nunggubuyu form but is used in some nearby languages such as Ritharngu.

In summary, Nunggubuyu does have some particles roughly with yes/no interrogative force. However, an exact correlation of these forms with English interrogatives is somewhat difficult. Syntactically, and to some extent pragmatically, the closest English parallels are tags (i.e., requests for confirmation, approval, or acquiescence for a statement, imperative, or suggestion). Moreover, /yu:ga/ in some contexts merely means 'I wonder...' and therefore does not always intend to evoke a reply; also, /yu:ga/ is frequently added to an already interrogative clause containing a WH word.

Attention is called to some other particles (Chapter 12) which are not primarily interrogative but have some uses which may involve the status of a proposition: /ari/, /muga/, /yin^{g}ga/, /yaga:/.

13.2 WH interrogatives: general remarks.

In the following sections we deal individually with several stems corresponding to English WH interrogative words (who?, what?, where?, when?, how?, why?).

In this initial section we discuss the status of these WH words, and their cooccurrence with yes/no particles (see above).

First, we make the observation that WH interrogatives are not always strictly interrogative in the sense of intending to elicit a reply. Somewhat roughly, we may interpret individual occurrences of WH words as either interrogative, indefinite, or dubitative. It is not suggested that these have sharp boundaries, or that it is always possible to categorise individual occurrences.

By indefinite, we mean expressions translatable 'something', 'somewhere', etc., indicating an entity, time, or place which is presumed to exist but whose precise identity is not known, and is (perhaps) not very important. By dubitative, we mean instances where the speaker is expressing his or her own ignorance of the identity ('I don't know what', 'I don't know where', etc., or perhaps 'I wonder what', 'I wonder where', etc.). The dubitative

may verge on interrogative force, since an expression of speaker's lack of knowledge may imply a request for clarification by the addressee. For 'anything', 'anyone', etc., see /arbidi/ §12.14.

As a specific example, let us take /lhal-n^{g}argu/ 'when?' (§13.7) with verb /ani=ya:-ri:/ 'he will go'. The simplest combination is: /lhal-n^{g}argu ani=ya:-ri:/, which would often correspond to the English question 'When will he go?' (interrogative), though it could also be indefinite ('He will go sometime', 'He might go sometime') or dubitative ('I don't know when he will go').

The status of the queried clause may be made somewhat more precise by adding a particle. The particle /ari/ 'maybe' (§12.11) normally points to indefinite or dubitative function: /ari lhal-n^{g}argu ani=ya:-ri:/ 'He will go sometime' or 'I don't know (I wonder) when he will go'. The dubitative reading is probably best with /ari/ in most instances.

On the other hand, /yu:ga/ (§13.1) plus a WH word is most often (though not exclusively) interrogative in force, so /yu:ga lhal-n^{g}argu ani=ya:-ri:/ usually means 'When will he go?', asking for a response. We have noted above that /yu:ga/ is not always strictly interrogative in force, but with a WH word this is usually the best reading.

For textual exx. of /ari/ see §12.11. Textual exx. of /yu:ga/ with a WH word are these: with /yan^{g}i/ 'what?' 11.5.1, 12.4.3-5, 27.4.2, 157.6.5, 168.6.1/2; with /yan^{g}i-n^{y}un^{g}/ 'who?' 7.11.2; with /yan^{g}i-mayi/ 'what place?' 20.5.5 (and with Relative form of 'what place?' also 168.9.5); with /a-ni-ga-wuy/ 'to where?' (§13.8) 18.12.3, 20.6.3, 20.7.8, 20.12.5; with /a-ji-ga:-'la/ 'from where?' (§13.8) 99.1.3. We can also get /yu:ga/ with the interrogative verb /=yamin^{g}gari-/ (§13.10), as in 34.5.2, suggesting that this verb belongs in the general WH word class.

13.3 /yan^{g}i/ 'what?'.

Actually, the root /yan^{g}i/ is used for human 'who?' as well as for nonhuman 'what?', but the human forms have distinct affixes and are treated separately in §13.5. The compound /yan^{g}i-mayi/ 'what place?' and derivatives are discussed in §13.4.

The simple form /yan^{g}i/ 'what?' is normally used with nonhuman reference, with allowance for the occasional fuzziness of the line between 'human' and 'nonhuman' (see §4.10). The form /yan^{g}i/ with no affixes is regular for subject or object of the predication. NC prefixes are uncommon (though possible). Because in most contexts it is not certain which noun class the queried referent will turn out to be in, even the verb (which should otherwise mark NC of subject, and for transitives also object) does not usually specify the expected NC of the referent. Instead, /yan^{g}i/ is regularly treated as being in ANA$_{\emptyset}$ class, as can be seen most clearly by considering a transitive verb with 'what?' as direct object:

(13.i) yan^{g}i ni=na-n^{y} 'What did he see?'
what? 3MSg/NA⟶ANA$_{\emptyset}$-a=see-Pa$_{1}$

Here the form of the pronominal prefix in the verb, /ni-/, specifies ANA$_{\emptyset}$ direct object (Table 9-1).

Textual exx. of /yan^{g}i/ with nonhuman reference are these: 11.5.1, 13.13.1, 13.13.3, 16.16.1/2 (ANA$_{\emptyset}$ concord for second occurrence), 27.4.2, 65.5.1 (ANA$_{\emptyset}$ concord), 157.6.5, 168.9.5 (along with /yan^{g}i-mayi/). Another ex. of ANA$_{\emptyset}$ concord is TNT 27.

Occasionally, /yan^{g}i/ may be used with human reference when the focus is not on an individual's personal identity, but rather on clan or moiety status or the like (cf. English 'What are you, a Tory or a Laborite?'). This seems to be the case in 168.6.1 'What are you[Pl]?'. However, specifically human forms are more common (in Nunggubuyu) even in such contexts.

Nonzero case forms of /yan^{g}i/ in common use are:

Purposive	a-yan^{g}i-yun^{g}guyun^{g}	'why?' (90.2.3)
Instrumental	yan^{g}i-miri	'by means of what?'
Relative	a-yan^{g}i-yin^{y}un^{g}	'of/about what?'
Similative	a-yan^{g}i-yi:	'like what?'

Use of NC prefixes with these case forms follows the pattern set by nouns: Instrumental /-miri/ usually occurs with no NC prefix, while other nonzero case suffixes usually do take a prefix. In these interrogative forms, the NC prefix is the punctual ANA class form /a-/ (§4.7-8).

Other case forms like Locative /-ruj/ may well be possible in principle, but in practise do not seem to be in common use.

Although I have no textual exx. of this, in elicitation it was possible to obtain forms of /yan^{g}i/ marked for a specific NC category, used when the speaker knows the NC but does not know the specific identity of the referent. In this situation, the speaker may use /yan^{g}i/ as an inflectable NAdj (§4.2), with intransitive pronominal prefixes (like those used with verbs, Table 9-1). Thus, for MANA class, the usual form would be /ma=yan^{g}i/ 'what?' with A series prefix of MANA class:

(13.ii) ma=yan^{g}i — nima=na-n^{y} — 'What did he see?'
[it was] what? — 3MSg/NA⟶MANA$_{a}$=see-Pa$_{1}$

However, if the reference is to past or present negative, or to past potential or future, we would get the B form of the pronominal prefix (see Table 8-3):

(13.iii) ama=yan^{g}i — anima=na-yi: — 'What will he see?'
[it will be] what? — 3MSg/NA⟶MANA$_{b}$=see-Nonpa$_{2}$

This construction is really a double predication (e.g., 'It was what?, he saw it') which translates into English as a single clause; for parallels with predicative demonstrative pronouns see §7.4, and see also §13.8, below.

Finally, we mention that /yan^{g}i/ occurs in a few idiomatic expressions roughly translatable as 'all kinds' or 'lots (of them)'. One is /n^{g}un^{y}ju a-yan^{g}i/, literally 'like what?' (for particle /n^{g}un^{y}ju/ see §12.13), but having the idiomatic meaning 'lots, many' (very emphatic); see 59.5.3, 95.1.3, 97.3.2/3, 139.11.3.

A similar emphatic expression involves /yan^{g}i/ preceded by the stem /algur/, which elsewhere means 'kinsman'. The whole is /algur a-yan^{g}i/ with NC prefix before /-yan^{g}i/, or /algur-yan^{g}i/ with what appears to be (compound) fusion of the two stems. The sense 'all kinds' (emphatic) is seen in the textual exx.: 9.8.1, 14.2.4, 29.12.4, 35.12.2, 139.5.3, 155.2.1, 163.16.3, 170.3.6. It is possible to add Multiple derivational prefix /-w$_{1}$ara-/ (§10.4) as in 167.21.3 (the prefix occurs before /-algur-/).

Both of these idiomatic expressions involve /yan^{g}i/ as a kind of rhetorical question. One might roughly compare similar emphatic expressions in English ('[We ate fish, kangaroos,] and you-name-it' or '...and God knows what').

13.4 /yan^{g}i-mayi/, /nun^{y}-jan^{g}i-mayi/ '(of) what place?'.

There is a special 'what?' expression referring only to places. It is /yan^{g}i-mayi/ 'what place?', consisting of /yan^{g}i/ 'what?' and an otherwise unattested morpheme /-mayi/. It is ordinarily found with no further affixation, as in 'What place is this?', but can also have case forms in which punctual ANA class prefix /a-/ is used, hence /a-yan^{g}i-mayi-yin^{y}un^{g}/ 'of what place?' 168.9.5 with Relative case suffix /-yin^{y}un^{g}/. The unaffixed exx. of /yan^{g}i-mayi/ are 18.10.5, 18.11.2, 18.16.2, 20.5.4, and 143.11.3.

By adding Gentilic derivational prefix /nuN-/ (see §14.11), we get /nun^{y}-jan^{g}i-mayi/ '[person] of what country?'. This is often found as predicative NAdj with intransitive pronominal prefix, as in /nu=nun^{y}-jan^{g}i-mayi/ 'You[Sg] are of what country?' 14.7.3, /wu:=nun^{y}-jan^{g}i-mayi/ 'They are of what country?' 69.16.2. This expression is, in effect, a common way of asking about the clan of a person or persons, since each clan has a focal territory (or estate) even if its members are not physically living in it.

13.5 /yan^{g}i-n^{y}un^{g}/, /yan^{g}i-n^{y}um-ba:/, /yan^{g}a-yan^{g}i/ 'who?'.

The explicitly human forms of /yan^{g}i/ 'what?' (§13.3) are translated as 'who?'. There are Sg, Du, and (3+) Pl forms, distinguished in much the same way other human nouns keep them apart (§4.15). Thus we have Human Sg suffix /-n^{y}un^{g}/, and an unsuffixed but reduplicated Pl form /yan^{g}a-yan^{g}i/. However, the Du form has Du suffix /-w$_{2}$a:/ added to (not replacing) Sg /-n^{y}un^{g}/, hence /-n^{y}um-ba:/.

The most common form is the Sg form /yan^{g}i-n^{y}un^{g}/, which is regularly used when the actual number of the queried persons is indeterminate (as in 'Who beat you up?'). Gender-marked forms /na-yan^{g}i-n^{y}un^{g}/ (M) and /n^{g}ara-yan^{g}i-n^{y}un^{g}/ (F) are possible but not common.

In general, /yan^{g}i-n^{y}un^{g}/ is treated as a WARA class noun for purposes of concord; see §4.10, §4.12. Thus, 'Who is that?' will come out as /yan^{g}i-n^{y}un^{g} wa:-da-wu:-'/ with WARA class form of the demonstrative (here Immediate root). A similar ex. with verb:

(13.iv) yan^{g}i-n^{y}un^{g} — bara=na-n^{y} — 'Who did you see?'
who? — 2Sg⟶3Pl/WARA$_{a}$=see-Pa$_{1}$

However, if the number (and for Sg/Du, gender) of the referent is known, it is permissible to use the actual pronominal category for concord; thus in 167.17.1 we have 'Who will go into the water?' with 3MSg (not WARA) intransitive prefix in the verb.

Other textual exx. of /yan^{g}i-n^{y}un^{g}/, some showing WARA concord, are: 7.11.1-5, 15.6.4, 18.13.8, and 20.15.4.

Although /yan^{g}i-n^{y}un^{g}/ generally occurs without other affixes (for subject or direct object), it is possible to add case suffixes, and when this is done we usually get /wa:-/ (WARA class prefix, punctual series) if there is no more specific NC marker. Thus 'of whom?' ('whose?') with Relative suffix /-yin^{y}un^{g}/ has a full form /wa:-yan^{g}i-n^{y}un^{y}-jin^{y}un^{g}/. In practise, this form is often reduced to /wa:-yan^{g}i-n^{y}un^{g}/ 'whose?' with no overt case marker, but with the presence of the covert case marker implied by the use of the punctual NC prefix. Other case forms like Allative-Dative /wa:-yan^{g}i-n^{y}un^{g}-guy/ 'to/for whom?' are also possible (though not common in the full form and subject to the same surface loss of case suffix). Unprefixed /yan^{g}i-n^{y}un^{g}-guy/ is also possible.

There is a Dual form /yan^{g}i-n^{y}um-ba:/ used when the queried referents are known to be two, as in 'Who are you two?'. Exx. are 20.7.7, 20.8.3, 20.11.2, 20.12.4, and 20.14.1 (all from one text). Agreement is normally MDu, or if both referents are female, FDu. In nonzero case forms (with or without surface deletion of the nonzero case suffix), WARA prefix /wa:-/ is possible, as in /wa:-yan^{g}i-n^{y}um-ba:/ 'whose?[Du]'.

The Pl form /yan^{g}a-yan^{g}i/ is used when the referents are known to be three or more in number; exx. are 18.7.7, 18.12.2, and 18.13.6. Concord is 3Pl or perhaps WARA (the two are distinguishable clearly only in demonstrative pronouns). The nonzero case form is /wa:-yan^{g}a-yan^{g}i/ 'whose?'.

In those forms involving suffix /-n^{y}un^{g}-/, /yan^{g}i-/ optionally undergoes a minor vocalic assimilation to /yan^{g}u-n^{y}un^{g}-/.

13.6 /-n^{g}argu/ 'how much?, how many?'

This stem can apparently function as an ordinary noun, or as a noun root requiring derivational NC prefix (§4.9), or as a NAdj taking intransitive pronominal prefixes and functioning as predicate. We defer until the next section the common compound /lhal-n^{g}argu/ 'when?'.

In 125.16.4 we have the nominal form /ana-n^{g}argu/ 'how many?' with inflectional NC prefix. In this ex. the question seems to be rhetorical, hence effectively 'lots of them' (cf. some uses of /yan^{g}i/ discussed at the end of §13.3).

However, in elicitation my informants preferred predicative NAdj forms:

(13.v) ma=n^{g}argu — how many[MANA]? — numa=n^{g}an^{y}bandi:-' — 2Sg⟶MANA$_{a}$=want-Nonpa$_{2}$ — 'How many do you want?'

(13.vi) ama=n^{g}argu — how many[MANA]? — bama=ma-n^{g} — 2Sg⟶MANA$_{b}$=get-Nonpa$_{1}$ — 'How many will you get?'

Note that the /=n^{g}argu/ form itself shows A form of the intransitive prefix in Present, B form in Future (see Chapter 8).

With the (more common) A form of the prefix, there is no surface difference (for the most common nonhuman nouns) between predicative NAdj as just shown and form with NC$_{der}$ prefix, e.g., MANA class form /ma-n^{g}argu/ from //maG-n^{g}argu//. This partial ambiguity, along

with the virtual absence of /-n^{g}argu/ from the texts, makes it difficult to analyse the various formal possibilities adequately.

13.7 /lhal-n^{g}argu/ 'when?'.

The temporal interrogative 'when?' is /lhal-n^{g}argu/; the only good textual ex. is 69.15.1 ('when will we[InPl] have a spear fight?'), but the form was often heard in conversation.

The compound initial looks at first sight like /-lhal-/ 'place, country', but I have difficulty making sense of the combination. Instead, I would think it is really /-lhaln^{g}-/ 'flame, firelight' with the final nasal lost regularly before another nasal (rule P-30). The suggestion is that time of day is associated with the position of the sun.

The compound final is /-n^{g}argu/, see preceding section.

13.8 Interrogative-demonstratives.

There is a set of forms (Table 13-1, below) functioning as interrogatives but which have some formal resemblances to the demonstrative pronouns and adverbs described in Chapter 7.

All of the forms involve the sequence /a-X-ga-/, where X is some NC marker or Locative adverbial /-ji-/. X may be analysable into more than one morpheme, specifically in MDu /-wi-ni-/, FDu /-wi-rn^{g}i-/, and Pl /-wu-ru-/, all of which involve a nonsingular morpheme /-wV-/ which may be identified with the Nonsingular morpheme /-w$_{2}$V-/ in pronominal prefixes (Chapter 9), cf. also demonstrative pronoun endings (Table 7-1). Some of the adverbial forms in Table 13-1 also have a case morpheme after /-ga-/.

TABLE 13-1

Interrogative-Demonstratives

a. pronouns

MSg/NA, FSg/N^{g}ARA	/a-ji-ga/
MDu	/a-wi-ni-ga/
FDu	/a-wi-rn^{g}i-ga/
Pl	/a-wu-ru-ga/
WARA	/a-wi-ga/
ANA	/a-ni-ga/
MANA	/a-mi-ga/

b. adverbs

Locative	/a-ji-ga/ 'where?'
	/a-ji-ga-ruj/ '(around) where?'
Ablative	/a-ji-ga:-'la/ 'from where?'
"	/a-ji-ga:-'la-yun^{g}/ "
Allative	/a-ni-ga-wuy/ 'to where?'

One significant formal feature of the forms in Table 13-1 is the usage of /-ji-/ not only as a Locative adverb marker (cf. demonstrative adverbs /ya:-ji/ 'here', /da-ji/ 'there[Imm]', §7.12), but also as the NC marker for both MSg/NA and FSg/N^{g}ARA. Thus, /a-ji-ga/ can mean either 'where?' (Loc adverb) or 'Where is he/her/it?' (pronoun). This syncretism is not found in demonstratives, although demonstrative pronouns do have /-gi/ for both MSg/NA and FSg/N^{g}ARA (Table 7-1).

The basic sense of the interrogative-demonstrative pronouns is 'where is/are X?'. These forms are inherently predicative, and are thus most similar syntactically to predicative demonstrative pronouns (§7.2, §7.4). Unlike demonstrative pronouns, the interrogative-demonstrative pronouns of Table 13-1 do not have nonpredicative variants formed by adding additional NC prefixes.

The textual attestations of the interrogative-demonstrative pronouns in NMET all involve ANA class form /a-ni-ga/ 'where is it?', see 13.33.1, 14.11.2 (seems shortened form here for /a-ni-ga-wuy/, cf. below), 15.8.3, 18.9.4, 20.10.6. Just as ANA class demonstrative pronouns may be used in apposition to 1st or 2nd person pronouns (§7.27), /a-ni-ga/ may be used to mean 'where are you?' or 'where am I?'. For 'where are you?' see /a-ni-ga/ in 18.14.4.

We cannot cite other textual exx. in NMET for the remaining interrogative-demonstrative pronouns, but WARA form /a-wi-ga/ occurs in Hughes' texts (TNT 5, MT 10), as does /a-ji-ga/ with 3MSg reference (TNT 9).

As with demonstratives, the pronouns in Table 13-1 require present tense positive context, with some allowances for special cases (see §7.4). To ask, 'Where was he?' or the like with past tense context, an adverbial form (Locative) is used. This is also the case with future sense, and we have a textual ex. of /a-ji-ga/ 'where?' in such a context: 15.6.1.

The variant /a-ji-ga-ruj/ in the table consists of /a-ji-ga/ plus regular nominal Locative case suffix /-ruj/ (§4.25). The extra nuance contributed by /-ruj/ here is 'next to' or 'just beyond', as is also the case with /-ruj/ added to a demonstrative Locative adverb (§7.18).

Ablative /a-ji-ga:-'la/ 'from where?' formally resembles the Centripetal adverbial form of demonstratives (§7.15), and has suffix /-ala/ instead of nominal Ablative /-w$_{1}$ala/. However, there is no specifically Centripetal sense in /a-ji-ga:-'la/. Exx. are 20.6.2, 20.10.4, 20.14.4, 20.15.5, 99.1.3, and MT 9.

An extended form /a-ji-ga:-'la-yun^{g}/ with Absolute suffix /-yun^{g}/ (used with demonstratives, see §7.7 and especially §7.9) is found in 26.1.2/3, in association with demonstrative /ya:-ji:-'la-yun^{g}/ 'along here'. The combination /-ala-yun^{g}/ indicates a partial trajectory rather than just a point of departure.

The other important interrogative-demonstrative adverb is /a-ni-ga-wuy/ 'to where?', which is formally similar to the Directional demonstrative adverbs in /-u-wuy/ (§7.14). Both types involve Allative-Dative case suffix /-w$_{1}$uy/ added to an ANA class pronominal form. Exx. of /a-ni-ga-wuy/ are 9.10.1, 14.11.2, 15.2.1, 15.9.7, 16.6.2, 18.8.1, 18.12.3/5, 18.14.1, 18.18.2, 20.4.6, 20.7.4, 20.9.2/7, 20.10.4, 20.11.5, 20.12.5, 20.14.5, 20.15.8, 26.3.2, 41.6.6, 41.19.5, and 41.23.1 (among others).

13.9 Interrogative verb /=yamin^{g}gari-/.

The verb /=yamin^{g}gari-/, variant /=yamin^{y}gari-/, is used as an interrogative verb. It is intransitive in form.

There is no single way to translate expressions containing this root, but a gloss 'to do what?' is often appropriate, as in /nan^{y}=jamin^{g}gara-n^{g}/ 'what will we[InDu] do?' 13.15.3. However, such expressions are also used to elicit approval or confirmation of a suggestion, as in /nun^{y}=jamin^{g}gari:-na, Bickerton/ 'How about Bickerton [Island]?' 161.13.1 (cf. 161.16.5, 161.17.3). In this ex., the verb has 2Sg as subject.

Beyond these uses, /=yamin^{g}gari-/ can function as an all-purpose general question. For example, /wu=yamin^{g}gari:-na/ with ANA class subject may be used to mean, in a certain context, 'What time is it?'.

Other textual exx. of the verb are 13.38.3, 20.17.1, 34.5.2, 41.21.4, 43.9.1, 46.2.2, 47.2.3, 113.1.2.

Our exx. of this verb indicate that it regularly occurs by itself (including, of course, a pronominal prefix and an inflectional suffix), with no accompanying constituents inside the clause (unless the subject is expressed by a separate NP as well).

Particle /yu:ga/ (§13.1) may co-occur, however, with /=yamin^{g}gari-/, as in 34.5.2.

In addition to simple /=yamin^{g}gari-/ (intrans.), there is a transitive derivative /=yamin^{g}gari-jga-/ 'to do what to [someone, something--direct object]'. This is formally the Causative, but in object-promotion rather than causative sense (§10.7). An ex. occurs in TNT 21.

13.10 /(w)a:n^{g}/ 'whatchamacallit?'.

The 'whatchamacallit?' word, formally a noun, is /(w)a:n^{g}/, and is used as a filler while the speaker tries to remember a name or other noun. It is very common in the texts, and a grammar of the language is obliged to emphasise this. Since the word in question often turns out to be a basic vocabulary item, or a well-known place name, we suggest that Nunggubuyu speakers have a somewhat distinct psycholinguistic production strategy than English speakers and permit "memory loss" more readily. Of course, this is largely possible due to morphological indexing, notably pronominal concord in verbs.

/(w)a:n^{g}/ quite often takes nonzero case suffixes, and in general its case marking is based on that of the corresponding "forgotten" noun or at least the latter's syntactic category--thus, when referring to a place name in locative (rather than allative) sense, it has zero case suffix ("Nominative") just as do full place names in this usage (§4.5).

It is sometimes difficult to determine whether a NC$_{infl}$ prefix is present, since punctual ANA prefix /a-/ often combines with it to produce /a:-'n^{g}/, which is homophonous with the unprefixed form in one of its pronunciations. With other noun class categories we do not have this problem. In general, NC marking on /(w)a:n^{g}/ is unreliable, often the unprefixed form occurring where we would expect the corresponding noun to have nonzero prefix. Presumably

this is because the speaker may not know even the noun class of the "forgotten" noun; indeed, when the speaker does try to anticipate, and puts a NC_{infl} prefix on the 'whatchamacallit?' word, it turns out that he/she has guessed wrong rather frequently.

Exx. of /(w)a:n^{g}/ can be found on many dozens of pp. in NMET. For example, in the brief text 24, we find it at 24.1.4/5/6, 24.2.3/4, and 24.3.2/6. An ex. with NC_{infl} prefix is /mana-wa:n^{g}/ 1.4.1 (a correct guess this time).

When the speaker really wants to express disgust with himself or herself for being unable to remember a name or noun, a stronger form /wa:n^{g} yagu/, often pronounced /wa:n^{g}-jagu/ (an irregular extension of Hardening P-18), is used, e.g., §20.4.3, 157.6.5. A form /(w)a:n^{g}-manamana/ occurred 35.12.1 but its exact meaning is hard to determine.

It is not possible to use /(w)a:n^{g}/ predicatively as NAdj with pronominal prefix. There is also no special Dual or Plural stem form. It is also not possible to combine /(w)a:n^{g}/ with kin-term affixation (Chapter 5), or with specific affixes associated with personal pronouns (Chapter 6) or demonstratives (Chapter 7). There is also no verbalised form, say with Inchoative /-ma-/ (§10.8).

One formation which is possible is the use of a NC_{der} prefix, creating a noun-class-specified form like ANA /u-gan^{g}/ or MANA /ma-gan^{g}/ (i.e., //uG-// or //maG-// plus /(w)a:n^{g}/). These forms suggest that the base form is //-w$_1$an^{g}//, incidentally. Exx. of the NC_{der} form are 13.19.4, 53.1.3. (For NC_{der} see §4.7, §4.9.)

The use of /wa:n^{g}/ presupposes the existence of a noun or name which should have been remembered (and is thus "definite" in a sense, though temporarily forgotten). As a result, there is some interchangeability between /wa:n^{g}/ and usage of an Anaph demonstrative pronoun (§7.1) like /an-uba-ni-yun^{g}/ (ANA) or /nu:-'ba-gi-yun^{g}/ (MSg/NA), which can likewise function in context as fillers pending recall and utterance of the missing noun. /wa:n^{g}/ seems most common with place names and nonhuman nouns, and somewhat less common with reference to humans (though quite possible in this usage).

For /-w$_1$an^{g}/ as a kind of plural suffix, see §4.16.

Chapter 14

Compounds and similar derivatives

14.1 Classification of cpds.

As noted in Chapter 10, there is no sharp distinction between verbal derivational affixes (especially prefixes like Comit and Mult) on the one hand, and compound elements on the other. For example, the rule (P-1, §3.2) inserting Epenthetic morpheme /-n^{g}u-/ at morpheme boundaries (before a stop) treats derivational prefixes and cpd. initials alike (distinguishing them from pronominal prefixes). Thus /=bura-/ 'to sit' must become /-n^{g}u=bura-/ following any derivational prefix or cpd. initial: derivatives /-n^{g}ara-n^{g}u=bura-/ (Mult), /-an^{y}ji-n^{g}u=bura-/ (Comit), /-an^{g}gara-n^{g}u=bura-/ ('together', cf. §10.10), and /-a-n^{g}u=bura-/ (Benef); cpds. /-nuga-n^{g}u=bura-/ '[stone] to sit', /-adu-n^{g}u=bura-/ 'to sit with spear [in body]', /-an^{g}a-n^{g}u=bura-/ 'to camp [somewhere]'. Contrast /ni=buri-Ø/ 'he sat' with just pronominal prefix before root, and no /-n^{g}u-/.

There is weak evidence for a mostly covert distinction between derivational prefixes and cpd. initials, but the distinction does not coincide with the repartition between Chapter 10 and this chapter. We will note in §14.3 that in the sense 'to hit, kill', the stem is /=w$_2$u-/ with no derivational/cpd. elements preposed, but suppletive /=w$_2$adja-/ after cpd. initial. With derivational prefix, we get /=w$_2$u-/ directly after Benef /-aG-/, but /=w$_2$adja-/ directly after Mult /-w$_1$ara-/, suggesting that Benef is less like a cpd. initial than /-w$_1$ara-/. (However, Recip /=w$_2$i-n^{y}ji-/ 'to hit each other, fight' does combine with /-w$_1$ara-/.) Although we cannot use this criterion to determine the status of Comit /-an^{y}ji-/ or certain other derivational prefixes, there is at least a hint of a formal distinction between a) Benef; b) Mult; and c) cpd. initials, with Mult being intermediate.

We may roughly classify the cpds. to be considered in this chapter along the following dimensions:

lexical vs. productive
modifier-nucleus (MN) vs. nucleus-modifier (NM)

Lexical compounds are specialised semantic units which are learned as such rather than being put together spontaneously.

Conversely, productive cpds. are those which can be put together on the spot, with both constituent elements having their own usual semantic values. This distinction is gradient rather than absolute.

Although any attempt to account for compounding using conventional "transformational" models will run into difficulties, certain types of productive compound could perhaps be thought of as the result of a copying rule by which the root of a NP with some grammatical function in the clause is copied (as cpd. initial) in the verb (or predicative NAdj). We specify that the rule is a copying rule, rather than an incorporation rule (by which the root of the independent NP is moved into the predicative word), since in these productive compounds (or some types of them) the cpd. initial may co-occur with an independent NP cognate. The copying process is normally optional:

(14.i) ma=bura:-' mana-nuga 'The stone sits'
it sits $MANA_C$-stone

(14.ii) ma-nuga-n^gu=bura:-' mana-nuga (same translation)
stone sits $MANA_C$-stone

Actually formalising such a copying rule is difficult, however, for several reasons. First, we do not always have a one-to-one association between independent noun roots and cpd. initials, even if we include suppletive pairs (§14.2). Second, we would have to explain why many nouns have no cpd. initial counterparts. Third, when copying is possible, as in the above exx., we still have to explain when and why the "optional" copying rule applies; for a consideration of discourse factors see §14.8. Fourth, there is no simple rule for which grammatical relations make an independent NP eligible for copying; see §14.6. Accordingly, while it is helpful to keep the copying analysis in mind, actually formalising the rules in transformational terms would be horrendously difficult.

The cpd. /-nuga-n^gu=bura-/ in (14.ii) is also a modifier-nucleus or MN cpd. since the final element /=bura-/ 'to sit' is the nucleus of the word as a whole, which has a verbal pronominal prefix and a verbal inflectional suffix and functions in every way as a verb. Most compounds are of this general type, with a nuclear final (verb or predicative NAdj) and a modifying initial (usually some kind of noun or of indeterminate word-class type). However, there are also some NM (nucleus-modifier) cpds. in which the grammatical function of the whole word is dictated by the initial. Some exx. are those with initial /nuN-/ (Gentilic, §14.11) or any of the other special nuclear initials in §14.12-13.

It should be said here that since cpds. are presented in some quantity in the dictionary (s.v. the nuclear component, with brief cross-listing s.v. the modifying component), we will not be giving exhaustive lists of the various types in this grammar.

In addition to the cpds. treated in this chapter, numerous other specialised derivational formations are handled in various sections in other chapters: for NC_{der} (derivational noun-class) formations see §4.8; for the morphology of kin terms including Dyadic forms see Chapter 5; all derivatives involving demonstrative roots are dealt with in Chapter 7 (e.g., §7.21, §7.22, §7.23); some derivational

prefixes in Chapter 10 (e.g., §10.10) could have been transferred into the present chapter; for interrogatives see §13.4 and §13.7.

14.2 Special cpd. initials.

In the exx. (14.i-ii) above, the cpd. initial /-nuga-/ 'stone' matched the (cognate) root of the independent NP. While there are many such cognates, there are also many cases of suppletion or phonological irregularity, and cases where some semantic or distributional skewing makes it difficult to identify the cpd. initial as a simple copy of the independent NP root. Table 14-1 presents cases of suppletion or severe phonological reshaping.

See dictionary for detailed information. Some brief remarks will be given here. /-ar-/ '[fresh-/salt-]water' is an ex. of a cpd. initial combining two concepts which are distinguished (quite rigorously) as independent NPs: /gu:gu/ 'freshwater' (ANA class) and /lhagayag/ 'sea, saltwater' (MANA). Even in the cpds., the two can be kept apart indirectly since the noun classes are distinct: /wa:-'r=abi-n^y/ 'it[freshwater] rose up', /ma:-'r=abi-n^y/ 'it[saltwater] rose up'.

TABLE 14-1

Special Cpd. Initials

body part		other	
-baG-	eye	-dhi-	[no uniform gloss]
-gi-	excrement	-dirG-	fear/bravery dimension
-lha(G)-	mouth	-gari-	[going] after
-lhaN-	foot	-ji-	[no uniform gloss]
-lhan^{g}aj-	entrails	-lhagarG-	line, row
-lhan^{g}aN-	milk	-lha:l-	mental disposition, mood
-li-	side	-lan^{g}gu-	river mouth
-n^{g}aN-	breast (?)	-mar(G)-	[no uniform gloss]
-n^{g}uraG-	penis	-malan^{g}aG-	considerably, quite §14.18
-n^{g}u-	guts	-mij-	a) name; b) throat
-ra-	tooth, ragged edge	-n^{g}al-	tree, branch
-rig-	vagina (--> 'hole')	-rang^{g}a-	sleeping
-ambaN-	headache	-raj-	[no clear gloss]
-ambuluG-	head	-ragar(G)-	a) spear; b) violence
-andhula-	sores on head	-run^g-	behaviour, conduct
-aN-	[see dict., p. 200]	-abirin^y-	[something] buried
-yi-	face	-agajij-	[no uniform gloss]
		-w$_2$aj-	food (flour, sugar, etc.)
object/material		-amburu-	rainbow
-galan^g-	egg	-w$_1$alamin-	behaviour, conduct
-laN-	cloud (?)	-w$_1$an^{y}ja-	food
-ramba-	boat, canoe	-w$_1$urG-	stain (?)
-w$_1$adji-	freshwater animals	-ya:l-	mental state, attitude
-adu-	spear	-ij-	word; situation (abstract)
-aG-, -a-	ground, earth	-yir-	foliage, leaves
-ar-	water (fresh, salt)	-yiga-	fire
		-raN-	flock

Some cpd. initials do not have a close nominal counterpart; these include /-dirG-/ 'fear/bravery', /-lha:l-/ 'mental disposition' (distinct from /-lhal-/, cpd. initial form of /lha:l/ 'country, place'), /-run^{g}-/ 'behaviour', /-amburu-/ 'rainbow' (though /ma:rn^{y}/ 'snake' is sometimes used as a noun in this sense, cf. the "rainbow serpent" mythology), and /-ya:l-/ 'mental state'.

Sometimes there is a virtual one-to-one relationship between noun and suppletive cpd. initial: /n^{g}ura/ and /-yiga-/ 'fire', perhaps /mi:mi/ and /-lhan^{g}aN-/ 'milk'. But more often there is some skewing, either some nonoverlapping of meaning, or the limitation of the cpd. initial to a handful of lexical cpds.

In Table 14-2, below, we present instances where a minor phonological change occurs in the cpd. initial, but where the relationship is still transparent. (Actually, in some of the exx. shown there are also some attested cpds. showing the unmodified noun root; see dictionary for details.) There is no fixed pattern in the table, except that the cpd. initial is usually shortened in some way.

Alternations like noun /lha:l/, cpd. initial /-lhal-/ 'country, place' with monosyllabic root showing length change are not shown in the table, since they are handled already by phonological rule P-44 (Monosyllable-Lengthening).

Exx. of cpd. initials which are essentially identical to cognate nouns in form and meaning are these (among others): /-lhal-/ 'country', /-lhawu-/ 'word, speech', /-lharug-/ 'walk, hike', /-lhud-/ 'power, loudness', /-lhaj-/ 'chopped wood', /-gara-/ 'hole, burrow', /-jir-/ 'fur', /-mada-/ 'grass', /-nuga-/ 'stone', /-mun^{g}gala-/ 'platform, sitting place in tree', /-ran^{g}ag-/ 'wood, tree', /-rilji-/ 'island', /-(w$_1$)aban-/ 'ground', /-walag-/ 'hollow log, coffin', /-anig-/ 'ashes, embers', /-ay-/ 'raft, nest'. To this we may add many body-part terms (some are ousted by suppletive forms, Table 14-1, but in some instances the suppletive and regular cpd. initial form are both possible). Note that the items just listed, along with those in the tables, tend to be either a) body parts; b) abstractions like 'conduct' which must co-occur with a qualifier, and c) "core" items.

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TABLE 14-2

Phonologically Irregular Cpd. Initials

cpd. initial	noun	gloss
-w$_1$alag-	al(w)ag	neck
-w$_2$ingidi-	-w$_2$angidi-	ray meat
-marirg-	mariyarg	twigs rustling
-rigu-, -rugu-	digu	raw (see P-17)
-jimun^{g}-	jimun^{g}gumun^{g}gu	coolamon
-w$_1$aran^{g}gi-	-w$_1$aran^{g}gay-	spear (shaft)
-murn^{y}-	murn^{y}murn^{y}	bubbles, froth
-w$_1$adi-	adi	road, path
-w$_1$aman-	-w$_1$a:man-	honey bee hive
-w$_1$amuy-	-w$_1$amuymuy-	scraps, pieces
-an^{y}jal-, -an^{y}bal-	an^{y}jabal	armpit
-galang-	gagalang	egg

TABLE 14-3

Semantic Shifts

form (as cpd. initial)	usual gloss	gloss as cpd. initial
-bira-	rear end, anus	back, hind area (of anything)
-galg-	honey bee[rare]	honey, honey bee [usual word]
-lhaln^{g}-	flame	fire, light (cf. also §13.7)
-lan^{g}-	top of head	mentality, emotion
-rigu- (noun /digu/)	raw, unripe	(also) dead, fainted, collapsed
-n^{g}unin^{y}-	groin area	sexual intercourse
-ambal-	top of head	head; top
-w$_2$an-	temple of head	hearing, disposition, temple
-w$_2$aran^{g}-	ear	hearing, forgetting
-w$_1$urij-	chest of body	(also) feelings/emotions

- -

In Table 14-3, above, we summarise some further exx. of semantic changes, usually with the cpd. initial having an extended meaning as compared to that of the cognate noun ("usual gloss"). Note in particular the use of body parts.

In §4.9 we mentioned that many nouns are unable to occur in underived form as inflectable nouns, and must first be combined with a derivational noun-class (NC$_{der}$) prefix; these are called defective or bound noun roots. In general, defective noun roots can be used also as cpd. initials (there are some exceptions, mainly involving long multisyllabic roots used with NC$_{der}$ prefix as independent nouns but not easily used as compound initials). In this usage, they do not bring a NC$_{der}$ prefix with them into the compound. The typical semantic domain for defective roots is parts or aspects of plants and inanimate objects.

Exx. of defective roots also attested as cpd. initials (for details see dictionary entries) are: /-lhan^{g}un^{y}-/ 'wind', /-mala-/ 'honey' or 'sky' (two homophonous items), /-gulu-/ 'corner', /-lhagalg-/ 'surf, saltwater', /-w$_1$uj-/ 'pandanus tree', /-raga-/ 'fish trap', /-n^{g}arag-/ 'sand', and /-w$_1$anburg-/ 'outward appearance, looks'.

In addition, many nondefective nouns (those which can be directly inflected as nouns) which we have listed above as having cognate cpd. initials can also be used with NC$_{der}$ prefixes (e.g., human body part terms which take NC$_{der}$ prefix when referring to parts of plants or inanimate objects).

By no means all nouns have corresponding cpd. initials, whether suppletive or cognate. In particular, specific flora-fauna terms (except 'pandanus'), specific manufactured implements (including particular types of spears), and adjectival or adverbial nouns (including gender/age/status terms for humans, except for collective term for 'uncircumcised boys', see /-aragu-/ in dictionary), do not occur as cpd. initials.

It might still be asked whether specific nouns (e.g., flora-fauna species) might co-occur with more general cpd. initials. For example, schematically the-coolibah it-tree-stands with coolibah (a tree) copied in the verb as a more general classifying cpd. initial.

I have heard that something like this occurs in Anindilyakwa, but in Nunggubuyu there is no regular usage of such classifiers, except for a few rather low-level classifiers like cpd. initial /-ar-/ (Table 14-1) for both 'fresh water' and 'saltwater', or /-ramba-/ (Table 14-1) for canoes and boats. Perhaps the closest approximation to a high-level classifier would be /-$w_1$an^{y}ja-/ 'food' (Table 14-1, right-hand column), which is often used in verbs with co-occurring NP with a more specific reference (to a plant or animal used as food). Another element, /-$w_1$adji-/ 'freshwater animals (tortoises, etc.)', can be thought of as a kind of classifier, but is apparently restricted to a small number of combinations.

(There are a few classifier-like elements used in /wun^{g}ubal/ songs, borrowed from Yuuln^{g}u languages, but they are not verbal compound initials--instead, they are preposed to more specific noun stems.)

14.3 Special cpd. finals.

The number of suppletive or otherwise irregular cpd. finals is not as great as with initials, perhaps because the finals are usually nuclear.

A grammatically interesting case is /=w_2u-/ 'to hit, kill' and its cpd.-final suppletive replacement /=$w_2$adja-/. As noted in §14.1, /=w_2u-/ occurs in this sense when preceded by a pronominal prefix or Benef /-aG-/ (§10.2), and /=$w_2$adja-/ occurs with intervening cpd. initial or Mult /-$w_1$ara-/ (§10.4); Comit (§10.3) does not occur with this verb. Exceptionally, Recip /=w_2i-n^{y}ji-/ rather than /=$w_2$adji-n^{y}ji-/ occurs after Mult /-$w_1$ara-/. For exx. of cpds. see dictionary entry of /=$w_2$adja-/. For cpd.-final /-w_2u-/ with no specific semantic contribution in "auxiliary" cpds., see §14.4.

In addition to this instance of suppletion, there are a number of verbs which have different forms in uncompounded and compounded contexts. For ex., there is one set of verbs whose underlying form in uncompounded position begins with a stop, but in cpd.-final position with the paired (homorganic) continuant. Actually, two types may be distinguished on the basis of reduplication patterns; see §3.17 and §3.20 for discussion and exx. The rules in question are P-16 and P-19. Other phonological rules which apply differentially to uncompounded and compounded (or derivational) boundaries, and thus in effect account for different (pre-surface) representations of stems in the two positions are P-4, P-8, and P-13; we note also that Initial Reduplication P-2 normally applies at the beginning of entire verb stems (including cpd. initial or derivational prefix), and that n^{g}u-Epenthesis P-1 inserts Epenthetic morpheme /-n^{g}u-/ between cpd. initial or derivational prefix and following morpheme (usually verb stem) beginning with a stop.

Shortening of verb in cpd.-final position is seen in /=w_1,$w_2$arwu-/, cpd.-final form of /=w_1,$w_2$arwu-/ (also /=w_1,$w_2$arwargu-/), as in Refl /-bilaj=garwi-'-/ 'be dragged on buttocks[/bilaj/]' TNT 5. Similarly, we can cite NAdj /$w_2$uguwuguni/ 'permanent(ly), for good' reduced to /$w_2$uguni/ as cpd. final in /-ragar=wuguni-/ '[be] for good' TNT 5pred (but the full form is found in cpd.-final position elsewhere: MT 8, 11).

While semantic skewing is not usual in cpd. finals, we can cite a few cases. /=w_2a-/ 'to bite' tends to include the sense 'to eat' in cpds. like /-duguj=ba-/ 'to eat fodder', while /=n^{g}u-/ 'to eat' is uncommon as cpd. final except in /-$w_1$al(a)=n^{g}u-/ 'to drink' (a possible ex. is /-nuga=n^{g}u-/ 'eat stone' TNT 34, but the form is problematic). /=$w_2$ala-/ 'to arrive, to come out [to place]' has an occasional cpd. where it loses its core meaning: /-badijan=bala-/ 'be/become angry or violent', /-bagumid=bala-/ 'be/become thief', in both cases with preceding NAdj which supplies the characterisation; perhaps /=yilbala-/ 'act silly' is similarly based on /yilg/ 'silly'.

There are quite a few verb and NAdj roots which appear to occur only with preceding cpd. initials, sometimes rather frozen ones. These include those verbs and NAdj which are associated with an "unmarked" cpd. initial (sometimes Mult /-$w_1$ara-/ in a special usage) which is present when no more concrete cpd. initial is used; see §14.10. See also dictionary entries of NAdj /-n^{g}ann^{g}ad/, /-n^{g}ara/, /-(w_1)a:gidhu/, /-(w_1)alag/, and verbs /=(w_1)ala-/, /=wanda-/, /=(w_1)ara-/, /=$w_2$ara-/ ('to drop'), /=(w_1)alaga-/, /=(w_1)alarma-/, /=yala-/ ('to nudge'), /=$w_2$uda-/, /=(w_1)uluda-/, /=wur-wu-/, /=$w_2$ururudha-/, /=(w_1)ururuga-/, /=$w_2$uyubuyama-/. Several of these show possible /w_1/ as initial segment, since /=w_1V.../ is hard to distinguish from underlying //=V...// in cpd. finals when the cpd. initial ends in a consonant (see P-8, P-9, P-18).

Some stems which occasionally occur uncompounded, but seem to prefer cpd.-final position, are /=lharara-/, /=$w_1$ala:lara-/, /=$w_1$alhara-/, /=$w_2$urwurlha-/, and /=$w_2$iririma-/ (others could be added). Verbs in particular show lexical idiosyncracies in their general amenability to occurring as cpd. finals, in addition to lexical idiosyncracies in their preference for specific cpd. initials (in lexical cpds.). Dictionary entries give rough ideas of the productivity of cpd.-final position for given stems--at least those with enough textual attestations to show patterns.

Some special final elements are dealt with below: for stems taking "unmarked" as well as specific cpd. initials see §14.10; for /-yij/ ending in Proprietive derivations see §14.14; for suffix /-j/ or /-n^y/ in abstractive and other nominalisations see §14.15-16; for Negative /-ari/ meaning 'bad, unskillful' see §14.21; for /-$w_2$alij/ 'pair of' see §14.22; for /-$w_2$irig/ or /-$w_2$in^{y}ig/ as Diminutive cpd. finals see §14.23. Common nouns are not normally used as cpd. finals, but see §14.5.

14.4 Auxiliary compound finals: /-w_2u-/ and others.

The term auxiliary compound is used here primarily to distinguish combinations involving /=w_2u-/ 'to hit, kill' and a preceding element where the verb /=w_2u-/ has effectively lost its literal meaning and basically serves as a dummy cpd. final enabling the preceding element (itself not directly inflectable) to receive verbal inflections. In the sense 'hit, kill', /=w_2u-/ is replaced in cpd.-final position by suppletive /=$w_2$adja-/, as noted above.

One cpd., /=ran^{g}ga-wu-/ 'to hit or kill (sleeping person)' is problematic since it looks formally like an auxiliary (Aux) cpd.

in that the suppletive stem is not used, but is semantically like a genuine cpd. in that /=w_2u-/ retains its basic meaning.

This exception aside, Aux cpds. with /-w_2u-/ (we put the = boundary before the preceding, semantically central morpheme) do not mean 'hit, kill', though a few come close. They include a fair number of intransitive cpds. (about one-third of the total attested), but whether transitive or (formally) intransitive they generally indicate a physical (often manual) activity.

Transitive exx. are /=dhabid-bu-/ 'tie up', /=galin^{y}bar-wu-/ 'go past', /=gala-bu-/ 'jump over', /=jiji-bu-/ 'conceal', /=jir-wu-/ 'singe, scorch surface of' (cf. defective noun /-jir-/ 'fur'), /=lhaj-bu-/ 'blame', /=lhalm-bu-/ 'burn, cook' (/-lhaln^g-/ 'flame', defective noun), /=lham-bu-/ 'restrain', /=lhilhir-wu-/ 'just nick, just graze', /=lhilgi-wu-/ 'break', /=lilili-bu-/ 'tap', /=lin^{y}gi-wu-/ 'blame, accuse', /=mad-bu-/ 'complete, do well', /-ba=marya-wu-/ 'sting in eye' (cpd. initial /-baG-/ 'eye'), /=n^{g}ar-bu-/ 'spear (animal)', /=rad-bu-/ 'tie', /=ru-bu-/ (cf. also /=$w_1$uru-bu-/, apparently a cpd. final form) 'cook, burn', /=adbar-wu-/ 'spill out, tip out', /=w_1/$w_2$urbar-wu-/ 'paint with red ochre' (obscurely related to /bulbar/ 'red ochre'), /=yalyal-wu-/ 'shake in water', /=yinur-wu-/ 'wipe nose of' (cf. /yinur/ 'common cold'), /=yi-wu-/ 'singe, scorch'. We should also mention /=$w_2$adji-wu-/ 'strike, hurt' which has a slightly different conjugation (MA_2 instead of MA_1, which applies to /=w_2u-/ and the other Aux cpds.; Table 11-6).

Intrans. Aux cpds. are /=lhaga-bu-/ 'mix meat and fat layers (of rays)', /=marya-wu-/ 'be full of food' (/marya/ 'vegetable food'), /=min-bu-/ 'play trick', /=ran^{g}a-wu-/ 'yawn', /=w_1/$w_2$aradar-wu-/ 'eat breakfast', /=$w_1$arar-bu-/ '[fish] jump around', /=$w_2$argad-bu-/ 'belch' (/$w_2$argad/ 'vomit'[noun]), /=$w_2$aya-wu-/ 'poke around', /=$w_2$ilil-bu-/ 'fan flames', /=$w_1$ulu-bu-/ 'suck honey' (/wulug/ 'honey-eating material'), /=ya:gi-bu-/ 'sneeze', /=ya:li-bu-/ 'cough' (cf. /yalijalig/ 'common cold'). Note the frequency of verbs of bodily functions ('yawn', 'belch', 'sneeze', 'cough').

As usual, //w_2// becomes /b/ after stop or nasal. In exx. like /=jiji-bu-/ 'conceal', we assume base form ending in stop archiphoneme //G//, hence //=jijiG-w_2u-//, so Hardening P-18 can apply.

There are a handful of combinations involving other cpd. finals which might be considered Aux cpds. In /=lirbi-ma-/ 'play with, take lightly' we may have /=ma-/ 'pick up, take' in special Aux function; likewise /=n^{y}in^y-ma-/ 'fight by pulling hair, etc.'. We might consider /=$w_2$ala-/ 'to arrive' in such cpds. as /-badijan=bala-/ 'become angry' as another Aux candidate. But only /=w_2u-/ is used systematically as an Aux, and only it has a distinct (suppletive) form in non-Aux cpds. (Historically, many verbs of N class, see Chapter 11, contain *-ga- 'carry', but this verb no longer exists separately and no synchronic segmentation is viable.)

In the Aux exx. with /-w_2u-/, frequently the preceding cpd. initial is not otherwise attested in the language. In the few cases where we can identify it synchronically, it is a noun (sometimes a defective noun, §4.9).

14.5 Nc-NAdj and (rare) Nc-Nc cpds.

The only significant type of cpd. in which both components are formally nouns is the one with a common noun (Nc) root as initial and NAdj as final.

We noted in §14.2 that only certain nouns can occur as cpd. initials, either unchanged, with phonological changes, or with a suppletive replacement. In general, specific flora-fauna terms, specific implement terms, and NAdj (including most human nouns) are not permitted as cpd. initial. This rule applies as well to Nc-NAdj cpds., which are therefore rather limited. On the other hand, there are no obvious lexical restrictions on which NAdj can appear as cpd. finals in Nc-NAdj cpds., except that NAdj specifically designating humans or human age/sex categories are apparently excluded. NAdj corresponding to English adjectives (designating size, shape, weight, goodness, and other qualities) are generally allowed as cpd. finals.

Cpds. ending in /-$w_2$irig/ or /-$w_2$in^{y}ig/ are treated in §14.23, while those involving /-ari/ are handled in §14.21.

NAdj for which Nc-NAdj cpds. are mentioned or cross-referenced in dictionary entries are /digu/ 'raw, uncooked', /dhamungur/ 'short' (base form really //lhamungur//, cf. P-19, §3.20), /lhardharg/ 'rough, coarse', /lharan^g/ 'ripe, cooked', /lhabarj/ 'big, important', /lhagabunulg/ 'dirty', /mamalan^g/ 'good' (often shortened to /-malan^g/ as cpd. final), /malala:di/ 'ignorant, not knowing', /maragar(i)j/ 'dangerous', /mawura:duj/ 'cold', /mundur/ 'heavy', /nunulg/ 'rotten', /n^{g}un^{y}ju/ or /n^{g}un^{y}ju-n^{g}un^{y}ju/ 'equal', /w_1/$w_2$aba:ru/ 'clean-surfaced', /$w_2$adawadad/ 'strong, firm', /ala:di/ 'bad', /$w_1$alalij/ 'wet', /an^{y}baj/ 'other, different', /an^{y}ja:bugij/ 'one, single', /$w_1$arawindi/ 'many, much', and /arwagarwar/ 'on top'. Some further exx. of these stems, using new attestations from Hughes' texts: /nuga-lhardharg/ 'stone-rough' TNT 34pred, /$w_1$urij-mundur/ 'chest-heavy' (pregnant) MT 30pred, /ran^{g}a-baba:ru/ 'tree[/ran^{g}ag/]-clean' MT 16pred, /mun-n^{g}an^{y}ja:bugij/ 'foot-one' TNT 15 (cf. P-8), /n^{g}al-wan^{y}baj/ (emend to /n^{g}al-an^{y}baj/ ?) 'tree-another' MT 20, and with verbalising derivational suffixes /-mara=mundur-ma-/ 'have one's hand[/maran^g/] become heavy' (Inch /-ma-/ §10.8) MT 5, /-gara=mamalan^g-ga-/ 'make hole[/gara/] good' (Fact /-w_1a-/ §10.9) MT 22. From Hughes we can also cite cpds. with /run^{g}gal/ 'big': /$w_2$al-run^{g}gal/ 'stem/trunk-big' MT 20, /n^{g}al-run^{g}gal/ 'bush-big' MT 20, /bagalan-dun^{g}gal/ 'eye-big' TNT 24.

It is not easy to characterise such cpds. globally as MN or NM types (§14.1). In many cases (those marked "pred" or with Inch or Fact suffix), the NAdj seems nuclear with the preceding Nc merely copied into the adjectival word, much as these same Nc roots can be copied into verbs. Exx. are /wu-nuga=mamalan^g/ 'it[stone] was good' 7.7.3 (with /ana-nuga/ '[the] stone' juxtaposed redundantly), and /wa:-'r=lhagabunulg/ 'it[water] was dirty' 2.5.7 (emend "-'r=" to "-'r=" as shown). In many other cases, however, the inflection is nominal rather than predicative (e.g., we have NC_{infl} prefixes §4.7 and/or case suffixes): /mun-n^{g}an^{y}ja:bugij-miri/ 'by means of one foot' TNT 15 (Instrumental case, §4.27), /an-i-dun^{g}gu-run^{g}gal/ 'big words' 57.2.2 (NC_{infl} /ana-/ truncated by P-46, //-ij-// 'word' from Table 14-1 bottom right, rdp. Pl of /run^{g}gal/ 'big').

However, in formally nominal instances, or with zero inflectional affixation (interpreted as nominal, with NC_{infl} prefix omitted and with zero Nominative case suffix), there is variation as to whether the (pragmatic) focus is on the noun (with the NAdj as modifier), or is really on the NAdj (specifying a quality for an already mentioned noun).

The situation is complicated by the fact that some Nc-NAdj compounds are semantically similar to what are sometimes called bahuvrihi compounds by linguists (the term is from Sanskrit grammar), c.f. English Blackbeard or black-bearded (i.e., 'having a black beard'). Here the cpd. itself contains a body-part noun plus an NAdj but the whole expression is predicated of a person (or other object). From the previous page we recall 'chest-heavy' = 'pregnant', and Inch verbalisation 'hand-heavy-BECOME' = 'have one's hand become heavy'. Other exx. are /ni-lhamij=gala:di/ 'it[fan-palm] has bad taste, tastes bad' (/-lhamij-/ 'taste' as cpd. initial, /ala:di/ 'bad' as final) 117.4.3, /mu-malijba/ 'having fair-coloured hair' (/mun^g-/ 'hair' as cpd. initial, final not otherwise attested). An ex. of a lexicalised fauna term with this structure is /n^{g}uda-lhardharg/ 'king brown snake' (lit., 'midriff-rough').

There are no productive compounding processes producing Nc-Nc cpds. We can cite just one structurally transparent ex.: /n^{g}ul-n^{g}u-jir/ 'pubic hair' with /n^{g}ul-/ 'groin region', Epenthetic /-n^{g}u-/ (§3.2), and defective noun root /-jir/ 'body hair, fur'. A few other nouns are probably historically complex, but synchronic decomposition is dubious. From /gagalan^g/ 'egg', its own cpd. initial form /-galan^g-/ (Table 14-1), and /bagalan^g/ 'eye' (cf. cpd. initial /baG-/ 'eye', Table 14-1), we can identify *-galan^g- as the historical root for 'egg' and regard /bagalan^g/ as a cpd. (/gagalan^g/ could be a compound or perhaps an irregular reduplication). Similarly, from /magulag/ 'skin', /w$_2$arigulag/ 'skin', and /lhagula/ 'lip(s)' we can identify *-gula(g) 'skin' as an old root whose current reflexes are compounds (for 'lip' cf. archaic, not easily segmentable /lha(G)-/ beginning several words referring to speaking, chewing, and eating). See also §14.24.

14.6 Grammatical relation of nominal cpd. initial.

Were we to undertake the (transformational) copying analysis of nonnuclear cpd. initials, suggested not very enthusiastically in §14.1, we would have to specify which of several NPs in the clause (each with a case category, or more generally with a grammatical relation like "trans. subject") is eligible for copying if it has a cpd. initial form (or suppletive counterpart). It turns out that, while some generalisations can be made, a rather large number of grammatical relations can be expressed by cpd. initials, and a transformational analysis will therefore be difficult indeed.

We may begin by making the generalisation that the cpd. initial is the referent of an NAdj, or the intrans. subject or (semantic) direct object (patient) of a verb. If the cpd. initial is a body part term (or similar inalienable noun), the above generalisation can be extended by permitting part-for-whole grammatical identity (compare §4.9).

The generalisation about nominal (Nc) cpd. initial with following NAdj final is rather obvious; see §14.5 for some exx. As an ex. of intrans. verb we take /=n^{g}aln^{g}ala-/ 'to shine, be white or bright-coloured', cpds. /-lhan^{g}an^y=n^{g}aln^{g}ala-/ '[entrails] to shine' 1.8.6, /-mun=n^{g}aln^{g}ala-/ '[person] to have foot shining' 17.8.2, /-yina=n^{g}aln^{g}ala-/ 'to have one's head shining' 27.5.2, and /-bagala=n^{g}aln^{g}ala-/ 'to have eye shining' TNT 18rdp and 24. Likewise, from /=abi-/ 'to jump' we get /-ar=abi-/ '[water] to splash' TNT 2 and /-yiga:=bi-/ '[fire] to jump up, give off sparks', and from /=ya-/ 'to go' we can cite /-mala=ya-/ '[sky] to go' TNT 9 and /-ar=ya-/ '[water] to go' TNT 15.

Transitive verbs: /=w$_2$adja-/ 'to hit, kill' in /-ran^{g}a=badja-/ 'to hit tree (with boomerang, etc.)', /-rulbu=wadja-/ 'to hit [him$_i$] in [his$_i$] back', and /-w$_1$adji=wadja-/ 'to kill freshwater game animals'; from /=na-/ 'to see' we have /-wurugu=na-/ 'to see billabong (pond)' 13.23.3, 13.24.2 (also TNT 15), /-rulun^y=na-/ 'to see shadow (or shade)' 44.4.3, /-gara=na-/ 'to see hole' MT 17, /-n^{g}alba=na-/ 'to see pond' MT 21 and TNT 2rdp, /-w$_1$an^{y}ja=na-/ 'to see [edible thing]' TNT 7, /-mari=na-/ 'to see mark (trace) of' 17.8.8, etc.

There are many similar exx. and we will now turn to a closer examination of cpd. initials which cannot be analysed as belonging to these relations. We begin with instances of trans. subject, which our initial generalisation excludes. There are not many such exx., but there are a few. The best exx. involve an inanimate agent, including pain or disease, acting on a human or other object; usually there is no independent NP corresponding to the agent (though in some instances this is a possibility): /-ambam=ba-/ '[headache] to afflict (lit., bite) [someone]' (/=w$_2$a-/); /-mara=wadja-/ '[lightning] to strike [e.g., ground]'; /-andhula=walga-/ '[sores on head] to afflict (lit., pound) [someone]'. Note that in English we say '[X] has a headache', '[X] has sores on head', etc., with the human patient grammatically the subject.

We now consider locative and allative cpd. initials, specifying location of action or terminus of motion. Exx. are /-mun^{g}gala=wadja-/ '[X] to hit [Y] in tree platform', /-yimil=na-/ '[X] to see [Y] in hole' MT 22, /-mal=na-/ '[X] to see [Y] looking up into sky' MT 16, /-an^{g}a-n^{g}u=bura-/ '[X] to be in camp' 3.1.1, 14.2.2, also TNT 14, and /-gulmun^y=ja-/ '[X] go to belly' MT 29. Ablative sense is rare, but we possibly have this in /-lha=n^{g}argiwa-/ '[X] to pull [Y, dir. obj.] from mouth [of Z]'.

Instrumental seems to be the sense in such exx. as /-w$_1$anam=biln^{g}in^{y}ja-/ 'to build fire [by lighting] bits of plants' 71.6.3, etc. There are also many instances where the sense could plausibly be described either as locative or instrumental without altering the scenario: /-lha=ba-/ 'to hold [it] in/with mouth' (/=w$_2$a-/), /-lha=wun^{y}ja-/ 'to kiss' ('to suck at/with mouth') TNT 9rdp. There are also instances which could be described either as instrumental or as a nuclear relation (intrans. subject, trans. object): /-mari=lharma-/ '[X] to chase [Y] by [following] mark/trail' or '[X] to chase [Y's] trail'; /-lhawu=rabala-/ '[X] to come out with words' or '[X's] words come out' 47.7.4 (note part-for-whole grammatical identity in non-instrumental reading).

Purpose/goal is not a common cpd. initial function, but note /-mij=na-/ '[X] to see(examine) [Y] for lice' MT 28 and 28rdp.

Source of mental state seems to be a reasonable description for the initial with /=n^{g}awi-'-/ 'to die' as final in the sense 'to be exhausted, tired', as in /-bari=n^{g}awi-'-/ 'to be tired from walking'. The sense similar to may perhaps be gleaned from another cpd. with the same final, namely /-mu:gar=n^{g}awi-'-/ 'to be very hungry', lit. 'to be (on verge of) dying like the dead'.

A more complex grammatical schema is needed for /-lharu=jirbi-/ 'to persist[/=yirbi-/] at walking', the logical representation of which would seem to require a higher verb ('persist', 'keep on') and a complement clause, here reduced to a single noun root. Others with this final are /-ba=jirbi-/ 'to stare' (i.e., 'to persist with eyes'), /-w$_{1}$aldha=yirbi-/ 'to continue racing', and /-yan^{y}=jirbi-/ 'to keep speaking', lit. 'to persist with voice'.

Another cpd. initial requiring complex logical representations is /-adu-/, which to an initial approximation can be glossed 'spear' or 'act of spearing' (it is now sometimes extended to situations involving shooting, etc.). Exx. of cpds. are /-adu-n^{g}u=bura-/ 'to sit with spear in one's body' from /=bura-/ 'to spear' (162.23.5); /-adu-n^{g}u=jura-/ '[X] to push spear into [Y, dir. obj.]' from /=jura-/ 'to push' (13.39.1); /-adu=n^{g}awi-'-/ 'to die from spear wound' from /=n^{g}awi-'-/ 'to die'; and /-adu=ya-/ 'to go with spear in body (after being wounded)' with /=ya-/ 'to go' (104.2.5rdp). The contribution of /-adu-/ is to specify that the victim is receiving or has received a spear wound or that the spear is still in his body; the cpd. final is a verb which may represent an aspect of the act of spearing the victim ('push in'), or a logically distinct but consequent state.

While further cpds. could be analysed in this fashion, the above will have to suffice. It is clear that no simple rule, copying a noun root from a particular privileged grammatical relation, will account for the data; not only do we see exx. of various relations as cpd. initials, but we have some which are difficult to characterise in terms of independently established grammatical relations or morphological cases.

One could, however, make the point that except for the small number of inanimate trans. subject cases, the vast majority of cpd. initials are associated in some way with intrans. subject or (semantic) direct object. Not only do we have many cpd. initials which designate this (absolutive) NP directly, or designate a body part thereof, we also can discern an absolutive perspective in the locative/allative, (most) instrumental, and other instances just mentioned. For example, the location in the "locative" instances refers to the location of the absolutive NP (not the trans. subject in the transitive exx.). Indeed, some of the trans. subject cpd. initials ('headache' and 'sores on head' in our exx., above) are, in effect, parts of the person functioning as direct object.

It is also necessary to point out that the grammatical relations aspect of cpd. initials is determined at an early derivational layer. Indeed, our specification that semantic (not necessarily morphological) direct object or patient is the absolutive NP to which cpd. initials may refer is designed to account for such instances as

/-mij=gu-/ '[X] to give name to [Y]' 80.1.4, /-lhabara=yi-/ '[X] to give coolamon to [Y]', and /-yan^{g}=u-/ '[X] to give voice (i.e., words, information) to [Y]', with various forms of /=yi-/ 'to give'. Here the verb /=yi-/ takes giver X as subject and recipient Y as morphological object (in pronominal prefix), though the clause-level case frame would have X as subject (Nominative), the gift as direct object (Nominative), and Y as indirect object (Allative-Dative). In these compounds, the grammatical relation of the cpd. initial is "absolutive" (here, direct object) in conformity with the clause-level case marking rather than the verbal morphology.

The same point applies to cpds. to which Benef (§10.2) prefix is added, bumping the underlying direct object out of the pronominal prefix and replacing it with a semantic indirect object (or, with intrans. input, adding a semantic indirect object). Thus from /=ma-/ '[X] to get [Y]' we first form cpd. /-w$_{1}$ana=ma-/ '[X] to grab [Y] by [Y's] arm', then Benef /-a-gana=ma-/ '[X] to grab [Y] away from [Z, Benef object] by [Y's] arm' (79.1.1/5). Note that cpd. initial /-w$_{1}$ana-/ 'arm' is not affected by the Benef overlay, which eliminates the pronominal object marker for Y from the verb (though Y can still occur as independent NP in Nominative case for direct object, vs. Allative-Dative for Z). The arm in question is still Y's, not Z's.

For similar remarks about derivational layering, see also our analysis of co-occurring derivational prefixes, notably the analysis of Mult /-w$_{1}$ara-/ in §10.4 and §10.11.

In the case of what we might describe as lexicalised benefactive verbs like 'to give' (whose morphological object marker always has indirect object meaning and which therefore does not need the Benef prefix), there may be some counterexx. to our generalisation in which a cpd. initial has indirect object perspective, when the cpd. initial would not make sense otherwise: /-maran^{g}=u-/ '[X] to give [something] to [Y] by hand[/maran^{g}/]' 4.6.3, /-ran^{g}ga=wu-/ '[X] to give [something] to [Y] as [Y] sleeps (i.e., secretly, at night)' 40.10.3. In the first of these, 'hand' may refer both to the giver and the recipient. See entry for /=yi-/ 'to give'.

14.7 Derivational layering (double cpds., etc.).

We have just made the comment (§14.6) that cpd. initials generally apply prior to Benef derivational overlays. We must now consider additional combinations involving a cpd. element and a derivational affix, as well as double cpds.

Consider a Caus derivation (§10.7) -head-hurt-Caus- '[X] cause [Y's] head to hurt' from intrans. input -head-hurt- '[Y] to be hurt in the head'. Because the cpd. initial 'head' regularly refers to intrans. subject or trans. object (absolutive), in the Caus ex. we get the same result semantically whether the cpd. initial or the Caus suffix is derivationally prior: -head-[hurt-Caus-] = [-head-hurt]-Caus.

Similarly, a Refl (§10.5) or Recip (§10.6) intransitivisation like -head-hit-Refl- '[X] be hit in head' from -head-hit- '[Y] hit [X] in [X's] head' is hard to analyse, since 'head' can only refer to absolutive X in either case: -head-[hit-Refl-] = [-head-hit]-Refl.

We can dig for more revealing exx. using the few verb stems which have irregular meanings in their Caus and Refl derivations:

the promotion-to-object instances of Caus (§10.7) like /=yami-jga-/ '[X] to say "..." to [Y]' from /=yama-/ '[X] to say "..."', and the antipassive instances of Refl (§10.5) like /=magi-'-/ '[X] to tell' from /=maga-/ '[X] to tell [Y]. However, the handful of promotion-to-object Caus forms do not occur in the data with cpd. initials that tell us much. As for the antipassive (false Refl) cases, we can perhaps glean something from one such verb, /=w$_1$urama-/ '[X] to go around [Y]', Refl /=w$_1$urami-'-/ '[X] to go in circle'.

One cpd. from the trans. input is /-dhaga:=gurama-/ '[X] to surround [Y]', and this has Refl form /-dhaga:=gurami-'-/ '[X] to go around in circle' (cf. also Recip form TNT 28). Although it is hard to tell what /-dhaga:G-/ means, it seems to mean the same thing in both instances, so we assume the derivational layering is [-Cpd-Verb]-Refl.

On the other hand, we can cite /-rin^y=gurami-'-/ '[Brolga] to go in circle' 7.19.1rdp, having /-riN-/ 'Brolga' as cpd. initial (this is a "subject-index" initial used in myths, see §14.19). Since it looks from present data that */-rin^y=gurama-/ does not exist either in the (subject-perspective) sense '[Brolga] to go around [it]' or in the (object-perspective) sense '[X] to go around [Brolga]', I presume that the layering is -Cpd-[Verb-Refl-] in this instance.

This contradiction is not unusual, in view of the fact that Refl derivations appear in some cases to be frozen (lexicalised), in other cases productive--a distinction which could affect layering.

Double compounding is not particularly productive. However, naturally some cpds. are partially frozen, and in view of the general productivity of some cpd. initials it is not too surprising that some double cpds. occur. Some exx.

/-yina-bara=ra-/ 'throw spear through head/prow[/yinag/] of' 70.3.6 (/-w$_2$ara=ra-/ cpd. of /=ra-/)

/-yan^y-jal=n^{g}awi-'-/ 'be tired from speaking' from /-yan^g-/ 'voice', /-yal=n^{g}awi-'-/ 'be tired' (/=n^{g}awi-'-/ 'die')

/-yan^g-gurin^y=ma-/ 'argue with [him]' (contains /-yan^g-/ 'voice' and /-w$_1$urij-/ 'chest; emotion', but */-w$_1$urin^y=ma-/ not separately recorded)

/-agajij-gan=dharma-/ 'imitate [him]' based on /-an=dharma-/ 'hunt; copy' (/=lharma-/ 'chase, pursue')

/bari-yal-n^{g}aran^{g}ara/ 'nomadic, restless' (/bari-/ 'walking', /-yal-/ 'mental state', NAdj /n^{g}aran^{g}ara/ 'spreading', inner cpd. not recorded)

/-dun-n^{g}u-gulu=w$_2$ada-/ '[water] form bay/inlet' (/-dun-/ 'bay' added to /-gulu=w$_2$ada-/ 'turn corner')

/-lhabara-w$_2$ad=bara-/ 'drop coolamon' from /-lhabara-/ 'coolamon' and frozen cpd. /-w$_2$ad=bara-/ 'drop' (/=w$_2$ara-/) TNT 21.

In the analysable cases just shown, the layering is, of course, from the root outward (to the left). It is possible that 'argue with' and 'nomadic' are frozen complexes with no internal layering, but the absence of attested inner cpds. may be accidental.

14.8 Discourse uses of productive cpds.

Of course, lexical cpds. (§14.1) in which the whole cpd. has a specialised meaning have no particular discourse significance; their usage is motivated by semantics. However, productive cpds. (§14.1) in which a cpd. initial has been (optionally) copied into a verb or predicative NAdj may have discourse as well as semantic motivations.

Such cpds. are, of course, condensations of more complex constructions into a single word (whether we think of this literally, as a "transformational" operation, or in terms of approximate functional equivalence). When pronominal prefixes, inflectional suffixes, and perhaps additional derivational elements are taken into account, a cpd. verb may contain a large quantity of material:

(14.iii) n^{g}ambambi-yan^{y}ja-yan^y=jan^{g}a-yi: 7.20.2
3Pl/WARA⟶1Sg$_b$-Rdp-voice=hear-NonPa$_2$
'they will constantly hear my voice'

(14.iv) wura:-'-jiga-nan^{y}ja=na-n^{y}ji:-ni
3Pl/WARA$_a$-Benef-fire-Rdp=see-Recip-Pa$_2$
'they found each other by [seeing] each other's fires'

This condensation makes such cpds. highly appropriate for usage in clan songs (/wun^{g}ubal/), the language of which is opaque and allusive rather than narrative. Cpds. are also suitable in songs because of their multisyllabicity, which fits the metrical requirements of song lines. (We have no space for discussing song language here.)

Even in "ordinary" discourse, we find partially systematic sequential patterning (though it is far from rigorous). The basic pattern is that the condensed, cpd. form often follows an initial phrase using simpler, uncompounded words. For example:

(14.v) ...adaba ya:-ji wu=buri-∅, ya:-ji wu-nuga-n^{g}u=buri-∅
now here it sat here stone sat
ana-nuga, ...
stone (7.9.5-6)
'...then it[stone] was here[narrator points to belly], the stone was here [in belly];...'

(14.vi) ...wan^{g}gu=na-ni wan^{g}gu-mal=na-ni...
it saw them it saw them looking up (1.1.6-7)

(14.vii) ...niwu=ma:ndha-n^{g}i ana-lha:l an-uba-ni, an-uba-ni
he made it country that[Anaph]
niwu-lhal=ma:ndha-n^{g}i...
he made country (35.2.3-4)
'...he made that country, he made that country...'

(14.viii) ...wini=wali-n^{y}ji-n^y wini-wanja=wali-n^{y}ji-n^y,...
they painted each other they painted each other on the arm (43.1.3)

Compounding is thus an occasional feature of the very general Nunggubuyu pattern of repetitions, which keep the narrative moving

and enable the narrator to alternate new, foregrounded clauses with repeated, hence backgrounded clauses (which then may frame a following clause with new material).

Although such repetitions are impossible to classify rigorously, we may suggest the following as recurrent types: a) clarifying echoes which repeat a clause with additional information to clarify the original clause; b) filler echoes which repeat a clause while the speaker thinks of what to say next, but without a clear lead-in to the eventual next clause; and c) lead-in echoes which are clearly designed to frame a following clause with new information. Lead-in echoes are often characterised by some combination of the following: a) reduplication (§8.4); b) monotonic high pitch; c) postposition /-maga:/ (§12.21); d) particle /n^ga/ at transition to next clause (§12.4). Compounding does not seem to be specifically associated with lead-in echoes, though some such echoes do involve cpds. The exx. (14.v-viii) seem to show compounding as a feature of clarifying echoes (14.vi, 14.viii) and filler echoes (14.v, 14.vii).

Especially in the case of filler echoes, it is not unusual for some formal variation, such as a change in word order, to occur, possibly as a stylistic feature; cf. /an-uba-ni/ 'that' in (14.vii). In such instances, compounding may also be thought of as a partially stylistic feature designed to prevent complete identity of repeated clauses.

Again, we caution that a rigorous classification of the functions of individual textual occurrences of cpds. is impossible, mainly because of variation in the propensity to compounding of various potential cpd. finals and cpd. initials.

14.9 Transitivity changes accompanying compounding.

There are a reasonable number of instances where a verb which takes transitive pronominal prefixes in uncompounded form (and usually in most compounds) becomes morphologically intransitive in one or two particular cpds. There is one ex. where the opposite occurs.

All cpds. mentioned in this section are lexical (§14.1).

In the list below we present the exx. of transitive verbs becoming intransitive in cpds.:

/-$w_1$adji=lharma-/ 'hunt freshwater animals' < /-$w_1$adji-/ 'freshwater animals', /=lharma-/ 'chase'

/-$w_1$alhaga=lharma-/ 'go looking, go hunting' < /=lharma-/ 'chase' (initial not otherwise attested)

/-w_2u=na-/ TNT 3[Benef] and 20 'to make large campfire' < /wurg/ 'large fire', /=na-/ 'to burn' (cf. P-24)

/-$w_1$anmur=na-/ TNT 31 'look around underwater' < /$w_1$anmur/ 'underwater', /=na-/ 'to see'

/-$w_2$ar=na-/ TNT 30rdp 'look for honey up in tree' < /=na-/ 'to see' (initial not otherwise attested)

/-ran^{g}gal=n^{g}araya-/ 'avert gaze (from mother-in-law, etc.)' < /ran^{g}gal/ 'forehead', /=n^{g}araya-/ 'to shield'

/-$w_1$araga=ragu-/ TNT 17, 36 'go on search, go looking' < /=ragu-/ 'look for, seek' (initial otherwise unattested)

/-$w_1$al(a)=n^{g}u-/ MT 16, 18rdp 'drink' < /=n^{g}u-/ 'to eat' (initial perhaps /-$w_1$alag-/ 'throat', Table 14-2)

/-wala=wadji-wu-/ '[buffalo/wind] to make thrust [at something]' < /=$w_2$adji-wu-/ 'strike, hurt' (and /$w_1$ala/ 'midriff' ?)

/-n^{g}alba=walga-/ TNT 23, MT 20 'jump into water' < /n^{g}alba/ 'billabong, pond', /=$w_2$alga-/ 'smash, pound'

/-mar=wuldha-/ 'do something for the last time' < /=$w_1$uldha-/ 'cut' (initial obscure)

/-$w_1$urij=guldha-/ TNT 18, 29 and MT 23 'to become thirsty; to choke' < /$w_1$urij/ 'chest', /=$w_1$uldha-/ 'cut'

/-dha=gurama-/ TNT 12, 31 'go in circle, walk around' < /=$w_1$urama-/ 'go around [it/him]' (initial obscure), cf. variant /-dha=gurami-'-/ (Refl), same gloss MT 20

/-an^g=gurama-/ MT 3 'make detour (around something)' < /=$w_1$urama-/ 'go around [it/him]' (initial obscure)

/-n^{g}aln=jaba-/ 'hook spear to woomera (ready to throw spear)' < /-n^{g}aln^g-/ 'woomera spike', /=yaba-/ 'put in'

/-n^{g}u=yaba-/ 'stuff meat and fat into intestines' < /-n^{g}u-/ 'entrails', /=yaba-/ 'put in'

Attested instances indicated are from Hughes' texts. Attestations from NMET are already in dictionary entries (s.v. second member of cpd.).

Though some of these cpds. are semantically specialised, there is a general trend toward antipassive usage; going from the trans. simple verb to the intrans. cpd., the resulting intrans. subject (marked in the pronominal prefix) is semantically related to the trans. subject of the simplex, as in '[X] look for [Y]' becoming cpd. meaning '[X] look, go on search'. For "antipassive" as an occasional sense with Refl derivatives, see §10.5. In the cpds., the cpd. initial may indicate the category of (semantic) direct object, so that additional specification of object in the pronominal prefix would be more or less redundant. In some other cases, though, the intransitivised cpd. has no specific semantic direct object, as with 'go looking' (i.e., for something). In the case of /-$w_1$urij=guldha-/ 'become thirsty', if we take the literal meaning as 'be cut in one's chest' or 'cut one's own chest', we have a mediopassive or reflexive sense of the cpd., and perhaps this is also the case in /-ran^{g}gal=n^{g}araya-/.

The fact that the cpds. are morphologically intrans. does not mean that a semantic direct object cannot occur as an independent NP juxtaposed to the verb. Thus /-$w_1$al(a)=n^{g}u-/ 'to drink' may co-occur with a noun like /ana:-gugu/ 'the water', in zero Nominative case. However, when the verb means 'look for', if the object (i.e., goal) is represented as an independent NP, it is usual to make the verb transitive again by adding Benef prefix (§10.2), as in /-a-galhaga=lharma-/ 'search for [it/him]' 16.17.1, TNT 5.

The change from intrans. input verb to trans. cpd. is seen in

/-ani=galima-/ TNT 21 'spread out [fire, dir. obj.] with stick or other poker', cf. /anig/ 'embers', /=$w_1$alima-/ 'go get water'

Here the cpd. final is semantically rather dissociated from the simplex verb.

14.10 Unmarked (dummy) cpd. initials: /-$w_1$ara-/, /-lhalma-/, /-n^gaga$\underline{r}$a-/, /-$\underline{r}$an^{g}ga-/, /-wu$\underline{r}$ugu-/, /-malan^{g}aG-/, /-aG-/

As we have briefly mentioned earlier, there are some cpd. finals which either cannot, or seem not to like to, occur in uncompounded formations (leaving aside cases of suppletion). These bound cpd. finals usually require an unmarked (or dummy) cpd. initial, which is used when no semantically concrete cpd. initial is present. The dummy cpd. initial depends on the particular cpd. final, and it may be simply a special usage of a root which has a real meaning in other contexts.

The common dummy cpd. initial is /-$w_1$ara-/ or variant /-$w_1$araG-/, which we have already seen as an important Multiple derivational prefix (§10.4). Although it is not easy to tell in just which combinations this becomes a dummy cpd. initial, there are some verbs which seem to use it with suspicious frequency, or which have not been recorded without it (except when a distinct cpd. initial is present). In addition, in some cases the combination /-$w_1$ara=Verb-/ seems to have been reinterpreted as the verb stem, so that specific cpd. initials are preposed to the entire sequence.

The exx. which I tentatively classify as involving /-$w_1$ara(G)-/ as unmarked cpd. initial are these:

/-$w_1$ara=wa$\underline{r}$ama-/ 'be constipated' < /=ba$\underline{r}$ama-/
/-$w_1$ara=warlha-/ 'be stiff or sore' < /=barlha-/
/-$w_1$ara=$\underline{r}$i$\underline{r}$ira-/ 'itch'
/-$w_1$ara-wada=wada-/ 'ache, be exhausted physically' < /=$w_2$ada-/ '[bone, etc.] break, snap, yield' (w. internal rdp.)
/-$w_1$ara=gaya-/ 'be hurt, have a pain' < /=$w_1$aya-/, cf. further cpd. /-dan=gaya-/ or /-dan-gara=gaya-/ 'have ache in belly or abdomen'
/-$w_1$ara=ya$\underline{l}$a-/ 'nudge [him/it]'
/-$w_1$ara=yirin^{g}a-/ 'poke [it/him]' < /=yirin^{g}a-/, cf. further cpds. /-w_2a$\underline{r}$an^y=jirin^{g}a-/ 'poke in ear' with simplex, /-$\underline{r}$a-wara=yirin^{g}i-'-/ [Refl] 'poke self in teeth' including /-$w_1$ara-/

Of course, /-$w_1$ara(G)-/ in these exx. may mean 'all over' or indicate multiplicity of intrans. subject or (semantic) direct obj. It is the frequency of usage of /-$w_1$ara(G)-/ which leads me to classify it as a dummy in these exx. Note that all exx. involve bodily sensations or physical actions on someone's body.

The other dummy cpd. initials are these:

/-lhalma-/, not otherwise attested:
/lhalma-wugag/ 'big, vast' < /-$w_2$ugag/
/lhalma-yiriwu/ 'huge'

/-n^gaga$\underline{r}$a-/ 'bone' (in some derivatives also 'sky'):
/n^gaga$\underline{r}$a-wugag/ 'big, vast' < /-$w_2$ugag/
/n^gaga$\underline{r}$a-yiriwu(-yin^{y}un^g)/ 'huge' (for ending cf. §4.16)

/-$\underline{r}$an^{g}ga-/ (as cpd. initial also '[while] sleeping'):
/$\underline{r}$an^{g}ga-mulumulubug/ 'short (in height)'

/-wu$\underline{r}$ugu-/ 'billabong, pond':
/-wu$\underline{r}$ugu=walhi-'-/ 'be vast, extend over wide area' (Refl form, cf. /=$w_2$awalha-/)

/-malan^{g}aG-/ (as cpd. initial 'considerably, verb', §14.18):
/malan^{g}a-n^{y}anay/ 'far away, distant'

/-aG-/ (frozen cpd. initial for 'ground, earth'):
/-a=buda-/ 'bulge, protrude, swell' < /=$w_2$uda-/ (some further cpds. based on this combination)

Note that /-lhalma-/ and /-n^gaga$\underline{r}$a-/ occur as alternatives with the same bound cpd. initials; /-n^gaga$\underline{r}$a-/ is more common.

14.11 Gentilic /nuN-/.

This morpheme is used chiefly in a small number of clan names, but also in /nun^g-gubuy/ 'Nunggubuyu people' < /wubuy/ 'Nunggubuyu language'. The following element is often a noun which does not otherwise occur as cpd. final, so Gentilic forms are best considered a special type of derivative. Exx. of Gentilic clan names (or terms for other regionally bounded groupings of people):

/nun-dhiribala/ (clan n.) < /lhiribala/ 'down' (i.e., at coast)
/num-barwar/ (clan n.) < /warwar/ 'thick stringybark scrubland'
/nun^g-ga$\underline{r}$an^{g}ari/ (clan n.) < place n. /ga$\underline{r}$an^{g}ari/
/nun^g-gumajbar/ (clan n.) < place n. /wumajbar/
/nu-maga$\underline{l}$a:ba/ 'Bickerton Island people (several clans)' < /maga$\underline{l}$a:ba/ 'Bickerton Island'

In another clan name, /numamu$\underline{d}$i$\underline{d}$i/ from /(mana-)mu$\underline{d}$i$\underline{d}$i/ 'scrub wattle tree', it looks as though /nuN-/ has been added to a noun which retains a form of the NC prefix, here /-ma-/. It is not clear whether this is an archaic formation, or (as is more likely) a borrowing from a nearby language (the /numamu$\underline{d}$i$\underline{d}$i/ originally spoke Ngandi [inland subclan] and Warndarang [coastal subclan]).

There are other clan names and the like which may contain /nuN-/ but where the second element is not easily identifiable: /nundhi$\underline{l}$agu/ 'Anindilyakwa people', /nun^{g}gan^{g}ulgu/ (clan n.), /nun^{g}gargalug/ (clan n.), /nun^{g}gayin^{y}balan^y/ (clan n.), /nun^{g}u$\underline{d}$ulbu/ (clan n.).

In a more general sense, we find /nuN-/ in /nun^y-jul/ (rdp. Pl /nun^{y}ju-nun^y-jul/) 'bush (inland) people', contrasting with /nu-madha$\underline{l}$ag/ 'beach (coastal) people', from /yu:l/ 'bushland' and /madha$\underline{l}$ag/ 'beach, coast'.

/nuN-/ pops up occasionally in other types of derivative. From /a$\underline{r}$agu/ 'half-grown male dugong' we get human noun /nun^g-ga$\underline{r}$agu/, which can be used as a collective (MANA noun class) for 'uncircumcised boys' or can take human (Sg/Du/Pl) affixes with the same meaning, e.g., Sg /nun^g-ga$\underline{r}$agu-n^{y}un^g/. (It looks as though the base form of the root is //-w_1a$\underline{r}$agu-// in the Gentilic form.) Simple /-a$\underline{r}$agu-/ as cpd. initial normally means 'uncircumcised boys' (collective).

/nuN-/ also shows up in (uncommon) demonstrative derivatives; see §7.23 for details. Similarly, it shows up in one interrogative form, /nun^y-jan^{g}i-mayi/ '[person] from what place?', see §13.4.

In general, Gentilic forms may be used in any gender or number form, taking regular nominal prefixes and suffixes to express them.

Some clan names like /murun^{g}un/ and /n^galmi/ do not involve /nuN-/. It is also not used with moiety terms /mandha:yun^g/ and /(y)irija/, or with most "tribal" names (except "Anindilyakwa"), and it is never used as cpd. initial with verb as final.

14.12 Special nuclear initials: /bala-/ 'side', /malG-/ 'time(s)', /agalhal-/ 'season', /lhal-/ 'country, place'.

These are specialised forms used as cpd. initials; only /lha:l/ 'country, place' is also used as an ordinary noun. In the constructions in question, these elements are used as nuclear cpd. initials and are followed by a nominal final (Nc, NAdj, with /lhal-/ also a kin term) which modifies the initial. The overall cpd. is thus NM type (§14.1). The elements used as finals in these constructions are often not elsewhere used as cpd. finals, so it is necessary to distinguish these combinations from those treated in §14.2-10.

/bala-/ is apparently unproductive in Nunggubuyu, though productive in some neighbouring languages (Ritharngu, Ngandi). It can be identified in /balajagu/, one of two words for 'left-handed', though the ending is obscure (/balajagu/ is also found in Mara). It is probably found, though synchronically frozen, in NAdj /$w_2$alawalamag/ 'right-handed' (cf. Ngandi /bala-ma:k/ 'side-good').

On the other hand, /malG-/ 'time(s)' is productive in Nunggubuyu. It may be used with an NAdj with numerical meaning, as in /mal-garawindi/ 'many times' from /$w_1$arawindi/ 'many' and several other combinations, but is also found in /mal-galagala/ 'somewhat later' (/alagala/ 'en route'), /(ana-)mal-gan^{y}ba-duj/ 'at another time' (/an^{y}baj/ 'other', Locative case suffix /-ruj/), and with more general meaning in /mal-jimba(j)-duj/ 'these days' (/yimbaj/ 'today, nowadays', Loc /-ruj/). All cpds. are NAdv (§4.3).

/agalhal-/ 'season' must be followed by a noun which specifies some time of the year. In one subsystem, /agalhal-alir/ 'sun [i.e., dry] season' is opposed to /agalhal-anbana/ 'rain season'. Other commonly used expressions involve names for prevailing winds at different times of year: /agalhal-mariga/ 'SE wind season' (early dry season with coolest weather of year). All of these cpds. are ANA class nouns and may be considered NAdj (§4.3).

As cpd. initial, /lhal-/ 'country, place' can be used with a following kin term, as in /lhal-mu:mu/ 'country/countries of my father's mother['s clan]' from /mu:mu/ 'my FaMo'. This is the only cpd. type I know of permitting a kin term as final, aside from derivational processes discussed in Chapter 5. /lhal-/ may also be used with moiety terms, as in /lhal-mandha:yun^g/ 'countries of the Mandha:yun^g moiety', but since /-lhal-/ is fairly common as a cpd. initial (e.g., with verbs) it may be that this type can already be handled as a Nc-NAdj cpd. (§14.5). Another attested cpd., /lhal-an^{y}baj/ 'different country', is clearly of this type.

14.13 /$w_1$andha-/ 'craving', /an^{y}ji-/ 'being with' as cpd. initials.

A special cpd. initial /andha-/, underlying form //$w_1$andha-// (see P-9), occurs with following noun X meaning 'craving X', 'obsessed with (trying to get) X'. Exx. are /andha-mananun^g/ 'lecherous, lusting for women', /andha-marya/ 'gluttonous, craving food', and /andha-wun^{g}a:ri/ 'violent, liking fights'. A more problematic ex. /andha-wuguwuguni/ is attested MT 8 with /$w_2$uguwuguni/ 'for good, permanent[ly]' (NAdj). Most of the attested finals do not otherwise occur in cpds.

A morpheme /an^{y}ji-/, presumably identical to the Comit prefix used in verbal derivations (§10.3), is found with numeral NAdj as final element in these combinations:

/(na-)an^{y}ji-yan^{y}ja:bu-n^{y}un^g/ '[man] living with/having one [woman]', with Human Sg form of /an^{y}ja:bugij/ 'one' 166.18.1

/(wara-)an^{y}ji-wulalwulal/ '[group of man] living with/having four [women]', with /$w_2$ulalwulal/ 'four' 166.18.3

The syntax of these two forms with /an^{y}ji-/ appears different; in the first ex. we get MSg NC$_{infl}$ prefix referring solely to the man, while in the second the NC$_{infl}$ prefix is Pl, apparently referring to the group consisting of one man and his wives.

For numerals, see §14.25.

The forms with /an^{y}ji-/ listed above can be thought of as being one instance in Nunggubuyu of a 'having X' (Proprietive) derivation, though a semantically restricted one. For other similar constructions, see end of §14.5 (discussion of "bahuvrihi" cpds.), and the next section below.

14.14 Proprietive derivation: reduplication and suffix /-yij/.

We have just seen a limited type of 'having X' (Proprietive) construction involving /an^{y}ji-/ plus a following numeral. In addition, a number of Nc-NAdj cpds. in §14.5 are of the "bahuvrihi" type semantically ('having an [adjective] X') with some adjectival modifier, as in /gulmu-mundur/ '[having a] heavy belly' (i.e., 'pregnant') from /gulmun^g/ 'belly' and /mundur/ 'heavy'.

In the present section we describe another, not very common derivation involving reduplication (by P-2) of a noun root and addition of a suffix /-yij/, meaning basically 'having [lots of] X'. Only a handful of nouns can occur in this derivation. We have three exx. of the derivation in its simple form:

/mada/ 'grass' → /mada-mada-yij/ 'having lots of grass'

/manjar/ 'foliage' → /manja-manjar-yij/ 'having foliage still on branch' 119.2.3

/n^{g}ura/ 'fire' → /n^{g}uru-n^{g}ura-yij/ 'fiery, blazing'

These forms are syntactically NAdj, and may occur in predicative NAdj status, as in /ma=n^{g}uru-n^{g}ura-yij/ 'it[boat] is blazing' or 'it[boat] is smoking like a fire'.

In addition, we have two further exx. where the Proprietive derivation needs an additional NC$_{der}$ prefix:

/-n^{g}ulha-/ 'blade end of spear shaft'
→ /NC$_{der}$-n^{g}ulhu-n^{g}ulha-yij/ 'blade end of spear shaft' (less common than /NC$_{der}$-n^{g}ulha/

/-yiga-/ 'fire' (cpd. initial form, Table 14-1)
→ /NC$_{der}$-yigi-yigi-j/ 'torch, burning stick'

These forms are derived Nc rather than NAdj. In the case of /-n^{g}ulha-/, the root itself is a bound (defective) one (§4.9) and therefore requires NC$_{der}$ prefix when used as any kind of noun (i.e., in any construction other than where it is cpd. initial). In the case of /-yiga-/, the root is not otherwise attested as a noun, but since /-yiga-/ is basically a cpd. initial (and since cpd. initials are often associated with bound noun roots, §14.2), it is not surprising to find a cpd. initial requiring NC$_{der}$ prefix in this construction.

Note also that with /-yiga-/ the derivational suffix does not have its full form /-yij/, but combines with the final /-yiga-/ to give /...-yigi-j/. Perhaps we could recognise the suffix allomorph here as /-j/, with an instance of the morphologically restricted rule V-Fronting P-50.

It is possible that the Proprietive suffix /-yij/ or /-j/ should be compared with Dyadic /-yij/ or /-j/ (also /-n^yij/) used with kin terms (§5.6). A comparison with nominalising /-j/ (seen with various functions in §14.15-16, below) is less appealing.

14.15 Nc or NAdj nominaliser /-j/ (with or without reduplication).

There are a number of synchronically transparent deverbative nominalisations, functioning either as NAdj or Nc (common noun), involving suffix /-j/. In most instances the root is reduplicated by P-2. A direct connection with the less common Proprietive construction just discussed (§14.14) is unlikely because of differences in semantics, word-class of input, and phonological form of suffix.

Phonologically, the issue is the treatment of the root-final vowel before /-j/. There are a number of instances of these changes:

//a// → /u/ //a// → /i/
//i// → /u/

However, there are also cases of //a// being unaffected by the derivation.

The phonological treatment of the vowel appears to be irregular and lexicalised. We have provided for the //a//→ /i/ exx. in our formulation of V-Fronting P-50, part (j). In the case of //V//→/u/, I am uncertain whether we should regard this as a case of V-Ablaut P-38, or whether we should regard the shift to /u/ as an independent grammatical mechanism. Possible evidence for the latter comes from considering these exx.:

/=n^galn^gala-/ 'to be/become white, shiny, bright'
/n^gal-n^galn^galu-j/ 'white, shiny, bright'
/rulbu-n^galn^galu/ 'goanna lizard sp.'

The last of these looks like a "bahuvrihi" Nc-NAdj compound (§14.5) meaning '[having a] light-coloured back', cf. /rulbu/ 'back, backbone'. For other indications of an unproductive nominalisation created by changing a final vowel to /u/, see §14.24.

The exx. of /-j/ which function as NAdj are these (some attested only with additional cpd. initial):

/du-duma-j/ 'black, dark' < /=duma-/ 'be black, dark'
/lhan^{y}ga-lhan^y-gayu-j/ 'bad-tasting' < /=$w_1$aya-/ 'to taste' and cpd. initial /-lhan^y-/ 'tongue'
/ba-dhawiwi-j/ 'having inquiring look' < /=lhawiwa-/ (variant /=lhawi-wu-/) 'to ask', cpd. initial /baG-/ 'eye'
/bira-n^gardha-n^gardha-n^ga-j/ 'having tail (rear end) raised' < /=n^gardha-/ 'to be raised', cpd. initial /-bira-/ 'anus'
/min^{g}i-min^{g}a-j/ 'lazy' < /=min^{g}i-/ 'be lazy'
/murmbu-murmbulu-j/ 'hot' < /=murmbula-/ 'be hot'
/n^gal-n^galn^galu-j/ 'white' < /=n^galn^gala-/ 'be white'
/ririru-j/ 'itchy' < /=ririra-/ 'be itchy, have itch'
/mawura:du-j/ 'cold' < /=mawura:da-/ 'be cold'

/$w_2$anga-wan-gallhu-j/ 'frightened' < /=$w_1$allha-/ 'float' with cpd. initial /-$w_2$an-/ 'temple' (Table 14-3)
/$w_1$arawuj-ban^{y}ja-wan^{y}ja-n^ga-j/ 'scented, having an odour' < /=$w_2$an^{y}ja-/ 'have odour', /-$w_1$arawuj-/ 'smell'
/bil-wilwilu-j/ 'weak, unsteady' < /=bilwila-/ 'be weak'
/$w_1$ir-girgiru-j/ 'skinny, thin' < /=w_1/$w_2$irgira-/ 'be skinny'
/$w_2$ululululhu-j/ 'variegated' < /=$w_2$ululululha-/ 'be variegated'
/yalga-yalganbu-j/ 'acting silly' < /=yalganbi-/ 'act silly'
/yirbi-yirbu-j/ 'persistent' < /=yirbi-/ 'be persistent'

Two further points may be made about these items. First, note that in some instances a cpd. initial is included in the reduplication ('bad-tasting', 'frightened'), but in others the cpd. initial is superimposed on an already reduplicated NAdj derivative stem ('having tail raised', 'scented'). Possibly the penultimate item in the list is of the first type if analysed as involving /=$w_1$anbi-/ 'to do' and cpd. initial /-yalG-/.

Second, note that when the verb root is of the N^gA_1 inflectional class (Table 11-5), the /-n^ga-/ augment (which occurs in some of the regular inflected forms) is present, hence /...-n^ga-j/ in two items in the list above.

In addition to the listed items (all of which correspond to an attested verb stem), there are many other NAdj which end in /j/ and which may be suspected of belonging to this type at least historically. A number involve reduplication (frozen), strengthening this suspicion. Among others we may mention /agaduj/ 'deep (water)', /agararij/ 'deep, steep' (cf. perhaps /aG-/ 'ground', Table 14-1, and verb /=(w_1)ara-/ 'have hole, be deep'), /$w_1$alalij/ 'wet', /$w_2$alabalamij/ 'thin' (cf. perhaps frozen initial in /$w_2$ala-yarayara/, optional extension of /yarayara/ 'thin'), /ya:ln^{g}alan^{g}alij/ 'lively' (for /ya:l-/ 'mental state' cpd. initial see Table 14-1), /$w_2$arubaj/ 'far away', /jarmayarmaj/ 'long, tall'.

There is one ex. apparently involving Recip /-n^yji-/ becoming /-n^yju-j/, though the Recip suffix is not clearly segmentable in the input verb:

/mun^g-ada:digan^{y}ju-j/ '[having] hair tangled up' < /mun^g-/ 'hair' (cpd. initial), /=$w_1$ada:digan^{y}ji-/ 'get tangled'

Since I cannot cite /=$w_1$ada:digan^{y}ji-/ in a simpler form without /-n^yji-/, synchronic segmentation is difficult, but the meaning is consistent with reciprocal.

In a smaller number of instances, the derived form with /-j/ functions as a noun, though in the relevant cases there is a nominal cpd. initial present, so the whole word is probably a Nc-NAdj cpd. with the noun nuclear, or with specialised meaning:

/dhagarijgaba:ban^{y}juj/ 'climbing vine spp.', apparently with otherwise unattested initial, then rdp. derivative with /-j/ from /=$w_1$aba-/ 'to wrap', Recip /=$w_1$aba-n^yji-/
/jirijban^{y}jawan^{y}jan^{g}aj/ 'piss beetle; "cheeky grass"†, with otherwise unattested initial and rdp. /-j/ form of /=$w_2$an^{y}ja-/ 'have odour' (see top of this page, 2nd item)
/ran^{y}juguyugaj/ 'peninsula' from /=ran^{y}juga-/ 'jut out', suggesting cpd. structure */-ran^y=juga-/, derivative */ran^y-jugu-yuga-j/, root */=yuga-/
/ambam-ba-n^ga-j/ 'headache' < /-ambaN-/ 'headache' (Table 14-1), /=w_2a-/ 'to bite' (N^gA_3 class with augment /-n^ga-/)

Note in the last ex. that the /-n^{g}a-/ augment of the N^{g}A$_3$ as well as N^{g}A$_1$ class is used in the /-j/ derivation, though in verbal inflection the two classes are almost exact opposites in permitting the augment in various suffixal formations.

There are some other, (even) less easily analysable instances which are probably of similar structure etymologically, e.g., /amburuyuwuruyuj/ 'grass sp. [Sporobolus]', which looks like */aN-/ plus rdp. /-j/ derivation of root */=w$_2$uruya-/ (not attested).

There are a couple of additional cases of /-j/ derivatives forming part of larger constructions or otherwise problematic:

/amba:-'mbuli-j-galag/ 'modest, ashamed', where rdp. plus /-j/ derivative of /=ambula-/ 'be modest' is cpd. initial, followed by /-(w$_1$)alag/ final

/w$_1$urij-buru-j/ 'sweat' with /w$_1$urij/ 'chest', final perhaps a /-j/ derivative of /=w$_1$ura-/ (attested in /-yi=wura-/ 'have grim expression on face')

/NC$_{der}$-(w$_1$)anja:njij/ 'barbs, hooks', surface forms like ANA class /(an-)u-ganja:njij/ (surface /g/ by P-8 or P-18 depending on setup of underlying form); ending looks like rdp. /-j/ derivative but NC$_{der}$ prefix needed

Another possible case of /-j/ is the bound (defective) noun root /-lhaj/, as in ANA class form /(an-)u-dhaj/ < //(ana-)uG-lhaj//, meaning 'chopped wood, firewood'. This would seem to be related to /=lha-/ 'to chop [wood]', though perhaps the synchronic association is weak due to the brevity of the forms.

For other cases of /-j/ see next section; for /-yij/ with rare variant /-j/ in Proprietive constructions see §14.14.

14.16 Abstractive nominalisations: /-j/, /-n^{y}/.

A tiny handful of exx. are attested of /-j/ or /-n^{y}/ in what appears to be an abstractive nominalisation from a verb. A complete list of attested forms follows (all are ANA$_{wu}$ class nouns):

/warn^{g}ayu-n^{y}/ 'pity' from /=w$_2$arn^{g}ayu-/ 'to pity'

/(n^{g}awa-)n^{g}awi-'-j/ 'death' from /=n^{g}awi-'-/ 'to die' 34.8.6

/wurij-guldhi-n^{y}/ 'thirst' from cpd. /-w$_1$urij=guldha-/ 'to be thirsty' (root /=w$_1$uldha-/) 34.8.6

/n^{g}arma-j/ 'laughter' from /=n^{g}arma-/ 'to laugh'

This formation is rare, and none of these forms has productive syntactic uses (e.g., "complement" clause form). Note that only two textual citations can be given from the entire corpus. Efforts to elicit this form from other verbs failed.

There are a number of other nouns which have similar abstractive meaning (referring to actions or activities) but which are not morphologically related to any simple verb roots; see §4.33.

For a handful of bare-root noun forms related to verbs, in some cases looking like abstractives semantically, see §14.21.

14.17 Special reduplications of /an^{y}baj/ 'other, different'.

From NAdj /an^{y}baj/ 'other, different', regular NC$_{infl}$ forms for ANA class are punctual /a:-'n^{y}baj/, continuous /ana:-'n^{y}baj/.

A unique type of reduplication is attested with this stem, sometimes including the NC$_{infl}$ prefix. The exx. are:

/an^{y}ba(j)-gan^{y}baj/ 'many kinds, all sorts' 13.30.4, 93.1.5, TNT 23[with Relative /-yin^{y}un^{g}/]

/ana:-'n^{y}baj-gana:n^{y}baj/ 'many kinds, all sorts' 59.7.2, 59.8.4, 69.11.2/3, 69.12.5, 108.4.4

The second form clearly includes NC$_{infl}$ prefix /ana-/ in the reduplication. The first form seems to be based on the simple root /an^{y}baj/, though arguably it might be based on /a:-'n^{y}baj/ with surface leveling of vowel length. To judge by our exx., if the prefix /ana-/ is present it must be part of the reduplication.

Ordinary nominal reduplication (§4.14) does not apply to NC$_{infl}$ prefixes.

14.18 Cpd. initial /-malan^{g}aG-/ 'considerably, very'

This is a cpd. initial (or perhaps we could say a derivational prefix) which intensifies the following NAdj or verb; the translation may be 'very' or a slightly less emphatic 'considerably, quite a bit'.

In the combination /malan^{g}a-n^{y}anay/ 'far away', /-malan^{g}aG-/ functions as an unmarked cpd. initial (§14.10) and thus has no specific meaning. In other combinations it has intensive meaning. There do not seem to be too many lexical restrictions on which stems it can combine with, which is one reason for thinking of it as similar to derivational prefixes (Chapter 10). Attestations:

/malan^{g}a-dhabarj/ 'quite important' 16.7.6 < /lhabarj/

/malan^{g}a-dun^{g}gal/ 'quite big' 16.7.3, TNT 11 < /run^{g}gal/

/malan^{g}a-gadha:dhari/ 'quite far behind' < /adha:dhari/

/malan^{g}a-gadhara/ 'rather few, rather little' < /adhara/

/malan^{g}a-gadharwara/ 'rather late in afternoon' TNT 26 (transcription emended) < /adharwara/

/malan^{g}a-gan^{y}baj/ 'quite different' < /an^{y}baj/

/malan^{g}a-barubaj/ 'quite close by' TNT 3pred < /w$_2$arubaj/

/malan^{g}a-bulhuwulhur/ 'quite a bit earlier' < /w$_2$ulhuwulhur/

/-malan^{g}a=bulbulwa-/ 'be quite swollen' TNT 3 < /=w$_2$ulbulwa-/

/malan^{g}a-guruguruj/ 'quite slow, soft' < /w$_1$uruguruj/

/-malan^{g}a=jabi-'-/ 'be on verge of going in' 162.4.3 < /=yabi-'-/

/-malan^{g}a=jaldha-/ 'slip past, get away 27.7.4 < /=yaldha-/

It is not always easy to pin down the nuance, but it does seem that the initial is productive with some kind of intensifying function at least for NAdj and intrans. verbs. We have no textual exx. involving transitive verbs.

A stronger intensifier is postposition /-w$_2$indi:yun^{g}/ (§12.21, cf. §4.32, §7.30). Verbal root forms (§12.2) also have a kind of intensifying usage. However, /-malan^{g}aG-/ is the most explicit intensifier with quantitative (scalar) contexts, and is thus most common with NAdj which describe gradient qualities.

14.19 Actor-indexing cpd. initials for myth characters.

There are a couple of cpd. initials which have no lexical meaning, but rather are used exclusively in reported speech ascribed to particular myth characters. These initials thus serve as stylised indices for the speech of the characters, just as special phoneme substitutions characterise the "speech" of Coyote or other figures in some Amerindian languages.

For Brolga the prefix is /-riN-/, or in some instances more specifically /-rin^{y}-/. Attestations (excluding song words) are:

/-rin-daba=rabala-/ '[Brolga] come out' from /=rabala-/ with internal reduplication (7.19.7)

/-rin^{y}=gurami-'-/ '[Brolga] go [i.e., fly] around' from /=w$_1$urami-'-/ (7.19.1rdp)

/-rin^{y}=jaljala-/ '[Brolga] move far away' from /=yaljala-/ (7.18.5rdp)

For Emu, who occurs opposite Brolga as a protagonist in one important myth, the prefix is /-mir-/, /-mirN-/, or /-mini-/. It occurs most commonly in the expression /-mir=mugardhi-/ or /-mini=mugardhi-/ '[Emu] be finder', with a verb which I have only observed in accounts of a myth in which Emu kidnaps and adopts a human boy (5.8.4, 3.7.3, TNT 7[with /-mir-/]). Other exx.:

/mir-galgal/ or /mirn^{g}-galgal/ 'apart, distinct [of Emu]' from /w$_1$algal/ (TNT 9pred, 10pred)

/mirm-biriwiri/ 'alone [of Emu]' from /w$_2$iriwiri/ (TNT 9)

All of these exx. involve either NAdj or intransitive verbs (/=mugardhi-/ is formally intrans.). We have no exx. of these indexical elements with transitive verbs.

Formally, we might take /-rin^{y}-/ and /-mir-/ (and variants) as suppletive noun roots, used in Nc-NAdj or Nc-Verb compounds. However, we must emphasise that, unlike other suppletive cpd. initials (and other nominal initials), these elements are used only in the speech (reported in myths) of the characters in question, apparently with self-reference.

14.20 Special Pl/Collective initials with verbs and NAdj: /-man-/, /-mandag-/, /-mulun^{g}-/.

In our chapter on noun morphology we mentioned (§4.16) some lexically restricted Pl elements. Two of these, /-man-/ and /-mulun^{g}-/, are also relevant to the present section, which deals mainly with verbs.

/-man-/ occurs as a Pl marker with a number of verbs; some of the combinations are rather common, though I do not think it is obligatory. Here, "Pl" refers to semantic plurality (for nonhumans as well as humans), whereas in the noun-class (NC) system "Pl" is a basically human morphological category, §4.15, §4.10.

Attestations of /-man-/ with verb follow. Most are intrans. verbs involving motion, but there is one clear trans. ex. where /-man-/ indicates plurality of direct object (for "absolutive" perspective cf. Mult /-w$_1$ara-/ §10.4 and our comments on cpd. initials in §14.6):

/-man=dhamara-/ '[Pl] go in front' < /=lhamara-/

/-man=dhaayi-/ '[Pl] extend in long line' < /=lhaayi-/

/-man=dharma-/ 'chase, follow [Pl object]' < /=lharma-/

/-man=dharwadharwi-/ '[Pl] to go along together' (no simplex)

/-man=dhulhuwi-/ '[tide] carry [things] along' < /=lhulhuwi-/ (see dictionary entry; trans. ex. but not requiring Pl)

/-ma=lu:lha-/ '[Pl] wade in water' < /=lu:lha-/ (cf. P-30)

/-man=n^{g}ama-/ '[Pl] swim' < /=n^{g}ama-/

/-man=dajara-/ '[Pl] disperse' < /=rajara-/

/-man=gala:lara-/ '[Pl] be up in tree' < /=w$_1$ala:lara-/

/-man=bayama-/ '[Pl] keep going' < /=w$_1$/w$_2$ayama-/

/-man=jarba-/ '[Pl] run briskly' < /=yarba-/

/-man=jarama-/ '[Pl] flee' < /=yarama-/

It is possible that /-man-/ is also present in /=manda:gi-/ 'to assemble [Pl object]', which would then be analysed as //-man=agi-// with //=agi-// 'go and collect [people, etc.]'. The phonology is unusual, but the insertion of /d/ and lengthening of following vowel is attested in another context (P-20). I think this is historically correct, but will not insist on it synchronically.

/-man-/ does not seem to be used with NAdj, except for the moiety terms discussed in §4.16.

Another form /-mandag-/ looks like a longer form of /-man-/. However, its grammatical status is somewhat different. /-mandag-/ may function as a bound noun root, taking NC$_{der}$ prefix and then functioning as a noun stem (see dictionary entry and §4.9); this is not true for /-man-/. Second, whereas /-man-/ is used chiefly with verbs, /-mandag-/ is attested as a kind of Pl/Collective marker with both NAdj and verbs. The NAdj exx. are:

/manda-maragarij/ 'dangerous group'

/manda-dhabarj/ 'substantial group' (/lhabarj/ 'big, important')

/manda-garawindi/ 'big group' (/w$_1$arawindi/ 'many'

/manda-birig/ 'small group' (/w$_2$irig/ 'small')

/-manda=gala:di-ya-/ 'to ruin all of them' (Fact verbalisation §10.9 from NAdj /ala:di/ 'bad')

Verbal exx.:

/-manda=n^{g}un^{y}maa-n^{y}ji-/ '[all] examine each other' from Recip of /=n^{g}un^{y}maa-/ 'examine, count'

/-manda=banaga-n^{y}ji-/ '[group] to stay together' from Recip of /=w$_2$anaga-/ 'to hold'

/-manda=dama-/ '[group] to abound, be many' (/=rama-/)

Even the verbs here have a more stative (including Recip) sense than the mostly active motion verbs with /-man-/. There is also a more extensive notion of plurality ('group', etc.) with /-mandag-/ than with /-man-/, which can be used for two or more actors.

/-mulun^{g}-/ (distinguish this from /mulun^{g}/ 'elbow') has been seen as a common Pl marker with NAdj /an^{y}baj/ 'other' and /argi/ 'some [other]' (§4.16). It is also used in the sense 'group' (i.e., Collective) with some other NAdj and with some verbs:

/mulun-dun^{g}gal/ 'big group' (/run^{g}gal/ 'big')

/-mulu-n^{g}u=bura-/ '[group] to sit' (/=bura-/ 'sit')

/-mulu=murgulha-/ '[group] to lie down'

/-mulu=na-/ 'to see [group]'

The last ex. is the only transitive one, showing absolutive perspective, as noted above for /-man-/.

For a minor combination involving /-mulun^{g}-/ and a demonstrative stem, see §7.23.

We might also mention in this connection the cpd. initial /-raN-/ 'flock' (Table 14-1, bottom right), used to refer to groups of flying animals (birds, flying foxes).

Pl prefix /mij-/ used with many NAdj (§4.15) does not occur with this sense in verbal cpds. There is a homophonous cpd. initial (or perhaps we should say two) used with verbs meaning 'name' or (in one cpd.) 'throat' (see dictionary entry, also Table 14-1, right).

14.21 Root nouns (participial, agentive); Negative final /-ari/

There are a few instances in which we find a noun which looks like a bare root from which a semantically associated verb is formed, though not by productive derivational processes. The noun roots thus resemble verbal "root forms" (§12.2), but differ in that the nouns may take nominal morphology and are not pronounced as interjections.

The root nouns are semantically diverse:

/$w_2$albalg/ 'wide' [NAdj], cf. /=$w_2$aldha-/ 'be stretched out', etc. (discussion §14.24)

/$w_1$ulgulg/ 'cut off, severed' [NAdj], cf. /=$w_1$ulguldha-/ 'to cut off', /=$w_1$uldha-/ 'to cut'

/-war/, attested in cpd. /bira-war/ 'having sore rear end' (/bira/ 'anus, rear end'), cf. /=barlha-/ and /=$w_2$arbarlha-/ 'be stiff, sore'

/n^gandarg/ '[act/sound of] snoring', cf. /=n^gandarda-/ 'to snore'

/anarg/ 'forearm-painting' (action or product), cf. /=anar-bu-/ 'to paint [him] on forearm'

/wunalg/ 'body-painting' (action or product), cf. /=wunal-bu-/ 'to paint [him] on body, torso'

The last three are, or at least can be, semantically verbal nouns (abstractives), compare §4.33 and §14.16. The first three are adjectival nouns (NAdj), and can be thought of loosely as participial in meaning, though they designate qualities (properties) rather than processes which produced the properties. The NAdj and verbal noun exx. have no special syntactic properties, and except for /$w_2$albalg/ none of them is especially common.

In the first four instances, the related verb is formally characterised by presence of a now frozen augment *-dha- (originally *-dhu-), forming verbs of A_2 inflectional class (Table 11-1). In the last two cases, the related verb is an "auxiliary" cpd. involving /-w_2u-/ (§14.4).

It must be emphasised that root nouns, like verbal root forms, are an unproductive, archaic formation.

We now consider a set of lexicalised nouns (NAdj) with agentive sense. When no further derivational elements are present, they not only specify a type of activity, but indicate that the referent does (or in a given instance has done) the activity successfully or well. The exx. are:

/lamabu/ 'good singer'
/madbal/ 'expert, master'
/mirabal/ 'expert, master'
/namir/ 'expert, master'
/radhar/ 'expert harpooner' (as NcMANA also means 'harpoon')
/abal/ 'expert, master'
/$w_2$ada/ 'expert food-gatherer'
/$w_2$alaj/ 'expert hunter'

Of the more general forms meaning 'expert, master', /abal/ is the most common. It is possible that /abal/, /madbal/, and /mirabal/ have the same root (cf. also verb /=mad-bu-/ 'to do [it] well'). All of the forms are used to praise someone for a successful performance (and need not imply habitual expertise).

The existence of such lexical "agentives" compensates for the absence of any productive agentive derivation from verbs. The only mechanism available for creating "agentives" from verbs is usage of the regular Relative suffix /-yin^{y}un^g/ (§16.4), but this is formally a clausal subordinator rather than a lexical derivation.

The opposite of 'good/expert VERB-er' can be expressed in some cases by adding /-ari/ as cpd. final to the lexical agentive:

/$w_2$alaj-gari/ 'poor hunter'
/$w_2$ada:-'ri/ 'poor food-gatherer'

However, this formation is not attested with the others. In the case of /lamabu/, a comparable sense is expressed by adding /ala:di/ 'bad' as cpd. final: /lamabu-wala:di/ 'bad singer' (here we may have to recognise /-$w_1$ala:di/ as the cpd. final form). Of course, NAdj /ala:di/ 'bad' by itself can be used predicatively ('he is bad', etc.) to indicate lack of expertise (or success) in an unspecified activity.

Another "agentive" form is /wun^{g}gan^y-galag/ 'good dancer', based on /wun^{g}gan^y/ 'dancing' (semantically an abstractive verbal noun) with cpd. final /-(w_1)alag/, found in a few NAdj cpds. The corresponding expression 'poor dancer' is formed by replacing this final by /ala:di/ 'bad', hence /wun^{g}gan^y-gala:di/.

The cpd. final /-ari/ illustrated above can be identified as an NAdj meaning '[be] absent' or 'not exist', which is always predicative in form (i.e., with intrans. pronominal prefix), except in these agentive compounds. In its regular senses it occasionally takes a cpd. initial: /-$w_1$an^{y}ja:-'ri/ 'absent, nonexistent' can be used with reference to foods (see Table 14-1, bottom right) but can also be used loosely as an equivalent to /-ari/ in general, and we can cite /lhud-gari/ 'having no power' (67.2.2pred, cf. Caus /-lhud=gari-jga-/ 66.3.4). As a negator of NAdj (the latter being a cpd. initial), /-ari/ is usually limited to the lexical agentives just mentioned, but we can also cite /ambalal/ 'elegant, splendid' vs. /ambalal-ari/ 'indigent, lacking nice possessions'.

It is possible that /-ari/ is present at least historically in some other (now frozen) combinations: /manajgari/ 'poor/unsuccessful hunter' (no positive form), /lan^{g}ari/ 'stubborn, headstrong' (cf. /la:n^g/ 'top of head' and Table 14-3), and /maln^{g}ari/ 'nasty, not nice [person]'.

This /-ari/ as cpd. final is as close as we come in Nunggubuyu to a privative derivation ('lacking X', 'having no X', 'without X'), which would be the opposite of the Proprietive (§14.14 and refs. there). However, clearly /-ari/ is restricted as cpd. final to a tiny number of combinations. Generally what might be a simple privative expression in other languages is represented in Nunggubuyu by a separate clause like /wa:='ri ana-marya/ 'There is/was no food' (with /-ari/ as predicate).

14.22 /-$w_2$alij/ 'pair of'.

In addition to the regular Dual (Du) suffix /-w_2a:/ (§4.15) with nouns, /-w_2i:yun^g/ with some kin terms (§5.3), and other Du markers with personal pronouns (Chap. 6) and demonstratives (Chap. 7), and

other semantically similar elements (such as Dyadic forms of kin terms, §5.6), there is a special ending /-$w_2$alij/ 'pair of'. It is possible to regard this as a general nominal formation which is functionally similar to Dyadic forms (/-yij/, /-j/, etc.) used with kin terms, and there may even be a partial historical identity. Another possible relative is the root in Dyadic /ali-jij/ 'husband and wife' (with Dyadic ending), Pl /mij-gali-jij/, though here the root is either //aliG-// or //$w_1$aliG-//, in any case not *//$w_2$aliG-// with the same //w_2// as in /-$w_2$alij/. (I suspect that /-$w_2$alij/ has been historically reshaped under the influence of Dual /-w_2a:/.)

The exx. of /-$w_2$alij/ are:

/mandha:yum-balij/ 'pair of members of /mandha:yun^g/ moiety' 14.9.3

/mand-irija-walij/ 'pair of /yirija/ moiety' 14.9.3

/muru-murun^{g}un-balij/ 'pair of /murun^{g}un/ clan' 20.11.4, 20.15.7 (Pl reduplication)

/dhudabadi-n^{y}um-balij/ 'pair of white men' (elicited)

In the three textual exx. listed above, the stem itself is Pl in form. I am therefore not sure of the correctness of the fourth, elicited ex., which involves /-$w_2$alij/ added to Sg stem form.

The exx. suggest that /-$w_2$alij/ is not common, and is effectively restricted to terms designating broad social categories (clans, moieties, races), though other combinations would probably be acceptable (at least marginally).

14.23 Diminutives (compounded or by consonantal "symbolism").

The NAdj /-$w_2$irig/ and /-$w_2$in^{y}ig/ (and their Pl counterparts /-$w_2$ura:yun^g/ and /-$w_2$un^{y}a:n^{y}un^g/, §4.14), both meaning 'small', can be used as finals in Nc-NAdj cpds. of the type described in §14.5. (They can also be used as uncompounded NAdj.)

I can cite no textual exx. of cpd. final /-$w_2$in^{y}ig/ or Pl /-$w_2$un^{y}a:n^{y}un^g/, though I heard such constructions occasionally in unrecorded sessions. Exx. of /-$w_2$irig/ and /-$w_2$ura:yun^g/:

/manda-birig/ 'small group' 52.4.3pred (/-mandag-/, §14.20)

/dhalbar-wirig/ 'having small hind leg'

/yam-birig/ 'having small (low) voice' TNT 26rdp (/-yan^g-/)

/ramba-wirig/ 'small boat/canoe' 161.5.3, 167.21.1 (Table 14-1)

/ramba-wura:yun^g/ (Pl of preceding) 112.5.1

/mada-wura:yun^g/ 'small grass[es]' 142.6.5

/ala:-'la-wura:yun^g/ 'small rivers' 110.1.3 (rdp. Pl, §4.14)

Incidentally, /mada-wura:yun^g/ shows that 'grass' is (cryptotypically) plural in Nunggubuyu though (mass) singular in English, although plurality is not marked by regular inflections for nonhuman nouns in Nunggubuyu.

Note that the second and third items in the list are "bahuvrihi" cpds. translatable as 'having [adjective][noun]' (§14.5).

While a few textual exx. can thus be cited of this formation, it is not a high-frequency one (indeed is strikingly uncommon in comparison with diminutives in many other languages), and has a strictly literal sense (not, e.g., being used merely for endearment or to mitigate requests).

The comparison of the two NAdj for 'small', /$w_2$irig/ and /$w_2$in^{y}ig/, suggests the possibility of this representing a minor instance of consonant symbolism. Indeed, of the two, /$w_2$in^{y}ig/ is more emphatically diminutive, being generally used for very small objects and very young children.

There are two other possible instances of such consonantal symbolism. First, we have /muruyun^g/ 'elder sibling' vs. /mun^{y}un^{y}un^g/ 'younger sibling' (Figure 5-1), though the two terms are not always used strictly with reference to age.

Second, there is a curious alternation of two words (NAdj) meaning 'slow[ly]' (also in some contexts 'softly'): /$w_1$urugurij/ and the less common /$w_1$un^{y}ugun^{y}ig/. Unfortunately, the latter is not attested in texts (the former is attested many times; in addition to citations in dictionary entry add MT 3, 5, 10, 13, 23 and TNT 24). The form /$w_1$un^{y}ugun^{y}ig/ seems more emphatic about the slowness/softness and this is compatible with diminution.

(Etymologically, /$w_2$irig/ and /$w_2$in^{y}ig/ may represent a partial convergence of two unrelated elements, cf. Ngandi diminutive cpd. finals /-girikirin^y/ and /-gan^{y}a?/, respectively.)

14.24 Irregular and problematic sets.

In this section we mention briefly some irregular and otherwise difficult sets of items which seem to be related to each other derivationally in some obscure way. Some of these relationships may turn out to be historically revealing.

a) /$w_2$albalg/ 'wide' [NAdj]; /=$w_2$aldha-/ 'be stretched out, extend out'; /warambaldhu/ 'hammerhead shark' (perhaps /waran^g/ 'ear' plus /-$w_2$aldhu/ 'jutting out')

b) /-$w_2$al-/ 'stem, trunk' (bound noun root); /=$w_2$albalma-/ 'to climb tree'; no clear semantic link to (a) but phonologically similar

c) /lan^{g}galu/ 'freshwater fish (rising from mud at first rains)'; /=lan^{g}gala-/ '[freshwater fish] to rise from mud'

d) /=n^{g}aln^{g}ala-/ 'be white, bright'; NAdj /n^{g}al-n^{g}aln^{g}alu-j/ 'white, bright'; /rulbu-n^{g}aln^{g}alu/ 'goanna lizard sp.' (/rulbu/ 'back' plus /-n^{g}aln^{g}alu/ 'white, light')

e) /mindhimindhu/ 'frightened, prone to flee' [NAdj]; /=mindha-/ '[lightning] to strike'

f) /adadin/ 'shore'; /=adada-/ 'go up slope'; /=adadi-/ 'take [it] up slope'

g) /=raga-/ 'go in front, lead'; /(raga-)ragij/ 'first [to be in place]'; /radaradag/ 'in front'; possibly /=rabala-/ 'to come out' (cf. /=$w_2$ala-/ 'to arrive, to come out at place'); /=raguyi-/ 'be first to take [it]'

h) /marya/ '[vegetable/soft] food'; /=marya:da-/ 'be hungry'; /=maryala-/ 'be very hungry'; /=marya-wu-/ 'be full of food'

i) /bulbar/ 'red ochre'; /=w_1/$w_2$urbar-wu-/ 'paint with red ochre'

j) /=yaldha-/ 'slip past, get away' (root form /jalg:/); /=yalgiwa-/ 'go past [it/him]'; possibly /=jalburda-/ 'jump into water'

k) /dhalbar/ 'upper/hind leg, branch'; /=dhalba:rin^{y}ji-/ 'to spread out, branch'

l) /lhagarar/ 'speech, talking'; /=lhagararа-/ 'to be noisy'
m) /-lhan^{g}urg-/ [bound noun root] 'sickness'; /=lha:n^{g}urn^{g}a-/ 'be sick'
n) /biln^{y}alga/ or /birn^{y}alga/ 'weak, unsteady, shifting'; /=bilwila-/ 'sway, be pliant'; /=bilya-/ 'tilt'
o) /=barlha-/ 'be stiff, sore'; /=w$_2$arbarlha-/ 'be stiff, sore'; /bira-war/ 'having sore rear end' (§14.21)
p) /min^{y}n^{g}an^{g}a/ 'sleep, night' [unit of time]; /min^{y}n^{g}u/ 'night time'; /-min^{y}n^{g}a=w$_1$ululudha-/ 'be sleepy'; /min^{y}gin^{y}gurara/ 'middle of the night'
q) /ayan^{g}a/ 'fire-drill, firestick'; /=w$_1$ayan^{g}anda-/ 'to use fire-drill (to make sparks)' (final related to that of /-an^{g}a=wanda-/ 'to make camp[/an^{g}a/]' ?)
r) /=n^{g}arda-/ 'be pried loose'; /=n^{g}argiwa-/ 'pull out, uproot'; cf. perhaps /-n^{g}arg-/ 'shore' [bound noun root]
s) /n^{g}amugijgaj/ '[early] morning'; /n^{g}amug/ 'dark[ness]'; /=n^{g}amuda-/ (variant stem of /=muda-/ 'get dark'), also cpd. /-an^{g}a=muda-/ 'get dark'
t) /n^{g}adugu/ 'rope'; /nu-n^{g}adugu/ and rdp. /nun^{g}u-nu-n^{g}adugu/ 'fishline'; /=n^{g}adugumbi-/ 'to fish with hook and line'
u) /rabara/ 'tail'; /rabara-wulma/ 'black whip snake' (final uninterpretable, but occurs in term for 'juvenile black whip snake' /n^{g}uda-wulma/, cf. /n^{g}uda/ 'midriff'); /rabarayala/ 'ray sp.'
v) /ma:bu/ 'egg'; /gagalan^{g}/ 'egg' and cpd. initial /-galan^{g}-/ (Table 14-2); unusual cpd. /gala-ma:bu/ 'egg'
w) /w$_1$aldhaaldhan/ 'separated, apart'; /=galdhaaldha-/ 'to walk with legs apart'; cf. possibly /aldha/ 'race, racing'

Since many of these alternations are quite idiosyncratic, we will not dwell on them. We can, however, notice a few recurrent formations:

Nc or NAdj form with final vowel becoming /u/ (a, c, d, e, p)
Trans. verb with /-giwa-/ (j, r)
Nc with final /-in/ (f) [only one ex. here, but Hughes recorded "agambin" 'native oven' (cf. /=a:gamba-/ 'to roast in oven'), though my informants did not confirm this form (there is a similarly unproductive Ngandi parallel).

Concerning the noun in final /u/, we noted in §14.15 that a shift of final vowel to /u/ may occur before derivational suffix /-j/, and that the two vowel alternations may be related (for overlap with a single root see [d] in the list above).

The apparent alternation of /n^{g}a/ with /an^{g}a/ in (s) may be due to partial convergence of two etyma (discussed in dictionary s.v. /=muda-/).

There are probably a great many other unproductive or totally frozen derivatives and compounds lurking in the stems listed in the dictionary.

14.25 Numerals; /an^{y}ja:-'n^{y}ja:-'n^{y}ja:bugij/ 'one by one'.

It is generally assumed that the development of an extended numeral system in Arnhem Land languages reflects contact with Macassan (Indonesian) traders, beginning in the Nineteenth Century.

The basic forms are:
/an^{y}ja:bugij/ 'one' (Human Sg /an^{y}ja:bu-n^{y}un^{g}/), cf. also NAdj or NAdv /an^{y}ja:bu/ 'together'
/w$_2$ula-wa:/ 'two', including Du suffix /-w$_2$a:/
/w$_2$ulan^{y}baj/ 'three', frozen combination of 'two' plus /an^{y}baj/ 'other'
/w$_2$ulalwulal/ 'four' (reduplication of extended form of 'two')
/maran^{g}-an^{y}ja:bugij/ 'five' ['hand-one']

Further numerals are expressed chiefly by juxtaposing two or more of these, thus '5 2' can mean '7'. One can use /maram-ba:/ 'hand-two' for '10', but it is more usual to just repeat '5'. For numerals from 11 to 20 it is possible to use similar expressions referring to the feet (i.e., toes).

It is not clear whether the extended form /w$_2$ulal-/ seen in the word for '4' is an archaic form of /w$_2$ula-/ 'two', or is a borrowing (cf. Ritharngu /bulal-/ 'two').

The three stems based on 'two' have a further syntactic peculiarity in that they seem to prefer to occur in predicative NAdj form. Thus instead of saying 'Two [men] went', in Nunggubuyu it is more idiomatic (though not obligatory) to say 'They were two, they went' (/wini=wula-wa: wini=ya-n^{g}gi/). In the case of '4', the reduplicated compound is usually broken up again with pronominal prefixes in both parts, especially with ANA and MANA noun classes: /mu:='lal mu:='lal/ 'They[MANA] are/were four'. See end of §4.2.

The three numerals beginning with 'two' lose the //w$_2$// after MANA prefix /ma-/, as in the last ex., and apparently after ANA prefix /w$_1$u-/ (and their B counterparts), see P-4, part (d). This results in VV-Contraction P-49.

For additional derivatives see the dictionary entries, especially of /w$_2$ula-/.

From /an^{y}ja:bugij/ we can get a form with at least two and often three initial reduplicative segments, meaning 'one by one, one at a time, singly': /an^{y}ja:-'n^{y}ja:[-'n^{y}ja:]-'n^{y}ja:bugij/; see dictionary s.v. /an^{y}ja:bugij/ for citations.

Chapter 15

Syntax: "phrase" and "clause" level

15.1 General.

In this and the following chapter we deal with a number of basic syntactic issues. In the present chapter we consider phrase- and clause-level phenomena, and complex (multi-clausal) phenomena in Chapter 16.

Unfortunately, this is a language in which even the identification of such units as phrase and clause is highly problematic (see next sections, below). Therefore the division into Chapters 15 and 16 may, ultimately, be unmotivated or merely partially motivated.

A rather different perspective, moreover, can be obtained in Chapter 17, which looks at selected aspects of morphosyntax in terms of their functional interactions in discourse, with reference to a text (given schematically in "English" transposition for readers' convenience). As that chapter indicates, a great deal of Nunggubuyu morphology is discourse-sensitive, and a compartmentalisation of morphology vs. syntax may result in serious misunderstanding.

The same remarks about morphology and syntax should be kept in mind in the present chapter. Its apparent brevity is substantially compensated for by the injection of discourse and syntactic frames of reference into the earlier morphology chapters, and Chapter 17 on functional discourse analysis.

Some sections in earlier chapters which are relevant to the understanding of material in Chapters 15-17 are these:

nouns: §4.2, §4.3, §4.8, §4.9, §4.18, §4.19, §4.22
pronouns: §6.3, §6.8, §6.10
demonstratives: §7.4, §7.7, §7.11
verbs: Chapter 10 (especially §10.11)
particles: §12.1, §12.2, §12.4, §12.10
postpositions: §12.21 (also §4.32, §6.13, §7.30)
interrogatives: §13.2, §13.8
compounding: §14.1, §14.5, §14.7

15.2 Status of "NP."

Although the notion word in Nunggubuyu is comparatively straightforward, this is not true of noun phrase (NP), a bread-and-butter

phrasal unit in more familiar languages. Because of the general surface-structure independence of coreferential words in a "clause," such as a (referential) noun and a modifying NAdj (adjectival noun, §4.2), we might begin by hypothesising that instead of a phrase (NP) we have independent appositional words which may be separated from each other by pauses (or intonational boundaries) or by intervening constituents. The alternative is to try to save the phrasal (NP) analysis in which these coreferential elements (at least under some conditions) are represented as constituting a single, tightly-knit syntactic unit.

Of course, to some extent the phrasal and appositional analyses may be merged by arguing that they hold at different levels--deep structure having NPs, and surface structure allowing scattering of the words constituting the NP by a scrambling rule. Within syntactic models allowing these devices, there is no real way to rule this two-level analysis out; on the other hand, it would be hard to demonstrate its validity in any empirical fashion. In addition, the effective absence of coreferential-NP deletion (Equi), see §16.2, eliminates a possible source of direct evidence for NP as a unit. In this section we will describe basic patterns of surface-structure distribution and whatever syntactic facts we can dig up which are relevant to the NP issue. Although readers are encouraged to make up their own minds after considering the data, my own view is that strong forms of the appositional and NP analyses are misleading and that we have both constructions (in surface structure) with an inherently fuzzy boundary. Hence I adopt a fuzzy-NP analysis.

First, we want to factor out sequences which might look like multi-word NPs but which are in fact divisible into subject (topic) and nonverbal predicate (comment). This is fairly obvious in the case of (morphologically) predicative NAdj--i.e., with intransitive (verbal) pronominal prefix (Table 9-1) rather than regular NC_{infl} prefix (§4.7). However, nonadjectival (common) nouns (§4.2) have no special morphological form for predicative usage, and some NAdj are only optionally put in semi-verbalised form when used as predicates. Exx. where we recognise a subject/predicate structure include these:

(15.i) n^galyurwa ana:-'-ni n^ga=lha-n^gi n^ga=na-n^y
bee sp.[Pred] this[Subj] I chopped it I saw it
'This is a beehive, I have seen it and cut it down'
(143.2.3 with verbs added for clarification)

(15.ii) arawindi ana-lagu
lots[Pred] honey[Subj]
'There is lots of honey' (143.11.6)

Actually, distinguishing subject/predicate constructions from NP-like sequences (functioning as arguments in a larger proposition) is itself difficult, and we will see (§15.5, below) that some words may have debatable (or intrinsically fuzzy) status in this respect, but for now we will factor out obviously predicative constructions.

Having put this pattern aside, we now turn to instances of fairly obvious appositional structure involving two (or more) nouns with the same reference (though possibly slightly different sense):

(15.iii) nuru-warga=warga-n-di-maga:, nabi, arulg, cheeky-one
we got lots bee bee stinging
'We got lots of bees, young bees, stinging ones'
(143.9.4; /arulg/ means young /nabi/ bee)

(15.iv) wu:=yimun^y-gi:-'-ni-maga:, wara-landhurg wara-babab
[dogs] sniffed dog[s] dog[s]
(143.14.3; loanword from Eng. pup)

(15.v) nuru=na-n^ga:-', a:-'n^g-guy a-n^gura-wuy
we burned it to whatchamacallit? to fire
'We cooked it in (lit., into) a fire'
(143.16.2; cf. §13.10 for 'whatchamacallit?')

(15.vi) wara-min^y-n^gambara, wara-oldme-old-men
elders old men (143.16.7)

In (15.iv) and (15.vi) the appositional nouns are identical or nearly so in meaning; in (15.iii) the term /arulg/ is more precise than /nabi/ but the two do not here denote separate (conjoined) entities. Note that appositional nouns typically have similar inflectional morphology, including case marker (15.v), and that they may correspond to a subject- or object-marker in the pronominal prefix of a verb (15.iv).

From the perspective of English, we might incline to recognise apposition when both words are (common) nouns (Nc), but suggest a NP analysis when one is adjectival (i.e., a nuclear Nc and a modifying NAdj). However, this is hard to justify in Nunggubuyu. In (15.iii) we have two Nc followed by an (English) NAdj, and there is no obvious difference in status between the Nc's and the NAdj. Moreover, essentially all human nouns (except kin terms and names) are formally NAdj; this applies to 'elders' in (15.vi) and presumably to the appositional English loanword with it.

A good case could be made for sequences containing a Nc and a NAdj as forming a NP if we could adduce idiomatic or other fairly standardised NAdj-Nc (or Nc-NAdj) units. English, for ex., has many such units in flora-fauna and many other domains (white oak, white birch; old man; double-play). Unfortunately, Nunggubuyu lacks such standardised expressions, except for some frozen or otherwise (partially?) fixed compounds (§14.5), which are arguably outside the scope of the present problem.

Of course, we do sometimes find a NAdj directly adjacent to a (semantically) referential noun with no pause between them, so that we have what looks like a NP structure. However, obviously appositional nouns may also be run together like this (15.iv, 15.v), and when descriptive NAdj and referential noun are tightly juxtaposed either order is possible:

(15.vii) wuru=na-n^y, yuwa:-gu
they saw [honey] there[Distant]
wara:-'rawindi wara-mananun^g big-mob
many women many
'Many women saw (found) honey over there' (143.2.5-6)

(15.viii) n^{g}ara-mu̲la-maji: n^{g}ara:-'rawindi namban^{g}i=wa-n^{g}a-na
if mosquito[es] many [they-]bite us[ExPl]
'if lots of mosquitoes bite us' (62.1.7-8)

Note that /(w$_1$)arawindi/ precedes the nuclear noun in (15.vii) but follows it in (15.viii), and also that (15.vii) has a second word (big-mob, from creole English) apparently functioning as another descriptive adjective on the other side of the nuclear noun. A similar flanking structure occurs in another ex. where the item in the middle happens to be a demonstrative pronoun:

(15.ix) ana-man^{g}a-jin^{y}un^{g} an-uba-ni ana-r̲un^{g}gal-in^{y}un^{g}
fatty one that[Anaph] big one
'that fatty, big one [beehive]' (143.15.4)

Here /man^{g}aj/ is NAdj (unlike its common Nc usage with regular MANA noun-class marker), and both flanking NAdj take Relative suffix /-yin^{y}un^{g}/ in its redundant, adjective-reinforcing usage rather than in genitive or 'about, concerning' sense (§4.30).

In general, inspection of a large number of exx. suggests that combinations of a (semantically) descriptive NAdj and a nuclear (referential) noun (which may be formally Nc, kin term, or human NAdj) do not differ in surface structure from appositional sequences like (15.iii-vi). NAdj, except in Nc-NAdj compounds (§14.5), are formally autonomous nouns which may be closely juxtaposed to a nuclear noun but are best viewed as separate, appositional units. (As for the Nc-NAdj compounds, we may observe that only a limited number of nouns can occur as cpd. initials, and that such compounds account for only a very small percentage of nonpredicative nominal forms in the texts.)

Essentially similar remarks can be made about putative "NP" structures involving a nuclear noun plus a Relative (including genitive) noun or a Relative clause. The Relative element in either instance takes suffix /-yin^{y}un^{g}/, except for some combinations where the Relative element gets a copy of the case suffix on the head noun. See §15.8 and §16.4 for discussion. The point to be made here is that such Relative nouns or clauses need not be directly adjacent to the head noun (which indeed may merely be covert); instead, they are often separated from it by pauses and/or by other intervening constituents. Moreover, Relative nouns and clauses sometimes have no head noun (overt or covert), in which case the question of "NP" structure does not arise (unless meaningless "dummy" heads are posited).

With regard to surface structure NP-like phrases, we must finally consider combinations of a noun with a) independent personal pronoun (excluding Relative pronoun in possessive function), and/or b) demonstrative (pronoun or adverb). We now consider pronouns and demonstratives in turn.

Exx. with pronoun are these:

(15.x) ya:-ni yigaj wu-gu-ru ana-n̲abi,
it is this indeed [as-for-]it bee sp.
wu-gu-ra:-'yun^{g} ana-mi̲n̲iguya
as-for-it bee sp.
'Here is [honey], /n̲abi/ [or] /mi̲n̲iguya/' (143.11.1-2)

(15.xi) mana-wa̲ngurag ma-gu-ru ma:='ran^{g}ga-n^{y}
bandicoot it it looked
'Bandicoot looked' (37.3.6)

(15.xii) wu-gu-rn^{g}i:-'yun^{g} win^{g}i=ya-n^{g}gi [verb rep. 3 times]
as for them[FDu] they went
juy! n^{g}a ba-gu, n^{g}ar-ubi-rn^{g}i
go[root form] and there those[FDu]
n^{g}ara-ma̲num-ba:
two women
'As for them, they went along and [stopped] there, those two women' (17.2.1-3, initial mention of women)

(15.xiii) ni-ga ya:-gi na-wujbi ni-ga:-'yun^{g}
it it is this female as for it
ya:-gi na-wa̲lya
it is this male
'Here is the female, and here is the male' (101.3.1-2)

(15.xiv) wu-gu-ru "n̲et" wirima=maya-na wa:-dhurabada,
they they call it white people
nu-ra:-'yun^{g} wara-wuru-wuruj "nan^{y}ja"
as for us Aboriginals net
'They call it "net," the white people, [but] we Aboriginals call it "nan^{y}ja".' (64.4.1-2)

These and many other exx. show that a) a Nominative pronoun or a Contrastive form with /-ayun^{g}/ (§6.3, §6.8) may be directly juxtaposed to a coreferential noun, as in (15.x) twice, (15.xi), and 'as for us' in (15.xiv), but b) the pronoun may also be separated from the coreferential noun as in (15.xii), twice in (15.xiii), and 'they' (whites) in (15.xiv). Moreover, when the pronoun is directly juxtaposed it may precede the noun as in most of the cases above, or may follow it as in (15.xi). The formal evidence is thus not very different from that for adjectival or Relative modifiers plus noun, discussed above, though overall the pronouns show somewhat more of a tendency to be tightly attached to the noun.

Another point which should be made here is that independent pronouns generally carry out specific discourse functions which set them off from nouns. Contrastive pronouns in /-ayun^{g}/ (§6.8), a common and important type, involve an explicit contrast with another referent, usually an NP of some kind in an adjoined clause. Even simple Nominative pronouns usually have at least an attenuated discourse function of this general type. This is an additional factor favouring an appositional analysis of the pronoun-noun combinations shown above. See also §17.6, below.

Probably the best case for an approximation to surface NP status is the combination of a demonstrative pronoun (DemPro) with a nuclear referential noun. There are quite a few exx. where a DemPro seems quite closely linked with a noun, though once again we can make no hard generalisations about relative ordering:

(15.xv) wu-gu-n̲i nu:-'bi-n̲i na-n^{g}anja̲l-yij
they[MDu] those[MDu] in-laws[Dyadic]
'those two (mutual) in-laws[WiMoBr and SiDaHu]' (76.1.3)

(15.xvi) na-lhambil̲bil̲g nu:-'ba-gi-yun^{g}
didjeridu [drone-pipe] that (66.1.5)

However, when DemPro and coreferential noun co-occur, it is entirely possible to separate them by pauses or other constituents, and numerous exx. like the following could be added:

(15.xvii) nu:-'ba-gi-yun^{g} ni:='maji-∅, na-wulmur-in^{y}un^{g}
that [MSg] he stole bachelor
'That one committed theft, the bachelor' (73.3.1)

The reason why DemPro seem more amenable to forming a tight surface unit with nouns than do personal pronouns is presumably that DemPro have their form and sense determined at the level of individual referents (i.e., "NP"s), while most independent personal pronouns have discourse functions which operate at "clause"-level or higher. Thus, DemPro are (semantically) appropriate as modifiers of specific nouns.

Moreover, in the case of DemPro there does seem to be a partial formal marking of status as prenominal modifier, in that Absolute suffix /-yun^{g}/ is dropped more often when the DemPro directly precedes a coreferential noun (with no pause or sharp intonational boundary) than when it is more autonomous (or postnominal). This is only a trend (§7.7), and unfortunately textual statistics might be misleading since /-yun^{g}/ is sometimes hard to hear in rapid speech (my transcriptions may have missed /-yun^{g}/ in some places, and may have falsely restored it elsewhere since informants helping with the transcription may have tended to give full, context-independent pronunciations of each word).

When coreferential pronoun, DemPro, and (referential) noun are all present, the most common sequence is (personal) pronoun, DemPro, noun, as in (15.xv), above. This again suggests a closer relationship between DemPro and noun than between pronoun and noun.

We now briefly mention possible multi-word NP units involving special forms of DemPros or pronouns. First, since the only specifically predicate-genitive forms are a type of personal pronoun (the unsuffixed Oblique form, §6.5), to say something like 'X is the man's' ('X belongs to the man') it is necessary to juxtapose the noun 'man' to a coreferential personal pronoun:

(15.xviii) ni-ga-wi an-uba-ni na-mun̲un^{y}ulu, ana-l̲agu
[is] his that[honey] (man's n.) honey
'That honey is Mun̲un^{y}ulu's' (17.1.2)

Another morphological form which can be combined with a noun is the special Type derivative of demonstratives (§7.25) meaning 'this kind', 'that kind':

(15.xix) yi:-jun^{y} mu:n^{g}
this kind hair
'hair like this [pointing]' (143.16.1)

However, the most significant combination for our purposes is the sequence of what is formally a demonstrative adverb (DemAdv) plus noun. By their very nature, adverbs like 'here', 'to here', or 'from here' would not be thought of as being potential modifiers

of a (referential) noun, forming a tightly-knit NP unit with the noun. However, DemAdv ironically seem to be closely connected with nouns in many textual passages, and the overall indication is that this sequence has as much right to be considered a surface NP as any other. Basically, what is happening here is that an expected nonzero case form of a DemPro ('at that X', 'to that X', 'from that X') is usually replaced by an appropriate DemAdv. Since the noun ('X') takes its own case suffix, the sequence is of the type 'to-there[DemAdv] to-X'. Exx.:

(15.xx) bu:::-gunu:-' warabara-guy
to there[Anaph] [place n.]-Allative
'that way to Warabarag' (143.12.4)

(15.xxi) yu:-guni a:-'la:di-wuy, a-trouble-wuy
to there[Dist] bad[thing]-Allative trouble-Allative
'to that bad [business], to [that] trouble'
(47.10.2)

Such DemAdv may also be used to accompany the use of Allative-Dative case for grammatical direct or indirect object, and/or the use of Ablative for grammatical subject (§4.22):

(15.xxii) n^{g}a:-'=gamaji-∅ n^{g}ara-wa:yin,
she stole from her Emu
yu:-guni yi:-gu̲dargu-wuy
to there[Dist] Brolga-Allative[-Dative]
'Emu stole [it] from that Brolga' (6.2.2-3)

It is probably erroneous to assume that such DemAdv are transformationally derived from "underlying" DemPro ('that', 'this') when modifying nouns in such spatial cases. Rather, this use of DemAdv seems to be consistent with the general tendency of Nunggubuyu speech to give spatial parameters to virtually all narrated events. But however we analyse this use of DemAdv, the sequences just illustrated are sufficiently recurrent to warrant recognition as NP-like units on the same order as sequences of DemPro and noun.

So much for arguments about NP-like units based primarily on surface juxtaposition and ordering. Obviously, another dimension of possible "NP" units is systematically shared affixation. In general, if we pay more attention to morphological concord than to surface position, we have somewhat stronger arguments in favour of recognition of NP as a valid unit.

With the exception of the DemAdv cases above (15.xx-xxii), the sequences we have illustrated in this section normally show concord between the various coreferential elements (noun, modifying NAdj, personal pronoun, DemPro). There is also, of course, concord between nuclear "NP" and pronominal prefix in verb (for details see Chapter 9, also §15.9, below).

If it is assumed that modifiers like DemPro and NAdj lack noun class and case in "underlying" forms, acquiring them by a concord rule from an adjoining noun (within a NP), and are subsequently optionally displaced from the noun by scrambling, then a two-level analysis with underlying NPs can be argued for. However, agreement in noun class (NC) and case is also typical of apposition

in various languages, and since there are at least some clear exx. of apposition in Nunggubuyu as in (15.iii-vi), above, we will need grammatical mechanisms anyway to handle affix duplication. Since the same mechanisms are formally capable of handling concord within NP-like units, like the use of MDu in the pronoun and DemPro of (15.xv), above, there is no compelling argument from NC or case concord ruling out appositional (or fuzzy-NP) analyses.

Indeed, one might be tempted to take the opposite tack, and suggest that a grammatically appropriate NC and/or case affix might not be repeated (obligatorily) in every word in a closely-knit NP. That is, we might look for a tendency to drop some affixes on, say, a DemPro which is juxtaposed to a coreferential noun--or perhaps keeping affixes on the DemPro but dropping them on the noun. If we can establish that case marking of DemPro (or other word) differs in an interesting way, depending on whether it is clearly autonomous or bound up in a larger NP, this would be possible evidence in favour of recognising NP as a syntactic category.

There might be something to this, notably with reference to DemPro, and one can cite some exx. like the following:

(15.xxiii) yi:-ba-gi yi:-n^{g}ala:ligi-ruj
that[Anaph] turtle-Locative
'at that turtle' (i.e., 'where the turtle was')
(14.10.2)

Additional exx. of this type and variations on it were mentioned in §7.4. The exx. generally involve omission of a case suffix in one of the two juxtaposed words, as with the omission of Locative suffix /-ruj/ in the DemPro here.

However, there are difficulties in interpreting what is going on here. In /yi:-ba-gi/ in this ex., the use of Punctual form of the (NA class) NC_{infl} prefix implies the covert presence of a spatial case category, rather than true zero (Nominative) case (§4.8). Thus we might call (15.xxiii) an ex. of partial case concord, as well as (full) NC concord. Unfortunately, this omission of nonzero case suffix which is hinted at by usage of Punctual form of NC_{infl} prefix is by no means limited to elements in multi-word NP-like structures; it happens also, rather frequently, to isolated individual words (nouns, DemPro, etc.), as noted in §4.8.

This is not the only problem in interpreting (15.xxiii). To begin with, some "case" suffixes turn out to have special, skewed meanings when added to DemPro (or DemAdv), see §7.18-20. Second, we have already mentioned that DemAdv rather than DemPro are often used as adjuncts to "coreferential" nouns in spatial (nonzero) case categories, as in (15.xx-xxii), above. There are thus specific factors applying to DemPro in such combinations which make it hard to interpret the dynamics behind dropping of case marker as in (15.xxiii).

Moreover, it is difficult to analyse combinations of personal pronoun plus noun in connection with omission of case marking, since some of the most important uses of such pronouns require or strongly favour usage of a non-case-marked pronoun form (regardless of case of coreferential NP); this is true of the important Contrastive form in /-ayun^{g}/ and often of the Nominative form (§6.3, §6.8).

As for dropping of NC_{infl} prefix with DemPro or personal pronoun when part of a multi-word NP-like unit, this is impossible with personal pronouns (which do not use NC_{infl} prefixes), and when it happens with DemPro it is usually a device for making the DemPro predicative (§7.3-4).

To top it off, dropping of case suffix is also possible in obviously appositional combinations:

(15.xxiv) mari ama-saltwater ama-lhan^{g}ada-waj
and [around] sea around [coastal] jungle
'and along the sea, along the coastal jungle,...'
(143.12.1, with Pergressive case, §4.23)

On the whole, then, concord patterns do not resolve the choice between NP and appositional analyses. However, there is one situation where a NP unit in a different sense may be motivated by concord data. This is conjunction of two or more NP-like units (each of which may be single-word or multi-word, or indeed covert) into a larger entity which may be cross-referenced (in the verb or by a DemPro or other modifier referring collectively) by a single NC category. We discuss this matter in our more general analysis of conjunction below, §15.7.

Another section, below, of possible relevance to the present issue is our discussion of "possession," actually a number of quite distinct constructions (§15.8). In addition to obvious combinations of possessed noun plus Relative noun or pronoun (in genitive function), we mention in that section a) kin terms with a partial indexing of "possessor" (propositus) via special prefixes, and b) terms for parts of named objects (plants, artefacts, etc.) which show whole-to-part harmony via use of derivational (inner) noun-class prefixes on the part terms. Such indexing mechanisms, and the possibility of juxtaposing the "possessor" (propositus; plant or artefact term), suggest a NP-like structure. However, even there we can argue for a kind of appositional structure, and in any event any conclusions about those limited types of "NP" based on their specific features would not help us with the more general analysis of "NP."

My general conclusion is that, while it is meaningful to group coreferential words together in some way, being associated in each "clause" with a particular grammatical relation (§15.9, below), these words commonly occur in surface structure either separated by pauses (or intonational breaks) or by intervening constituents. Personal pronouns may be juxtaposed to coreferential nouns, but have a rather different discourse status (as well as different morphology) in the most important constructions. DemPro and some types of DemAdv (the latter showing no noun-class concord) are more consistently bound closely to coreferential nouns, but ordering is not fixed and even demonstratives may be separated from coreferential nouns. Personal pronouns, demonstratives, "adjectives" (NAdj), and Relative modifiers (including genitive usage), may all occur independently as one-word units; when they do occur in the same "clause" as a (nuclear) noun, it is possible to regard the combinations as appositional rather than phrasal, but a fuzzy NP unit might be recognised in cases where the sequence is pronounced rapidly and

without pauses or intonational boundaries. Aside from a fairly restricted compounding pattern (§14.5) forming single stems, there are no lexicalised or idiomatic multi-word NP-like units.

15.3 Status of "VP."

Because of the flexible word order of the language, frequent pauses between component words in a "clause," and the comparative formal autonomy of words in general, it is difficult to imagine any reason for recognising verb phrase (VP) as a syntactic unit in the sense of a verb plus adjoined elements (NPs, etc.).

In English syntax, VP is ordinarily recognised as a major division of a clause, excluding the subject NP (but including objects and other constituents). However, in Nunggubuyu, there are no consistent distinctions between independent nouns (or "NPs") acting as grammatical subjects and those acting as direct objects--both regularly have zero (Nominative) case, show Continuous NC_{infl} prefix or omission of prefix, and have no systematic differences in word order. To be sure, subject and object are distinguished by concord in the verb (since transitive pronominal prefixes mark both subject and object categories), and there are optional formal differences in the nouns which can be invoked to clear up a referential ambiguity (§4.22), but overall we have no real evidence from surface patterning that a VP unit excluding the subject NP has any grammatical status in the language.

It is perhaps possible to argue, citing certain respects in which transitive subjects behave differently from intrans. subjects and direct objects (absolutives), that trans. subjects have a special status, being more peripheral from the clause nucleus. For example, trans. subject is generally not indexed by compound initials or Multiple derivational prefixes in the verb; see §15.9, below, for more on grammatical relations. But this argument would, at best, succeed in lumping trans. subject with other peripheral, non-nuclear grammatical relations like instrumental, and does not establish that trans. subject is uniquely outside the main body of the clause.

There is even less evidence that intrans. and trans. subject as a unit has such a unique, non-core status. We could mention that Contrastive personal pronouns (§6.8) in /-ayun^{g}/, which are usually clause-initial and are arguably outside of the nucleus of the clause (see also §17.6, below), are predominantly associated with intrans. or trans. subjects, but aside from exceptions involving other relations there is good reason to regard this as a special status of discourse-sensitive pronouns rather than of complete (subject) NPs, as pointed out again in §15.2, above.

While VP in the usual sense therefore seems even less well motivated than NP, we perhaps should mention that appositional verb sequences are not uncommon. One type of this is the sequence of a semantically "empty" verb ('to do' or 'to do thus') plus a normal verb:

(15.xxv) n^{g}i=yama:-' n^{g}i=yimun^{y}-gi:-'-ni
it did thus it sniffed
'It sniffed around (like this)' (143.13.6)

This sequence is repeated later in the same text (with different subject), see 143.16.3.

Repetitions of identical, synonymous, or nearly synonymous verbs are common in Nunggubuyu texts and serve a variety of functions. The type with verb /=yama-/ 'to do thus' plus descriptive verb is not unlike the "NP" sequence of a DemPro and a coreferential noun, since /=yama-/ is a kind of "deictic" verb semantically, taking a juxtaposed quotation or an accompanying gesture or onomatopoeia. Other types of verb sequence include a discourse pattern where a new event or activity (especially of motion or other intrinsically durative activity) is expressed by a foregrounded verb, often in Punctual aspect (for past tense), with one or more subsequent repetitions (often Continuous aspect and often with Reduplication to emphasise prolongation) serving as background for the following event. For this and other repetitions, see especially Chapter 17, below.

However, in none of these repetitions is there any formal subordination of any of the verbs, all of which must take the same complete morphological trappings (pronominal prefix and inflectional suffix at a minimum) as they have in isolation. Since an inflected verb is capable of serving as a one-word clause, a juxtaposition like (15.xxv) can be analysed as a sequence of two clauses which happens to be pronounced with no pauses or sharp intonational boundaries, a pattern which is also possible with longer strings with two or more verbs each having subject NPs and other constituents next to it.

Since there is also no special Gapping rule applying specifically to a VP-type unit (of any kind), I conclude that there is no formal syntactic evidence for VP, even a "fuzzy VP" like the "fuzzy NP" structure hesitantly recognised in §15.2, above.

15.4 Basic word order patterns within breath/intonation groups.

The question of even statistically dominant word order in "clauses" is quite difficult to analyse in this language. We have just seen that a "NP" may show up in the form of two or more surface words, separated from each other by pauses or other constituents (such as verbs), so that "subject" and/or "object" may show up in discontinuous form. As we will see in our textual analysis in Chapter 17 (see especially §17.7), breath/intonation groups typically do not correspond to syntactically "logical" clausal or phrasal divisions; often a noun or "NP" is uttered in isolation either as an introduction to a new episode unit (in which case the noun may or may not have a specific grammatical relation in an ensuing predication), or as an "afterthought" unit added to an already complete "clause" (with terminal intonation) for clarification or just as a filler.

In the present section we will disregard clearly set off preposed or postposed (afterthought) chunks and look at sequences of words pronounced more or less as a single breath/intonation unit (or string in the sense of Chapter 17), roughly corresponding to a sequence of words not broken up by commas in NMET. (This notion is not rigorously operationalisable since it is based on a combination of terminal intonation patterns and pauses, but is perhaps of some use anyway.)

We also, of course, will not discuss here morpheme-order within words. This matter is dealt with in the respective morphology chapters.

We begin by making observations about comparatively fixed ordering patterns involving specific forms, then gradually and cautiously expand to more general patterns.

One clear generalisation is that negative words precede words which they specifically negate. This applies to negative words /wa:='ri/ (literally 'it is absent') and particle /yagi/ (§15.6, cf. §8.1-2). The word specifically negated is normally an immediately following verb, whose form is also affected indirectly by the negation. /wa:='ri/ also sometimes focuses its negation on another word, such as a predicative NAdj or other noun, or even a noun functioning as constituent in a larger predication; in any event /wa:='ri/ regularly precedes the significantly negated item. This ordering rule does not necessarily apply to /=ari/ used predicatively in the sense 'be absent, not exist' (in which case the co-occurring word usually represents the topical subject), and cannot apply to the negative interjection /girjag!/ 'no!' which forms one-word "clauses" and cannot negate other words (§15.6). See below for an occasional inversion of /Neg Verb/ to /Verb Neg/ in repetitions for stylistic effect.

A second generalisation is that enclitic particles must follow another word (i.e., cannot occur as first word in a string). They usually, but not always, follow the first word in the string if this is semantically appropriate. Unfortunately, the only well-attested enclitic is /yamba/ 'because' (§12.15, see discussion of surface order there), so this second generalisation is not very general.

A third generalisation is that WH interrogatives regularly precede other words in the same (logical) "clause" (§13.3ff.). This applies to interrogatives like 'what?' and 'when?'. Interrogative particle /yu:ga/ (§13.1) may precede or follow the WH word.

The above generalisations are essentially rigorous (except for stylistic inversions in the first case). Other generalisations are possible but indicate predominant rather than rigorous patterns. Moreover, such "syntactic" ordering rules as we may be able to glean (as statistical patterns) may well turn out to be underlying discourse-based rules. Moreover, exceptions to the rules can be thought of as representing on-line production idiosyncracies reflecting the idiosyncratic Nunggubuyu management of "memory" (i.e., the tolerance of preposed and afterthought chunks and frequent usage of "whatchamacallit?" fillers, §13.10). Therefore a gross statistical display of, say, VSO vs. SVO and other ordering possibilities would have to be taken with salt and could well involve questionable coding procedures.

We consider instances where a verb (V) or nonverbal predicate (Pred) co-occurs in a string with S(ubject) and/or O(bject), the latter defined as "clause"-level direct object (usually but not always cross-referenced by pronominal prefix in the verb). As our input we consider Text 16 (presented as "Text A" in Chapter 17), along with Texts 143 and 161, all from NMET.

I count 12 exx. of [Pred S] where Pred is a (formally) predicative NAdj, a noun (Nc or NAdj) not in predicative form with pronominal

but functioning as predicate, an Emphatic pronoun (§6.9) in predicative function, or an unprefixed (predicative) demonstrative pronoun (§7.2, §7.4). I count only one ex. of [S Pred], and one flanking construction of the type [Pred S Pred]. Exx. are:

(15.xxvi) ara:-'mbalaman aba wu-ga:man
Mult-good now its[ANA] beehive
'Then the (inner) hive (honey/wax) was good'
(143.1.4) [Pred S]

(15.xxvii) ya:-ni yigaj ana-lhabara
[it-was-]this indeed coolamon
'The coolamon was here' (143.6.1-2) [Pred S]

(15.xxviii) wara-garamin^{y}anmin^{y}an ba:::-wi-ruj
honey bee sp. [it-was-]there-farther-on
'Honey bees (of this sp.) were beyond there'
(143.12.2) [S Pred]

(15.xxix) wu=ja:dug ana-mission-area wu=ja:dug
it was finished
'the mission was completed [built]'
(161.31.3-4) [Pred S Pred]

See also #112 and #139 in Text A (Chap. 17).

I generally interpret flanking structures as based on a primary sequence type XY with an extra X added. Thus (15.xxix) is an occasional expansion of the [Pred S] type seen in (15.xxvi-xxvii). The one counterex. in this small data base, (15.xxviii) with S preceding Pred, is perhaps not significant, since it is preceded by another honey bee sp. term, so the term beginning (15.xxviii) may be functioning in part as the final element in a list of spp. with the following predication then run into it as an expansion.

On the basis of these data, and informal analysis of the rest of the texts, I conclude that nonverbal predicates regularly precede subjects if the two co-occur in the same string, but that some exceptions occur. The probable discourse motivation for this is that such predicates present "new information" and are therefore highlighted, while subjects in such constructions are normally at least partially presupposed by the general context. If we suggest that initial position in this language correlates with highlighting, we can combine our result for nonverbal predicates with the earlier observation that WH interrogatives are initial, since WH interrogatives (whether formally predicative, see §13.8, or just arguments in a larger proposition) are inherently highlighted.

We now consider relative order of V and O when co-occurring in a single string (not separated by pauses). We omit WH interrogative object. In order to give a fuller idea of the type of exx. we will show all exx. from the three texts considered, in simplified "English" representations preserving Nunggubuyu order (hyphenated strings represent single Nunggubuyu words). Adjacent strings are shown in some cases. The underlined segment is the O.

a) OV order:

Text A, #114: ...he-fished, huge-ones now he-fished
he-hooked-them,...

Text A, #187: they-searched-for-him, islands[Collective]
they-did-to-them[islands]...
Text A, #228: this now they-sent-to-us [it-is-]this monster.
143.6.3: honey[sp.] [into-]basket we-put-it.
143.13.1: if-we-go boat we-will-see-it.
143.16.1: and this-kind-of-thing hair we-cut-it.
161.1.2-3: we-who-sat people mine I-held-them.
161.3.2-3: suddenly fight[noun] now there we-reached-it
(i.e., we got into fight)
161.3.5: we-ate-it, dugong we-ate-it.
161.5.1-2: I-went-down canoe-seat I-chopped-it[-out].
161.7.2: they-paddled, rifle he-aimed-it.
161.12.4: bishop he-arrived, bishop I-grabbed-him.
161.16.2: this this [and] this I-transported-it.
161.19.3-4: how-much? indeed load we-went we-took-it.
(i.e., we took a tremendous load)
161.20.3-4: then whatchamacallit [the-]Rana--oops! [I mean]
[the-]Cora I-awaited-it. (names of boats)
161.22.4: as-for-it residential-area I-located-it [it-is-]this.
(with Contrastive pronoun, §6.8)
161.26.1-2: nothing, strong[equipment] not they-sent-it.
(i.e., they didn't send us heavy machinery)
161.26.3-4: we-completed-it, stone[structure] we-completed-it.
161.26.4: timber we-completed-it. (parallel to preceding)
161.29.1-2: now big[-one] we-made-it here, engine now mill.

b) VO order:
Text A, #5: he-kept-killing-them crabs.
143.5.3-4: and we-put-it-down, now we-peeled-it its-shell,
its-shell, its-cement, we-peeled-it...
143.13.5-6: it[wasp]-smelled it now honey.
143.14.1-2: [it-is-]that that-one it[wasp-]smelled-its-liquid
honey. ('honey' also referent of demonstratives)
143.15.3-4: they[dogs]-got-lots fat-one that big-ones...
143.15.6: now we-gave-them[dogs] its-liquid we-got-liquid.
161.3.6: [at-]Wurindi, we-ate-it game[animals] all-sorts.
161.17.1: I-got-them[people]-ready now I-got-them
whatchamacallit?, children.
161.21.1: now I-got-it ration, I-got-it...
161.27.1-2: it-arrived Cora[boat], here it-unloaded-it load.
161.35.3: I [it-is-]this only-Nunggubuyu I-transported-it
mine story[words] Nunggubuyu I-spoke.
(i.e., 'I have spoken this in Nunggubuyu')

c) flanking OVO:
143.3.5-6: like this, big-ones we-got-lots honey.
161.22.2-3: now whatchamacallit? this now I-marked-it this.
161.31.2-3: this only they-finished-it this...

d) flanking VOV:
161.31.4: we-completed-it this we-completed-it.

Overall, these data suggest a marginal preference for OV over VO, but there are interpretative problems in several of the exx. (i.e., associating a noun as O of a particular V when alternative construals are possible), and even if we have correctly represented all of the exx. it may be that non-syntactic factors are at work.

With respect to on-line "memory" factors, note in particular that 'whatchamacallit?' representing O is postposed to the verb in (161.17.1), with correct noun following after a pause; this is the regular pattern in the texts for 'whatchamacallit?' constructions. By extrapolation, we may suspect that even when there is no 'whatchamacallit?' substitute, postposing of O may reflect a kind of secondary status. Although we will use the term "afterthought" to refer to added chunks following a clear pause or intonational boundary (§17.7), some cases of VO order seem to have approximately similar bases. Note also that some cases of VO order involve O nouns which are virtually redundant, as in 'we-peeled-it its-shell', 'it-smelled-its-liquid honey' (word glossed 'liquid' refers usually to honey or similar thick, viscous liquid), 'they-got-lots fat-one', 'it-unloaded-it load'. By contrast, OV word order correlates at least roughly with nonredundant, new, focal elements.

Difficulties in assigning OV vs. VO labels can be seen in such exx. as '...he-fished, huge-ones now he-fished he-hooked-them', where we assign OV order on the basis of ordering within a breath/intonational group (so that we disregard the segment before the comma). Of course, in a sense the string after the comma is just an expanded repetition of the material before the comma; since the O is "new" while the (repeated) verb is not, it is not surprising that the O precedes the (repeated) verb.

In 161.22.4 in the OV list, 'as-for-it' is an ex. of a Contrastive pronoun (§6.8). It is usual for such elements to occur prior to verbs with which they are associated, except that they may occur postposed to verbs (especially) when anticipating a contrast with a noun in a following clause.

Although we cannot account for local choices of OV and VO order in any mechanical fashion, we may conclude that both orders are reasonable common, and there is a tendency for OV to be associated with new, focussed O while VO is perhaps a bit less common and is associated with more redundant O; low-level "memory" problems also favour VO, especially when 'whatchamacallit?' word is present.

We now consider order of subject vs. verb, VS as opposed to SV. Preliminary analysis of exx. in the three texts in question shows no reliable differences between trans. and intrans. subject with regard to ordering, so we combine them here.

a) SV order:
Text A, #245: wife her-belly-burst.
Text A, #246: and as-for-her wife other her-belly-burst.
(with Contrastive pronoun, §6.8)
Text A, #248: as-for-him they-kept-listening and and
he-burst, his-belly-burst.
143.2.5: they-saw-it there, as-for-them[others] there
they-saw-it.
143.10.4: we-will-go truck it[truck]-will-proceed.
143.11.4-5: I-saw-it, that-one, we we-got-lots.
161.6.1: he Wurajuju's-father they[MDu]-quarreled-together.
(i.e., W's father and someone else quarreled)
161.8.1 (two): and and he coming-here "hoy!" he-said-thus
as-for-me "hoy!" I-said-thus...

161.12.3: I-spoke, bishop he-arrived.
161.12.5: I-spoke, Mr.-Montgomery he-arrived.
161.14.2-3: now mission this it-would-have-sat [at-]Dharari.
161.14.5: now it word[s] it-was-waiting-for-me.
161.16.4-5: "...", Chris she-said-thus.
161.24.1: he now Dick-Harris we[ExPl]-met-together here.
(i.e., I and D.H. met)
161.27.3: [at-]Wumajbar sawmill it-sat.
161.35.1-2: Muji:ji[man's n.] and in-English he-will-tell he-will-tell-him.
161.35.2-3: he-will-tell-him I it-is-this Nunggubuyu-only I-took-it.
('it-is-this' possibly appositional to 'I')
161.35.4-5: as-for-him in-English Muji:ji it-is-he![Emph] he-will-take-it.
(i.e., he will translate it into English)

VS order:
Text A, #159: he-farted suddenly they[flies]-swarmed they-smelled-his-excrement flies.
Text A, #250: he-jumped-out that-one [the-one-]whom-he-ate.
143.3.2: it-filled[Refl] billycan, and coolamon.
143.16.3: it-sniffed dog.
161.5.4-5: he-wanted-you Dick-Harris.
161.20.4-5: it[Cora, a boat]-arrived [with-]load Cora.
161.27.1: now it-arrived Cora.
161.28.1 now there he-arrived whatchamacallit?, Mr.-Hughes.
161.28.2: he-arrived now there Mr.-Hughes, he-reached-us
161.31.1: in-the-bush they-who-sat people.
(i.e., the people who were staying in the bushland)
161.33.4-5: it-arrived sickness.

flanking SVS:
Text A, #171: as-for-them place-n. they-sat babies and wives.
161.12.1-2: mission of-Numbulwar it-stands this.
161.26.2-3: and this it-arrived this-kind-of-thing.
161.33.2-3: then big it-would-have-been this whatchama-callit?, house[s]
161.34.4: Balamumu[tribe] they-arrived big[group].

These data suggest that no particularly strong difference exists between order of S and order of O vis-à-vis verbs; there seems to be a moderate preponderance of noun-before-verb (OV, SV) ordering but the reverse is fairly common and flanking is not unusual.

As with O, 'whatchamacallit?' S is normally postposed, as in 161.28.1 in the VS list. Aside from this, it is difficult to make useful generalisations about the nature of SV vs. VS, especially since semantically similar exx. with 'to arrive' occur in both lists. We can say that Contrastive pronouns ('as-for-X', as in five of the exx. above) are normally initial, and this is a more significant fact for subject than for object since Contrastive pronouns are most often (though not rigorously) associated with intrans. or trans. subject (§6.8). Note also 'as-for-them' before verb in the first flanking SVS ex., with the rest of the "NP" after the verb. Indeed, some of the SV exx. aside from those with explicit Contrastive pronoun seem to involve at least some degree

of implied contrast between the preverbal noun and a referent in an adjoining parallel clause; thus the three Text A SV exx. form a series with contrasting subjects (and the same verb), with the second and third showing Contrastive pronouns; the first (#245) lacks Contrastive pronoun but presumably was influenced by the anticipation of the following parallel clauses. The double ex. 161.8.1 is of the same type, and in 143.11.4-5 we observe a shift from 1Sg to the broader 1InPl (this type of "sloppy" coreference is elsewhere sometimes expressed by Contrastive pronoun). Likewise, the (Nominative) pronoun 'I' in 161.35.2-3 is an anticipatory parallel to the explicitly Contrastive 'as-for-him' in 161.35.4-5 (all of these are in the SV list, above).

Therefore, while the overall statistics for S and O may show roughly similar preferences for noun-first order, the precise conditioning factors may be a little different for the two, with S-first order being associated mainly with (strong or weak) contrasts among semantically parallel "NPs" in adjoining clauses (the "NPs" having a vaguely "topical" status within their respective clauses, see §17.6), while O-first order may be associated with focal status within the predication itself.

It is difficult to determine normal word order when S, O, and V are all simultaneously present, since this is uncommon within a single breath/intonational unit. Indeed, S is more often omitted (in transitives) or at least separated off by a pause or intonation boundary than is O; note that our list of exx. involving S is slightly shorter than our list for O, and the former list includes numerous intransitives; thus more transitive verbs show up with adjoining O than with adjoining S (as independent nouns).

Incidentally, 161.6.1 and 161.24.1 in the SV list above have singular noun with a plural-subject pronominal prefix in the verb; this is explained in our section on conjunction, §15.7, below.

My general conclusion about ordering of S and O is that there are no fixed patterns. Allowing for the fact that "memory" organisation (tolerance for afterthoughts, etc.) is a frequent interfering factor, we can say broadly that preverbal position (with or without intervening constituents) is common for S and O, favoured by contrastive status (across clauses) or focal status (within clause), but that postverbal position is only slightly less common. It is primarily the morphology, notably the marking of noun class of subject (and object) in verbal pronominal prefixes, which expresses grammatical relations, so that word order is mainly controlled by low-level discourse and "psycholinguistic" production factors, and that in a rather flexible way; independent nouns are, moreover, often omitted since the pronominal prefixes often suffice to ensure referential clarity in contexts.

Without presenting statistics, we may say that, on the whole, Allative-Dative and other case categories expressed by (normally) nonzero case suffixes are postposed to verbs but may precede them. Preverbal position is perhaps a little more common with demonstrative adverbs (Allative, etc.) and with other adverbial nouns with orientative meaning such as 'today'.

Some particles occur frequently at the beginning of the discourse chunks with which they are logically associated. We show below,

§17.9, how such particles as /adaba/ 'now', /mari/ 'and', and /araga/ 'suddenly' normally precede the chunks they modify, and how /n^{g}a/ 'and' occurs either at the end of the first or at the beginning of the second of two closely linked strings.

For order of elements within multi-word "NPs", see §15.2, above. Although the prevailing structure is (arguably) appositional rather than phrasal, so that the individual words can occur independently of each other and do not have fixed ordering when they co-occur, we saw in that section that Contrastive and some other pronouns usually precede a coreferential noun, and demonstrative pronouns more often precede than follow a coreferential noun.

The question of stylistic inversion of word order from one string to a repetition thereof is our final topic in this section. Because the basic word order is so flexible anyway, identifying instances of inversion as stylistically motivated is problematic even when we do have variant order in a repetition.

In general, we do not seem to get stylistic inversion in those repetitions which indicate real repetition (or continuation) of an action described by the first string. We will see in our analysis of Text A in Chapter 17 a number of narrative sequences of exactly identical strings.

On the other hand, inversion does seem to be a possibility when the repetition is not an expression of actual repeating. We can see this best in occasional exx. involving a negative word like /wa:='ri/, where the obligatory preverbal position is reversed in repetitions:

(15.xxx) wa:='ri n^{g}anu=na-ni, n^{g}anu=na-ni wa:=ri
not I saw him I saw him not
'I didn't see him, I didn't see him' (5.15.4-5)

There are not too many exx. exactly like this in the texts, but I noticed this pattern in unrecorded materials as well and regard this ex. as representative of a real type of inversion. It is likely that occasional textual exx. involving elements other than a negative word can be accounted for by similar deliberate variation in order of constituents, but since such inversion does not apply to enclitic particles and probably cannot apply to WH interrogatives, the exx. involving words other than a negative word will be exx. with a verb and adjoining nouns or pronouns, which therefore have a somewhat indeterminate ordering pattern anyway.

15.5 Status of "clause"; double-predicate constructions.

Like "NP," the syntactic unit "clause" has a fundamentally problematic status in this language. We will not always bother to put quotation marks around it, but readers should understand that it may not be a well-defined syntactic unit. We discuss a number of types of "subordinated" clauses in Chapter 16 (Relative, Purposive, and several of roughly gerundial status), none of which is sharply reduced formally and which therefore all have many characteristics of independent main clauses. In those constructions we can usually argue for having clearcut clausal boundaries in principle, since nouns and adverbs may be logically linked only to one or another of the main predicative nuclei (main vs. subordinated verb), though

even in those constructions there may be some nouns, for example, which have ambiguous (or ambivalent) clause assignment. Much the same point can be made about conditional constructions (§16.7).

In the present section we are concerned mainly about identifying clause boundaries in the more usual sequences of expressions which lack formal subordination markers. Since subordination in the strict sense has low text frequency (only conditionals and Relative clauses have respectable numbers of occurrences in our texts), the problems raised in the present section apply to most Nunggubuyu speech.

There are really two problems arising from the identification of clause boundaries: a) identifying clause nuclei (hence also the number of clauses in a given stretch of speech); and b) assigning peripheral constituents, mainly nouns and pronouns, to particular clauses.

Since it is improper to equate clause nucleus solely with a particular word class (i.e., verbs), our first task is to enumerate types of words which can serve as predicative nuclei. It turns out that while inflected verbs are prototypical nuclei in this sense, other types of words can also function in this way in simple sequences which have every appearance of corresponding to clauses in more familiar languages. In the following exx. we show a verb, an unprefixed (predicative) demonstrative pronoun (§7.2, §7.4), an Emphatic personal pronoun (§6.9), a formally predicative NAdj with intransitive pronominal prefix (§4.2), another NAdj functioning predicatively but without this formal change, and finally a common noun (Nc, §4.2) as predicative nuclei:

(15.xxxi) wu-gu-ra:-'yun^{g} wa:-nun^{g}gu-nun^{g}-garagu adaba
as for them uncircumcised boys now
ba-gu-wugij wuru=buri-Ø
there[Anaph]-still they-sat
'For their part, the young boys stayed there'
(55.7.1) [verb]

(15.xxxii) ba-ma:-'la mana-n^{g}ugu
[it-is-]that-Centripetal flood
'The floodwaters [were] coming there' (cf. §7.5)
(21.4.5) [predicative DemPro]

(15.xxxiii) n^{g}aya-waj ana:-'-ni
I[Emph] this[ANA]
'It's me!' (5.6.2) [Emph pronoun]

(15.xxxiv) na-lhambilbilg ni=dhamungur
didjeridu(drone-pipe) it is short
'The didjeridu is short' (66.2.3) [predic. NAdj]

(15.xxxv) wurugurij nu:-'ba-gi-yun^{g} na-ni-dhud
slow[soft] that[Anaph] its force[noise]
'That sound [of didjeridu] is soft'
(66.1.6) [ordinary NAdj]

(15.xxxvi) yu:ga anan^{y}
yes/no? yamstick
'Is [that] a yamstick?' (13.29.1) [Nc]

Other words which can function as predicates are unsuffixed Oblique pronouns (used as predicate genitives, §6.5, §15.8, with optional adjoining coreferential noun, see §15.2, ex. 15.xviii), and WH interrogatives including (in principle) all simple interrogative-demonstratives (§13.8) and some others (like 'who?' in 'Who is that?', §13.3).

All of these items are predicative in the sense that they can be used in meaningful propositions which are "about" some referent, with no obvious ellipsis of some other predicative constituent (i.e., an underlying verb which gets dropped). The exx. given above are perfectly ordinary Nunggubuyu constructions (without the addition of another verb), and in some cases there is no verb which can be added without changing the meaning. There is, for example, no copula (verb) which can be used in such exx., though one could add a harmless verb like 'to sit' (meaning also 'to stay', 'to be [in a place]') without drastically affecting the sense.

When we move away from simple, isolated expressions like these to running text, we find that serious problems emerge in our identification of predicative nuclei. To begin with, there is no reliable connection between breath/intonation units of any kind and individual predications. As will become clear in Chapter 17, where we analyse a text (Text A), strings (breath/intonational units) usually do not correspond to intuitive "clause" units; an intuitive clause may show up as two or three strings, but some strings contain two or more verbs or other predicative nuclei. These are not merely occasional divergences of strings from clauses, rather they are a persistent, regular pattern.

In applying the notion of predicative nucleus (hence clause) to such discourse, we can only fall back on an essentially intuitive analysis, taking the various predicative nuclei as shown above as potential nuclei in their textual occurrences and playing each ex. by ear. In addition, such words as predicative NAdj (with intrans. pronominal prefix) and predicative (unprefixed) DemPro are recognised as predicative nuclei on formal grounds even when (to an English speaker) this violates the intuitive construal. It should be frankly recognised that there is a circular element in any procedure for identifying predicative nuclei, and that this notion (and hence that of clause) may thus be an intrinsically "fuzzy" one.

In analysing specific textual fragments, we notice in particular the frequent occurrence of two (arguable) predicative nuclei in a Nunggubuyu combination which would come out in English as a single clause. We call this the double-predicate construction, without necessarily committing ourselves thereby to any particular analysis (e.g., as ultimately one or two syntactic units), and without sharply distinguishing it from juxtapositions of clauses. The most typical subtype is that containing both a verb (or perhaps predicative NAdj) and an unprefixed (predicative) DemPro:

(15.xxxvii) ya:-ni nuga wu=jalalaga-na
[it-is-]this stone it juts out
'This stone is jutting out; Here is a stone jutting out' (41.14.1)

(15.xxxviii) n^gunu=ragu-ni, n^ga da-gi
she looked for him and [he-was-]that[Imm]
n^gunu-mun=na-n^y
she saw his foot
'She was looking for him, then she saw his foot there' (17.8.1-2)

(15.xxxix) da-ni miniguya n^ga=na-n^y
[it-was-]that[Imm] honey bee sp. I saw it
'I [just] saw some honey bees there' (143.1.2-3)

Such exx. can be multiplied. They show a general tendency in Nunggubuyu to make use of predicative (unprefixed) DemPro rather than (nonpredicative) DemAdv, especially when the deictic category is (still) valid in the here-and-now of the speech event (as in the last ex. above, despite past tense in the verb), or when the deictic category is from the perspective of a protagonist within the narrative, as in (15.xxxviii). The DemPro must have a valid referent, and is therefore not used in negative counterparts of such exx. (which would have Locative DemAdv, §7.12). For narrative perspective see §7.26. Semantic restrictions are discussed §7.12.

As in the exx. shown, the DemPro in this construction most often precedes the inflected verb. One can thus consider the exx. to have begun with a simple predication of location, with a following (often clarificatory) extension centred on the inflected verb. The location and sense of the DemPro seems to be about the same as in simple deictic predications, as in (15.xxxii), above, and there does not seem to be any reason not to consider the DemPro in the last three exx. above to be predicative to the same extent.

In addition to DemPro (which are vulnerable to the objection that they have no verb-like inflection), there are similar double-predicate constructions involving adjectival nouns (NAdj). Again, often a single English clause corresponds to a Nunggubuyu sequence with two predicative nuclei (an inflected verb and a predicative NAdj with intrans. pronominal prefix):

(15.xl) ni-bu=buri-Ø, ni=wiriwiri-wugij
he was sitting he-[was-]alone-still
'He remained (there) alone' (29.1.3, cf. 163.14.3)

(15.xli) gudugudu wiri:='ru-n^y wu=wurag
burial ground they left it it-[was-]left-alone
'They left the burial ground alone' (50.4.5-6)

This type of construction is highly typical of certain NAdj, notably those meaning 'fast', 'slow', 'alone', and 'left alone'; in some contexts we can also get it with 'proper[ly]' and some others. Again, this use of the predicative NAdj requires that it be true as an independent proposition; thus, negation of the overall proposition ('He did not go there fast[NAdj]', etc.) would require replacement of the predicative NAdj form by a nonpredicative form without pronominal concord (ANA class forms are used with no referential meaning in this context), see §4.2, §4.3, §15.6[end].

Our exx. with DemPro or NAdj as second predicates (along with an inflected verb) are difficult to interpret in any other way, since both word classes show special forms characteristic of

predicative use and since truth conditions apply to them (as well as to the inflected verb). This leads inexorably to the uncomfortable suggestion that nouns and pronouns, which lack special predicative forms, may be "predicative" in some sense in many textual occurrences (e.g., when focused in some way), even when cross-referenced in a neighbouring verb. The lack of special case marking for subjects and (usually) for objects means that nouns/pronouns in these grammatical categories cannot be reliably distinguished on formal grounds from clearly predicative forms, as in (15.xxxiii) and (15.xxxvi), above. In view of the fragmented, chunky structure of much Nunggubuyu discourse (with pauses inserted more or less at will), and in view of the occurrence of nouns as isolation forms with no obvious grammatical relation in any nearby verbal predication (§15.9, below), we may have to recognise a certain tendency toward autonomous status for nouns (other than those marked for nonzero case category), making rigorous identification of predicative instances treacherous.

We should also mention briefly the possibility that some sequences of two inflected verbs might be thought of as a close-knit combination or even as a syntactic unit. We mentioned in §15.3, above (cf. 15.xxv), that close-knit sequences of essentially appositional verbs are not uncommon (e.g., 'it-did-thus it-sniffed' meaning 'it sniffed around like this'). It is reasonable to consider these to be double-predicate constructions on the same order as those involving a verb and a different predicative element in the previous exx.

The status of specifically subordinated clauses is dealt with in the appropriate sections of Chapter 16. There is, however, one other syntactic test which could potentially be used to identify clause boundaries. This is due to the fact that negative words /wa:='ri/ and /yagi/ (§8.1-2) define a domain ("negative context") within which each noun (including NAdj and NAdv) and verb (or predicative NAdj) must have certain inflectional features. We can thus determine the domain (scope) of the negation by examining the morphological possibilities for nouns and verbs. As we will see in our discussion below (§15.6), this test does not permit us to salvage the notion of "clause" as a rigorous syntactic unit; instead, the scope of a single negative word turns out to be variable, ranging from a single constituent to a sequence containing two or three inflected verbs. (However, the syntax of negation is consistent with the view that at least subordinated clauses are separable from the respective main clauses.)

Having discussed the question of how to identify predicative nuclei, and the use of negation to identify a type of syntactic unit (which in some cases coincides with our intuitions about clauses), let us conclude this section by discussing difficulties in assigning "loose" nouns (and other referential words) to predications even when we think we know what the predicative nuclei are.

Using schematic "English" transpositions (preserving Nunggubuyu word order, with hyphenated strings corresponding to single Nunggubuyu words), consider the syntactic status of the underlined noun, pronoun, or DemPro in the following:

clause-boundary problems:

a) it-did-thus it smoke it-went. (132.3.1)
b) now they-pounded-it now they-soaked-it that[Anaph] lily [-root] they-soaked-it. (133.2.1-2)
c) we-soaked-it[cypress shavings], now we-doused-ourselves, that[Imm] cypress, true-medicine. (134.1.2-3)
('cypress' can also mean 'liquid medicine made from cypress shavings', so underlined NP could be covert direct object of 'doused'/'poured', or subject of following '[it-was-]true-medicine')
d) now they-hit-each-other fight[noun]. (6.3.1)
e) it[fly]-ran[-up], fly, he-smashed-it. (8.2.2-3)
f) they-went this-way they-went now country and they-made-it country. (9.5.1-2)

In general, these exx. are problematic either because there is no obvious verb which they function as an argument of, as in (d), or because there are two neighbouring verbs and we cannot easily tell to which of them they[nouns/pronouns] belong. In the latter situation we usually have no real problem of construal, since the noun/pronoun designates a referent who does play grammatical roles in both predications; the only problem is assigning surface "clause" boundaries, and this is more of a problem for the analyst than for speakers and addressees. Even in cases like (d) with a loose noun which does not play a grammatical role in a verb-based predication, there is usually no real construal problem for reasons to be dealt with in our section on grammatical relations, §15.9, below.

15.6 Negation, "negative context," and aspectual skewing.

The basic negative elements are these:

a) /girjag!/, negative particle acting as one-word unit;
b) /yagi/, particle negating overt or covert proposition with potential meaning (including Future, Past Potential, and Evitative; note that imperative is subsumed under Future);
c) /=ari/, requiring intrans. pronominal prefix, predicative NAdj negating existence or presence (in a place);
d) /wa:='ri/, formally (c) with dummy ANA class prefix, the most general negative word, negating a nonverbal constituent or an overt or covert proposition with active (nonpotential) meaning (including Past Actual and Present).

Of these, /girjag!/ is syntactically the simplest, since it does not negate a specific clause or other phrase in the fashion of /yagi/ or /wa:='ri/, and it does not permit a subject NP, as with /=ari/. Of course, semantically /girjag!/ must negate something, but what it negates is generally a preceding statement by another speaker, or an expectation, hope, or goal implied by the narrative context. More specific subtypes are: negative answer to question 11.5.1/2, 12.4.4, 12.5.4; refusal to obey imperative 14.17.4; rejection of suggested action 13.25.1/2, 161.13.2/3, possibly 18.18.4; contradiction/challenge to addressee's claim 4.2.5, 5.9.1, 13.37.1, 143.12.7; reaffirmation after addressee's challenge (like French

si!) 5.9.2; failure of attempt or absence of favourable outcome 7.2.1 ('they-uprooted-sedges, and no! she she-wanted-more-food', i.e., didn't get enough sedge-root food), 13.40.3 ('they-pulled-selves-out and no!'), 16.2.2/5/7/9 and passim in Text 16 ('he-fished and no!, [fish-was-]little'), 40.16.3 ('they-came-behind and no!, they-gave-up [search]'), 43.16.4 ('it-killed-him, no!'), 95.9.3/4 ('it[kangaroo]-ran and no!, fire', i.e., kangaroo could not escape because it was ringed with fires), 163.1.5 ('we-pulled-it and no!'); absence (or delay) of expected event 43.7.1 ('fly-fly-fly-fly![verbal root forms] and no!, further-on...', i.e., went further instead of stopping), 69.5.1 ('and later no! he-held-spear-ready', i.e., he did not throw it just yet), 70.2.2 ('they-fought no!, not[/wa:='ri/] they-were-hit', i.e., the spears missed). There is one apparent ex. of prohibition of criminal act in progress (36.5.2), but such prohibitions are usually expressed by /yagi/ instead, even when reduced to a single word.

In the 'failure-of-attempt' instances, note that there is usually a preceding verb indicating the (intended/attempted) action, with no indication until /girjag!/ (glossed 'no!' above) that the effort failed. There is often another expression following /girjag!/ in this construction, clarifying why the action failed or the outcome was unsuccessful; note that this clarifying predication is not negated unless another negative word is present in it. Another way to translate the failure-of-attempt constructions is with 'could not' or 'cannot' (hence 'it could not kill him' as an alternative to 'it tried to kill him [and failed]'). The construction shown is perhaps the most usual way to translate English 'try' and 'cannot', in the absence of a verb meaning 'to try' and in the absence of a modal element (verb or other word-type) for ability/possibility. However, to indicate a 'just-missed' kind of failure (i.e., 'it could not quite kill him'), it is also possible to use other constructions involving Past Potential verb (§8.6) and/or particle /yin^{g}ga/ (§12.7). For 'cannot' see also /yagi/, below.

In some of the above-cited cases, /girjag!/ occurs in repetitious strings /girjag! girjag! girjag!/ or the like.

We now consider /yagi/, which negates potential predications (including future, imperative, etc.). For Past Potential Negative the verb has B-series pronominal prefixes and $Past_2$ inflectional suffix (Chapter 8), a form which is also used for Past Potential Positive when /yagi/ is not present. For Future Negative (including prohibitive) the verb has $Nonpast_3$ inflectional suffix and A-series pronominal prefix. In the rare Evitative Negative the verb is the Evitative suffixal form (with the option of using $Nonpast_3$) with A-series pronominal prefix (Chapter 8).

The overwhelming majority of textual occurrences of /yagi/ are with Future Negative form and meaning. We may categorise them roughly into subgroups, based on English gloss, but the subgroups are not formally distinct and are merely different contextual shadings on the same pattern: prohibition (2nd person subject) 7.14.1/2, 11.7.1/2, 12.6.1, 13.14.1, 13.35.1, 15.11.2 (verb omitted), 17.9.6, 25.5.2, 40.1.6-7, 69.3.3, 71.13.4/5, 71.14.2-4 (with pronominal prefix shortened from /nunu-/ to /nu-/, irregularly); prohibition (3rd person subject) 47.9.5-6 (using 3MSg as polite substitute for

second person, i.e., the linguist), 171.1.3 (asking addressee to convey prohibition to other person); negative suggestion 20.19.3 (if the sense is approximately 'let's not go there'); negation of morally/legally improper behaviour ('mustn't') 54.1.6, 54.4.1-2 57.4.4, 67.2.2-3, 68.4.6, 68.5.3, 75.1.3 (three), 75.2.2, 76.1.4, 76.2.2/8, 77.1.3, 77.2.1/2/5, 83.1.2/3 (three), 84.1.5, 85.1.1/4/7, 88.3.1/2/3 (note that most of these exx. are in a sequence of short texts about customary kinship-based behaviour); inability (usually translated as English cannot with present[!] tense) 20.7.3, 20.8.5, 42.6.4 (all involving sense 'cannot see'); negative intention (1st person) or prediction (any person) 17.13.4 ('I won't spear you'), 28.13.4 (1Sg), 62.5.2 (1Sg), 90.2.7 ('He will not [be forced to] go to jail', perhaps in moral/legal sense but if so not focusing on subject's responsibility, rather on unnamed coercing agents), 164.2.4 ('we[ExMDu] might not return' with particle /ari/ 'maybe', §12.11), 164.3.3 (1ExMDu), 165.1.7 (3Pl, prediction).

Past Potential Negative is uncommon in the texts. It occurs in 120.6.1-3, and there is a good ex. from Hughes in TNT 27. Past Potential Negative is used in negating either clause in a counterfactual condition, see discussion §16.7. The ex. in TNT 27 is as follows in my transcription:

(15.xlii)
yagi-maga: bamba:-'=bi-ni bamba:-'=ga:ru:-'
neg- you-hit-[it-]for-them you left them
'You shouldn't have hit them, you should have left them [alone]' (TNT 27)

Both verbs are in the same form (Past Potential), but /yagi-/ negates only the first, so that the second verb is positive (but still potential) and represents the antithesis of the prohibition. Postposition /-maga:/ is common with such contexts; see §12.21.

There are also some special uses of the "Future Negative" form with /yagi/ which are best dealt with in other sections; for negative purposive clause see 89.2.3 and discussion §16.5, for negated clauses in hypothetical (as opposed to counterfactual) conditionals see ex. in 62.1.2/3 and discussion §16.7, and for gerundial 'while not VERB-ing' in sense 'before VERB' see ex. 47.19.3 and discussion §16.6.

Most textual exx. of /wa:='ri/ have a co-occurring inflected verb, the overall construction being Past (Actual) Negative or Present Negative (Chapter 8). The Past Negatives in NMET are 3.2.5, 5.15.4/5, 7.6.2/3, 14.18.3, 15.11.2, 17.13.5, 19.9.2, 21.10.2, 28.10.4, 41.7.3/4, 47.1.5, 47.4.5/6, 47.5.4 (two), 47.6.2/3, 47.7.3/4 (three), 47.9.1, 47.11.2/3, 47.13.2, 47.17.6, 47.22.3/7, 51.1.3, 69.5.7, 69.14.1/3, 70.10.2, 71.6.3, 73.4.1, 73.6.1 (if transcription correct), 100.4.1 (two), 113.3.3, 113.7.2, 117.1.2, 117.6.5, 119.4.4, 120.3.2, 120.5.1/3/4, 157.15.1, 161.5.2, 161.26.1, 162.17.1, 162.18.4, 162.24.6, 163.2.2/3, 166.10.2/4, 166.22.2 (two), 167.1.2, 170.1.1. There is, in addition, an intriguing example of Past (Actual) Negative where one might have expected a Past Potential Negative for semantic reasons, suggesting that in the past tense the Potential form is more marked than its counterpart (Future) is in the nonpast system: 10.2.3 ('he father could not see'); contrast 'inability' exx. of /yagi/, top of this page.

The occurrence of /wa:='ṟi/ in Present Negative clauses is also well attested in the texts: 7.9.1, 47.10.2/3, 47.23.6, 48.1.4, 62.1.6, 71.30.1, 71.32.1/3/4, 71.33.1, 82.1.6, 91.1.1, 100.7.3/4 (three), 106.4.1/2, 106.5.5, 109.3.3, 110.4.3, 112.1.1, 112.4.5, 120.2.1, 121.1.1, 121.2.1, 121.3.5/7/8, 123.2.5/6 (three), 125.1.3, 156.2.4/5, 156.3.5. The usage of Present Negative is slightly circumscribed by the usage of Future Negative for some contexts (inability, negation of morally/legally improper behaviour, etc.), commented on in connection with /yagi/, above.

There are also instances where /wa:='ṟi/ occurs by itself as a kind of abbreviated negative clause, with the full pragmatic force based on the context. We should warn immediately that there is some danger of confusion of isolation forms of /wa:='ṟi/ (implying a covert clausal accompaniment), and predicative use of /=aṟi/ 'to be absent or nonexistent' (see below) when the subject happens to be in the ANA noun class. Exx. of isolation /wa:='ṟi/ along with my attempt to reconstruct the fuller clause which could have been used, are 13.23.4 ('You saw the billabong in our country. No [, you may not use it.] It is reserved for us.'); 40.5.3 ('No [,I have not come here because I have died.] I just strayed off course.'); 69.16.4 ('We spoke [about fighting], but no [, we didn't fight], they were lying.'); 71.2.4 ('They saw us [looking for a murderer], no [,they didn't find him then.] Later they recognised him.'); 143.9.2 ('They bit us, the /ṉabi/ honey bees are nasty; as for /miṉiguya/ honey bees, no [,they don't bite]'); 157.13.4 ('We [Nunggubuyu] lived to the north; as for the Warndarang area, they [Warndarang people] no [i.e., did not live with us], they were separate'); 167.20.6 ('they they returned [to Indonesia], the boat [stayed there] for good, then no [, they did not come back this way]'--I have reanalysed the MANA class marker as referring to the ship, not the rope).

There are also some cases of /wa:='ṟi/ in what appears to be a broken-off (self-interrupted) fragment or false start: 14.9.4, 84.1.2, 109.4.1. I would not lump these in with the isolation forms since the latter seem to be a fully grammatical usage when the (logical) proposition negated is obvious from context.

/wa:='ṟi/ occasionally occurs with a reduplicated (Past Actual Negative or Present Negative) verb. In 113.3.3 the sense is negation of prolongation/repetition ('We did not scatter all over'), but in unrecorded exx. the opposite sense, continuous validity of negation ('never') was also noticed: /wa:='ṟi n^{g}an^{y}-jara=ya-ri:/ 'I never go'. It is possible that the same kind of sense as in the latter ex. can be achieved by adding postposition /-w$_2$ugij/ (§12.21) 'only, still, nothing but' to a negated verb: in 47.22.4 the expression /wa:='ṟi n^{g}an^{g}=gawan^{g}gi:-ni-wugij/ might be construed to mean 'I never listened [to other clans' myths]'. However, simple negation without reduplication or /-w$_2$ugij/ is much more common; recall also that Future Negative with /yagi/ is used for negation of morally/legally improper behaviour (combining a normative and descriptive angle).

It remains to discuss the following matters: a) negation of nonverbal predicates; b) negation of nonpredicative constituents; c) negative harmony affecting nouns/verbs in negative contexts; d) extension of harmony over two predications and e) its blocking at boundaries with subordinated clauses; f) negative harmony with

omission of the implied negative word; g) word order, especially stylistic inversions in repetitions; h) existential/locative negation with predicative NAdj /=aṟi/ and the relationship between this and /wa:='ṟi/; i) identification and analysis of lexical verbs and nouns (including cpds.) with intrinsic "negative" sense; j) the relationship between conditionals and negatives.

First, negation of predicative NAdj (see Table 15-1, below). Recall that a NAdj like /ṟun^{g}gal/ 'big' can be used with nominal morphology, either by itself or in apposition to a coreferential element such as a noun (§4.2, §15.3), but can also be used (unlike common noun, Nc) in specifically predicative form, with pronominal prefix (Chapter 9). An ex. of the latter is /wu=ṟun^{g}gal/ 'it is/was big' and variant for Future (or Past Potential) /an^{g}gu=ṟun^{g}gal/ 'it will be big', 'it would have been big'. Note that the choice between A and B prefix series (§8.2) enables predicative NAdj to have at least a reduced expression of verbal inflectional categories. There is also the possibility of putting /ṟun^{g}gal/ in the Inchoative form with derivational suffix /-ma-/ (§10.8), in which case we not only have pronominal prefixes (A vs. B) but also a full set of verbal inflectional suffixes after /-ma-/. In general, simple predicative /wu=ṟun^{g}gal/ 'it is/was big' has stative sense, while fully verbalised Inchoative /wu=ṟun^{g}gal-ma-n^{y}/ 'it became big' indicates the process of changing state (though sometimes with perfective nuance).

In the negative, the distinction between simple predicative (unsuffixed) and Inchoative NAdj is partially neutralised. As the table below shows, negative predicative NAdj even in stative sense (middle column) must have the appropriate form of the Inchoative suffix (compare rightmost column), as well as /yagi/ or /wa:='ṟi/ (which are used as they are with other verbs). The exception is the Present Negative, where postposition /-maga:/ (§12.21) is obligatorily added to the NAdj in place of a form of /-ma-/. Thus, in the Present Negative, a formal distinction could be made between the true Inchoative type /wa:='ṟi an^{g}gu=ṟun^{g}gal-ma-n^{g}/ 'it does not get big'

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TABLE 15-1

Negation of Predicative NAdj

	positive NAdj predicate	negative NAdj predicate	negative Inchoative suffix form
Actual:			
Past	wu=NAdj	wa:='ṟi an^{g}gu=NAdj-ma:-'	-ma:-'
Present	" "	" " " -maga:	-ma-n^{g}
Potential:			
Past Pot	an^{g}gu=NAdj	yagi(-maga:) an^{g}gu=NAdj-ma:-'	-ma:-'
Future	" "	yagi wu=NAdj-mi-∅	-mi-∅

Note: pronominal prefix in exx. is of ANA noun class; NAdj represents any adjectival noun.

and the regular (stative) type /wa:='ri an^{g}gu=run^{g}gal-maga:/, though the former type is not common.

It should also be mentioned that positive NAdj predications may omit the pronominal prefix, so that /run^{g}gal/ by itself may act as a briefer equivalent of /wu=run^{g}gal/ 'it is/was big'. In the negative, if the NAdj is predicative functionally this simplification is not permitted (but if functioning nominally a NAdj could be negated using the rules for noun/adverb negation given below).

An ex. of the Past Negative is /wa:='ri ama:='ya-ma:-'/ 'it is not bitter-tasting [/w$_{l}$ayag/]' 118.3.3. Exx. of Present Negative are 52.4.2-3, 68.4.2, 95.5.4, 162.24.4-5, in addition to the following one:

(15.xliii) wa:='ri an^{g}i:='dhara-maga: n^{g}ara:-'-gi n^{g}ara-ya:g
not it-is-few this meat ant
'Meat ants are not few [in number]' (13.6.3

Here the NAdj is /adhara/, with B form of N^{g}ARA intransitive pronominal prefix /an^{g}i-/.

Consider now this ex. with nonadjectival (common) noun:

(15.xliv) ana:-'-ni wa:='ri an-in^{y}-n^{g}an^{g}alu-maga:
this not deceptive words
'This is no lie' (i.e., 'no kidding') (41.4.4)

Here the prefix is Continuous inflectional noun-class (NC$_{infl}$) prefix /ana-/; the stem is a frozen cpd. with nuclear initial //-ij-// 'word[s], truth' and an unproductive cpd. final. The overall syntax and especially the use of /-maga:/ suggest an affinity with the pattern just described for Present tense negative form of predicative NAdj (Table 15-1, above). However, Nc (common nouns) do not have a larger paradigm such as that shown in Table 15-1, since they cannot take Inchoative suffixes. (Another ex. is 87.1.5.)

I tried to elicit more exx. like (15.xliv) and obtained the following:

(15.xlv) wa:='ri n^{g}aya na-n^{g}udalhardhar-maga: ana:-'-ni
not 1Sg king brown snake this[1Sg]
'I am not king brown snake'

(15.xlvi) nu:-'ba-gi na-yiwan^{g}gu-n^{y}un^{g}
that[Anaph, MSg] old man
wa:='ri na-baba-maga:
not [my] father
'That old man is not my father'

While these basically confirm the validity of the type in (15.xliv) as applicable to nouns in predicative function (though not morphologically verbalised), it was not possible to elicit any special past or future counterparts.

The expression negation of nonpredicative constituent will be applied here to instances where a negative word, normally /wa:='ri/, focuses squarely on a noun (including NAdv) which is not predicative in function (as are nouns in the preceding exx., above). However, the exx. I have in mind are not complete "clauses" with a verb closely juxtaposed to the negated noun but outside the negation's scope. Instead, they are basically simple sequences of negative

word (/wa:='ri/) plus noun (without postposition /-maga:/), with a covert larger proposition implied by context, usually due to contrasting the negated noun with another noun in a parallel clause. Therefore, these exx. could all be analysed as involving omission of an implied verb (which would presumably have been syntactically within the scope of the negation if it [the verb] had occurred overtly). Consider these exx.:

(15.xlvii) wiri=na-n^{y}, wa:n^{g} yagu, wu-dulbu
they saw it whatchamacallit? mainland
wa:='ri yaga: ana-rilji wu-dulbu
not [§12.12] island mainland
'They saw whatchamacallit?, the mainland--not an island, the mainland' (18.6.3-4)

(15.xlviii) wini=yama-n^{y} n^{g}a wuran^{g}ulyu, gada!
they did thus and place n. oops!
wa:='ri ana-wuran^{g}ulyu wini=rabali-n^{y}
not place n. they came out
'They did this[went] and[arrived at] Wuran^{g}ulyu--oops!, not Wuran^{g}ulyu. They came out...' (20.2.3-4)

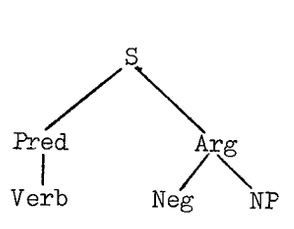
Other similar exx. are 47.23.4, 53.1.1, 71.16.4/5, 108.1.2, 116.12.2, 118.1.4 (focusing on compass-point NAdv). In the following ex. with NAdj, the fact that nominal rather than verbal inflection is used shows that this construction is not predicative:

(15.xlix) wini:-'jba:='j-bi-ni::: ana-wirig
they weaved it small[-one]
wa:='ri ana-run^{g}gal
not big[-one]
'They weaved it, a small one--not a big one' (108.2.4)

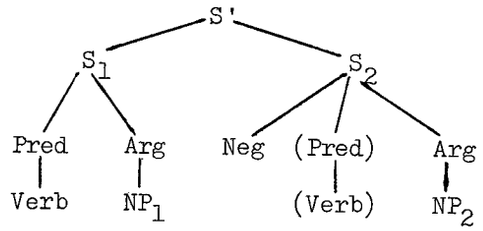
In a number of these instances, a verb (not in negative form) occurs near the negated noun and we are tempted to recognise a specific type of constituent negation applying within a clause, schematically something like A in Figure 15-1, below. However,

FIGURE 15-1

A. constituent-negation analysis



B. pruned clause-negation analysis



Abbreviations: Pred[icate], Arg[ument].

Fig. 15-1; (15.xlvii - xlix) §15.6

because this type of constituent negation normally occurs in connection with a juxtaposed (positive) clause with another noun (NP_1) contrasting with the negated noun (NP_2), I believe that all of the exx. are consistent with the view that the verbs in question are not really within the same "clause" (here: logical proposition) as the negative word, and I favour an analysis (B in Figure 15-1) in which the negated noun is what is left of a fuller (negative) clause with the verb omitted by an optional pruning rule (similar to Gapping but not restricted to any particular word- or phrase-type). (The order of elements and clauses in the figure is arbitrary and nonessential.) Readers may wish to disagree with this analysis after examining all of the textual exx., but I am presently not persuaded of the need for recognising (nonpredicative) constituent-negation as a distinctive syntactic structure.

We now come to aspect-skewing or negative harmony, one of the most interesting and distinctive syntactic features of this language. Basically, the point is this: a negative word (but not negative particle /girjag!/) is associated with a scope, typically one verb or other predicative word and perhaps one or more adjuncts such as "NPs" and particles. Any verb or noun (as well as demonstratives) within the scope of the negation, i.e., in a negative context, has its own morphology affected, as follows:

a) verbs: for Past Negative (Actual or Potential) must have $Past_2$ suffix and B prefix (i.e., have same form as Past Potential Positive);
for Present Negative must have $Nonpast_1$ suffix and B prefix (i.e., form also used as Future Positive Punctual);
for Future Negative must have $Nonpast_3$ suffix (unique to this function) and A prefix;
for the rare Evitative Negative, no change (vis-à-vis Evitative Positive verb form).

b) nouns and demonstrative pronouns: inflectional noun-class prefix (NC_{infl}) is obligatorily present regardless of case and discourse status (focal, etc.); moreover, for nonhuman noun classes, NC_{infl} prefix must be the Continuous rather than Punctual form.

The basic structure of verbs in negative contexts has already been presented in Chapter 8, which gives more information about the usage of the inflectional-suffix categories and the A and B pronominal prefix series. Concerning NC_{infl} prefixes (with nouns and demonstratives), see §4.7-8.

It is possible, but very tricky, to speculate on specific motivations for these adjustments. In the case of verbs, the use of $Past_2$ could be viewed as aspectual neutralisation, since in the Past (Actual) Positive we have an aspect opposition with $Past_1$ forming the Punctual and $Past_2$ the Continuous. However, going from Past (Actual) Positive to Past Negative also involves changing A prefix to B prefix, so we might want to emphasise the formal identity with Past Potential (i.e., a general irrealis) rather than emphasising the aspectual association. In the Present Negative, the use of what is elsewhere a Future Punctual verb form is quite bizarre--the use of Future form is compatible with our observation

that Past Negative = Past Potential in form (the Future is the Potential category in the nonpast system), but the choice of the Punctual aspect form is anomalous. Finally, the Future Negative has a special inflectional form of its own, making it impossible to determine external aspectual associations. As for the NC_{infl} prefixes with nouns and demonstratives, despite our terms "Punctual" and "Continuous" for the two (nonhuman) series, the distinction between them (as well as the principles for presence/absence of prefix) seems to depend on several interacting factors in nonnegative contexts, including case category and definiteness/givenness, so it is difficult to determine which such factor "motivates" the neutralisation in negative contexts.

Regardless of whether we can make any sense out of the specific morphological associations between Positive and Negative inflected forms, the rule of negative harmony is very interesting and very important, for the simple reason that it does apply within a specific syntactic domain (its scope). We can therefore examine textual exx. to see if, for example, we can salvage the notion of "clause" by showing that the scope of a negative word coincides with our intuitive idea of this unit. With regard to the functions of the negative harmony system, we can show that without it addressees would have great difficulty interpreting discourse chunks including any negative words.

Frequently, the boundary of application of negative harmony does indeed correspond to a clause-like unit. As noted above in §15.5, such a unit (i.e., a sequence with a verb or other predicate and perhaps one or more "NPs" and a particle) frequently does not correspond to an intonational unit, so the operation of negative harmony even to constituents separated from the negative word by a pause suggests (at first sight) that this syntactic rule gives us a valid operational definition (and empirical vindication) of the notion "clause." Some exx.:

(15.1) yagi ana:-'-ji n^ga=bura-n^gi-Ø
not ANA_c-here I will sit[$Nonpast_3$]
'I will not stay here' (28.13.4)

(15.1i) ana:-'-nu:-'-wuy yagi ni:ni=rumi-Ø
ANA_c-this way not you[MDu] will go[$Nonpast_3$]
'Don't come this way!' (40.1.7)

(15.1ii) aba ana-yimbaj wa:='ri n^ga:mbu=n^ga-n^g
now ANA_c-today not we eat it[$Nonpast_2$]
'Nowadays we don't eat it' (119.8.3)

(15.1iii) wa:='ri n^gijan^g -- ana:-'-ji amban^{g}gu-ji=na-ni
not more ANA_c-here it neared them[$Past_2$]
ana-n^gura
ANA_c-fire
'The fire did not get close to them' (120.3.3-4)

The use of Continuous ANA NC_{infl} prefix (ANA_c-) is particularly striking with adverbial nouns (NAdv), as in all four of these exx., since in positive contexts NAdv are usually prefixless. Indeed, observing the behaviour of normally unprefixed stems when they occur

in negative contexts is the best test for distinguishing NAdv from genuinely uninflectable particles. Place names, which have important affinities to NAdv, are likewise usually unprefixed, but require Continuous prefix (almost always /ana-/) in negative contexts, as in our earlier ex. (15.xlviii). In the case of ordinary nouns, negative harmony is less noticeable, since Continuous NC_{infl} prefixes are common (though far from obligatory) with subject and object categories in positive utterances; negative harmony is, however, very noticeable with Instrumental case, which elsewhere usually has prefixless noun (§4.27), and with nonzero spatial cases like Locative (§4.25) and Ablative (§4.21) which elsewhere strongly favour the Punctual NC_{infl} series.

In the entire corpus, I have found no clearcut violations of the negative harmony rule. A possible instance is the rather broken and disorganised sequence at 168.6.3, where /lha:wu an^{y}baj/ 'language different' without NC_{infl} prefixes seems to have been interposed between /wa:='ri/ on the left and the verb /ambu:=yambi:-ni/ 'they spoke' (form showing negative agreement, i.e., B prefix and $Past_2$ ending), but the interposed segment can be interpreted as a parenthetical insertion outside the (semantic) scope of the negative.

In many other exx., the apparent direct juxtaposition of a negative word and a noun or verb which does not show negative harmony is not a violation of the rule, rather a reflection of the fact that the noun or verb is not semantically within the scope of the negative. For ex., looking back at (15.xlviii), in the quoted segment the final verb /wini=rabali-n^{y}/ 'they came out' (Past Punctual Positive form) is logically a distinct predication, and despite the absence of a pause between them it has nothing to do with the negated place name just before it. Similarly, in the exx. of 'isolation forms' of /wa:='ri/ given earlier in this section, the fact that /wa:='ri/ is an isolation form (i.e., having no adjoining overt words in its scope) is reflected by the absence of negative harmony in neighbouring clauses--if it were not for negative harmony, most such constructions would be chaotically ambiguous. Further exx. could easily be cited.

While the data given so far seem to vindicate the notion of "clause" as the syntactic unit which negative contexts are defined in terms of, further analysis shows this to be doubtful. While it seems to be true that negative words /wa:='ri/ and /yagi/ have scopes which minimally contain (or imply) a predicative nucleus and any nouns functioning as arguments in it, negative harmony is not confined to such "clausal" units. Instead, negative harmony due to a single negative word often applies to two or more juxtaposed predicative nuclei (and their adjuncts, if present). The exx. involve verbs (occasionally another predicative word) which, in context, designate actions or situations which are identical (as in simple verb repetitions), overlapping, or otherwise closely associated, so that this extended negative context is not totally arbitrary (open-ended). An example:

(15.liv) wa:='ri n^{g}a=n^{g}adugumbi:-ni n^{g}an^{y}=jama:-'
not I fished I did thus
'I didn't fish like that' (162.18.4)

Here the two verbs both have B prefix; compare positive counterpart /n^{g}a=yama:-'/ (Continuous) or /n^{g}a=yama-n^{y}/ (Punctual) 'I did thus' for the second verb. The other exx. involving /wa:='ri/ plus two predicative nuclei are these, in schematic translations: 7.6.3 (later not she-thought[Eng. borrowing] she-thought-about-it [native word]), 19.9.2 (not to-there he-permanent[NAdj] he-went), 47.9.1 (not that they-did-thus they-wanted-it), 47.11.2 (not again it-was-crooked it-was-crooked), 70.30.1 (not they-sit like-you[Pl] like-whites like-Europeans they-sit, very-old, old, they-die, not [i.e., they die young]), 71.33.1 (not we-die we-do-thus), and 109.3.3 (not they-cook-it, they-cut-it-up). In the ex. just cited from 70.30.1 there are actually three verbs after the initial /wa:='ri/, but /wa:='ri/ is repeated after a pause at the end of the whole string, a not unusual phenomenon. Note also the following:

(15.lv) wa:='ri-yun^{g}guyun^{g} ana-wun^{g}a:ri an-uba-ni-yun^{g}
not -Purposive ANA_c-fight[noun] ANA_c-that
wu:=ri-n^{y}ji:-ni-yin^{y}un^{g}c,
they speared each other-Relative
ambiri:-'=dharma-n^{g}i, ambu:=yama:-'
they chased [them] for it they did thus
'so that those spear-fighters would not fight,
not chase [enemies] for a fight like that'
(69.10.4-6)

The last two verbs (though not the Relative clause, on which see below) show negative harmony (B prefix, etc.) and are thus within the scope of the initial negation. However, with regard to the first three words, /wa:='ri-/ can also be interpreted as the ANA subject form of predicative NAdj /=ari/ 'to be absent, not exist', with /-wun^{g}a:ri/ 'fight[noun]' as subject (i.e., 'so that there would be no fight'). When we get to /ambiri:-'=dharma-n^{g}i/ we see that /-wun^{g}a:ri/ is (also) the Benefactive (indirect) object, and if we assume that the speaker planned the whole sequence we can take /-wun^{g}a:ri/ as simply a nominal argument of this verb.

The extended (multi-clause) negative domains also occur with the other negative word, /yagi/:

(15.lvi) yagi an-u-guni wu:=rumi-ø ana:-'rijbila
not ANA_c-to there they will go ANA_c-[place n.]
wu:=wurdhi[:]-'-ø
they will be buried
'They will not [are not allowed to] go to Arijbila
and be buried [there]' (54.4.1-2)

Similar exx. with /yagi/ are 71.14.4 [imperative] (not you-tell-him many[people] you-tell-them), 75.1.3 (not she-will-go that[woman] they[Du]-will-see-each-other that son-in-law [i.e., she should not go near son-in-law so that they come into close visual contact]), 77.2.1 (not that brother he-will-go there nearby he-will-stand), and 86.1.2 (now not that[FSg] they-will-name-her they-will-call-her ritual name).

While reading the schematic glosses for the passages just cited, keep in mind that the negation ('not') has the underlined verbs within its scope in both the /wa:='ri/ and /yagi/ lists. If the reader forgets, and associated the negation only with the first verb, misinterpretation will result. Of course, this is another way of saying that the formal changes expressing negative harmony serve as an index (sometimes a fairly long-distance one) which Nunggubuyu addressees need in order to decode such complex structures. Because a single negation may apply to sequences containing two (or even three) predicative nuclei, our earlier point about the functional significance of negative harmony (in connection with 'isolation' cases of /wa:='ri/) deserves reinforcement. When a word (noun, demonstrative, verb) turns up lacking negative harmony, we know we have left the negative context behind.

However, while negative contexts may spread to include two or more predicates (if synonymous or otherwise closely associated), full negative harmony is blocked by the boundary between an ordinary clause and a subordinated clause (Relative, etc.), and at the boundary between the two parts of a conditional construction. We just saw, in (15.1v), a Relative clause in positive form, with A series pronominal prefix on the verb, in the middle of an encompassing negative context affecting the final two verbs. Regardless of whether we interpret the Relative as meaning 'they who speared each other' or as attached to the preceding noun 'fight' (i.e., 'fight in which they speared each other'), the syntactic point to be made is that a verb in a Relative clause is not affected by an "upstairs" negation regardless of its surface location.

Further exx. of upstairs or main-clause negation not affecting the form of verbs/predicates in a Relative clause are 47.4.5/6 (but not they-who-had-bad-voices, but not they-who-fouled-it-up), with Relatives functioning as subjects in an implied upstairs predication negated by /wa:='ri/; and 166.22.2 (not they-who-stayed here, they did not go).

While full negative harmony therefore does not apply across such boundaries, demonstratives and nouns (including most "adverbs") which occur in such exx. within the Relative clause do appear to require overt NC prefixes, and for nonhuman classes the Continuous form. In 166.22.2, just cited, 'here' has Continuous prefix, as does a demonstrative 'that' referring to 'voice' in 47.4.5, also just cited. For partial negative harmony, see §16.4.

Of course, subordinated clauses may have their own internal negation, since they are basically like main clauses in form (with an additional suffix or particle). Internal negation in Relative clause is found in 47.6.2-3 (they who did not want each other's words, they did not go) with separate main-clause negation; possibly 47.10.2-3 ([secret] words go to [make] trouble, to women who do not [should not] listen) if my construal is correct; also 54.5.1-2 (they who will have no law [traditional customs], they will not go and be buried in Arijbila[sacred clan burial ground]). Here the negative-harmony rule applies to nouns and verbs within the negative subordinated clause, but there is no spillover of harmony across the boundary in either direction (though of course the main clause may be internally negated on its own).

Internal negation with /yagi/ and Pergressive suffix (as subordinator) added to verb is used to express 'before [verb]', as in 47.19.3 (but not it-will-dawn-Pergressive, i.e., 'before it dawns', see §16.6).

In 95.2.2 we have Ablative /-$w_1$ala/ as subordinator (§16.6) meaning 'from [where]'. The larger sequence is "translatable" as 'they made shelter[s] on one side, where the [emu] footprints were not on the ground, where they [emus] had entered the water' (the 'from' gets lost in the free translation here). Since the verb 'be[lie] on ground' shows negative harmony, I take the negation as being internal to that clause, though it would come out (in English) equally well if translated '..., not where the [emu] footprints were on the ground, ...', which if taken as an exact syntactic representation of the Nunggubuyu would suggest that the negation is outside the Ablative clause (implying a covert negated verb 'they made shalter[s]' omitted to avoid repetition).

Having discussed the syntactic possibilities of negative harmony at some length (concluding that it may extend to a closely-related or synonymous second predication [often but not always with the same subject] as long as it does not cross a subordination boundary), we now turn to occasional instances where negative harmony by itself indicates (or implies) negation with the negative word omitted. This is rare, but unless I missed a word in the transcription we have an understood negation in 100.3.1 ('we ate it') and 69.3.5 ('the words are pleasant'). In 100.3.1 the verb /na:ni=n^gu-ni/ has B-series prefix, contrast positive /ni:ni=n^gu-ni/ 'we ate it'. In 69.3.5 we have a (cpd.) predicative NAdj /an^{g}gu:-'n^y=mamala-maga:/ (//ij=mamalan^g//), not only with B-series prefix but also with /-maga:/ postposition as usual in Present Negative form of predicative NAdj (Table 15-1, above). In 161.25.1 the verb is /n^gambambi=walbum-dha-n^gi/ 'they helped me' showing negative harmony with no negative /wa:='ri/ present, though perhaps the code-switched segment preceding this, /nobody people/ (i.e., no-one), can be thought of as a substitute. In general, it looks like /wa:='ri/ is rarely (but occasionally) just omitted, with the secondary marking of negation by the operation of harmony on nouns/verbs the only surface marker of the negative. I have noticed no similar exx. involving /yagi/, although deletion of this element would usually be recoverable since, in its most common use as Future Negative, it is associated with the Nonpast$_3$, a verbal inflectional category which is found only in the Future Negative (aside from its rare use as Evitative, with Evitative postposition /-magi/).

Turning now to word order, we repeat from §15.4, above, the basic principle that the negative word /wa:='ri/ or /yagi/ must precede the negated predicative nucleus (usually verb), the exceptions being cases of stylistic inversion in repetitions (see below). If the "clause" contains other constituents preceding the verb, the negative word may occur just before the verb (after the others), or it may occur earlier (often initially). A few representative exx.:

(15.1vii) yagi na:-da-gu:-' nu:n^gunu=n^gi:-ø
not that[man] you[FDu] will eat him
'Don't you[FDu] eat that man!' (17.9.6)

(15.lviii) wu-gu-n̲i yagi wini=yambi-n^{y}ji-ø
they[MDu] not they[MDu] will speak to each other
'They must not speak to each other' (76.1.4)

(15.lix) yagi wara-wuruj wara=wu:-'
not people they will kill them
'The people must not kill them' (84.1.5)

(15.lx) wa:='r̲i aba na-ni-n^{y}ara-yun^{g} ani=waran^{g}ga:-'
not now father he looked
'His father could not see [was blind]' (10.2.3-4)

For further exx. and slight variations on ordering see our earlier exx. of /yagi/ and /wa:='r̲i/ in this section, such as (15.xliv), (15.xlvi), (15.xlviii), and (15.l-liii). It is possible that in some cases the precise location of the negative word may indicate a shade of focusing (the negation itself focussing mainly, say, on the immediately following word), but I cannot find any consistent patterning. I suspect that there are two conflicting principles at work, one favouring clause-initial position so that addressees immediately realise that a negative context is beginning, and another favouring immediate preverbal position (on the grounds that clausal negation has a "naturally" close relationship to the predicative nucleus).

Both /yagi/ and /wa:='r̲i/ may be followed by postpositions or (other) subordinators whose semantic application is to the whole clause. The common postposition /-w$_{2}$ugij/ 'still, only, nothing but' does not seem to do this (it would usually show up on the following verb), but Evitative /-magi/ is added to /yagi/ rather than to the (already Evitative) verb form in the Evitative Negative type /yagi-magi ni:='gi-ø/ 'lest he not return' (no textual exx.); hypothetical conditional postposition /-maji:/ can be added to either /wa:='r̲i/ or /yagi/, as in /yagi-maji: wini=lhargi-ø/ 'if they do not send it' (62.1.3; same /yagi-maji:/ in 63.1.4 and 89.1.6, also 89.1.2 but apparently there as false start); Pergressive subordinator /-waj/ is added to the following verb in 47.19.1 /yagi wu=l̲a l̲mi-ø-yaj/ 'before it dawns', but Purposive /-yun^{g}guyun^{g}/ occurs clause-initially in /wa:='r̲i-yun^{g}guyun^{g}/ in ex. (15.lv), above, suggesting that case suffixes used as subordinators have some flexibility in their location.

Stylistic inversion was mentioned at the end of §15.4 with an ex. (15.xxx) showing repetition of a [/wa:='r̲i/ Verb] sequence with the order reversed. This particular pattern is not terribly common but does occur now and then, and seems to be the only grammatical pattern in which a negative word follows a predicative nucleus within its own scope.

There is, however, an analytical question here. I am inclined to take exx. like (15.xxx) in which the second /wa:='r̲i/ (or /yagi/) is pronounced in an intonational group with the repeated verb as reflecting a stylistic factor favouring slight variations in some types of "clause" repetitions. However, it is possible to analyse these exx. in a different way--arguing that the first negative word has both verbs within its scope, and that the second negative word is a redundant, optional repetition of the negation.

In support of this, note the second /wa:='r̲i/ (added after a pause) closing the negative context initiated by the first /wa:='r̲i/ in this ex., which contains only one predicative nucleus:

(15.lxi) wa:='r̲i ambu:-lhawu=r̲abala-n^{g}i ana-lha:wu,
not they came out [with] words ANA$_{ç}$-word[s]
wara-wuru-wuruj-baj, wara-mij-buruya-baj
among people among children
wara-ma̲na̲num-baj, wara-mij-gulmur-waj,
among women among young men
wara-n^{g}a̲la-n^{g}a̲lan^{y}ji-yaj, wa:='r̲i
among girls not
'They did not come out with [divulge] the words
among the people--among the children, the
women, the young men, the girls--no!'
(47.7.4-6)

Since we have already established that the initial /wa:='r̲i/ (in other exx.) may have more than one predicate in its scope, and have now shown that a second /wa:='r̲i/ may be added at the end of a long negative context (even with just one nucleus), there is no way to rule out an attempt to explain stylistic inversion exx. by combining these features (in which case the structure does not have a genuinely stylistic basis--variation in word order for its own sake). Nonetheless, I perversely maintain that stylistic inversion may still be an operative production factor, even if its output does coincide with outputs from other sources; unfortunately, this is an instance of attempted mind-reading.

Existential/locative negation is expressed by the predicative NAdj /=a̲ri/, which can only occur with pronominal prefix (contrast particle /a̲ri/ 'maybe', §12.11). The prefix is a regular intrans. pronominal prefix (Table 9-1), and may be of A series (Past Actual, Present Actual) or B series (Past Potential, Future). Some exx. of the forms:

	ANA	3MSg/NA	MANA
Past/Present Actual	/wa:='r̲i/	/ni:='r̲i/	/ma:='r̲i/
Past Pot, Future	/an^{g}ga:='r̲i/	/ani:='r̲i/	/ama:='r̲i/

Although 1st or 2nd person forms could be produced, such as 1Sg /n^{g}a:='r̲i/ (A) or /n^{g}and=a:r̲i/ (B), these do not seem to be used; existential negation is logically anomalous with these pronominals, and locative negation would usually involve a negated verb like 'to sit' (/=bura-/). I have also not noted double negations like */wa:='r̲i ama:='r̲i-maga:/ 'It[MANA] is not absent', though it would not be difficult to produce such a form (for the framework see Table 15-1, above).

Some textual exx.:

(15.lxii) wun^{g}unu-nana=na-ni::: n^{g}a ni:='r̲i
they[FDu] saw him and he was absent
'They saw him, then he disappeared (from view)'
(13.15.1-2)

(15.lxiii) an^{g}ga:='r̲i ana-lha:wu
it will be absent word[s]
'There must be no words' (76.2.2)

The type (15.1xii) indicating disappearance from the view of another observer is common. This can also be expressed by an overtly verbalised Inchoative derivative (§10.8) /=ari-ma-/, but the Inchoative (attested 139.2.4) is less common than the simple form.

The other textual exx. of /=ari/ are 3MSg or NA /ni:='ri/ 13.15.2, 15.9.7, 43.8.3, 43.14.2, 65.6.3, 65.12.8, 117.4.8, 170.1.1 (NA); MANA /ma:='ri/ 118.4.6, 161.26.3; 3Pl or WARA /wura:='ri/ 71.25.2; ANA /wa:='ri/ 7.10.5, 17.2.7, 28.10.7, 41.4.1, 42.5.2, 71.25.2, 91.1.4, 93.1.2, 117.4.7, 120.1.1/6, 161.26.3, 161.32.2 (with subordinator /-$w_1$uy/).

Because the form /wa:='ri/ is also the basic clausal negative for Past/Present Actual, there is the question whether to take the two cases of /wa:='ri/ as really identical. A lumping analysis would treat them as identical syntactically, while a splitting analysis would regard them as (synchronically) distinct. In the latter, the existential/locative /=ari/ is set up from the start as a predicative NAdj, while /wa:='ri/ (and /yagi/) are nonpredicative negative elements associated with clauses. The lumping analysis requires more thought, but is not entirely outlandish, and has the advantage that it might account for the form of /wa:='ri/, which is presumably not explained by a splitting analysis. The essentials of a possible lumping analysis ("underlying" representations plus a sketch of applicable rules) are given in Figure 15-2, below.

The idea would be that clausal negation is a predication of nonexistence of lower proposition (Predicate plus Argument); the lower proposition is itself thus an Argument (Arg) in the higher predication. We represent /=ari/ as 'absent' (NAdj). In order for this analysis to work, the lower proposition must be treated as a NP of ANA class (regardless of the class[es] of NP[s] within the lower clause). It is also necessary to separate /yagi/ clausal

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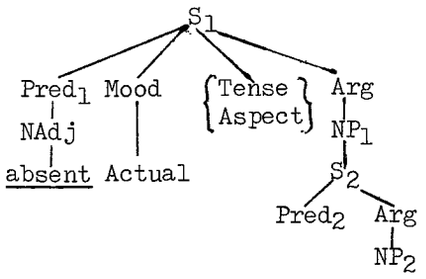
FIGURE 15-2

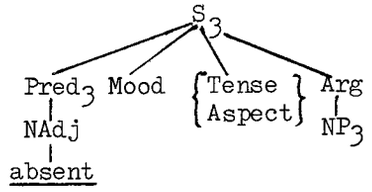
Lumping Approach to Clausal and Existential Negatives

a) clausal negation



rules: NP_1 treated as ANA class; Mood and Tense-Aspect along with concord from NP_2 go on $Pred_2$.

b) existential/locative negation



rules: Mood (Actual vs. Potential/ Future) and concord from NP_3 go on 'absent'; Tense-Aspect vacuous.

negation from that with /wa:='ri/, since /yagi/ has no predicative forms and has no NAdj properties. Therefore "Mood" is specified as Actual in (a) in the figure, while this category is open-ended in (b) and thus may be Actual or Potential (or, for that matter, Evitative, whose negation is also with /yagi/). (In the figure we take "Future" to be the Potential form in the Nonpast tense, so "Tense" is Past or Nonpast.)

It is up to readers to decide how reasonable it is to set up a different structural representation of /yagi/ negation (whatever this representation, not shown in the figure, might be). However, the use of ANA class concord for a propositional argument can be supported by other direct evidence. First, ANA (specifically, ANA_{wu} subclass) is the regular noun class for Abstractive nouns designating activities such as /wun^{g}a:ri/ 'fight, fighting, war' (see §4.13, §4.33), as well as form most adverbial nouns (§4.3). ANA ($ANA_{\emptyset}$ sublcass) is also the unmarked concord category of /yan^{g}i/ 'what?' (nonhuman), see §13.3. There is a tendency to use ANA as the concord category for conjunctions of nonhuman nouns with different nonhuman noun classes; see below, §15.7. In addition, we find ANA (ANA_{wu}) as concord category for what appears to be a propositional argument (after copy-raising) in a 'to want' construction discussed (with some reservations) in §16.8. Therefore taking (a) in Figure 15-2 as a representation of /wa:='ri/ clausal negation does not require an otherwise unmotivated concord rule.

Further evidence for the lumping analysis could consist of a demonstration that a single instance of /wa:='ri/ could have a scope containing both a "NP" whose existence/presence is denied and a distinct predicative nucleus. Looking back at (15.1v), and disregarding the Relative clause in /-yin^{y}un^g/, note that one way to interpret it is with the initial /wa:='ri-/ (with Purposive subordinator) negating the existence of the noun /ana-wun^{g}a:ri/ 'fight[ing]' and also the subsequent verbs ('they chase [enemies] for it[fight], they do thus'). If so, we could represent the whole construction as a conjunction of (b) and (a), the latter itself complex with two verbs rather than one, from Figure 15-2, with a single negative NAdj ('absent') applying to the whole sequence. However, since /ana-wun^{g}a:ri/ also has a grammatical relation (Benefactive object) in the verb glossed 'chase', it is not clear in (15.1v) that /ana-wun^{g}a:ri/ is the subject of a separate existential predication. Consider, however, this ex.:

(15.1xiv) wu-wan^{y}ja:='ri an-uba-ni-yun^g, ambu:=lhan^{g}arma-n^g
food is absent that[ANA] they [don't] get it
'There is no food, they don't get any' (58.1.2)

Here we start with /=ari/ as existential negator, with cpd. initial (Table 14-1, bottom right) specifying the subject as some kind of food (the demonstrative 'that' also refers to food). This is followed by a transitive verb with 'food' as direct object, with negative sense and showing negative harmony (Present Negative form with B prefix and $Nonpast_1$ suffix). Although the form of /wu-wan^{y}ja:='ri/ seems to have been determined in the initial existential predication (the cpd. initial would not have been used in a simple clausal negation), it seems to carry its negative force

over into the verbal clause. An advocate of the lumping analysis could take this to show that /wa:='ri/ (or a cpd. thereof) can jointly dominate a NP whose existence it denies, and a clause which it negates. An advocate of the splitting analysis would emphasise that the form of /wa:='ri/ (presence of cpd. initial, choice of noun class, A vs. B prefix form) depends on whether it is functioning as (predicative) existential/locative negation or (nonpredicative) clausal negation, so that /wu-wan^{y}ja:='ri/ in (15.1xiv) must have originated specifically within the initial existential clause, and would develop a possibly ad hoc interpretation of the absence of a second negative word in that example. I see some merit in both approaches, and feel that both have some psychological reality to Nunggubuyu.

Another indication that the existential/locative negation and clausal negation are not totally distinct structures is the virtual interchangeability of forms with predicative /=ari/ and of sequences with /wa:='ri/ and a negated verb, usually 'to sit' (/=bura-/), with essentially existential/locative force:

(15.1xv) ni:='ri ana:-'-ji
he is absent ANA$_c$-here
'He is not here'

(15.1xvi) wa:='ri ani=bura-n^{g}a-n^{g} ana:-'-ji
not he sits here
'He is not (sitting/living) here'

Although in (15.1xv) the predicative NAdj /=ari/ takes concord from the (otherwise covert) 3MSg subject, while this does not happen in (15.1xvi), the meaning is not very different, since the literal meaning 'sit' is downplayed in most uses of the type (15.1xvi). It may be that the first pattern is favoured by a) temporary absence and/or b) nonhuman status, the second by c) more permanent or enduring absence and/or d) human status (especially for 1st/2nd person pronoun), but there is a clear functional overlap. Indeed, we find textual exx. where an existential/locative negation is begun with /wa:='ri/ and then self-repaired by switching to an appropriate form of /=ari/ with different prefix (117.4.7/8 with NC change, 166.15.1 with NC change and cpd. initial, 71.25.2 with NC change, perhaps 54.4.1 with switch from A to B prefix, 120.1.7 with added cpd. initial--for the addition of a cpd. initial in a repetition see also §14.8).

There are some other combinations involving /=ari/ of an essentially derivational nature which we will just mention here: in existential/locative sense only it is possible to add a body-part cpd. initial indicating an absent body part or trace (/mun^{g}-gari/ 'lacking hair, bald'; /mun-gari/ 'having one's foot[prints] absent' MT 21pred; /lhud-gari/ 'lacking power [in voice]' 67.2.2, cf. Causative of this 66.3.4); /-w$_1$an^{y}ja:='ri/ '[food] to be absent' is sometimes used without specific reference to food, as in 47.8.1 and 166.15.1[rope]; redupl. /-ara:='ri/ is used in some kinship contexts (49.1.4ff.) and may underlie /nigararij/ 'ritual manager [SiDaSo]'; /-ari/ as cpd. final means 'bad, unsuccessful' with some lexical agentive NAdj (§14.21). See also dictionary s.v. /-ari/.

We now turn to some possible syntactic affinities between obviously negative constructions and others with a possible covert "negative" nature. We will use negative harmony, identified above as indexing the presence of a negative element, as a way of testing for cryptotypic "negation" in other constructions.

First, we observe that Nunggubuyu, like most languages, has a number of verbs (and NAdj which can function as predicates) which have (arguably) a negative component in their semantic representation. Actually, it is difficult to determine how far we should push this analysis--in cases of polar antonyms like 'long'/'short' and 'good'/'bad', should we take one pole as covertly positive and the other as covertly negative ('not long' = 'short')? For present purposes we will confine our attention to some of the more obvious exx., shown in Table 15-2, below.

To begin with, the stems shown (all of which, including the two NAdj at the beginning, are used chiefly if not exclusively as predicative nuclei) do not themselves show any trace of negative harmony--the verbs take regular tense-aspect inflection, the NAdj take regular (positive) affixation including A form of intrans. prefixes, and all of them can themselves be overtly negated in the same way as other predicative nuclei.

The textual exx. of /ambadhi/ and the better-attested /malala:di/ are at least consistent with the view that clause-mate nouns take Continuous NC$_{infl}$ prefixes, the other marker of negative harmony. However, this is hard to interpret since it is usually also true of the positive antonym /marbuy/ 'knowing', and therefore could simply be because the thing known or not known is clearly presupposed (definite), which itself is a sufficient reason for using Continuous prefix.

In the case of /-awu=ba-/ we do not have enough textual exx. to tell what is going on, but with /=ariba-/ 'to not see, to overlook, to miss [visually]', we may have counterexx.:

(15.1xvii) a:-'y-wala arwar yuwa:-gu n^{g}a:='riba-n^{y}
from nest above there[Dist] he did not see her
'He did not see her there up in the nest'
(10.6.1, cf. similar ex. TNT 15)

TABLE 15-2

Lexicalised Negatives

stem with negative meaning		positive counterpart (approx.)	
ambadhi	'unaware'	marbuy	'knowing'
malala:di	'ignorant'		
=ariba-	'to not see'	=na-	'to see'
-awu=ba- (cpd. of /=w$_2$a-/)	'to dislike'	=n^{g}an^{y}banda-	'to love, like'

Here the three preceding words all lack Continuous NC_{infl} prefixes; /arwar/ and /yuwa:-gu/ are prefixless, and /a:-'y-wala/ has Punctual form of NC_{infl} prefix (unless the form is really prefixless /a:y-wala/, which would be homophonous with the Punctual). However, exx. of this type are again hard to analyse, since it could be argued that (15.lxvii) is really two distinct clauses, one meaning '[she was] up there in the nest' and the other meaning 'he did not see her', so that negative harmony would not apply anway. (Indeed, following the segment quoted as (15.lxvii) there is a verb 'she was perched'.)

If we reanalyse (15.lxvii) in this way so that this type is not recognised as a counterex., we can say that our evidence supports at least a predominant usage of Continuous NC_{infl} prefix with nouns clearly within the scope of the predicative nuclei in Table 15-2, though this pattern may reflect the fact that these nuclei rarely or never take nouns in the nonzero case categories which otherwise favour Punctual prefix or lack of prefix, and the fact that the nouns which do occur with them tend to be already definite in context, favouring Continuous prefix independently of the negative component in the sense of the predication.

In roughly the same way, the protasis of a hypothetical (future) conditional, and both protasis and apodosis ('if..., then...') of a counterfactual conditional, have a kind of irrealis meaning built into them (cf. English some/any in 'I had some money', 'I did not have any money', and 'If I (had) had any money,...', though some is also possible in the last ex.).

We discuss conditionals in detail later in §16.7. Without presenting the data here, we can say that these conditional contexts display a clear preference for usage of Continuous NC_{infl} prefix even in positive cases. There is thus at least an approximate syntactic affinity between these conditionals and negatives. Moreover, in the counterfactual conditionals the verbs in both clauses are in the Past Potential form (B pronominal prefix, $Past_2$ inflectional suffix), which is also the form used in the Past Negative (Actual and Potential) along with /wa:='ri/ or /yagi/. Postposition /-maga:/ (§12.21) is also often added to counterfactual conditional clauses; we have seen this as a negative marker (with NAdj) in Table 15-1, above.

In addition to the direct effects of negative harmony, such as requirement of Continuous NC_{infl} prefix for nouns and demonstrative pronouns, there may also be some indirect effects involving change of word class (vis-à-vis positive counterpart). This applies both to predicative demonstrative pronouns (§7.4) and certain certain NAdj which also have NAdv usages (§4.2-3). In both cases, the negative context triggers shift from a form (predicative DemPro, predicative NAdj) which shows pronominal prefix indexing a particular referent, to a NAdv or DemAdv (Locative) form with nonreferential ANA_c- prefix (ANA being the regular noun class of adverbs). Instead of treating this as a syntactic transformation, it is probably preferable to regard it as a semantically motivated alternative structure.

In the case of predicative DemPro, a form like /ya:-gi/ 'he is here' is really just a predicative usage of the demonstrative

'this[MSg]', so the English gloss 'he is here' with copula and a demonstrative adverb is syntactically misleading. To say 'he is not here' it does not suffice to add a negative element to /ya:-gi/, since this would mean '[he is] not this' or the like, which would be illogical since 'this' would have no valid referent. Therefore, the negative counterpart to /ya:-gi/ 'he is here' has to be a different construction with predicative nucleus either /=ari/ 'be absent' or some verb like 'to sit' in basically existential usage, with Locative DemAdv (not DemPro) added to specify the zone in which absence is predicated:

(15.lxviii)
ni:='ri ana:-'-ji
he is absent ANA_c-here
'He is not here'

(15.lxix)
wa:='ri ani=bura-n^ga-n^g ana:-'-ji
not he sits ANA_c-here
'He is not (sitting/living) here'

If the DemPro like /ya:-gi/ 'he is here' is part of the close-knit double-predicate construction (§15.5), so that it does not function as a totally independent predication, the negation of the other predicative nucleus will permit direct replacement of /ya:-gi/ by /ana:-'-ji/ 'here' without the additional negated predicative nuclei shown in the two exx. above. Thus (15.lxx) has as its negated equivalent (15.lxxi):

(15.lxx)
ya:-gi ni=ya-ra
this[MSg] he sleeps
'He is sleeping here'

(15.lxxi)
wa:='ri ani=yi-n^ga-n^g ana:-'-ji
not he sleeps ANA_c-here
'He is not sleeping here'

As for the ambivalent NAdj/NAdv stems, in §4.2 we gave some exx. showing how /n^gulun^{g}ulug/ 'fast' often occurs in a kind of double-predicate construction with another verb (say, of motion), hence 'he-is-fast he-runs' meaning 'he runs fast' and so forth. We also showed that when such expressions are negated, normally the verb is directly negated and the NAdj 'fast' is converted into an NAdv with ANA_c- prefix (not agreeing with actor). See (4.i - v, 15xl - xli).

However, the treatment of such NAdj/NAdv stems is a little more tricky than was indicated in §4.2. To begin with, it is possible to directly negate predicative NAdj /ni=n^gulun^{g}ulug/ 'he is fast' if the speaker wishes to specifically negate this predication; hence /wa:='ri ani=n^gulun^{g}ulu-maga:/ 'he is not fast', using the morphological frame discussed above, see Table 15-1. Moreover, with some of the NAdj/NAdv which, in positive contexts, pattern like /n^gulun^{g}ulug/ in tending to be in predicative form (in double predications), the shift to NAdv, as in /ana-n^gulun^{g}ulug/ 'rapidly', is semantically awkward since the concept expressed by the stem cannot be abstracted away from the relevant actor as easily as 'fastness' can be abstracted (as NAdv). Although my data are only from elicitation sessions, I recorded the following forms involving the stem /$w_2$iriwiri/ 'alone, by oneself, singly':

(15.lxxii) ni=ya-n^{g}gi yu:-guni ni=wiriwiri
he went to there he [was] alone
'He went there alone'

(15.lxxiii) ba=wiriwiri ba=ya:-ri:
you [will be] alone you will go
'Go by yourself!'

(15.lxxiv) wa:='ri ani=ya-n^{g}gi an-u-guni ani=wiriwiri-maga:
not he went to there he [was] alone
'He did not go there alone'

(15.lxxv) yagi num=biriwiri nun=dumi-Ø
don't! you [will be] alone you will go
'Don't go alone!'

In all four of these exx., the NAdj /w$_2$iriwiri/ 'alone' is formally predicative, with referential intrans. pronominal prefix. The point is not that variants of the two negative versions with NAdv form /ana-wiriwiri/ cannot possibly occur, rather that there is at least some asymmetry between /w$_2$iriwiri/ and /n^{g}ulun^{g}ulug/ 'fast' in susceptibility to becoming detached from the concrete referent.

15.7 Conjunction (of nouns, etc.).

The simplest type of nominal conjunction is of the type /X mari Y/ with the two nouns X and Y linked by the conjunctive particle /mari/ 'and' (§12.4). This construction is moderately common in the texts, normally either with no pauses or with a pause between X and /mari/. Some exx. are 6.1.1 ('emu and whatchamacallit?, brolga'); 10.2.1 ('[a] son and [his] father'); 14.8.2 ('silver gull and pheasant') and repetitions later in same text; 28.6.1 ('her father and her mother') repeated 28.7.3, 28.11.4/8; 29.7.2 ('[n. of one dog] and whatchamacallit?[other dog]'); 29.12.2 ('seaweed and cuttlefish shells [two types of beach debris]'), 34.1.1 ('moon and native cat', two protagonists in myth) repeated with synonym substitutions 34.1.2, 34.2.1; 42.1.3 ('green turtle and dugong', two myth protagonists); 143.7.1 ('we chopped them, /min^{y}ar/[tree], and /balara/ [tree]'); there are a number of others as well.

Particle /mari/ is basically a local conjunction linking one noun or other word (Y) to usually a single preceding word (X). There are some textual exx. which show iterative use of /mari/ in chains (/X mari Y mari Z/), but these are generally not pronounced as fluent strings, rather as hesitant "afterthought" increments:

(15.lxxvi) mari A anu=wanaga-na B, mari C,
and he will hold him and
mari mij-gulmur mulun^{g}-argi, mari an^{y}ja:bu-n^{y}un^{g}
and young men some others and one-HumSg
n^{g}anu=lharga-n^{g} D.
I will send him
'...and he will have A with him [and] B, and C, and some other boys, and I will send one boy D' (164.1.1-4; A to D are names)

It is possible to use /mari/ in conjoining nouns which occur in nonzero case forms such as Relative /-yin^{y}un^{g}/ and Allative-Dative /-w$_1$uy/, thus /yi:-n^{g}arugali-jin^{y}un^{g} mari yi:-n^{g}ala:ligi-yin^{y}un^{g}/ '[story] of dugong and turtle' (42.1.1); /na:mba-jin^{y}un^{g} mari nan^{y}jawara-yin^{y}un^{g}/ 'of A and B[names]' (63.1.2); and /a-marin-guy, mari a-lhabara-wuy/ '[we put it] into baskets, and into coolamons [containers]' 143.8.3.

As these exx. show, there is no formal difference between a) a nominal conjunction (conjoined NP) to which a single case marker is added, and b) conjunction of two nouns both of which are (independently) already marked by the same case. Thus, '[story] of dugong and turtle' and 'of A and B' in the exx. above can reasonably be considered semantically to be Relative case forms of unit NP which happens to consist of a conjunction, i.e., [[N$_1$ plus N$_2$]-Case], while the final ex. about containers seems to involve the structure [[N$_1$-Case] plus [N$_2$-Case]], but the surface forms end up being exactly parallel. This suggests that despite the overt /mari/ conjunction, the conjoined nouns have autonomous surface-structure status, as already suggested by the toleration of pauses between them.

While we have already seen that /X mari Y/ is a reasonably common sequence, /mari/ is by no means always present in noun conjunctions. Indeed, in (15.lxxvi), bottom of preceding page, the name symbolised here as /B/ does not have /mari/ in front of it, though it is semantically conjoined to the earlier noun /A/. Note that although /B/ is pronounced with no clear pause (comma) before it, it is a kind of "afterthought" since the preceding verb 'he will hold him' has 3MSg object marker referring exclusively to the earlier name /A/. Another ex. with /mari/ absent:

(15.lxxvii) mari ama-saltwater ama-lhan^{g}ada-waj, wara-n^{g}a:nig
and [by] sea by coastal jungle bee sp. 1
wara-garamin^{y}anmin^{y}an ba:::-wi-ruj
bee sp. 2 they are beyond there[Anaph]
wu:-wan^{y}ja-n^{g}u=bura:-' waran^{y}in^{y} miwul
they [food] sit pl.n. X pl.n. Y
'...and around the coast and jungle, honey bee spp. 1 and 2 stay, at [places] X and Y' (143.12.1-3)

Here we disregard the initial /mari/ which links this segment to what precedes it. I do not take 'sea' and 'jungle' to be really conjoined here, rather as semantically overlapping and hence appositional in this context. However, the two names of bee spp. are conjoined semantically, and the two place names are also conjoined, but /mari/ is not found here. There are many other textual passages of this type, and indeed /mari/ is commonly omitted in lists of (conjoined) nouns which are pronounced fluently as units (with a special list intonation, §17.4). In particular, we observe that whereas English and can indicate the termination of an extended list ('X, Y, and Z'), Nunggubuyu /mari/ has no such function. (For a demonstrative form often used to sum up and thus terminate a list of nouns, see /da-ni:-'la-yun^{g}-gala-waj/ §7.9.)

The relative surface autonomy of conjoined nouns from each other is also manifested in the typical pattern for semantic combinations of a third person expression (usually a noun, demonstrative pronoun, etc.) plus a 1st or 2nd person pronominal. The point is that instead of listing the 1st/2nd person pronoun as one of the conjuncts ('X and me', 'X and you'), the procedure is to pronounce the third person expression and then to use a nonsingular 1st/2nd person pronominal form which subsumes all of the conjoined referents. This pronominal form may be just the subject- or object-marker in the pronominal prefix on the verb (or other predicative nucleus), or it may be an independent pronoun pronounced after the third person expression, or both:

(15.1xxviii) nuru=wa-n^{g}, ma:gun nu-ru
we[ExPl] killed it [name] we[ExPl]
'M and us killed it[buffalo]' (163.7.7)

(15.1xxix) nu:=ya-n^{g}gi, wara-mij-bura:yun^{g}, Roger ni-ni we[ExMDu]
we[ExPl] went children
mari yiriwulwuldi nu-ru, nuru-gu=gubadha-n^{g}i.
and [name] we[ExPl] we walked around
'We went [with] the children. Roger and I, and Yiriwulwuldi, the three of us went walking.' (161.18.1-2)

In the last ex., note that the pronominal summation is incremental--first the 1ExMDu pronoun indicating speaker and one other person (Roger), then 1ExPl pronoun (requiring at least three referents) indicating further inclusion of Yiriwulwuldi. Further textual exx. of this general type are 163.10.4 (with 3Pl as the conjoined category instead of 1st or 2nd plural, since speaker and addressee are not included, but of same conjunction pattern), 163.11.5-6 (1ExMDu then 1ExPl), 163.19.2 (1ExMDu marked only in verb, not by independent pronoun), 164.2.1-2 (two names plus speaker giving 1ExPl, with no explicit dual form on the way). A slightly different variation involving similar pronominal prefix pattern, but with Emphatic 1Sg pronoun rather than (summative) nonsingular pronoun among the other nouns, is 163.1.1-3.

Focusing for the moment not on the type of concord in the verb but just on the independent nouns and pronouns as in the two preceding exx. (15.1xxviii and 15.1xxix), note that these sequences of (singular) noun plus summative (nonsingular) pronoun have a basically appositional character. Instead of having a structure of the type [X plus Y], we have a structure of the type [X, Pron$_{xy}$] in which the second element (a personal pronoun) contains the first element plus at least one other referent. Therefore /mari/ 'and' is inappropriate between X and Pron$_{xy}$.

Apposition, it would seem, is a fundamental type of structure in Nunggubuyu. Our analysis of (nonconjoined) "NPs" in §15.2 suggested that coreferential multi-word sequences of an NP-like nature could be analysed as appositional rather than forming surface phrases. We have also noted that Proximate and Immediate demonstrative pronouns are often juxtaposed in an appositional way to 1st and 2nd person pronouns (or pronominal affixes), respectively (§7.27). We will have more to say about apposition in discussing possession (§15.8).

Of course, in addition to analysing the form of the conjoined independent elements themselves, we must specify rules for pronominal concord, especially for subject- and object-markers in the verbal pronominal prefix when the subject or object is a conjunction of nouns/pronouns. The conjunctive concord rules are:

a) pronominal person rule is that first exclusive includes speaker but not addressee, first inclusive includes speaker and addressee, second person includes addressee but not speaker, third person excludes speaker and addressee;
b) human MSg plus one other referent (including FSg), human or nonhuman, is MDu;
c) human FSg plus other FSg or one nonhuman is FDu;
d) total of three or more referents including at least one human is Pl (except for optional 1InMTr and 1InFTr categories);
e) two nonhumans of same noun class are treated as a noun of the same noun class (no pluralisation);
f) two or more nonhumans of different noun class inconsistently but often act like a noun of ANA class, especially ANA$_{\emptyset}$.

The terms "human" and "nonhuman" in these rules are subject to the minor skewing phenomena described in §4.10-13, so that dogs and "personified" animals in myths may be "human," while babies and white people (collective) may be "nonhuman" for grammatical purposes.

An ex. of MSg plus FSg having MDu concord is 28.11.4 ('her father and her mother they[MDu]-returned'), exemplifying rule (b). In 3.7.2 Emu (treated as 3FSg) and a small boy are treated as 3FDu, which may seem to be a violation but is consistent with the fact that a baby or small child may be treated as ANA class noun, as in the immediately preceding passage 3.6.4/5. Conjunction of human and nonhuman referents as subjects or objects of a proposition is almost nonexistent in practise, though further exx. of rules (b) and (c) were obtained in (somewhat forced) elicitation, mainly with higher animate nonhuman as in 'he/she and the kangaroo/shark/crocodile fought'. In such interactive (mainly Reciprocal) combinations there is no clear syntactic alternative to such a conjunction, but in such contexts as 'I saw him/her and the kangaroo/shark/crocodile', the normal Nunggubuyu pattern is to have separate predications ('I saw him/her, [and] I saw the kangaroo/shark/crocodile'). Such repetitions with different noun/pronoun for subject or object are very common in Nunggubuyu, as in 166.4.3 to 166.6.1, where several nouns/pronouns successively occupy subject position in the context '___ cut down [tree for] canoe'. (A better feeling for the Nunggubuyu toleration of repetitions, with or without one referent changed, can be gotten from the text analysis in Chapter 17.)

An. ex. of rule (f) above is /nura:-'ra=n^{g}u-ni/ 'we[ExPl] ate them' 93.2.3 and, in the same passage, /nura:-'ra=wadja-n^{g}i/ 'we killed them' 93.1.5 and 93.2.3. The pronominal prefix is 1ExPl→ ANA$_{\emptyset}$-a //nuru-//, not itself marking plurality of object, though Multiple derivational prefix //-w$_{l}$ara-// (§10.4, not covered by the concord rules above) indicates object plurality here. The verbs refer to the killing and eating of a range of animals who are

enumerated one by one in the passage with the verbs repeated now and then. The individual nouns are 'goanna lizard' (WARA), 'blue-tongued lizard' (WARA), an indefinite expression 'various sorts [of animal]' (here $ANA_{\emptyset}$ but with noun class variable by context), 'frilled lizard' (WARA), 'sand goanna' (MANA), 'tree goanna' ($N^{g}ARA$), 'olive python' ($N^{g}ARA$), 'water python' ($N^{g}ARA$), 'black-headed python' ($N^{g}ARA$), and 'mouse' (WARA). The passage also includes some verbs ('we ate it', 'we killed it') lacking the Multiple prefix (hence not applying to the entire series) and with object marking showing that a particular animal is focused on; this applies naturally at the beginning when 'goanna lizard' (WARA) is the only animal thus far introduced, but also applies at the end when the concluding /nara=n^{g}u-ni/ 'we ate it' refers only to 'mouse'.

A similar ex. is 95.10.6-10, where $ANA_{\emptyset}$ is again the collective concord noun-class for a conjoined series of nouns, though in this instance most of the individual nouns are also $ANA_{\emptyset}$. However, in 98.9.1 we have two plants (with edible roots), one $ANA_{\emptyset}$ and the other WARA, with $ANA_{\emptyset}$ as the concord category in /wuru-wara=n^{g}u-ni/ 'they ate them [both]'; perhaps this verb is also intended to subsume other plant names given shortly before (mostly MANA and ANA_{wu} classes).

Preference for ANA as the "unmarked" category among nonhumans can also be seen in other facts presented elsewhere in this grammar. First, ANA is the noun class for highly general (life-form) flora and fauna categories like 'fish', 'terrestrial game animals', and 'tree' (fauna terms being $ANA_{\emptyset}$, 'tree' and 'grass' ANA_{wu}), and ANA is also the regular class (ANA_{wu}) for abstractive nouns referring to activities (§4.13, §4.33). The use of ANA with most adverbial nouns is also perhaps relevant (§4.3, cf. §4.5 on place names). In addition, $ANA_{\emptyset}$ is the unmarked concord category for indefinite /yan^{g}i/ 'what?' (§13.3). Furthermore, the form /da-ni:-'la-yun^{g}--gala-waj/ (§7.9), formally a predicative demonstrative pronoun (Immediate root, ANA class, plus several suffixes), is the most common list-summative form and is commonly used to wrap up lists of nouns of various classes (though it is possible to use a counterpart with a specific, marked noun class if the items in the list are all or predominantly of some other noun class).

While further exx. of rule (f) can be adduced, both from texts and elicited test cases, I should add that this construction seems to strike Nunggubuyu speakers as slightly anomalous. In some of the passages just discussed, in addition to the more sweeping summarising expressions (like 'we ate them' with explicit Multiple prefix, i.e., 'we ate them all'), we have observed that parallel verbs with individual nouns as objects also occur periodically, and sometimes repetitious passages with several such verbs (each with a different object) are used instead of the sweeping ones.

Some points made in this section so far can be reinforced by considering certain cases of Reciprocal verbs (since, by definition, the morphological subject must be conjunctive). First, our point just made about awkwardness felt toward the (nonetheless frequently attested) use of ANA (usually $ANA_{\emptyset}$) for conjunctions of nouns can be further exemplified by pointing to exx. involving /=lharma-/ 'to chase, follow'. In those textual passages where a real chase is

going on with both participants running around wildly (as opposed to one person tracking another by following footsteps), the usual verb form is /-an^{y}ji=lharma-/ '[X] to chase [Y]' (transitive, exx. in TNT 1 and 24), or even more often /-an^{y}ji=lharma-n^{y}ji-/ '[X or Y] to be involved in a chase' (intrans., exx. 37.4.3ff., 37.6.2rdp, 40.15.3, 43.6.2, TNT 28, MT 20). The affixes are Comitative /-an^{y}ji-/ §10.3 and in the second form Reciprocal /-n^{y}ji-/ §10.6, though the combinations are "idiomatic" in the sense that their meanings cannot be computed from the meanings of the components. In particular, the common form /-an^{y}ji=lharma-n^{y}ji-/, though Recip in form, takes singular (not plural) subject, so that if X is chasing Y we may have one form of this sequence with X as subject, then another with Y as subject. Although the overall passages are symmetrical in the sense that X and Y occur in parallel linguistic forms, so that the chase is presented as an activity involving both protagonists (deemphasising their distinct roles as chaser and chased, respectively), there seems to be an avoidance of forms where both are merged into a single pronominal (as subject of true reciprocal verb).

We conclude by pointing out that the kind of structure exemplified above as (15.1xxviii-1xxix), with a noun juxtaposed in a semi-appositional way to a nonsingular pronoun which subsumes its referent, has parallels in reciprocal clauses. The best ex. in NMET is 161.24.1 ('he now Dick Harris we[ExPl]-met-each-other'), i.e., 'We[Nunggubuyu] and D.H. met each other'. This is also the structure in 161.6.1 ('he Wurajuju-Dual they[MDu]-quarreled-with-each-other'), i.e. 'Wurajuju's father [and another man, not mentioned] got into an argument'. The dual form of the overt noun is merely a device used in necronyms (§4.4) as a way to avoid mention of the actual name of a deceased person.

There is not much to say about conjunction of personal pronouns or demonstratives (for verbs, or rather clauses, see §16.1). Such combinations as English you and I are not commonly used in Nunggubuyu, though they are not really ungrammatical; the regular practise is to use the appropriate nonsingular pronoun (note that the elaborate set of pronominal categories, and the inclusive/exclusive distinction, make it unnecessary in most cases to spell out the singular components in the English fashion). As seen above, singular pronouns are not usually conjoined to nouns or other third person referential expressions either; the basic pattern is to pronounce the noun, then use a pronominal form which subsumes its referent. Nonpredicative demonstrative pronouns like /nu:-'ba-gi-yun^{g}/ 'that one [MSg, Anaph]' behave like nouns with regard to conjunction. The same is true of adverbs, which are morphologically nominal (NAdv) anyway.

Attention is called to the usage of /-w$_{1}$an^{g}/ with (singular) noun to indicate conjunction with an unspecified group of persons (§4.16, also Chapter 5), and to the existence of Dyadic kin terms (§5.6) which refer to pairs or larger groups of kinspersons related to each other in a particular way.

15.8 Possession.

Possession is not a tight, unitary morphosyntactic phenomenon in this language. Therefore the present section is merely a convenient rubric under which we mention a variety of formations, most of which

are treated more thoroughly elsewhere in the volume. We will mention here the primary type with Relative /-yin^{y}un^{g}/ (or /-n^{y}in^{y}un^{g}/ with personal pronoun), whole-to-part noun-class harmony, expression of kin-term propositus, relevant compounding/derivational mechanisms, and predicate genitives, with particular reference to the syntactic questions of apposition and case-spreading.

In §4.30 we present a general discussion of the meanings and uses of case suffix /-yin^{y}un^{g}/, which we label "Relative" to make certain it is not misunderstood to be a simple genitive marker. Some of its uses are not genitive (in any usual sense), including the 'about X, concerning X' one. The majority of uses, however, could be described as genitive in a broad sense--possessor of object, owner of song or other immaterial property, substance from which object is made, whole of which something is a part, habitat in which a plant or animal dwells, something by which a thing is distinctively characterised. That is, /-yin^{y}un^{g}/ serves to mark a broad array of relationships which a modifying noun (or pronoun) may have to another noun.

The "head" (modified) noun, if present overtly, has no special morphological marking (except for kin terms and some body-part terms, see below). The head noun and Relative noun, like other coreferential elements constituting a (notional) "NP" (§15.2), are typically separated by pause or intonational boundary, and often enough by intervening constituents. In the light of our earlier analysis of NP structure, we may consider the possibility that the head noun and Relative noun/pronoun may be formally appositional, coreferential elements. Of course, the Relative noun/pronoun is coreferential only in the sense that the combination Stem-Relative functions as a descriptive modifier to the head noun; it is not the referent of the inner stem of the Relative noun/pronoun which is coreferential. (Indeed, there is no concord from head noun to Relative noun/pronoun; the latter has its own noun-class marking and so forth.)

Our understanding of head/Relative combinations may be assisted by considering what happens when the head noun is in a nonzero case category (because of its grammatical role within the larger "clause"). In this situation, we have a case-spreading rule by which the case suffix of the head noun may also show up on the "Relative" noun/pronoun with the Relative suffix /-yin^{y}un^{g}/ deleted to make room for it. This spreading (or agreement) rule is optional but rather common. In addition, sometimes the nonzero case suffix shows up only on the "Relative" noun/pronoun and is omitted on the head noun; this can happen when the "Relative" pronoun is immediately adjacent to the head noun. So we have three surface possibilities: a) nonzero case suffix on both nouns, b) on just head noun, or c) on just "Relative" noun/pronoun:

(15.lxxx) ni-ga-wi-ruj a:-'n^{g}a-ruj
he -Loc camp -Loc
'at his camp' (40.7.2)

(15.lxxxi) nu-ri-n^{y}in^{y}un^{g} ana-lha:l-waj
us[ExPl]-Rel country -Pergressive[§4.23)
'in/around our country' (113.1.3)

(15.lxxxii) n^{g}aya-wi yu:-guni Cape Barrow-wuy
me[Oblique] to there -Allative
'to my [country] Cape Barrow' (47.21.1)

(15.lxxxiii) n^{g}aya-wi-wuy a-lha:l
me -Allative country
'to my country' (41.5.5)

In such constructions, when the nonzero case suffix is omitted from the noun and sometimes when it is omitted from the (genitive) pronoun, there is an indirect index thereof. In the final ex., above, use of /a-/ (Punctual) rather than zero or /ana-/ (Continuous) NC$_{infl}$ prefix of ANA class suggests the (covert) presence of one of the nonzero case suffixes, since Punctual prefixes are very common with these cases (though Continuous may occur). Similarly, in the penultimate ex. above, the missing Allative case suffix on the initial pronoun is partially indexed by the use of the Oblique stem of the pronoun /n^{g}aya-wi/, cf. /n^{g}aya-wi-wuy/ with suffix in the final ex. The regular Nominative form is /n^{g}aya/ and the Relative (possessive) form is /n^{g}aya-wi-n^{y}in^{y}un^{g}/. An exception to the tendency to use stem forms implying a covert nonzero case suffix is (15.lxxxi), where the Relative (possessive) 1ExPl pronoun /nu-ri-n^{y}in^{y}un^{g}/ rather than unsuffixed Oblique stem /nu-ri:-'/ is found.

Especially in view of the fact that the nonzero case suffix sometimes shows up just on the pronoun and not on the head noun, it may be advisable to modify our analysis, and instead of speaking of case-spreading (i.e., case agreement from head noun to modifying possessive element) we might speak of case-marking applying to such combinations in the same way they do to prototypical instances of apposition, say two coreferential nouns or a noun and coreferential demonstrative pronoun (§15.2). That is, in principle both the Relative (possessive) pronoun or noun, and the head noun, are assigned the same nonzero case in these exx., but individually one or the other word may omit the suffix (usually, though, taking an Oblique form).

A number of further analytical problems are posed by the relationship between case-spreading in simple possessive expressions of these types, and case-spreading in subordinated clauses in which the subordinator is a case suffix; see §16.4.

It is also worth mentioning our earlier discussion (§6.6) of the interpretation of case-marked pronoun forms like /n^{g}aya-wi-wuy/ (1Sg-Allative, with Oblique stem marker /-wi-/), in contexts where no possessed head noun occurs. While in some instances a gloss like 'to me' is fine, often the sense is really 'to my [camp]' or the like, and this pattern is most clear with Locative /-ruj/ as the case suffix. It seems, then, that often there is a covert head noun which is not realised on the surface. This is consistent with other facts about "NPs" (§15.2); for example, the possibility of expressing a "NP" by just a demonstrative, or just a modifying NAdj, with the implied nuclear noun omitted.

Whole-to-part noun-class harmony is expressed by attaching a NC$_{der}$ prefix to the noun root denoting the part ('belly', 'side', etc.), creating a derived noun stem with noun class based on that of the

whole. This pattern (§4.9) is particularly common when the whole is a plant or manufactured article, but extends in a lexically idiosyncratic way to some animal and even human contexts (as with /muwaj/ 'name').

The apposition structure for head noun and Relative noun/pronoun sketched above can also be justified for the combination of the whole noun and the part noun:

(15.lxxxiv) binan^{g} mana-ma-muwaj ma:-da-mu:-'
gum on wattle tree MANA-MANA$_{der}$-name that
'That [gum] is /binan^{g}/, its name' (123.4.4-5)

(15.lxxxv) ni-gubulu-wugij wini=ma-ni, na-yan^{y}jug
NA$_{der}$-body-only they get it tree sp.
'They just get the core of /yan^{y}jug/ tree'
(121.1.7)

Here /binan^{g}/ is a MANA class noun (though without prefix here), triggering MANA derivational form of /muwaj/ 'name'. In the next ex., /yan^{y}jug/ is a NA class noun and induces harmony in the term for 'body' (root /w$_{1}$ubulu/). Similarly, the question asked to find out addressee's name is this:

(15.lxxxvi) nagan^{g} yan^{g}i-n^{y}un^{g} na-ni-muwa-jun^{g}
you[Sg] who? MSg-MSg$_{der}$-name-HumSg
'You are who?, named?'

Usually the appositional relationship between whole and part terms is not dramatised (except with /muwaj/), since usually a whole term is presented earlier in the discourse than any part terms related to it; in (15.lxxxv) /yan^{y}jug/ had been mentioned earlier and the noun was repeated in the segment shown above.

Relative forms with /-yin^{y}un^{g}/ are not normally used for the whole term in this construction. However, if the part term happens not to show whole-to-part harmony and there is a juxtaposed whole term, the latter may take /-yin^{y}un^{g}/ (§4.30).

Of course, it is possible to conjoin two distinct part terms relating to the same whole. In this event, the two part terms are not appositional to each other, though they share the same noun class by (separate applications of) whole-to-part harmony. They are conjoined, and may be separated by /mari/ 'and', as in 121.1.6 and 127.3.3. However, sometimes they are linked by /n^{g}a/ (§12.4), which is otherwise not common in nominal conjunction; it seems to emphasise here the trajectory from one part to another, as in 139.4.3 and 156.1.3/4.

Kin term propositus ('my' in 'my father') is regularly indexed in the kin term itself (Chapter 5), which normally has distinct forms for 1st, 2nd, and 3rd persons (1st subsuming exclusive and inclusive first person), expressed by affixation or stem suppletion.

As noted in §5.5, when the propositus is also expressed by a noun/pronoun juxtaposed to the kin term, the former may be in Relative form with /-yin^{y}un^{g}/ (pronominal /-n^{y}in^{y}un^{g}/), but is more often in the same case category as the kin term (especially with nonzero case suffix:

(15.lxxxvii) n^{g}a=ya-n^{g}gi nu-ga-wi-wuy na-ni-n^{y}ara-wuy
I went you[Sg]-Allative father-Allative
'I went to your father'

See also (5.i-ii).

It should be noted that such separate expression of propositus is not very common. In /na-ni-n^{y}ara-wuy/, above, the kin term is already specified by stem shape as having 2nd person propositus, and the only semantic contribution of /nu-ga-wi-wuy/ is to specify the propositus as singular. In general, the syntax of such kin expressions is consistent with an appositional analysis, though the possessive pronoun may show up in Relative case form (in which case the possessive pronoun acts like an adjectival modifier).

Compounding and related derivational mechanisms can also be approached in some cases with an appositional analysis. For example, cpd. initials indicating body parts (i.e., inalienable possessions) are morphologically and syntactically similar to cpd. initials referring to whole objects. For example, from /=w$_{2}$an^{y}ja-/ 'to uproot' we can get /-jir=wan^{y}ja-/ 'to pull out body hair (or feathers) of [animal, direct obj.]', or /-mada=wan^{y}ja-/ 'to pull up grass [direct obj.]'. In the first case, the direct object (including the morphological object in the pronominal prefix) is some animal, such as an emu (bird), so that the cpd. initial 'body hair, feathers' /-jir-/ merely denotes a part of the whole. In the second case, the cpd. initial /-mada-/ is identical to the direct object noun, also /mada/, which is optionally expressed as independent noun:

(15.lxxxviii) n^{g}an^{g}u-jir=wan^{y}ja:-' n^{g}ara-wa:yin
I pulled out its body hair emu
'I removed feathers from the emu'

(15.lxxxix) n^{g}awu-mada=wan^{y}ja:-' ana-mada
I pulled up grass grass
'I pulled up the grass'

The first of these exx. also permits an additional noun which redundantly specifies the body part, just as the last ex. has redundant expression of the direct object noun; thus (15.lxxxviii) can be elaborated by adding /n^{g}ara-n^{g}ari-n^{g}u-jir/, the N^{g}ARA NC$_{der}$ form of /-jir/ (§4.9). These data suggest that the cpd. initial denoting the body part (as well as the independent noun with the same meaning) has an essentially appositional relationship to the noun denoting the whole.

In addition to the above types, there is also a predicate genitive construction of the type '[X is] mine', '[X is] yours'. The only explicit predicate genitive form is the unsuffixed Oblique stem form of personal pronouns, e.g., /n^{g}aya-wi/ '[X is] mine', /nu-ra:-'/ '[X is] ours[ExPl]', etc. (§6.5). When the predicate genitive referent is expressed by a noun, it is juxtaposed appositionally (usually with no case suffix):

(15.lxxxx) ana:-'-ni ni-ga-wi na-munun^{y}ulu
this [is] his [man's n.]
'This belongs to M'

For actual textual exx. of this type see 17.1.1/2.

Recursive genitives of the type 'the X of the Y of the Z' is rarely expressed in Nunggubuyu, except when one of the possessive relationships is inalienable (kin term or body part). There is no difficulty taking a kin term (already specifying propositus) or a body-part term (showing NC harmony with term for whole), and making this into a possessive form with Relative suffix /-yin^{y}un^{g}/. Thus /n^{g}ara-n^{g}ari-dhalaman-jin^{y}un^{g}/ 'of its sticky substance' (used in sense 'lower section [of a palm sp.]' 117.5.3, cf. in following line /yi:-n^{g}ari-gambal-in^{y}un^{g}/ 'of its head', i.e., 'top section'). An ex. with kin term: /a-ga:gu-yin^{y}un^{g}/ 'of mother's mother' in 76.1.3, with "nonhuman" ANA class form of the term.

Recursion of the (not specifically inalienable) possessive with Relative /-yin^{y}un^{g}/ could, in theory, produce exx. like this: */na-walyi-n^{y}un^{y}-jin^{y}un^{y}-jin^{y}un^{g}/ '[the one] of the one of the man' ('man' = /walyi-n^{y}un^{g}/ with HumSg suffix, §4.15). However, such a form would presumably reduce to /na-walyi-n^{y}un^{y}-jin^{y}un^{g}/, which is already the simple Relative form 'of the man', since elsewhere /-yin^{y}un^{g}-/ is deleted when another case suffix is added (see discussion of case-spreading, this section, above). The combination of two overt /-yin^{y}un^{g}/ suffixes with a noun stem is not recorded; I suspect that it might occur (rarely) in the construction 'about the one of X', in other words, when the outer /-yin^{y}un^{g}/ has the nonpossessive sense 'about' and the inner one is possessive, but I have no exx. with noun stem. With personal pronoun, we do have a couple of textual exx. of /-n^{y}in^{y}un^{g}-jin^{y}un^{g}/ with this type of meaning (47.23.1 and 64.9.4, discussed §6.4).

An analytic recursive genitive construction of the type /X Y-yin^{y}un^{g} Z-yin^{y}un^{g}/ meaning 'the X of the Y of the Z', hence bracketed

[X [Y [Z]]]

is presumably possible, but would not be distinct formally from the counterpart where Y and Z are synonyms in apposition to each other. I can find no exx., and consider this construction highly marginal (except for the inalienable exx. mentioned above).

Again we refer to §16.4 for Relative clauses, which have much in common with Relative noun/pronoun forms syntactically.

15.9 Grammatical relations; "dummy" subjects.

The analysis of grammatical relations (i.e., the syntactic counterparts of "case" categories), especially of the nuclear relations like subject, object, and indirect object, is somewhat complex. We will look for patterning in the following three areas, in succession: a) verbal morphology; b) noun/pronoun morphology; and c) syntax. We get somewhat different results depending on which of these areas we look at.

We will use the following terminology in this section:

IS = intrans. subject	SUBJECT = IS plus TS
TS = trans. subject	ABSOLUTIVE = IS plus DO
DO = direct object	agent = volitional/active IS or TS
BO = benefactive object	patient = semantic object affected
IO = indirect object	

The lower-case labels "agent" and "patient" are exclusively semantic. Upper-case labels are usually meant as grammaticalised categories, but may refer to categories at different derivational levels and may sometimes be used with roughly semantic meaning.

In verbal morphology the following phenomena are relevant: a) cpd. initials and Multiple prefixes; b) voice derivations (Refl, Caus, etc.); and c) structure of pronominal prefixes.

The basic result for (a) is that cpd. initials, and the important Multiple prefix form /-w$_{1}$ara(G)-/, typically index the ABSOLUTIVE noun (IS or DO). That DO here has an essentially semantic meaning (patient) is suggested by the fact that cpd. initials usually index the object given when the verb is 'to give' (/=yi-/), though this object is not indexed in the pronominal prefix (which does index giver and recipient). Actually, ABSOLUTIVE is probably a little too broad, since instead of /-w$_{1}$ara(G)-/ another Multiple allomorph /-n^{g}araG-/ or /-n^{g}aran-/ is used for (mostly human or higher animate) volitional IS, so /-w$_{1}$ara(G)-/ for IS is basically nonvolitional. The combination of nonvolitional IS and patient DO is also a reasonable general characterisation of the category expressed by cpd. initials in productive cpd. types, though there are some special cpd. types in which the initial represents mainly volitional IS (§14.19 for myth character indexicals, §14.20 for some Pl/Collective morphemes). (For a highly restricted set of cpd. initials with TS reference, e.g., 'headache', see §14.6.)

In addition to direct indexing of (nonvolitional/patientive) ABSOLUTIVE, cpd. initials and Multiple /-w$_{1}$ara(G)-/ may index some other (nonnuclear) category such as instrumental or a spatial (usually locative) category, but from the perspective of the ABSOLUTIVE referent (e.g., spatial distribution around the patient's affected body part); see discussion of "absolutive perspective" in (§14.6).

In general, then, cpd. initials and Multiple affixes provide evidence for a division between nonvolitional ABSOLUTIVE (including patient) on the one hand, and volitional IS on the other. There is no very clear positive evidence that volitional IS and (any) TS constitute a single category, since /-n^{g}araG-/ (Multiple, §10.4) and the cpd. initials mentioned §14.19-20 apply mainly to IS (and in their infrequent transitive uses the cpd. initials mentioned refer to DO, not TS).

Turning to voice derivations, we must point out that in this domain, forms and functions do not always coincide. The relevant forms (left) and functions (right) are these:

Comit (§10.3)	add comitative NP
Benef (§10.2)	add indirect object
cpd. (§14.9)	antipassive (drop DO)
Refl (§10.5)	mediopassive (drop TS)
	merge coreferential TS and DO
Recip (§10.6)	merge coreferential SUBJECT and IO
Caus (§10.7)	add causal agent (TS)
	promote nonnuclear NP to DO

(Only patterns with at least a few attested exx. are shown here.)

These derivational elements do not always provide clear evidence regarding higher-order grammatical relations such as SUBJECT and ABSOLUTIVE. Comit has no effect on the other relations, and since Caus applies (more or less) only to intrans. inputs while Refl and Recip apply (as relation-changing rules) only to trans. inputs, they do not give us much insight. There are no striking asymmetries of an "ergative" or "accusative" syntactic type as to which categories may be converted (by derivations) into which others: we have IS becoming either DO (causal) or TS (object promotion), and either TS (antipassive) or DO (mediopassive) becoming IS.

The most interesting derivation is Benef, since this creates a morphological object (in the pronominal prefix) which will bump out any prior morphological object (i.e., if the input was trans.). From the perspective of the verbal morphology, it could be argued that the underlying DO, while possibly still indexed by a cpd. initial, Mult prefix, or verb-root subcategorisation, has been eliminated (as a nuclear NP) from the "surface structure." Some of the other derivations just listed may change the relational status of a NP (e.g., IS becoming DO) as a secondary readjustment following promotion or addition of another NP, but Benef is the only one which secondarily bumps out a prior NP.

The pronominal prefixes (Chapter 9) are important here in two ways. First, our commentary about the voice implications of the derivational affixes just mentioned was based in part on looking at the pronominal prefix, seeing whether it was trans. or intrans. and for trans. prefix seeing which referent was indexed as TS and which as DO (morphologically). Secondly, the transitive pronominal prefixes may be analysed internally, and some information may be gleaned as to whether the system is basically nominative/accusative or ergative/absolutive in formal structure. Although the system is primarily a direct/inverse one and thus escapes gross classification along these lines, we did find (§9.12) that some allomorphic patterns did point toward a hidden nominative/accusative bias. (The point could have been made more strongly had we decided to take the "Inverse" morpheme as basically accusative, a categorisation which would account for its position invariably after object-marking pronominal (it is usually also directly in front of TS-marking pronominal, but may be separated from it by the "B" morpheme, §9.8). So the results with respect to the pronominal prefixes are different from our results with respect to cpd. initials and Multiple affix, where we identified a rough category of nonvolitional ABSOLUTIVE as an operative category, but found no real evidence for (IS/TS) SUBJECT.

We now turn to noun/pronoun morphology. We may use nouns, especially common nouns (Nc), as our basis here, since personal pronouns either have the same basic system or else (for the various discourse-marked pronoun forms) lack nonzero case marking. Demonstrative pronouns also have similar case categories, though some case suffixes have special meanings (Instrumental, Locative, etc.).

For nouns, TS, IS, and DO are not rigorously distinguishable from each other formally. All three typically have zero (Nominative) case marker, and either Continuous form of NC_{infl} prefix or (for sense-foregrounding) absence of this prefix. However, there is a limited tendency for differentiation between TS (or IS/TS) and

DO, the latter being thus associated with "oblique" cases, especially Allative-Dative. This formal fission is manifested in two ways. First, sometimes DO shows Punctual rather than Continuous form of NC_{infl} prefix, a prefixal variant characteristic of the "oblique" cases (Allative-Dative and the spatial categories). This pattern applies to only a small percentage of DO tokens in the texts, but there are enough exx. to warrant recognition (§4.8). Secondly, there are some textual passages in which Ablative case is used to distinguish TS from an opposed DO or IO, which is characteristically put in Allative-Dative case form (exx. with DO in this case are 36.3.4, 36.4.3/5; see §4.22 for further exx. and discussion). There are thus hints of a usually covert differentiation among TS, DO, and IS, in that only TS can take Ablative form, while DO is opposed to TS and IS in permitting Allative-Dative case and/or Punctual form of NC_{infl} prefix. (In §6.5 we mention that personal pronouns also rarely take unsuffixed Oblique form for DO function, the best ex. being /nu-gu-rn^{g}a:-/ 'you[FDu]' in 17.12.4.)

With regard to the discourse-marked pronoun forms like Contrastive (§6.8ff.), it is appropriate to mention here that most often the pronoun is SUBJECT of the clause, but this is only a statistical trend and exx. are attested in DO and other functions.

With respect to clause-level or complex syntax, it is difficult to find evidence for grouping the basic categories like IS, TS, and DO internally. Word order (§15.4) is rather fluid to the point where we cannot easily establish even basic or underlying ordering of TS vs. DO in transitives. Mediopassives (with TS omitted) and antipassives (with DO omitted) are not very helpful, and since the Causative formation does not apply (except in a couple of possibly idiomatic forms) to transitive inputs it does not provide useful evidence on groupings of underlying relations. There also do not seem to be any systematic requirements of coreferentiality of NPs in particular grammatical relations in the operation of clause conjunctions, or in permitting negative harmony (§15.6) to extend over a span including more than one predicative nucleus. For some possibly relevant data from the 'to want' construction see §16.8, but aside from the dubious status of those data, there is no analytically cogent reason to group IS with either of the two major transitive relations in the formulation of the copy-raising rule discussed in that connection.

There are some important points which must be made regarding the interaction of case-marking of independent noun/pronoun and the structure of inflected verbs. First, recall that from the point of view of verbal morphology, Benefactive constructions (in which a nonobligatory indirect object is indexed by the object marker of the verb, with following Benef prefix) look like relational restructurings in which a new morphological object is created, with an old DO (if present) then bumped out to make room:

$$TS_i \quad DO_j \quad IO_k \longrightarrow \quad TS_i - IO_k - \text{Benef}$$

Since the Benefactive object replaces the old DO as morphological object in the pronominal prefix, we could think of the former as moving up from third to second place (in the fashion of relational grammar), with the old DO being demoted to nonnuclear "chômeur."

However, when these referents are also expressed by independent nouns/pronouns in the rest of the clause, they do not show the effects of any relational restructuring. The Benefactive IO is commonly in Allative-Dative case (§4.20), a category only rarely applied to DO. Similarly, the "demoted" DO in the Benefactive construction typically shows up as an ordinary Nominative noun, rather than in a low-ranking category like Instrumental as is typical with demoted NPs in other languages.

Aside from such Benefactive constructions, there are others where a verb does not overtly index a particular referent which nonetheless seems to behave (in the larger clause) much like a DO. This applies to some simple lexical verbs, and to a few of the "antipassive" cpd. derivatives (§14.9).

(15.lxxxxi) wu-wal̲n^{g}a:-'l̲=n^{g}u-yi: ba-gu ana-mi:mi
it drinks[intrans.] there milk
'It [baby kangaroo] drinks milk there' (92.2.4-5)

(15.lxxxxii) yuwa:-gu wuru=wiln^{g}in^{y}ja-n^{g}i ya:-ji
there[Dist] they built fire[intrans.] here
wuru=wiln^{g}in^{y}ja-n^{g}i, yuwa:-gu wuru=wiln^{g}in^{y}ja-n^{g}i
(see above)
ya:-ji wuru=wiln^{g}in^{y}ja-n^{g}i, balawud̲awud̲a, ana-n^{g}ur̲a
huge fire
'They built fires here and there, huge fires'
(100.5.3-5)

In the first ex. we have a cpd. /-w$_1$al̲=n^{g}u-/ (intrans.) 'to drink' from transitive /=n^{g}u-/ 'to eat, consume' (§14.9), while in the second ex. we have a lexical intrans. verb. Both imply a semantic object (patient), and this may be expressed by an independent noun, usually in Nominative case (with 'drink' Instrumental is also possible but is uncommon). The independent patients may be referred to as unindexed DOs. Although their syntactic status is somewhat difficult to pin down, in general they appear to act like DOs with respect to clause-level syntax; they may, for ex., be the downstairs coreferential NP in a Relative clause, as may the demoted NP in a Benefactive (100.6.1 is an ex. of the latter; see also §16.4). A further correlation is possible with semantic patient in constructions with verbs like 'to give' (/=yi-/) and 'to tell' (/=maga-/) which have an obligatory IO slot which is indexed in the object marker of the transitive pronominal prefix (without Benef prefix):

(15.lxxxxiii) mana-n^{g}udan man-uba-ma-yun^{g} wani=ya-n^{y}
guts those he gave to them
'He gave them those guts' (1.10.4-5)

If we add together the unindexed DOs of the formally intrans. verbs shown above with the DO of 'give'/'tell' and the "demoted" DO of a Benefactive, we have a class of DO-like NPs in the clause which are not indexed in verbal inflection. It is particularly striking that Benefactive constructions show apparent demotion (not merely non-indexing) in the verb, but show no demotion of the corresponding independent NP. It seems, then, that verb-level and clause-level

categories are somewhat distinct, at least in the sense that the clause may have a NP acting like DO which is unrecognised in the verb. This is really just another indication of something we have been pointing out all along--there is a considerable degree of autonomy for each noun/pronoun and verb in this language, rather than a system based on tightly constructed phrasal and clausal units. For ex., the occurrence of unindexed DOs may be attributed to various local structural/functional pressures applying specifically to verbal morphology--the redundancy of DO-indexing in verbs like 'to drink' (the only traditional possibilities being water, milk, and in unusual cases blood or saltwater), and the allocation of priority to pronominal indexing of IO (which is often human and hence makes maximal use of the set of pronominal categories) instead of DO. Thus the Benefactive verb form seems to be a local, purely morphological relational restructuring rather than a genuine syntactic realignment.

Finally, there is the matter of "dummy subjects." There are a number of weather verbs of the type 'it rains' or 'it becomes dusk', usually with ANA class subject in the pronominal prefix. However, in Nunggubuyu it seems that the dummy-subject analysis, in which the 'it' is not recognised as referential (rather as having been inserted by rule to fill an obligatory syntactic slot), is dubious. In the case of 'it rains', for ex., the verb is actually 'it all falls' (including Multiple prefix), and the subject marker may be wither ANA or N^{g}ARA class. Since these are the two NC possibilities for the noun /anbana/ 'rain', it is reasonable to assume that this noun is the (often covert) subject of the verb form. In the case of /wu=l̲al̲ma-n^{y}/ 'it dawned' (ANA subject prefix), there is a variant form with additional cpd. initial /-aG-/ 'ground', hence /wa:-'=l̲al̲ma-n^{y}/ (see 125.11.2 for a slightly different form of this). It may be, then, that the normally covert subject is 'ground', and since /=l̲al̲ma-/ also means 'to tear, split' (intrans.), the whole expression could mean 'it[ground] splits [as sun rises]' (cf. English The day broke). Without running through all verbs of this type, I will simply express the view that the others can be handled in similar ways (perhaps in some cases with NAdv like /adharwar̲a/ 'dusk' as covert subject). (For dummy object, see also §16.8.)

We may summarise this section as follows: within the verb there is evidence from cpd. initials and Multiple prefixes of a division between nonvolitional ABSOLUTIVE and volitional IS (with TS defined negatively as not involved in these forms); verbal derivational affixes often affect voice but do not provide much evidence for "ergative" vs. "accusative" patterns; the Benefactive verb form is the most interesting since it appears to promote indirect object and eliminate direct object, but it turns out that clause-level syntax is unaffected by the "demotion"; pronominal prefixes on verbs show a limited bias for nominative/accusative (IS/TS vs. DO) patterning within a basically neutral direct/inverse system; independent nouns/pronouns usually do not differentiate TS, DO, and IS but show occasional formal convergence of DO with Allative-Dative (fully or partially), while TS sometimes shows Ablative suffix; in the absence of Equi and other coreference-based rules it is hard to identify clause-level "ergative" vs. "accusative" syntax; there are many unindexed DOs, but no true dummy subjects.

Chapter 16

Syntax: complex constructions

16.1 Simple clause conjunction and chaining.

As already mentioned in §15.5 and detailed throughout the present chapter, Nunggubuyu "clauses" are normally fully inflected even when functioning syntactically as subordinated. It is obvious, then, that sequences of clauses which describe a series of narrative events, and similar types of clause conjunction, should involve what are formally main (matrix) clauses with perhaps a conjunctive particle or the like (Chapter 12).

Indeed, no overt conjunction is necessary in many narrative passages. In Chapter 17, below, we consider in some detail a single Nunggubuyu text (Text A), given there in a word-for-word "English" version displaying the structure of the original. Perusal of the text will show that many clause transitions (involving, in most cases, narrative-event sequences) show no conjunctive particle whatever.

This does not mean, of course, that Nunggubuyu discourse consists of a simple string of clauses with no structural organization at higher levels. In Text A, for example, we do find formal evidence for multi-clause "groups," marked in many cases by certain initial particles such as /mari/ (§12.4) 'and', /a̲daba/ (§12.3) 'now, then', and /n^{g}ija̲n^{g}/ (§12.6) 'again, moreover'; see discussion in §17.9. In addition, there are formal devices for foregrounding and backgrounding alternate clauses, creating somewhat the same effect produced by subordination (switch-reference, gerundials, etc.) in other languages. One type of backgrounded clause, usually involving repeated material, is expressed largely by intonation (§17.4), though aspect (§8.3-4) and noun-class morphology (§4.8) among other devices are also systematically used in this context.

A relatively small number of textual passages contain a clause with a (usually suffixed) subordinator on the predicative nucleus or some other word, indicating a kind of backgrounding of the clause vis-à-vis some other(s). For discussion see comments on "backgrounded, clarifying" uses of Relative clause in /-yin^{y}un^{g}/ (§16.4, below), and on some of the case-suffix subordinators in §16.6. These are not high-frequency formations in simple backgrounding function.

The relatively loose structure of clause conjunction is matched by a similarly loose conjunction system for NPs, which often shows the component NPs in an apposition-like arrangement, with only optional usage of conjunctive particles (§15.7).

16.2 Status of "complement" and "subordinated" clauses.

The term complement clause is used in linguistics to refer to certain types of "lower" clauses which are directly within the scope of a "higher" or "matrix" verb such as 'to promise', 'to persuade', or 'to want'. Many languages have a further distinction between finite (or tensed) complements showing the form of a matrix clause plus a subordinating element (English that, French que), and nonfinite (untensed) complements such as infinitives which show a sharp reduction in regular inflection, often accompanied by partial or full formal nominalisation of verbs.

As we will see in §16.3, below, Nunggubuyu lacks a close equivalent to English indirect quotative complements with that, since quotations are direct (for the fine print see the section cited).

Moreover, Nunggubuyu has no nonfinite complement formation of even slight productivity. There are a tiny handful of abstractive nominalisations which are formally related to existing verb stems (§14.16), but these are very rare in texts and are not systematically used in any particular syntactic frames; they resemble English words like thirst and death rather than productive infinitive or other complement constructions.

Accordingly, in the remainder of this chapter we will be dealing with finite clause formations with some subordinating element added, generally a "case suffix" in a special clausal function, or some other suffix such as postposition /-maji:/ in conditionals (§16.7). Relative clauses (§16.4) are also full finite clauses with a suffix, usually on the verb, there being no productive participial formations (for a tiny handful of forms which might be classified as representing an unproductive participial type, see §14.21).

In addition to the regular usage of fully tensed clauses where we might expect nonfinite complements, it is difficult even to identify Nunggubuyu syntactic contexts which correspond to the contexts which, in English, call for complement constructions. As we explain in §16.9, many English matrix verbs like 'to decide', 'to persuade', and the like which regularly take complement clauses have rough functional counterparts in Nunggubuyu with an entirely distinct structure; the English constructions can be seen as highly condensed (telescoped) logical representations of more complex situational scenarios which are spelled out more fully in Nunggubuyu (e.g., using direct quotations rather than metapragmatic summaries). Therefore, the absence of nonfinite complements, and the absence of a counterpart even to English finite complementiser that, can be attributed not so much to a different distribution of clause types across (constant) syntactic environments as to a fundamental difference between the two languages in the constitution of these syntactic environments. (For a possible usage of matrix-like clause as complement of 'to want', see discussion in §16.8, below.)

Instead of speaking of "complement clauses," then, we will use the alternative term subordinated clause as a cover term in this chapter for finite clauses with some additional element which subordinates the clause to a higher clause (matrix) or to some element therein (in the case of relativisation). This rubric may apply to Relatives (§16.4), Purposives (§16.5), case-suffix subordinators (§16.6), the protasis ('if'-clause) of hypothetical conditionals (§16.7), and perhaps 'because' clauses with enclitic particle /yamba/ (§12.15). It does not apply to the apodosis ('then'-clause) of a hypothetical conditional, which has the form of a matrix clause, and should perhaps be kept from applying to the protasis or apodosis of a counterfactual conditional (§16.7) since both of these clauses are in essentially the same form (Past Potential inflection with optional /-maga:/ postposition). The term "subordinated" (or even "complement") may be applied to the second clause in the 'to want' construction (§16.8), but we will point out that the evidence for this type is weak.

Another candidate for subordinated status is the Evitative (§8.7).

16.3 Direct and indirect quotation.

Essentially all quotation, including quotation of unspoken decisions and other mental ideas (§16.9), is direct. A special intonation is characteristically used for the quoted material (§17.4), and there may be additional signals such as beginning the quotation with an exclamation like 'hey!' (§12.20). Quotations, including mental ones, are commonly closed with a form of the verb /=yama-/ 'to do thus', as in '"Go!" he-did-thus' (i.e., '"Go!," he said'). The only other verb used in this way with ordinary direct quotations is /=lhawiwa-/ 'to ask', usually in cpd. form /-yan=dhawiwa-/ 'to ask [with speech]' (cf. /-ba=dhawiwa-/ 'to ask with eyes, i.e., with inquiring look', etc.).

Exx. of direct quotation: '"/e:::/" they-did-thus' 41.9.3-4 (note that the reported sound here is non-speech, so English would generally use they went rather than they said); '"I went astray at Ayindur. Marambadin^{y} took me" he-did-thus' 40.16.1-2; '"Where will I go? This way I will go"' 15.2.1 (i.e., 'He decided to go that way'; no quotative closer here); '"How far?" he-asked' 1.4.4.

There is no well-defined indirect discourse construction of the English type (that complementiser, here-and-now oriented pronominal and tense usage). However, something resembling indirect discourse might be identified in connection with the cpd. verb /-an=jama-/ 'to think [that...]' from root /=yama-/. Here we are, of course, dealing with mental rather than spoken quotations. The context in which /-an=jama-/ is used is mistaken identification of some object by a narrative actor. All available exx. have as complement a nonverbal clause of the type 'that [is] X'. The exx. are 12.3.4 '"that[Anaph] barracuda" they-thought'; 21.2.2 'he-thought "it-[is/was-]Mandha:yun^{g}-moiety-country that[Anaph] his-still country"' [i.e., he thought he was still in his own moiety country]; TNT 23 line 4 'it-thought "that [is/was] human"'; MT 28 lines 5-6 up '"lice it [is/was]" he-thought they-thought "it [is/was] lice". Although tense is indeterminate, use of Anaph demonstratives and 3rd person pronoun ('his-still') suggests partial indirect discourse.

16.4 Relative clause with /-yin^{y}un^{g}/; case-spreading from head noun.

The most common subordinated clause type involving a suffixed "case" suffix subordinator is the "Relative" clause with /-yin^{y}un^{g}/. This suffix has been described in §4.30, where a number of senses including genitive and 'about, concerning' were described for its nominal uses. A similar generous semantic range can be seen in the clausal forms to be described here, and the term "Relative clause" should be taken in a broad sense.

We will discuss (at least) the following points in the present section: a) relationship of /-yin^{y}un^{g}/ clause to head noun; b) set of possible grammatical relations of head noun (in matrix clause) and of coreferential noun (in subordinated clause) when a head noun is clearly present; c) exx. of various verbal inflectional categories in Rel clause; d) 1st/2nd person heads; e) use of unsubordinated clause in roughly the same meaning as Rel clause; f) addition of /-yin^{y}un^{g}/ to constituents other than predicative nucleus within Rel clause; g) interaction with conjunction; h) interaction with negation; i) Rel clause within another subordinated clause, or Rel clause containing another subordinated clause; j) replacement of /-yin^{y}un^{g}/ by another case suffix by case-spreading from head noun; k) /-yin^{y}un^{g}/ added to another subordinator; l) ordering.

I count 235 occurrences of Rel clause with /-yin^{y}un^{g}/ in NMET and will use this corpus here. The complete list, omitting one or two which are unintelligible on the tapes, is this: 1.7.3, 7.7.6, 7.15.5, 7.21.6, 10.14.3, 12.3.2, 13.5.1, 13.32.3, 13.40.4, 13.43.3, 14.12.2, 15.3.3, 15.7.3, 16.17.7, 16.18.5, 16.23.3, 17.7.5, 17.11.4, 19.7.1 (two), 20.17.6, 21.1.2, 21.5.2, 21.9.3, 27.5.3, 32.2.4, 34.2.6, 35.12.3, 40.6.4, 40.7.5, 40.13.6, 41.22.7, 43.12.3, 43.15.5, 45.4.2 (two), 45.10.5, 46.1.5, 47.1.1, 47.2.2, 47.2.4/5/6/7, 47.3.2, 47.3.5, 47.4.2/3/4/4/5/6, 47.5.5 (two), 47.6.1/3/4/4, 47.7.2, 47.9.2/3/3, 47.10.6, 47.12.2/3, 47.13.6, 47.15.1/2/3, 47.17.5 (two), 47.20.1, 47.22.8/9, 47.23.7, 49.2.5, 50.3.7, 50.4.5, 53.1.6, 53.2.4, 54.1.4/4/6, 54.3.1/2, 54.4.1/4, 55.2.3/3/4, 55.3.4, 55.5.4, 55.7.6/6/7, 56.1.2/3/4, 57.2.4, 57.3.5, 59.2.1, 59.3.7 (two), 59.4.2/3, 59.6.4, 59.9.1, 64.3.3, 64.3.7, 64.8.3, 64.9.6/7/8, 65.4.1/2, 65.5.4, 65.8.3, 65.9.6, 66.1.5/6, 66.2.4/5/6, 66.3.5, 67.2.1, 68.1.4/5/6, 69.3.2/6/7, 69.6.3, 69.10.5, 69.13.2/4, 71.2.2, 71.3.1/4, 71.10.5, 71.11.5, 71.22.4, 71.23.2/3, 71.27.2, 73.1.2, 73.3.4, 73.4.3/4/7, 73.7.5/7/7/8, 73.8.4, 74.1.5, 74.3.1, 79.1.6, 88.1.4, 89.1.5, 91.1.3, 93.2.2, 94.3.2, 94.5.1, 95.8.8, 95.10.7, 98.9.4, 100.6.1/4/5/5, 103.1.4 (two), 105.1.3, 105.2.3, 105.3.3/5, 105.5.3, 106.4.5, 108.6.1, 108.8.2/4, 110.3.1/6/7/7, 110.4.5, 112.5.5, 113.4.5, 113.5.6/7, 113.8.5, 113.10.5, 114.11.6, 116.3.1/2/7, 116.9.2/4/4, 116.13.2, 119.7.3, 120.4.3, 123.1.2, 123.4.4, 148.1.2 (two), 151.3.2, 156.2.6, 157.2.1, 157.13.3, 161.1.2, 161.29.3 (two), 161.31.1, 161.32.4, 161.35.6, 162.8.3, 166.4.3, 166.16.3, 166.20.1/3, 166.21.5, 166.22.2, 167.11.1, 167.15.2, 167.17.2, 167.19.1/2/2/3, 170.1.5, 170.3.1/2/4, 170.4.2. The omitted exx. are 55.3.3, 59.3.4[meaning of verb unclear], and 59.10.8.

Our first point is the relationship of the Rel clause to a head noun in the matrix (higher) clause. (Actually, the head may be a demonstrative pronoun or other noun-like element.) Although classification of individual textual exx. is difficult and in some cases

probably arbitrary, we can distinguish in principle the following three types: a) Rel clause functions as restrictive modifier of an overt head noun; b) Rel clause functions itself as a NP with a clear grammatical relation in the higher matrix clause although there is no separate overt head noun; c) Rel clause is not linked to a specific head noun, and functions semantically as some other kind of subordinated clause.

Some exx. of (a) are 17.11.4 ('they$_i$-finished-him$_j$-off, that[Anaph]$_j$ who$_j$-lay-on-platform, they$_i$-finished-him$_j$-off') and 167.17.2 ('he$_i$-went-into-water [my-]father$_i$ [who$_i$-died-]at-pl.n.[§4.4] whom$_i$-they-speared, [name$_i$]'), among many others. The occurrence of a preceding DemPro (often Anaph, sometimes Prox or Imm) is usually a giveaway that the Rel clause is in restrictive modifying function, as in the first of these two exx.; see also 16.23.3, 47.20.1, 47.10.6, 56.1.2, 64.8.3, 65.4.1/2, 123.4.4, and several others. However, a DemPro need not be present for this to be the meaning.

Some exx. of (b) are 7.21.6 ('[man's n.$_i$], in-English he$_j$-who-will-write-it, he$_i$-will-tell-him$_j$') and both exx. in 47.5.5 ('not they$_i$-went, [the-ones-]who$_i$-were-tired, who$_i$-were-tired-of--walking'). In such instances the matrix clause typically has a pronominal subject- or object-marker in the verb which is coreferential to the referent of the Rel clause (though if the matrix-clause case is a spatial one or another not cross-referenced in the verb this need not be true).

The difference between (a) and (b) is not great. Just as NAdj, DemPro, and other elements may occur as modifiers of a co-present and coreferential noun or may occur by themselves as the only overt element in a "NP," so a Rel clause may appear by itself as a formally "headless" relative clause, or may occur with juxtaposed head (as with DemPro and NAdj, the linear order is not rigorous and intervening constituents may occur; however, a Rel clause commonly follows its head).

Type (c), with no overt or covert head noun, is difficult to identify clearly since in many cases there is a possibility of assuming a covert matrix NP in some minor case category; the problem is compounded since there are often two or three ways of analysing the semantics of the whole construction. Some exx. possibly involving a covert (zeroed) minor-case head are these: roughly locative head in 20.17.6 ('...they-stopped; where-they-stopped they-stayed'); allative in 43.15.5 ('[they went] slowly and log-which-was-open and go-in![root form], they-went-in now into-log'), though here the head does appear in the ensuing discussion (in the underlined Rel clause 'log' is a cpd. initial rather than a separate head noun); covert Benefactive (dative) object in 91.1.3 ('pl.n.-only they-make-it[burial], [for-]him-who-is-named[with ritual name], they-make-it...'); and temporal 'when' in 161.1.2 ('in-bush my--, when-we-stayed'), though 'when' does not correspond to a specific nominal case.

There are a number of somewhat clearer cases of type (c), in which the Rel clause has a backgrounded, clarifying discourse role, or perhaps acts as a kind of complement clause. The "backgrounded" usage here is to be distinguished from the use of narrative repetitions (usually with Continuous aspect and often reduplicated) to frame event predications discussed in §17.3-4.

A fairly complete list of the backgrounded/clarifying exx. which I have (tentatively) identified is this: 13.32.3 ('he-pulled-it-out, spear, from-there it-quivered it-did-thus fly! fly![root forms]...'); 13.43.3 ('he-watched-them up-to-here[in water], saltwater to-there upward it[water]-went', i.e., he watched them as the rising water moved up on them); 15.7.3 ('...he-came-out, now he there he-made-fire pl.n., now he-looked-for-it water'), though here the underlined Rel clause might also be interpreted as 'where-he-made-fire'; 16.18.5 ('they-sniffed, [imitation of belching], he-belched and, he-emitted-smell, he-emitted-stench'); 17.7.5 ('water from-here it-went-in from[i.e., through]-nose, and he-breathed water, water-went-in', i.e., as he breathed some water got into his nose); 21.5.2 ('king-brown-snake, as-for-him, he-made-noises from-there, he he-went-fast', i.e., he went along fast, making noises); 27.5.3 ('he-looked to-there, they-had-heads-shining they-bobbed-up-and-down'); 50.4.5 ('fighting-stick it-stood, here they-erected-it, again another they-erected-it, sacred-ground$_i$ they-left-it$_i$'); 71.22.4 ('[murderers use] shin-bone ..., then they[victims]-sleep they-do-thus', i.e., when/where the intended victims sleep); 71.23.3 ('he-got-it spear, ..., which-was-like-that like-this, they[victims]--slept', i.e., when/where they slept); 73.3.4 ('[after he$_i$ stabbed him$_j$] that-one$_j$ they$_{ij}$-be-equal but equal they-stabbed-each-other', i.e., they stabbed each other reciprocally); 110.3.1 ('then it[fish]-made-noise now it-jumped-around', i.e., it made noise by splashing and jumping around); 116.13.2 ('cycad-damper[bread] [is-]distinct, of-whatchamacallit of-juice they-crushed', i.e., cycad damper is made from crushing cycad nuts into a juicy pulp).

This list is somewhat heterogeneous. The underlined segments, which correspond to Rel clause with /-yin^{y}un^g/ (including, in a few cases, some other constituents within the clause), can in a few cases be construed as complements of matrix verbs like 'see/watch' and 'smell', but it would be a mistake to treat this as a rigid syntactic arrangement (for exx. where the "complement" of such a verb is a main clause with no subordinators, see 28.16.5, 29.3.3, and many similar exx.). Most of the items in the list above can be explained by pointing out that the underlined clauses are slightly backgrounded (vis-à-vis adjacent clauses) but provide clarifying information about the situation. This usage of Rel clauses is not exceptionally productive, considering that the forms given above represent over 500 pp. of texts; there are many Australian languages with "adjoined relative clauses" (K. Hale's terminology) which are much more productive than the Nunggubuyu type.

Following up on a pattern seen much more clearly in the neighbouring language Ngandi, we observe that occasionally this Rel clause form is used apparently for de-focusing the verb and thus focusing on some other constituent within the clause. This is not a well-developed Nunggubuyu construction but might be identified in some of the following: 56.1.2/3/4 ('his$_j$-MoMoBr$_i$ that-one$_i$ he$_i$-will-circumcise-him$_j$; as-for-him$_k$, he$_k$-will-lie-down [under him$_j$] his$_j$-SiHu$_k$, he$_k$-will-grip-him$_j$'); 59.6.4 ('they-set-bushfires; female-wallaby, male-wallaby they-set-bushfires[to hunt wallabies]'); 170.1.5 ('bloodroot$_i$ that$_j$ xxx they-paint-torso[-with-it]'). The construction is comparable to English 'it is X who will...'.

We now consider the set of grammatical relations which the coreferential Rel-clause NP and the head (in the matrix clause) may have in their respective clauses, referring to combinations where such a head is clearly identifiable (i.e., in restrictive modifier readings). Since it is not even necessary that there be a head, we do not expect any particular constraints on coreferentiality network when there is a head, and this expectation is basically borne out.

The relativised NP in the Rel clause itself can apparently be in any relation and need not be cross-referenced in the verb. We can cite the following: trans. subject 10.14.3 ('here-comes monster which-killed-for-me my-son'), cf. 45.10.5, 46.1.5, 47.4.6, etc.; intrans. subject 13.5.1 ('as-for-them[ants] who-go-in-front another path they-make-it'), cf. 17.11.4, 35.12.3, 47.5.5, etc.; regular direct object cross-referenced in verb 7.15.5 ('there it-lay stone, which-she-had-eaten'), cf. 16.17.7, 16.23.3, 32.2.4, etc.; semantic direct object (patient) not marked in verb or bumped out by co-occurring Benefactive (cf. §15.9) 55.7.6 ('[rituals] which-they-danced', with intrans. verb), 100.6.1 ('they-built-fire$_i$, huge$_i$, fire$_i$, which$_j$-they-built-for-it$_j$, crab$_j$', where 'build[-fire]' is intrans.), cf. 47.23.7, 57.2.4, 57.3.5, 59.3.7, 59.9.1, 95.10.7, 105.3.5, 105.5.3. 110.3.6, 116.9.2, 119.7.3, 148.1.2[second Rel], 166.20.3; comitative [see §10.3] 73.4.7 ('they-bestowed-on-him$_i$ woman with-which-he-slept', i.e., for him to sleep with); instrumental 7.7.6 ('stone, stone-was-rough, which-she-pounded-with'), cf. 13.40.4, 14.12.2, 66.1.5, 66.2.4/6, 68.1.5/6, 71.11.5, 170.1.5 (several of these have alternative construals); locative or allative 108.8.2 ('fish-trap$_i$ this$_i$, which-it[fish]-went-into'), cf. 19.7.1 [first Rel], 110.4.5, 161.29.3; indirect object (dative) 59.6.4 (no dative marking in Rel verb) and 100.6.5 (Benefactive, with whole-to-part coreferentiality with patient); purposive/goal 55.7.6 [second Rel], 93.2.2; 'about, concerning' (a meaning which Relative nominal case marker often has, §4.30) 47.7.2, 47.20.1, 47.22.8/9, 64.3.7, 69.13.2 (some of these alternatively construable); possessor in possessive predication 'X has Y' 54.3.1/2 ('if-they-die, who-not[-have] law, who-not[-have] ritual') and 54.4.1 ('who-not who-will-not[-have] law, not to-there they-will-go'). In these last possessor cases, the Rel clause is based on a simple predication of existence (or in these particular exx., non-existence), so there is no overt cross-referencing of the possessor within the Rel clause.

The head in the matrix clause may likewise be anything, so far as can be determined. We will observe below that when the head noun is in a nonzero case, it is possible to replace /-yin^{y}un^g/ in the Rel clause by a copy of the head's nonzero case. Leaving such case-spreading exx. aside for the moment, we find regular /-yin^{y}un^g/ Rel clause modifying nonzero-case head in such exx. as 47.10.3 (allative-dative), 69.13.4 ('about' on one reading), 71.11.5 and 71.27.2 (possessor, most clearly in the latter ex.), and 113.8.5 (allative). There are, of course, a great many exx. involving heads functioning as subject or object. In 73.1.2 we have a head which ends up as predicate genitive two lines later; in 91.1.3 the head seems to be an implicitly (not formally) benefactive.

Internal derivational processes like Recip and Refl apply within clauses prior to such embedding rules as relativisation. Exx. of Recip intrans. subject relatives are 47.1.1 and 47.2.4ff. among many others; a Refl ex. is at the end of 47.4.4.

Whole-to-part coreferentiality, involving a term for a person or other whole entity and another term for a body part (or similar inalienable like 'name'), turns up occasionally in the relationship between head and relativised noun: 88.1.4 ('name'), 108.6.1 ('shadow'). For information about this type of coreferentiality in other morphological contexts see §4.9, §14.6, §15.8. For strict-inclusion coreferentiality (singular vis-à-vis plural), see discussion in this section, below, on interactions with conjunction.

Although most of the textual exx. involve Rel clauses whose verb is $Past_2$ (most often Past Continuous) or $Nonpast_2$ (usually Present), there are no formal restrictions on verbal inflectional category as long as the combination makes sense. I do not have any exx. involving Evitative verb forms (§8.7), Past Potentials (§8.6), or Future forms in imperative sense (§8.5); I presume one could construct Past Pot exx. which would make sense but this would not be easy for Evitatives ('lest...') or imperatives. Exx. of other categories are $Past_1$ (Past Punctual) 13.40.4 (two), $Nonpast_2$ (Present) 47.23.7 and (Future Continuous) 54.4.4. Negative forms (which involve some changes in verb forms, Chapter 8) are discussed later in this section.

Of course, heads of Rel clauses are usually third person nouns or pronouns. However, it is possible to have 1st/2nd person pronouns acting as heads, in which case there is usually no independent pronoun as head, rather just the 1st/2nd person pronominal marking in the Rel clause (and, if appropriate, also in the matrix clause). The best textual ex. involves 1ExPl in 114.11.6 ('...we-ate-it, we-whom-they-begat'). The form here involves /-yin^{y}un^{g}/ added to the verb /nambi-lhama=lhama:-'-/ 'they[old people] begat us'.

Although the Rel clause with /-yin^{y}un^{g}/ is fairly common (one instance for every two odd pp. in NMET), it is possible to find many passages where instead of a perfectly possible Rel clause we get just the corresponding unsubordinated verb form. Thus in 65.13.5 we have a construction meaning 'Tell those people about this song which I have brought to you', but instead of a Rel clause the last part comes out simply as /n^{g}ana:-'=jura-n^{g}i/ 'I transported [it] to you' with no subordination. We have already noted above that the nonrestrictive (adjoined) relative interpretation is not terribly common with /-yin^{y}un^{g}/, and that "complements" of verbs like 'to see' (as in 'I saw him eat[ing]') in Nunggubuyu are commonly unsubordinated main clauses in form; cf. 28.16.5, 29.3.3. Since one function of such adjoined relatives is discourse backgrounding, note that there are alternative devices which can be employed for backgrounding, particularly in repetitious passages (see §17.3ff.).

We now look a little more closely at the form of Rel clauses in /-yin^{y}un^{g}/. Normally the kernel of such a clause is a verb or other predicative nucleus to which /-yin^{y}un^{g}/ is attached as a suffix. However, it is possible to have additional constituents such as NPs within the Rel clause. In this event, /-yin^{y}un^{g}/ may be

added to another constituent, especially a noun preceding the predicative nucleus, whether or not also added to the nucleus. When added to a noun, the resulting form is identical to the ordinary Relative case form of the noun (§4.30). It is therefore possible to consider a syntactic analysis in which the Relative noun is a constituent distinct from (perhaps in apposition to) the Rel clause, both being directly attached to the head in the matrix clause (or in some cases functioning as 'about X' constituents or as other subordinated adjuncts to the matrix clause). The two alternative analyses of a representative instance are shown in Figure 16-1, below. The appositional analysis takes the two Rel forms as autonomous, while the Rel-doubling analysis presupposes a simple Rel clause plus a rule allowing multiple appearance of the Rel suffix within the Rel clause (one could argue that this Rel-doubling rule--to be distinguished from the [head-to-Rel] case-spreading rule discussed below--has the function of identifying N_j as being within the scope of the Rel clause, just as use of certain NC_{infl} prefixes on nouns may mark them as being within the scope of a negative, §15.6).

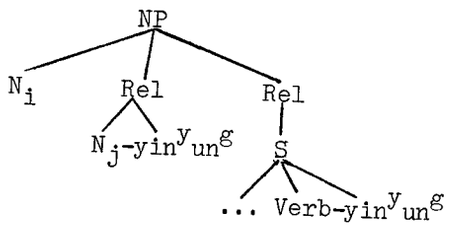
It is not as easy as it might seem to decide which analysis is correct. This is because the nominal case-marking use of Rel /-yin^{y}un^{g}/ (§4.30) is very broad semantically, and in particular is not confined to genitive. In many textual exx. showing double (noun-and-verb) Rel, it is possible to construe the passage logically in either fashion.

Relevant textual exx. are these (using 'of X' as conventional gloss for Rel suffix form of noun): 54.1.4 (two) ('if-he$_i$-dies, of-law$_j$ he$_i$-[who-]holds-it$_j$[,] of-law$_j$ he$_i$-[who-]holds-it$_j$', i.e., if a man who has ritual power dies), cf. negative counterparts 54.3.1/2 and 54.4.1 with Rel suffix added to negative element; 55.5.4 ('they$_{ij}$-got-painted and, of-there[Anaph]$_i$ of-first$_i$, and of-from-there[Dist]$_j$ whom$_j$-they$_k$-brought', i.e., the latecomers who were brought in as well as the first group there); 57.3.5 ('women$_i$ [as-for-]them$_i$ they$_i$-dance too, that[dance?] of-forked-stick which[dance]-we-sing', i.e., which we perform at the forked-stick

FIGURE 16-1

Analyses of Double Noun-and-Verb Rel Sequence

appositional-Rel analysis



Rel-doubling analysis

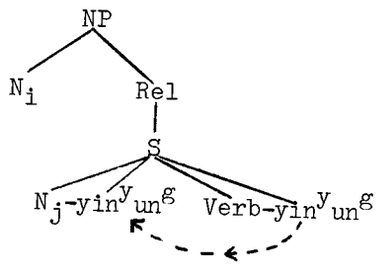


Figure 16-1

dancing ground; 64.9.6 ('I-discussed totems$_i$, that-kind$_i$ we of-countries$_j$ which$_i$-made-them$_j$-all', i.e., which created our [clan] locations); 73.7.5 ('as-for-us of-elders$_i$ we-who-heard-them$_i$'); 74.3.1 ('also that-one$_i$ who[FSg]$_i$-follows of-later', i.e., also the next daughter); 116.13.2 ('cycad-damper, it-is/was-distinct, of-whatchamacallit of-its[cycad's]-juice which-they-crushed'). In all but the first ex. in this list, /-yin^{y}un^g/ is added to the verb in addition to being added to the noun (including NAdv in some instances). The appositional-Rel analysis is logically reasonable in most of the exx., but so is the Rel-doubling analysis, and the latter is semantically preferable in such cases as 73.7.5.

There are also numerous exx. where a noun (including NAdv) which appears to be semantically within a Rel clause does not show a second occurrence of the /-yin^{y}un^g/ suffix: 17.7.5, 47.4.4/5, 47.6.3, 67.2.1, 71.3.4, 89.1.5, 112.5.5, 166.22.2, 170.3.2. There does not appear to be any strict syntactic rule as to when the noun in the Rel clause shows /-yin^{y}un^g/; for example, in some of the exx. in this last list the noun without /-yin^{y}un^g/ is the direct object of the Rel clause; compare the ex. 64.9.6 (this page, top) showing Rel ('of-') on direct object ('countries'). My basic conclusion is that the double-Rel (noun-and-verb) construction may reflect either formal apposition of two Rel nodes, or optional Rel-doubling within a single Rel clause, the two sources often being impossible to separate.

We now consider the relationship between relativisation and conjunction (see §15.7 and §16.1 for background). To begin with, two Rel clauses may be conjoined in apposition (i.e., both modifying the same head, overt or covert) as in 45.4.2 ('it$_i$-dumped-out-for-her those$_j$ minnows$_j$, fish$_j$ which$_j$-it$_i$-had-killed [and] which$_j$-it$_i$--had-swallowed'); cf. 47.2.4ff., 47.4.2ff., and 47.6.3ff. (This should be distinguished from simple repetition of a single Rel clause, as in 103.1.4.) It is also common to find a semantically empty Rel clause based on the neutral verb /=yama-/ 'to do thus, to do like that' juxtaposed to a more precise Rel clause with some other verb, as in 167.19.1 ('it-which-coiled-up, it-which-did-thus', i.e., which coiled up like this). A Rel clause with /=yama-/ may also be used in apposition to a non-relative predicate, as in 15.3.3 ('fish$_i$ he-hooked-them$_i$, big-ones$_i$, which-were-like-this'). Rel clauses may also be conjoined when noncoreferential to create semantically plural units, but the exx. in the texts generally involve overt heads with them, as in 116.9.4 ('we-got-lots ... Saratoga[fish sp.]$_i$ which$_i$-we-caught fish$_j$ which$_j$-we-speared barramundi[fish sp.]$_j$'). As with other conjoined NPs, it is not necessary to use an overt conjunction (on which see §12.4).

Our next point in connection with conjunction is that we can have restrictive relatives with overt head nouns (or matrix-clause pronominals which also function logically as heads of the Rel clause), where the head is singular and the coreferential NP in the Rel clause is plural and subsumes the referent of the head. Such strict-inclusion cases are of the general type 'the man$_i$ who they$_{ij}$ live here', which would be reshaped in English as 'the man$_i$ who lives here with him/her$_j$' or some similar construction.

Textual exx. of this pattern are these: 73.3.4 ('[he$_i$ stabbed him$_j$], that-one$_j$ they$_{ij}$-who-were-equal but equal they-stabbed-each--other', though here the Rel clause may be taken as a backgrounded one rather than as a restrictive modifier), 79.1.6 ('if-he$_i$-grabs-her$_j$ that-one$_j$ who-they$_{jk}$-sleep [i.e., who sleeps with her husband$_k$], he$_i$-will-take-[her$_j$]-from-him$_k$'). Cf. also, perhaps, 34.2.6.

In 59.2.1, on the other hand, we have a singular Rel clause which turns out to designate one referent subsumed by a plural pronominal in the matrix clause: 'we$_{ij}$-went and he$_j$-who-was-in-front now we$_{ij}$-broke-it-off grass'. (The 'and' here is /n^{g}a/, not /mari/, so the Rel clause is best associated with the 'broke-off' clause.) Here the Rel clause acts just like other (third person) nouns often do when conjoined to a 1st/2nd person pronominal (§15.7).

Turning now to interactions between relativisation and negation, we remind readers that a scope-bearing negative element (/wa:='ri/ or /yagi/, also NAdj /=ari/ in negative existential sense) produces formal effects on predicative nuclei and all nouns (including NAdv) within its direct scope. Verbs thus take special forms (Chapter 8) and all nouns must have Continuous form of NC$_{infl}$ prefix (§4.7, §4.8) when directly under the scope of such a negative element, as explained in §15.6 in connection with "negative contexts."

Although a single negative element may have a sequence including two or even three predicative nuclei in its scope for this syntactic process, the scope of a negation does not cross the boundary between a matrix clause and a Rel clause. In particular, a matrix-clause negation has no effect on the verb of a Rel clause, and vice-versa. It is, however, possible that matrix-clause negation requires usage of Continuous prefixes in (nonpredicative) nouns in a Rel clause which is clearly associated logically with this matrix clause (i.e., has a clear head noun within the matrix clause or is, as a clause, subordinated in some way to the matrix clause).

Exx. of positive Rel clauses associated with negative matrix clauses are these: 47.4.5/6 ('[some heard and learned the rituals,] but they-who-had-bad-voices [did] not [learn], but they-who-got-it--wrong [did] not [learn]', with order of words changed); 47.5.5 ('they$_i$-went, [but] those$_j$ not they$_j$-wanted-it[ritual] but, not they$_j$-went, who$_j$-were-tired, who$_j$-were-tired-of-walking'); also 47.7.2, 47.9.2/3, 47.17.5, 54.1.4-6 (with neg. /yagi/), 69.10.5 (Rel clause part of negative Purposive clause with verb in Past Potential Negative form, §16.5), and 166.22.2. In all of these cases the verb (or other predicate) of the Rel clause is in regular (positive) form, though the matrix predicative nucleus (if overtly present) shows negative form (Chapter 8). However, in all of these exx., Rel clause adjuncts such as demonstratives and nouns (including NAdv), if present, show Continuous NC$_{infl}$ prefix form, suggesting that the use of this prefix form as an index of negative scope does apply across the matrix/Rel clause boundary. Of the preceding textual exx., those showing a constituent with Continuous prefix form are 47.4.5/6 ('that' 47.4.5), 47.7.2 ('that' 47.7.1, 'of this man' 47.7.2), 47.17.5 ('of wild words' 47.17.4 if part of Rel clause), 54.1.4-6 ('of law' twice 54.1.4, 'song' and 'ritual' 54.1.5), and 166.22.2 ('here').

There are also, of course, cases where there is a negation within the Rel clause itself. Exx. in which the matrix clause is positive, so there is a clear bounding of the scope of the negation at the Rel-clause boundary, are 47.15.1 ('not-who$_i$ who$_i$-listened, of-another-country they$_i$-stayed', i.e., those who did not [want to] listen to the ritual stayed home in their country), also 54.3.1/2 and 71.10.5 (the latter can be analysed syntactically as 'one which was not like this', though a looser English gloss could be 'not [a powerful] one like this' as in the NMET translation). In these negative Rel clauses, there is either a negative-existential predicate with /=ari/ (54.3.1/2, with negative possessive sense), or a regular negative element, usually /wa:='ri/, which induces regular negative forms of the verb or predicative NAdj, as well as requiring NC$_{infl}$ prefix in Continuous form in adjuncts. Thus the Rel-clause verb in 47.15.1 is /ambura:-'wa:='wan^{g}gi:-ni-yin^{y}un^g/ 'they did [not] listen', with B form of pronominal prefix //amburu-// as regular in Past Negative, as opposed to positive counterpart with prefix //w$_2$uru-//, hence /wura:-'wa:='wan^{g}gi:-ni-yin^{y}un^g/ 'they listened' (Rel).

Finally, we can cite a couple of textual exx. where both the Rel clause and the matrix clause are (separately) negated: 47.6.3 ('those$_i$ who did not want each other's words, they$_i$ did not go', with word order Anglicised), also 54.4.1.

When the Rel clause is internally negated with /wa:='ri/ 'not' (negator for Past Actual and Present), Rel suffix /-yin^{y}un^g/ is commonly attached to /wa:='ri/ as well as to the predicative nucleus. (If /=ari/ 'to be absent, not exist' is the predicative nucleus, /-yin^{y}un^g/ is naturally added to it.) There are some exx. which do not follow this pattern--71.10.5 shows /-yin^{y}un^g/ just on the verb, as does 47.6.3. These facts may be relevant to our earlier discussion (§15.6, especially Figure 15-2) of the possibility that /wa:='ri/ as clause negator may be analysed syntactically as a separate predication.

Our next topic is double subordination in which a Rel clause is either itself subordinated to another subordinated clause of some type, or contains a subordinated clause. Such complex constructions are uncharacteristic of Nunggubuyu, and there is no special morphological marking of doubly-subordinated clauses, but there are a handful of textual sequences where double subordination is probably present at least in terms of semantic interpretation of clause strings.

There are no good exx. of one Rel clause attached as restrictive modifier to a head which is itself inside a (higher) Rel clause. There is one textual ex. which might be interpreted this way, but an alternative construal is possible: 47.15.2-4 ('they$_i$-who$_i$-headed--for-them$_j$ now they$_j$-who-held-words[knowledge] and, those$_j$ they$_j$-[were-]there they$_j$-told they$_j$-told-them$_i$'). If we analyse this as 'they$_i$ who headed for the ones$_j$ who had the knowledge were told [by them$_j$]', we have double relative subordination. On the other hand, we could associate the second underlined Rel clause with the final predication: 'they$_i$ who headed for them$_j$ were told by the ones$_j$ who had the knowledge'. This would not involve double subordination. Because of the absence of any telltale morphological

or other overt clue, it is difficult to establish the correctness of one interpretation over the other. My conclusion is that double-Rel subordination is not typical of this language, but that juxtapositions of two Rel clauses may occur in contexts where such a semantic interpretation is possible.

Other textual exx. where a Rel clause is inside another subordinated clause (at least semantically) are these: Rel clause in a purposive clause (§16.5) in 69.10.5, and Rel clause inside protasis ('if'-clause) of conditional (§16.7) in 49.2.5, 54.1.4/6, and 79.1.6. It is more difficult to embed a purposive or conditional clause inside a Rel clause for logical reasons; we can cite only an ex. of a direct quotation inside a relative (59.3.7).

We now consider case-spreading, which has been alluded to before in this section. There are, in principle, two distinct phenomena which we would like to keep apart. One is copying a nonzero case from the head onto a word (usually predicative) in a Rel clause. The other, of which Rel-doubling (Figure 16-1, above) is an instance, is copying a case marker from one word in a subordinated clause to another (usually from predicative nucleus to a NP element). To keep them apart we refer to these where necessary as head-to-Rel case-spreading and Pred-to-NP case-spreading. It is possible in principle for head-to-Rel spreading to occur first, with subsequent Pred-to-NP spreading.

Head-to-Rel spreading involving Rel clauses is formally parallel to case-spreading which applies to Relative nouns with genitive function modifying another noun; when the modified noun itself has a nonzero case, a copy of this case marker may replace the regular Relative suffix /-yin^{y}un^g/ on the possessor noun. Thus 'I am going to X's country' may come out as 'I am going to X, to country'; see §4.30.

Probable textual exx. of head-to-Rel spreading involving Rel clauses include these: 47.17.2 ('they$_i$-got-up [and went] to-those$_j$ now to-[who$_j$-]sat--, to-[who$_j$-]watched-over-the-country...), and 73.4.5 ('[the wives are] to-him$_i$-only and that-one$_i$ to-[who$_i$-]they-[i.e., old men]-named'). Sometimes alternative construals are possible (and equally plausible), hence 47.17.2 could also be taken as having 'to-those$_j$' and an Allative clause 'to-[where-]they$_j$-sat' in formal apposition to each other, or even as a (nonrelative) Allative clause 'to [where] those[men] sat' (neither of these alternative construals is possible for 73.4.5). An ex. of Pred-to-NP case spreading is 98.2.3 ('[flying foxes] were-feeling-ill from-having-eaten-it$_i$ from-paperbark-tree$_i$', i.e., from having eaten [nectar of] paperbark tree); this is not a relative clause semantically or otherwise.

Since the identification of specific types of spreading is tricky, and since head-to-Rel spreading involves deletion of a presumably underlying Rel suffix /-yin^{y}un^g/ so that the resulting clause is formally the same as (non-relative) subordinated clauses with case suffixes on verbs, we defer consideration of additional textual exx. until the fuller discussion in §16.6, below.

Rel /-yin^{y}un^g/ superimposed on a case-marked verb is rare in the texts. We can cite only 47.13.6 /wu:=wawan^{g}gi:-ni-yala-wa-jin^{y}un^g/ 'all [the people] who were listening' with /-yin^{y}un^g/ in Rel sense

added to the already compound case-marker sequence /-w$_1$ala-waj/ (§4.26), which here seems to emphasise numerical extent (as it does with demonstratives, see §7.9 discussing /-ala-yun^g-gala-waj/). Aside from this rather unusual instance which has specialised meaning, /-yin^{y}un^g/ is not attested as a relativiser following a case-suffix subordinator. (However, /-yin^{y}un^g/ may be added as a nominal Relative case suffix to a noun already having a spatial case suffix such as /-w$_1$ala/ 'from', see §4.30.)

Regarding the ordering position of Rel clauses, the main question which suggests itself is whether the Rel sequence is directly juxtaposed to the head (if the latter is overtly present), in which case the Rel clause will sometimes be physically contained within the matrix clause, or whether the Rel clause must be a peripheral adjunct to the matrix clause (even if this means being physically separated from the head). Unfortunately, because of the choppy nature of Nunggubuyu phrasal and clausal structure and the frequent usage of repetitions and afterthought phrases, it is not so easy to determine this as it might seem. As a generalisation, we may say that Rel clauses often directly follow the head (including DemPro) and may therefore be physically inside elements from the matrix clause, as in 32.2.4 ('some-others$_i$ which$_i$-it$_j$-speared there [in-the-form-of]bones there they$_i$-lie'), cf. also 13.5.1 (taking 'as-for-them' Contrastive pronoun as head), 40.7.5, 47.7.2, 66.2.5, etc. However, Rel clauses may also occur following (less often preceding) the matrix clause, often acting as clarifying afterthoughts even in restrictive modifying function, as in 15.3.3 ('fish$_i$ he-hooked-them$_i$, big-ones$_i$ which$_i$-were-like-this'), cf. also the strings of Rel clauses in 45.4.2, 47.2.4ff., 47.4.2ff., etc. On the other hand, the head may be omitted initially, then added after a (coreferential) Rel clause as a kind of afterthought, as in 54.1.4 ('if-he$_i$-dies [law-who$_i$ he$_i$-holds-it] lawman$_i$'), cf. perhaps 47.2.2.

The matter of ordering is complicated by the occurrence of sandwiching structures in which a matrix element (perhaps the head) is repeated, occurring on both sides of the Rel clause. Thus in 1.7.3 ('he-tied-up-entrails [by-means-of]that$_i$ bark-fibre$_i$ here which$_i$-he-held he-tied-up-entrails') a matrix predication is repeated on both sides, sandwiching the NP containing the Rel clause; cf. 17.11.4. The Rel clause may also occur between two coreferential (appositional) elements, as in 71.2.2 ('that[-man]$_i$ whom$_i$-they-hunted, man,...') and other exx.

The remarks on appositional structure of "NPs" (§15.2) and on afterthoughts (§17.7) elsewhere in this grammar are pertinent here.

Order of elements in multi-word Rel clauses is also somewhat variable. A NP follows the Rel-clause verb in 10.14.3, 47.4.4, 67.2.1, 74.1.5, but precedes the verb in 7.21.6, 47.4.5, 47.6.3, 54.1.4, 64.3.7, 64.9.6, 71.3.4, 112.5.5, 116.13.2, 161.31.1.

16.5 Purposive clause with /-yun^{g}guyun^g/.

Purposive case suffix /-yun^{g}guyun^g/ is used as a subordinator in a variety of functions. For its use with nouns see §4.24.

The most common meanings are 'so that; in order to' (i.e., true purposive) and '[was] just about to'. The verb (or predicative NAdj) may be in any of several inflectional forms (Chapter 8). We consider textual exx. below on the basis of inflectional category.

Past Potential inflection occurs in 10.18.1 ('[as] she was about to jump'), 11.7.1 ('he was about to spear it'), and 12.7.2 ('he was about to spear them'), all indicating imminent dramatic events (which were interrupted or delayed, as it happens). Hughes' exx. are TNT 15 line 3 /anima=ra-ni-yun^{g}guyun^g/ 'he was just about to spear it'; TNT 19 line 6 up /an^{g}unu=lhida-n^{g}i-yun^{g}guyun^g/ 'she was about to poke him' (/=lhida-/ elsewhere usually intrans.); TNT 32 line 8 /ambun^{g}unu=rabi-jga:-'-yun^{g}guyun^g/ 'they[FDu] were about to take him[corpse on platform] down'; and MT 22 bottom line /anin^{g}gu=yami-jga:-'-yun^{g}guyun^g/ '[just as] it was about to [or, was beginning to] do that to him'. The event in the /-yun^{g}guyun^g/ clause may actually begin but is not completed. Cf. §8.6.

Future inflection (basically the equivalent of Past Potential in the nonpast system) is found with /-yun^{g}guyun^g/ in 65.14.3 ('[come to ritual ground] so you will be scorched[i.e., ritually cleansed]'); 65.15.1 ('so that you will be all right [ritually pure]'); 97.4.3 ('[fires will link up] so they will burn [grass]'); 157.6.2 ('[work!] so you will become an adult woman'); 167.15.3 ('in this way [i.e., calling out names of winds] we[InPl] can go back'); and with negation 89.2.3 ('so that they will not pursue him [and cause] trouble'). From Hughes we can cite MT 22 line 4 up /nimba:='rgi-n^y-jun^{g}guyun^g/ 'so you can pull me out'.

Past Actual inflection is found in 13.36.2 ('he was about to spear them'), though the more usual inflection in this sense is Past Potential (see above); 46.2.1/2 ('[they$_i$ reached them$_j$] so they$_{i,j}$ could tell each other words, so they$_i$ could evaluate those people$_j$'); 47.18.2 ('they were afraid of spears, of spearing each other in the neck') with /-yun^{g}guyun^g/ clause acting as a kind of complement of 'be afraid [of]' in apposition to the noun 'spear[s]'; 53.4.7 (irregular passage with error made in choice of verb stem, subsequently repaired); 112.7.4 ('[we put fat in with meat] in order to mix the fat and the meat'); 143.8.4 ('[we put honey-absorbing material, e.g., soft grass roots, in basket] in order to eat the honey'); 167.6.2 ('[they prepared pot] in order to boil the trepang'); and from Hughes TNT 25 lines 1/2 ('it showed her the water lilies so that she got them, and so that she drank the water').

Present inflection occurs twice in 122.2.4 ('[they make rope] for spear[noun with Purposive case], [or] in order to play with it[rope], in order to do it'). Note that here the /-yun^{g}guyun^g/ clause is syntactically parallel to a noun with /-yun^{g}guyun^g/ as case suffix.

There are also a few textual exx. for which identification of exact inflectional category is difficult due to phonological neutralisation of prefix oppositions, or because with predicative NAdj we have only a reduced inflectional system. In 4.8.1 (twice) /n^{g}a=marbu(y)-yun^{g}guyun^g/ '[shake it!] so I know' is probably Future (prefix //n^{g}an-// 1Sg$_b$) rather than Present (//n^{g}a-// 1Sg$_a$); 47.18.7 /wuru=marbu(y)-yun^{g}guyun^g/ 'so they knew/know' could be Present but is more likely Past (Actual); the same is true of

69.13.2 ('[they told us] so we knew'). In 69.10.4 the predicative nucleus is /wa:='ri-/ 'it is/was absent' in negative existential sense, probably Past Actual, hence /wa:='ri-yun^{g}guyun^{g} ana-wun^{g}a:ri/ 'so there would be no fighting'.

In general, then, /-yun^{g}guyun^{g}/ (Purposive) clauses tend to mean 'in order to' or 'so that', indicating some intended consequence of the event in another (usually preceding) clause, which may sometimes be a Future in imperative sense. However, we also have a sense 'was (just) about to' indicating an apparently imminent event (which is, as it turns out, usually interrupted or delayed) with Past Potential verb (rarely Past Actual); in this sense there is usually a following verb indicating the interrupting event.

Purposive clauses with /-yun^{g}guyun^{g}/ may co-occur with certain particles (Chapter 12). The most common one is /n^{g}un^{y}ju/, which elsewhere may mean 'like, similar to' (§12.13). Textual exx. are 4.8.1, 47.18.7, 65.15.1, 69.13.2, 89.2.3. In the sense 'was about to' the particle /yin^{g}ga/ (§12.7) may co-occur, as in 11.7.1 and 12.7.2; the basic sense of this particle is anticipation/imminence.

Purposive /-yun^{g}guyun^{g}/ is usually found just once in the clause, on the verb or other predicative nucleus. In one ex. it is, however, attached directly to the /n^{g}un^{y}ju/ particle, hence 65.15.1 /n^{g}un^{y}ju-yun^{g}guyun^{g}, numburu=ma:lambur-bugij/ 'so that you will be all right'. (As explained in §12.3, /n^{g}un^{y}ju/ is not always a true particle morphologically and therefore occasionally may take affixes including a case suffix.) In most of the /n^{g}un^{y}ju/ exx., however, the /-yun^{g}guyun^{g}/ is on the predicative nucleus. When the Purposive clause contains an internal negation with /wa:='ri/ or /yagi/ (§8.2) as negative marker, the /-yun^{g}guyun^{g}/ (like most other subordinators) may be attached to the negative element, hence 89.2.3 /n^{g}un^{y}ju ni-ga:-'yun^{g} yagi-yun^{g}guyun^{g} wunu=lharmi-Ø ana-trouble/ ('so as-for-him not-Purp they-will-pursue-him [and cause] trouble', i.e., 'so they will not pursue him...').

Although the Purposive clause type is moderately common, there are numerous textual passages where a simple Future or Past Potential verb forms without /-yun^{g}guyun^{g}/ can be translated as purposives. For ex., in 69.4.4-5 we have a sequence of the type 'yes/no? you-want-it$_i$ spear$_i$ you-will-spear-him', i.e., 'Do you want a spear in order to throw it at him (spear him with it)?'. I count 24 exx. of Purposive clause with /-yun^{g}guyun^{g}/ in NMET (i.e., about one every twenty pp.); a more productive construction could have showed up much more often.

16.6 Other case suffix subordinators: /-ruj/, /-w$_1$ala/, /-waj/, /-w$_1$uy/, /-mira:dhu/, /-miri/, /-yi:/.

In addition to /-yin^{y}un^{g}/ (§16.4) and /-yun^{g}guyun^{g}/ (§16.5), the other case suffixes (§4.20-29) also occur as subordinators in one function or another, though some are uncommon. In analysing the textual exx., we should distinguish instances where a Relative clause modifying a case-marked head (overt or covert) has simply copied the head's case suffix onto the predicative nucleus of the Rel clause (replacing /-yin^{y}un^{g}/), as discussed in §16.4 under the rubric of (head-to-Rel) case-spreading, from cases where the suffix acts as an independent subordinator (e.g., adverbial or gerundial).

TABLE 16-1

Case Suffix Adverbial Subordinators

suffix	label	gloss as subordinator
-w$_1$ala	Ablative	after
-w$_2$aj	(Simple) Pergressive	while
-w$_1$aj	Retrospective Pergressive	back when
-w$_1$uy	Allative-Dative	as soon as

Note: only representative glosses shown

For convenience, a simplified schema showing the meanings of case-suffix subordinators with basically temporal functions is given above as Table 16-1. It should be mentioned right away that some of these usages are fairly uncommon, and that the same suffixes may be glossed in other ways as well; for details see the rest of this section. We now analyse the textual occurrences of the various case-suffix subordinators in the order they occur in the section heading (preceding page).

For Locative /-ruj/ (§4.25) I count 16 textual occurrences in NMET as a clausal subordinator, including one (163.21.5) where /-ruj/ shows up on a noun though it logically subordinates the relevant clause as a whole; the others have /-ruj/ on the verb or other predicative nucleus. The most common meaning is 'where X', i.e., the place where an event or situation X (expressed by some clause) occurred. There may or may not be an appositional NP in locative sense outside the subordinated clause; if there is, we can take the Loc clause as showing head-to-Rel case-spreading (so the Loc clause can be identified as really a Rel clause modifying a Loc NP in the matrix clause). However, sometimes a co-occurring Loc noun is best recognised as being a noun within the Loc clause which receives its Loc case marking by Pred-to-NP case-spreading inside the clause (in which case the surface Loc noun may be semantically nonlocative). Even if a clause-mate noun does not get a copy of the Loc suffix from the predicative nucleus, the noun may at least show Punctual form of NC$_{infl}$ prefix, which here indexes the (covert) "presence" of a spatial case marker (§4.8).

Exx. of the type 'where [someone] slept' to indicate a camping area are /wu:=ya-Ø-ruj/ 'where they slept' 33.1.4, also 44.1.3, 45.2.4 (with additional Loc pronoun for subject of 'sleep', i.e., showing Pred-to-NP spreading), and 163.10.4. Another recurrent type is 'where [he] buried [it]', 'where [they] are buried', or 'where [he] put [it]'; see 8.6.2 (with dir. obj. 'basket' showing Punctual prefix but not case-spreading as such), 41.23.5 (appositional to place n.), 59.4.4 (subject avoids Pred-to-NP spreading), 65.2.4 (preceding by coreferential DemPro). Others are 13.3.2 (after Loc head noun, with clausemate subject in Punctual prefix form), 16.13.9 ('there where-he-was-squatting'), 28.15.3 (preceding ANA class DemPro), 47.22.5, 110.2.7 ('there at-the-trap, where-they-stood'),

120.1.3 ('Koolatong [River] my[country] where-it-bore-me', i.e., in my mother's clan territory), 162.16.3 ('on top, where the Christians have meetings', with meeting in Punctual form), and 163.21.5 ('where Emu ate the stone, there we stopped'), with Loc suffix added to 'stone' rather than 'she-ate-it', and with Loc clause picked up by 'there' (/ba-ni/ '[it-is-]that[Anaph]') in following matrix clause. From Hughes' texts we can cite TNT 4 /ni=lha-n^{g}a-n^{y}-duj/ '[he stopped] where-he-stood[i.e., landed]' (with following place n.); TNT 7 /nima-lhura:-'-ruj/ '[she went and came to] where-he-was-making-string'; and TNT 23 /o:-'ba-ni-ruj n^{g}i=na-n^{g}a:-'-ruj a-n^{g}argu/ '[he returned to] where she [had] cooked the wallaby' (lit. 'that-Loc she-cooked-it$_i$-Loc wallaby$_i$' with 'wallaby' in Punctual prefix form).

Ablative /-w$_1$ala/ is reasonably common, occurring 19 times in NMET (and 8 times in Hughes' texts). While a handful of the exx. might be construed as showing head-to-Rel case-spreading (from Abl head noun in matrix), in general the sense is that of an adverbial subordinator. The gloss, in particular contexts, may be 'after X' or 'from X, as a result of X' where X is some clause. (For /-w$_1$ala/ with nouns see §4.21.) There are a few problematic cases as well.

The gloss 'after X' seems best in 10.16.2 '[she saw him like that] after-he-lay-down', and also 20.2.2-3, 28.10.6, 47.16.5, 69.5.2, 98.8.3 ('rain$_i$ after-it$_i$-fell' with no case-spreading on noun 'rain'), 108.6.6, 163.9.2 (but could also be construed as head-to-Rel spreading from preceding Abl place n.). The gloss 'from X, as a result of X' seems best in 47.20.3, 98.2.3 ('it was feeling bad from eating [nectar of] a paperbark tree', with Pred-to-NP spreading adding Abl on 'paperbark tree'), 161.33.6-9 [four exx.]. In 95.2.2/3 we have two exx., each in apposition to /ya:-ji-ji:-'la/ '[along] this side' (§7.21), so the Abl suffix here has a real spatial sense '[along] from where X' indicating a trajectory (see §4.21 and §4.26 for nominal parallels). More difficult exx. are 4.7.2 and 157.9.4, though they can be construed as having the Abl suffix mean 'after'.

The exx. from Hughes' texts are TNT 18 line 5 ('after'), 25 line 3 ('after'), and 31 mid ('from where' ?); and MT 9 line 8 up ('so that' ?), 17 line 6 ('after'), 21 mid (?), and two 29 mid ('as a result of').

The transcription /-waj/ represents Pergressive /-w$_2$aj/ (/-baj/ after stop or nasal) and Retrospective Pergressive /-w$_1$aj/ (/-gaj/), see §4.23. When added to verbs, the two can be phonologically distinguished only if the verb form ends in stop or nasal, which in practice means if the verb is Past$_1$ or Nonpast$_1$ (i.e., usually Punctual), while with other verb forms (Past and Future Continuous, Present) the two cannot be reliably differentiated.

The meaning of /-w$_1$aj/ as a subordinator is 'back when X', generally referring to some lengthy period of time in the distant or fairly distant past. Some of the most common forms involve predicative NAdj meaning 'child', 'young man', etc., hence 'back when I was a child', etc. Although 'back' is optional in English in this context, /-w$_1$aj/ rather than /-w$_2$aj/ is required in Nunggubuyu. Exx. are /n^{g}a=wiri-gaj/ 65.11.6 'back when I was a child (/w$_2$irig/)'

and /n^{g}i=wiri-ga:::j/ 74.2.3 'back when she was a child' (this latter ex. is followed by /wiri-gaj/ with the pronominal prefix strangely omitted). Although phonologically ambiguous, /-waj/ in 69.12.7 ('[back] when I was a young man') and 71.32.2 ('[back] when we were young') is almost certainly /-w$_1$aj/ as well.

The only textual ex. showing /-baj/ allomorph of /-w$_2$aj/ is /niwu=rad-ba-n^{g}-baj/ TNT 10 (line 3 up) 'where he tied it', though this may be a frozen place name. Though /-w$_2$aj/ was freely given by informants in elicitation sessions as an equivalent of English 'while', it does not seem to be very common in the texts. Exx. from NMET which, though phonologically ambiguous, can safely be considered to involve /-w$_2$aj/, are 43.4.1 '["..." it said] as it went along', with negative /yagi/ (§8.2) in the construction translatable as 'before X' (i.e., 'while not [yet] X') in 47.19.3 ('before it dawns'), and perhaps in 40.6.2 ('when they are lost'). We probably also have /-w$_2$aj/ in MT 6 line 1 /ni=jarara-n^{g}i-waj-bugij/ 'while he was still going along' (with /-w$_2$ugij/ postposition 'still', §12.21).

This gives us a total of 8 exx. of both Pergressive suffixes combined in NMET, and another 2 in Hughes' texts--obviously a paltry total for subordinators translatable as 'while'. Often these suffixes are absent in discourse passages where they would be semantically reasonable, as in 11.3.3-4. The use of the Pergressive suffixes seems to require that the background ('while X') situation be an extended period of time, rather than a simple imperfective situation framing another more punctual event. For other devices for backgrounding one clause vis-à-vis another see Chapter 17 (including §17.3-4), also §8.4 and the particles discussed in Chapter 12.

Allative-Dative /-w$_1$uy/ is found as a subordinator 11 times in NMET and twice in Hughes' texts. An adverbial sense 'as soon as' (with past or future reference) was obtained regularly in elicited utterances but this was rare in the texts; the only good exx. are the two in 161.32.2 /wa:='ri-wuy, wu=ja:du-guy/ 'as soon as there was no [more work], as soon as it[work] was completed'. By contrast, we have definite head-to-Rel spreading from dative head twice in 80.1.6-7: '[I will give name] to-there now that$_i$ to-boy$_i$ whom$_i$-I'll-beget, whom$_i$-I'll-find[i.e., beget]', where the two Rel clauses are surface All-Dat clauses /n^{g}anu=lhama-n^{g}-guy, n^{g}anu=lhan^{g}arma-n^{g}-guy/ with /-w$_1$uy/ added to 'I-will-beget-him', 'I-will-find-him'. Similar spreading may be present in the three All-Dat clauses in 47.17.2-3, and is clearly present in 73.4.5. The sense 'to where X' where X is the content of the subordinated clause is found in 65.2.2 twice ('[let's go] to where they are buried'), with juxtaposed DemAdv and DemPro; a similar ex. is 41.10.6. From Hughes we can cite /-w$_1$uy/ in TNT 21 line 9 (perhaps 'as soon as', but then the passage is restructured) and MT 23 line 4 up ('to-the-fish ... to-where-they-catch-fish').

Since the 'as soon as' sense is not very common in texts, we may point out that roughly the same effect can be achieved by simply conjoining the two relevant clauses, with perhaps an additional particle emphasising suddenness or abruptness (§12.7) or just a slight narrative break point (§12.3-4), or perhaps a dramatising verbal root form (§12.2).

Originative /-mira:dhu/ is rare even as a nominal case suffix (§4.28). As a clausal subordinator we find it 4 times in NMET. The exx. suggest that /-mira:dhu/ as subordinator is rather similar in sense to Ablative /-$w_1$ala/ (see above). The gloss is 'as a result of X' in 55.3.7 ('the-food, [which-they-get-]from-their-going', i.e., from going and gathering) and 161.21.2 ('[I obtained food rations and took the people along] from-working', i.e., the food rations were earned by working). In 55.9.1/2 we have two exx. where the best English gloss is 'after X', though the activities in question are linked in an organic ritual sequence rather than merely having an accidental temporal relationship: '[they$_i$-circumcise-them$_j$] after-they$_{i[j]}$-stay-up [and] after-they$_i$-dance'. I know of no exx. of subordinator /-mira:dhu/ in Hughes' texts.

Instrumental /-miri/ is very rare as a subordinator; I can cite 2 exx. in NMET and 1 in Hughes' texts. In 47.8.8 we have a sequence /n^ga-gu-ra:-'yun^g-miri n^gu:-dir=n^gawi:-'-ni-miri/ '[even among] ou selves[InPl] we[InPl]-were-afraid'. Here /-miri/ is added first to a Contrastive form (§6.8) of an independent personal pronoun, apparently in a kind of reinforcing sense rather than instrumental. This emphatic sense is not found with /-miri/ as nominal case marker (§4.27), but is typical of /-miri/ as a suffix with demonstratives (§7.19). In the ex. cited, /-miri/ is then added as well to the verb 'we-were-afraid'. This looks like head-to-Rel case spreading formally, though the verb does not really have relativising function. Our other NMET ex. is 161.25.4, where /-miri/ is added to 'we-broke-it-up' in the passage '[with-]sticks we-dug, we-dug, we-broke-it[ground]-up, we-jabbed-into-it[stone] they-cut-it-up by-means-of whatchamacallit?, with-wood, the-stone'. It is not clear why /-miri/ is added here; it might be due to head-to-Rel spreading if we take the 'we-broke-it-up' as being associated with the nouns 'stick' and 'wood' (which are here coreferential to each other), which occur noncontiguously in the passage. Or, we could take 'we-broke-it-up' as explaining the mechanism behind 'we-dug', i.e., 'we dug by breaking up the ground', in which case the Instrumental clause would be merely loosely appositional to 'stick, wood'.

The Hughes ex. is TNT 5 line 6 /ni-ragar=wuguni-miri/, which apparently means 'he suddenly got stuck [for good]', referring to a man who fell into a hole and was trapped; /-ragar-/ may indicate violent action, and /=wuguni-/ is apparently related to the normally reduplicated NAdj /$w_2$uguwuguni/ 'for good, permanent[ly]', though it is possible that it relates more directly to /bu-guni/ 'to there [Anaph]' (§7.13) and/or to the related form /bugu-wuguni/ 'facing that way' (§7.22, normally with Concrete suffix /-u/ added). The /-miri/ has reinforcing rather than instrumental sense,

Similative /-yi:/ 'like, similar to' (§4.29) may occur as a clausal subordinator in the sense 'just as X' where X is some proposition, usually an activity. It may be accompanied by a head noun also with /-yi:/ and/or with particle /n^gun^{y}ju/ 'like' (§12.13). The exx. in NMET (total: 3) are 10.12.6 /n^gun^{y}ju a:-'-ni wura:='ran^{g}ga-na-yi:/ '[he could see] just like [the people] here see' (i.e., the man recovered his sight), where /a:-'-ni/ (Prox DemPro, ANA class) has Punctual prefix as often with Similative case suffix; 43.17.2 /an-i:-jin^{y}un^g[§7.25] n^ga=yama-na n^ga=magi:-'-na-yi:/

'[they told us their traditions] of this sort, [as] I do this, like I am speaking[repeating]', where /-yi:/ might have been added to both verbs but was in fact just added to the last one; and 113.9.3 /n^gun^{y}ju a:-'-ni-yi: nuru=bura-yi:/ '[we lived along the coast] like this[place], as we are sitting[living]'. In the last ex. we could also plausibly construe the passage as meaning '[we lived along the coast] just as we are sitting[living] here', so that the DemPro /a:-'-ni-yi:/ (which also shows Similative suffix) might be taken as an instance of Pred-to-NP case-spreading within the subordinated clause. In addition to the 3 NMET exx. we can cite TNT 5 line 5 /n^gun^{y}ju n^girima=wann^{g}a-na-yi:/ '[he trod on grass] just as we [might] tread on it'.

Our overall conclusion is that the case suffixes treated in this section are not very common as subordinators, in contrast to the more common Relative /-yin^{y}un^g/ (§16.4) and Purposive /-yun^{g}guyun^g/ (§16.5). Moreover, the essentially temporal relationships indicated in Table 16-1, above, are not the only glosses possible for those suffixes as subordinators, and indeed the glosses shown each apply to a relatively small number of actual textual exx. When the case suffixes of the present section do occur as subordinators, in some instances we are really dealing with head-to-Rel case spreading or with (in a handful of instances) a similar spillover process not strictly involving logically relative clauses. There are also cases where the subordinator (especially Locative, Originative, and Similative) has a sense similar to its regular sense as nominal suffix.

16.7 Conditionals.

A conditional construction consists of an 'if'-clause or protasis and a 'then'-clause, or apodosis, containing the proposition which is consequent on the truth of the protasis. The apodosis can, in some cases, be regarded as the matrix (main) clause while the protasis is subordinated to it. There are two basic types of conditional construction: hypotheticals ('if he comes, I'll see him') and counterfactuals ('if he had come, I'd have seen him').

In the less common counterfactual type, the protasis and apodosis are formally parallel, with the protasis normally preceding the apodosis. In both clauses the predicative nucleus is in Past Potential inflectional form (§8.6), or the equivalent for predicative NAdj (i.e., with B series prefix, §8.2). The postposition /-maga:/ (§12.21) is commonly, but optionally, added to one or more words in the protasis and/or apodosis, most often the predicative nucleus itself. Textual exx. are 120.6.1-3 ('if that had gotten into their eyes, they would have been permanent[ly blinded], they would not have been able to see') with /-maga:/ on 'permanent[ly]' (predicative NAdj) and on /yagi-/ (negative used with Past Potential Negative at end); and 161.33.2-3 ('if they had done that [helped with building], these houses would have been big') with /-maga:/ this time on the protasis verb. These are apparently the only exx. in NMET.

The hypothetical type is much more common. Usage is fairly broad, and the English translation may be with 'when' as well as 'if' ('when he comes, I'll see him') as long as the reference is to

a future (hence hypothetical) event; exx. involving the 'when' translation include 4.7.1 and 65.13.3. There is a postposition /-maji:/ 'if, when' which is found on one or more words in the protasis, but not in the apodosis.

Usually, in the hypothetical type both the protasis and apodosis have predicative nuclei in Future form (Future Punctual Positive, Future Continuous Positive, or Future Negative). As noted in §8.5, Future forms may also be used as imperatives, and the apodosis (but not protasis) may be pragmatically an imperative or suggestion, as in 4.7.1 ('when you reach the people, shake the rope!'), cf. 65.13.3. The aspect (Punctual, Continuous) and negativity of the protasis and apodosis are independent of each other. For ex., we have an aspect change in 90.1.4-6 ('...if he_i spears[Pun] $that_j$ $policeman_j$ and the $policeman_j$ dies[Pun], from there $they_k$ will come[Con]'). The combination of positive protasis and negative apodosis is found in 54.1.1-6 ('if he dies..., they will not bury him anywhere else'), cf. 67.3.1 and other exx.; negative protasis and positive apodosis is found in 63.1.4-5 ('if the wind is not blowing, they go and talk to the two old men').

The last ex. cited also exemplifies the occasional use of Present (here Present Positive) instead of Future in the apodosis, since the situation described here is a habitual one. (The protasis in the ex., however, is Future Negative, reflecting the strong tendency to prefer Future forms even when Present forms are logically possible in the protasis.) The only instances of Present protasis in conditional in NMET are 68.2.4 ('if we want the old [versions of] the songs, we sing the old ones') with apodosis Present Positive too, 115.1.1 ('if they want those cycad [nuts], they say "..."') with Present apodosis, and 61.1.3 (conjoined protasis). We conclude that Future is strongly preferred in the protasis, and only slightly favoured in the apodosis, in contexts where either Present or Future would be possible. (Note that "Future" as a category has a more hypothetical/potential nuance in Nunggubuyu than in English, Chapter 8.)

The protasis has a simple noun as predicative nucleus in 42.6.1 ('if [there is a] dugong'). The protasis has a predicative NAdj in 49.1.4/5 ('if he is absent') and again in 49.2.5; perhaps we should take the form in 103.2.5/6 involving the loanword good-tucker 'good food' in the same way although the loanword takes no pronominal prefix. (/-maji:/ in 84.1.4 probably represents an incomplete sentence rather than a noun as predicative nucleus.)

We now give complete lists of conditionals (hypothetical) with /-maji:/ in NMET. With Future Punctual Positive nucleus we have 4.7.1, 13.33.2, 22.1.6, 47.22.1 (two), 54.1.1ff. (four including repeats), 62.5.3, 63.4.3, 65.13.3, 67.3.1, 78.1.2 (four including repeats), 79.1.1ff. (four), 80.1.1 (three), 80.2.2 (two), 80.2.7, 83.1.2/4, 89.1.1/3/4 (four), 90.1.2ff. (four). With Future Continuous Positive we have 42.5.4, 47.22.1/2, 49.2.1, 61.1.4, 62.1.7-8, 65.13.2, 67.2.5, 67.3.1, 68.4.4, 75.1.5, 75.2.4, 76.2.1/7, 77.1.4-5, 88.3.2, 90.1.5-6 (two), 90.2.2, 143.13.1, 157.7.2, 165.1.2/4. I count a total of 37 instances of /-maji:/ in clause with Future Punctual Positive vs. 23 with Future Continuous Positive, but the

statistics are misleading in that the numbers are inflated somewhat by the existence of passages with several occurrences of /-maji:/ in a repetitious protasis string. Future Negative is found in 62.1.2/3 (five times), 63.1.4, in a false start in 89.1.2, and in 89.1.6, for a total of 8 instances in NMET (including five in one short sequence). In the Future Negative, /-maji:/ is added to the negative particle /yagi-/ rather than being added to the accompanying verb.

Following up the last remark, we may say that the location of /-maji:/ in a multi-word protasis clause is somewhat variable when no internal negative element is present. In most cases, /-maji:/ in positive protasis is added to the predicative nucleus and/or to a clause-initial noun, DemPro, or pronoun ("noun" here includes most adverb-like elements). Exx. of non-verb constituents which show up with /-maji:/ are DemPro /nu:-'ba-gi-yu[n^g]-maji:/ 'if that [man]' 54.1.1 and elsewhere, DemAdv /ana:-'-ji:-'la-maji:/ 'if along this side' (§7.21) in 62.5.3, personal pronoun /ni-ga-maji:/ 'if he' 78.1.5, and noun /ana-wun^{g}a:ri-maji:/ 'if fighting' 83.1.2; in these instances the accompanying predicative nucleus may or may not also have /-maji:/, there being no fixed rule on whether such repetition of /-maji:/ will occur. Exx. of multiple usage of /-maji:/ within the same clause (whether or not we have actual repetitions of a single word having /-maji:/) are 78.1.2ff. and 90.1.2ff. However, repetitions seem to be most characteristic of hesitant, somewhat broken passages where the speaker needs to keep using /-maji:/ to ensure that the addressee understands the logic of the passage correctly. Exx. of /-maji:/ on a noninitial verb in the clause, after not being used on a preceding constituent, are 13.33.2 and 22.1.6, among others.

Probably the most interesting syntactic aspect of conditionals is their relationship to negation. As we have seen, the protasis and/or the apodosis of a conditional may have an overt negative ('if he doesn't come, we'll go ahead and eat'; 'if he gets sick, we won't leave the house'). In such clauses, the regular syntax of negation (§15.6) including the rigorous usage of Continuous forms of NC_{infl} prefix for all morphological nouns, is applicable. The predicative nucleus takes the same negative form that it would have in a main clause.

Since the protasis and apodosis are syntactically quite separate, negation in one of them has no formal effect on the other. Thus, in exx. cited earlier where either the protasis or the apodosis (but not both) are negative, the predicative nucleus of the negated clause takes its regular negative form, but that of the positive clause takes its regular positive form. All this is as we would expect.

However, in addition to this there is a general rule that a "positive" hypothetical protasis, a "positive" counterfactual protasis, and (often) a "positive" counterfactual apodosis, counts as a negative context (§15.6) for purposes of NC_{infl} morphology (§4.8). In other words, although the predicative nucleus takes its regular positive form, the nouns (including adverbs) and DemPro in the clause must have Continuous NC_{infl} form. (In positive clauses in nonconditional constructions, nouns and DemPro may take Punctual prefix form or may omit the prefix under some conditions, §4.8.)

There are enough hypothetical conditionals in NMET to make statistics useful in demonstrating this point. Counting only nouns and DemPro which are clearly in the scope of a hypothetical protasis with overt marking by /-maji:/, I count 35 instances of Continuous prefix with nonhuman noun, and zero instances with Punctual or with omission of prefix. For human nouns, which merge Continuous and Punctual prefixes into a single NC_{infl} series, I count 43 instances with prefix, and zero without prefix.

These figures are particularly striking for the nonhuman cases, which include many DemAdv which are generally in unprefixed form in (nonconditional) positive clauses. Exx. in positive hypothetical protasis are /an-ubu-guni/ 'to there' 22.1.5 (usual form /bu-guni/ §7.13), /an-u-guni/ 'to there[Dist]' 65.13.3, 79.1.3, 90.1.5, 68.4.4 (usual form /yu:-guni/ §7.13), and /an-uwa-ga:-'la/ 'from there[Dist] to here' 75.1.6, 78.1.6, 88.3, 90.1.6, and 90.2.2 (usual form /yuwa-ga:-'la/ §7.15).

Although we do not have enough exx. to be statistically sure, it seems that a Relative clause (§16.4) referring to a referent within the conditional protasis likewise requires or at least favours Continuous forms of the NC_{infl} prefix. The relevant ex. in NMET is 54.1.4-5 where a Rel clause of the type 'the lawman who holds the law[traditions], camp songs, and /madayin/ ritual' is also the subject of a hypothetical conditional protasis 'if ___ dies' (see 54.1.3). The nouns acting as direct objects of the Relative clause ('law', 'camp songs', /madayin/) take Conditional prefix /ana-/. This is at least consistent with the view that "negative scope" extends from a higher clause into a Rel clause for purposes of NC_{infl} prefix-form choice.

Hypothetical apodosis nouns do not require Continuous prefix forms; in all respects, hypothetical apodosis clauses are formally identical to ordinary main clauses (Present or Future). Exx. of unprefixed forms of nouns and DemPro in the apodosis are 62.5.3, where the DemAdv for '[along] this side' shows up as Continuous /ana:-'-ji:-'la-/ before /-maji:/ in the protasis but as ordinary unprefixed /ya:-ji:-'la/ in the following apodosis, also 79.1.6 (/wun^{g}a:ri/ 'fighting'), etc.

Our statistics above refer only to nouns (and DemPro) which are "clearly" in the scope of a protasis with /-maji:/. It is necessary to point out, however, that the scope of a conditional protasis may be more fuzzily bounded than is the case with genuine (overt) negation. In the case of negation (§15.6), a single negative element may have an extended scope comprising more than one predicate, but the logic is categorical--a given proposition must be interpreted as being either positive or negative. In the case of conditionals, there may be spillover between the protasis ('if/when X') and a more general, nonconditional background-information discourse chunk. We therefore find in the texts occasional instances where what begins as an overt conditional protasis is continued and elaborated by clauses in which /-maji:/ is absent, or conversely where one or more "main" clauses describing background are suddenly rephrased as conditional protasis clauses. The point here is that not only does this shifting between protasis and "main" clauses involve presence or absence of /-maji:/, it may also involve turning on and off the

"negative context" status of the clauses. We may illustrate this with two passages. First, in 47.22.1-3 we have this sequence: 'if I go off course, if I speak, [if] I speak and go to another place, I will get the words wrong'. The underlined sequence seems to be merely a paraphrase of the preceding conjoined protasis clauses, but lacks /-maji:/, and the word 'to another [place]' shows up as /a:-'n^{y}baj-guy/ with Punctual prefix instead of Continuous /ana:-'n^{y}baj-guy/. In 79.1.1-5 we have what is basically a string of protasis clauses (the apodosis comes only at 79.1.6), with /-maji:/ present in lines 1 and 2 and then reappearing at line 5. In around lines 3 and 4 the formal markers of a conditional protasis appear to lapse, so we get DemAdv form /yuwa-ga:-'la/ 'from there [Dist]' and noun /a:-'n^{y}baj-gala-yin^{y}un^{g}/ '[person] from another [place]', the former showing no prefix and the latter a Punctual prefix. However, the speaker breaks off this sequence and begins the clause again at line 5 with /ana:-'n^{y}baj-gala-yin^{y}un^{g}-maji:/ 'if [person] from another [place]', with /-maji:/ and with Continuous prefix form.

Despite this, in some other passages a single /-maji:/ seems to operate logically over a sequence containing more than one predication, with the "negative context" applying as well. For example, in 75.1.5ff. we have 'if he comes from there [and/or if], as for her, she comes from there, [that is, if] they come face to face, she should turn her face away'. Here only the last clause is an apodosis, and the first three clauses together comprise an extended protasis. However, only the first of the three has /-maji:/ 'if' overtly. Nevertheless, throughout the extended protasis all adverbs take the Continuous prefix form (which is otherwise unusual with such adverbs in positive clauses). Likewise, in the next segment, 75.2.4, we have two conjoined clauses forming an extended protasis ('[if] she goes and if she sits there'), where /-maji:/ happens to show up only on the second verb but its scope seems to extend backward to the 'go' verb logically. (A further complication here is that occasionally we can have what looks logically like a conditional construction, but with no /-maji:/, as in 13.11.3-4.)

The regular order of clauses in a conditional construction is that protasis precedes apodosis, in both hypotheticals and counterfactuals. There are a few textual exx. where one might argue that the opposite order is at hand, but it usually turns out that there is a way to construe the passage with protasis first. Thus in 67.2.5-6 and on into 67.3.1 we have a sequence 'if the bachelors [young men] hold [i.e., know] the camp songs, if they sing' sandwiched between clauses on both sides which could logically be taken as apodosis clauses; if we take the protasis (quoted) as looking ahead to the clauses following it, we have no counterexample to the ordering generalisation. All, or virtually all, of the textual exx. are compatible with the generalisation.

There is no obligatory particle at the boundary between protasis and apodosis. There are a handful of instances of /n^{g}a/ (§12.4), see 4.7.1 and 13.33.3. Occasionally the apodosis begins with a Contrastive pronoun, like /ni-ga:-'yun^{g}/ 'as for him' 75.2.4 (see §6.8). /adaba/ 'now, then' occurs before the apodosis in 62.1.8, as does /yin^{g}ga/ in 42.5.5 (see §12.3, §12.7, respectively).

Aside from simple repetitions of a protasis (which are fairly common), we also have cases where two or more clauses are combined into an extended protasis; the clauses (i.e., predications--see §15.5 for the problematics of defining "clause" rigorously) may be semantically conjoined ('if X and Y'), disjunctive ('if X or Y'), or may be related to each other as paraphrases or elaborations. Usually the clauses in question are simply juxtaposed to each other; /-maji:/ may occur in each protasis clause or may be omitted in some of them; we have already discussed some exx. of this general type earlier. Particle /n^ga/ (§12.4) occasionally occurs as a linker within an extended protasis, as in 89.1.4 (conjoining two sequentially related events in the protasis) and 90.1.4.

16.8 'to want' construction.

A verb /=n^gan^ybanda-/ 'to want, to like' occurs fairly often in the texts as a simple transitive verb with a nominal object, as in /niri=n^gan^ybandi-n^y/ 'we[ExPl] wanted it' 43.17.3; see also 46.1.2ff., 47.3.2, 47.5.3/4, 65.5.3, 69.4.5, 100.7.3ff., 161.5.4 and for cpds. 47.2.4/7 and 47.6.1. The object is often human, in which case the sense is usually 'to love, to be fond of', though not usually in a romantic sense.

As was the case with neighbouring languages, it was possible to elicit a 'to want' construction with clausal complement. It should be stressed that this construction did not show up clearly in any of the texts. The construction is therefore at best of low productivity. Since it was elicited through English-to-Nunggubuyu translation sessions, it is possible that the construction is a calque obtained artificially. In retrospect, the same remark might be made about corresponding constructions which I have reported for other local languages. On the other hand, the Nunggubuyu contruction was elicited without difficulty from several informants, who gave fairly consistent judgements on grammatical details.

For what it is worth, the elicited construction was of the type 'I want X' (i.e., a regular transitive surface clause) followed by another main-like clause acting semantically as the complement. There was no conjunction or formal subordinator. The X acting as surface direct object of 'to want' was either a duplicate of a NP with an argument role in the "complement" clause, or a dummy 3rd person noun-class marker (ANA_{wu} class). If we assume that the underlying structure is of the type 'I want [NP_i Verb NP_j]' (NP_i subject and NP_j indirect or direct object of the complement-clause verb), so that 'want' in the matrix verb must get a surface same-clause direct object by copying or dummy-insertion, the rules are these in our elicited data:

a) intransitive "complement" (no direct/indirect objects)
   i) X = copy of complement subject if noncoreferential to subject of 'want'
   ii) otherwise, X = dummy ANA_{wu} pronominal
b) transitive "complement" (direct and/or indirect object)
   i) X = copy of complement subject if noncoreferential to subject of 'want'
   ii) otherwise, X = copy of object, with preference to direct object (including noncross-referenced patient).

Therefore, if the subject of 'to want' is 1st singular pronoun ('I'), the surface object (X) of 'to want' will be a coreferential duplicate of the complement's (transitive or intransitive) subject as long as the latter is not also a 1st person pronoun. Thus 'I want him to go' comes out as 'I-want-him, he-will-go' and 'I want them to kill me' comes out as 'I-want-them, they-will-kill-me'.

With the two subjects coreferential, 'I want [myself] to go' becomes 'I-want-it[ANA_{wu}], I-will-go', and 'I want to kill them' becomes 'I-want-them, I-will-kill-them'. In this situation, if there is both a direct and indirect object, informants appeared to prefer copying of the direct object, although in the complement verb the direct object may have been "bumped out" of the pronominal indexing prefixes by a (Benefactive or other) indirect object (§10.2, §15.9). Thus 'I want to kill it for you' most often comes out as 'I-want-it, I-will-kill-for-you', though it is possible to use the alternative 'I-want-you, I-will-kill-for-you'.

A further indication that the NPs in the complement which happen to have overt pronominal indices in the complement verb are not necessarily those which get preferred in the copying rule is the fact that some semantically transitive but morphologically intransitive complement verbs nonetheless permit the semantic patient (which may appear as an extra, pronominally unindexed NP in the same clause) to be the non-subject which shows up as copied direct object of 'to want' (when the subjects have coreferential subjects). For example, 'to drink' is /-w$_l$a$\underline{l}$(a)=n^gu-/ (§14.9), an intransitive cpd. from transitive /=n^gu-/ 'to eat'. It is quite possible to say 'He drank water' with independent NP 'water' (/ana:-gugu/) expressing the semantic patient, but this NP is never pronominally indexed in the verb 'to drink'. However, when 'I will drink water' is the complement of 'I want', we get 'I-want-it, I-will-drink water', where 'it' and 'water' are coreferential (and 'it' takes whatever noun class marker is appropriate to the particular patient noun).

As the exx. here suggest, the "complement" clause has Future inflection: /n^gawu=n^gan^ybandi:-' n^gan^y=ja:-ri:/ 'I want to go' ('I-want-it[ANA_{wu}]' in Present form plus 'I-will-go'). It may take Punctual or Continuous aspect. If the construction is negated, as in 'I do not want to go', both clauses take the appropriate negative element and show the syntax of negative contexts (§15.6), thus /wa:='$\underline{r}$i n^gan^ggu=n^gan^ybanda-n^g, yagi n^ga=$\underline{r}$umi-Ø/ 'not I-want-it, not I-will-go'. If the 'to want' clause is Past tense, the complement is Past Potential, as we would expect: /n^gawu=n^gan^ybanda-n^gi n^gan^y=ja-n^ggi/ 'I wanted to go' ('I-wanted-it[ANA_{wu}], I-would-go').

Overall, the 'to want' construction looks very much like a conjunction of two independent clauses rather than like a true complement-clause or even matrix/subordinated-clause sequence. The absence of complementisers and the duplication of negative elements point in this direction.

The rules for creating surface direct object of 'to want' can be analysed along the following lines: a) hierarchical accessibility for complement subject first, then complement object (direct object or unindexed patient preferred to some extent over indirect object); b) constraint against copying NP coreferential to subject of 'to want'; c) dummy ANA_{wu} used if no other NP satisfies these conditions.

In most of the elicited exx. the copied "NP" had the form of a pronominal element only, in both 'to want' and complement clauses. When a copied NP showed up as an independent noun or other independent element, the independent form could show up in either clause, so far as could be determined. However, in some instances the two clauses were not sharply bounded (e.g., by intonation and/or pause) and it was difficult to determine where the non-verb constituents belonged. In addition, postposed afterthought NPs, and preposed topical NPs (§17.7) are very common in Nunggubuyu, and perhaps we should not read too much about syntactic bracketing into surface word-order relationships.

16.9 Rough equivalents of English matrix verb with complements.

In the preceding sections in this chapter we have described, among other things, the productive subordinated clause formations of Nunggubuyu. We have made some remarks about Nunggubuyu counterparts to some English complex constructions. It remains here to give additional details about approximate Nunggubuyu translation equivalents of other English constructions involving a matrix-clause verb taking a clausal complement.

a) to try. There is no direct syntactic counterpart of English 'He tried to swim', 'He tried to kill me'. There are, however, some recurrent constructions which have roughly the same effective sense. In 161.9.3-4 we have a sequence 'I-would-break-it-off nearly, suddenly again, I-failed' (i.e., 'I was on the verge of [being able to] break it, but couldn't'; 'nearly' is a contextual gloss here for /lha:lhag/ 'recent, near in time'). The first verb is in Past Potential form. Instead of the explicit verb 'I-failed' the speaker could also have just used the negative particle /girjag!/ 'no!' (§15.6). Another way to translate 'to try' is to use the particle /yin^{g}ga/ (§12.7) indicating in this case apparent imminence of some event. In 13.40.3-4 we have the sequence /yin^{g}ga win^{g}i=n^{g}argiwi-'-n^{y} n^{g}a girjag!/ 'virtually they-pulled-themselves-out and no!' (i.e., they tried and failed to extricate themselves'), with Past Punctual (non-Potential) verb, conjunctive particle /n^{g}a/ (§12.4), and the negative particle just mentioned. These exx. involve past attempts with known (unsuccessful) outcomes; in a future or imperative context, the verb designating the intended action will be in Future form (including imperative usage, §8.5), and /yin^{g}ga/ is sometimes added to indicate speaker's encouragement of addressee. There is, however, no matrix-clause verb 'to try'.

b) to decide. To translate 'He decided to go', we normally use a quotative construction in Nunggubuyu, the usual quotative framer being the verb /=yama-/ 'to do thus' following the quotation (this framing verb is sometimes omitted since the quoted segment is usually identifiable by special intonation as well as context). The quotation (here usually a mental rather than spoken quotation) is often in two parts with an initial question and then the decision, as in 15.2.1 ('to-where? I-will-go, this-way I-will-go to-whatchamacallit? to-[place n.]', i.e., 'He decided to go to [place n.]'). Other exx. are 9.10.1, 15.6.1, 16.6.2, 18.8.1, 20.4.6, 33.6.5, 41.6.6, 41.11.2-3, 41.14.2-3, 41.19.5-7, and 41.23.1-2.

c) to persuade. English 'He persuaded her to go' is a metapragmatic summary or telescoping of a complex speech interaction. In Nunggubuyu there is no counterpart to this verb; instead, as with 'to decide', direct quotation is used. The conventional way of saying 'He persuaded me to go' is '"Go!" he-did-thus; "All-right," I-did-thus' ('to do thus' here means 'to say'). That is, at least a schematic representation of the two-party conversation is reproduced, with an initial command or suggestion (Future inflection) and then a spoken assent (usually nasalised /i!/ §12.18), both permitting quotative framing verb /=yama-/.

d) to refuse. English 'He refused to go' is likewise not easy to translate into a Nunggubuyu syntactic counterpart. There is a productive verb /=lha:bi-/ 'to refuse [request]', but it does not take a directly subordinated complement clause (it is intransitive in form itself). The only textual ex. is 47.10.1, which illustrates the occurrence of this verb in a self-contained surface clause; the overall passage is of the type 'He should not ask me any more, I refuse [to answer]'. (The verb 'to ask' in this passage is /=yama-/ with a different sense and different inflectional paradigm from /=yama-/ 'to do thus, to say'; see /=yama-/^{2} vs. /=yama-/^{3} in the dictionary, p. 263). That is, the nature of the request is spelled out before the 'refuse' predication is made.

e) to forget. There are two or three cpd. expressions meaning roughly 'to forget', but again they do not occur with a directly subordinated complement clause. In 29.9.1 we have 'I-am-looking-for--its-name' (i.e., 'I have forgotten [and am trying to remember] its name') with cpd. /-mi=dagu-/ from //-mij=ragu-// 'name-seek', but it is not possible to expand this by substituting a clausal complement for 'name'. For near-synonyms see list under FORGET in the index to the dictionary (p. 292).

f) to order. There is no verb 'to order, to command' as in 'He ordered (told) me to swim'. A direct quotation involving a Future verb form (in imperative function, §8.5), and perhaps the regular quotative framing verb /=yama-/, is sufficient. Exactly the same construction can also mean to suggest (there being no formal difference between an imperative and a suggestion in this language).

g) to hope. There is no construction of the type 'He hoped to go' or 'He hoped that I would go', nor is there any verb closely resembling 'to hope (for)'. There are some verbs meaning 'to wait for' (see list in index, p. 306 of dictionary), taking nominal rather than clausal objects. Something like 'to hope' can be gotten by adding anticipatory particle /yin^{g}ga/ (§12.7) to a Future (or Past Potential) clause, but this is just one of several possible glosses for this particle.

h) to want. For 'He wants to go', see §16.8, but note that the construction described there did not occur in texts. The 'to decide' construction mentioned above (this section) effectively takes care of 'to want' as well, and perhaps in some other cases the anticipatory particle /yin^{g}ga/ (§12.7) may have 'to want' as a gloss.

i) to stop. As with 'to refuse' and 'to forget' (above), 'to stop' exists as a verb but does not regularly take a directly subordinated clausal complement. A typical ex. is 108.2.4-5 'They--kept-weaving-it[reduplicated] and they-finished-it', with verb

/=in^{y}ga-/ 'to finish, complete' at the end, taking a nominal direct object rather than a clausal complement. The other relevant verb, /=aja-/ 'to cease [activity]' is an intransitive verb but is used in much the same way, hence 5.20.6-7 'he-was-burning-her-all-over [reduplicated] he-ceased'. The two clauses are really conjoined, with the first describing the activity in progress (rather than being a mere complement clause indicating what activity was stopped).

j) to begin. 'He began to work' is very difficult to translate. When referring to the onset of an extended activity, a Nunggubuyu speaker may simply use a Punctual aspect form of the relevant verb. Text A (Chapter 17) has some exx. involving 'to paddle'. In some contexts the use of particle /araga/ 'suddenly' with an activity verb may approximate the English 'to begin', and even the more mundane particle /adaba/ 'now, then' may serve the same purpose because of its event-bounding characteristics (§12.3, §12.7).

k) to warn, to threaten. Direct quotations including a clause in Evitative form (§8.7) expressing the undesirable consequences.

l) to know. Simple 'He knows' is expressed by a form of NAdj /marbuy/ with intransitive pronominal prefix (i.e., predicative NAdj form). Semantically negative counterparts are expressed by similar constructions involving /malala:di/ 'ignorant' or /ambadhi/ 'unaware'. These NAdj, however, do not take directly subordinated clausal complements. When the thing known or not known is an event rather than a named entity (such as a language or song), we get such passages as this: 'we[i.e., the Nunggubuyu and another group] were spearing each other, some were throwing [spears] from that side and others from this side, [but] I was unaware of it [since I was on the beach]' 161.4.3ff. As in other exx. we have seen (with 'to refuse', 'to forget', 'to stop'), the "complement" is really a quite independent surface main clause; the 'to know' predication presupposes this information but is not syntactically superordinated to it.

m) to think. For 'He thinks that...' see end of §16.3, the exx. being those with /-an=jama-/. Although the "complement" clause (i.e., the proposition believed) is expressed as a separate clause with no subordinators, some indirect-discourse pronominal substitutions occur. (Unfortunately, the exx. in the texts involve nonverbal complement predications of the type 'He thought it [was an] X', so we do not have any exx. involving a fully inflected predicative nucleus.) The type with /-an=jama-/ is only moderately common (two occurrences in NMET), and usually involves mistaken identifications. A more general 'to think' construction is the direct (mental) quotation, with optional quotative framing verb /=yama-/.

n) to ask. In the sense 'to enquire' the verb is /=lhawiwa-/, usually cpd. /-yan=dhawiwa-/ 'to enquire [verbally]'. This regularly follows a direct quotation. Actually, since the direct quotation should already be interrogative in form, one can omit the 'to enquire' framer, or replace it with the more neutral quotative framer /=yama-/.

o) to say. Direct quotation (for intonation see §17.4) with optional but frequent quotative framing verb /=yama-/ 'to do thus', as in /ni=yama-n^{y}/ 'he did thus, he said'. See §16.3.

p) can/could. Regular Future or Past Potential verb form.

q) should/must. " " " " ." " "

16.10 Comparatives.

There is no compressed comparative construction of the type 'He is smaller than I (am)', nor a superlative of the type 'He is the smallest (of us all)'. As is characteristic of Nunggubuyu, such a construction is broken up into its logical constituents. Thus to say 'He was older than I' (or 'I was younger than he') the expression in Nunggubuyu is 'He [was] adult, I [was] young', as in 65.11.6, or whatever variant of this is contextually appropriate. That is, two predications containing opposed NAdj are juxtaposed.

In a passage roughly translatable 'The water was getting higher and higher' we get the following structure in Nunggubuyu: 'He saw [looked at] them, then the tide came in, he was looking at them, [the water was] up to here [speaker points to knee], he was looking at them [and the water was] up to here [speaker points to waist], he was looking at them [and the water was] up to here [speaker points to shoulder]...' (see 13.43.1ff.).

Rough equivalents of the superlative construction in English, but with distinct structures, can be created in Nunggubuyu by a similar clause juxtaposition of the type 'He [was] big, the others [were] small' (i.e., 'He was the biggest of them'), or simply by using an emphatic form of the adjectival noun (with postposition /-w$_2$indi:yun^{g}/, §12.21, §4.32). There are also some emphatic suppletive adjectival nouns (cf. English huge, tiny), discussed pp. 339-40 of dictionary.

Chapter 17

Functional systematics (text analysis)

17.1 General.

In this chapter we try to bring together the discourse-controlled morphological and syntactic facts which have been scattered through several preceding chapters, and try to show how these diverse elements function together. In addition, we try to show some ways in which intonation operates in discourse. Although we will make some remarks about middle- and higher-level discourse structures, our main interest here is how discourse and basic grammatical features interact.

To this end, in this chapter we present (below) a schematic "English" translation of Text A (actually, Text 16 of NMET), a myth narrative. Readers should go over the remarks in §17.2, then go through the text schema before continuing with §17.3ff.

17.2 Remarks on "Text A."

A brief synopsis of the events in this text:

#3-114: A man M coming from Groote Eylandt going southward along the coast has trouble finding a spot where he can catch big fish; after straying into distant territory he finally catches some big fish;

#115-119: M goes on shore and builds a fire to cook the fish;

#119-141: A local man W notices the fire, sings a clan song about northeast wind, goes toward the fire, and briefly presents himself to M;

#142-170: M flees and tries to hide, but farts, attracting a swarm of flies; W finds M by noticing the activity of the flies, sneaks up to M, attacks M with an axe and eats him;

#171-181: Two wives [apparently of W] are not far away with their children; they observe W belching profusely and wonder what he has killed and eaten;

#182-225: A large search party including M's relatives from Groote Eylandt come, find M's blood, track W down by following the smell of the belching, and trap W by setting a ring of fires which close up around him; W sings his northeast-wind song again;

#226-240: The two wives echo W's song and refer to the arrival of the search party; the two wives clear some ground (for ritual dancing) and begin performing the circumcision ritual in the presence of the arriving search party;

#241-252: W, the two wives, and their children die in succession as their bellies explode.

The "English" translation given here is based word-for-word on the Nunggubuyu; each Nunggubuyu word in the original is represented by one English word (though by "word" here we may mean a hyphenated chain like he-kept-going). The "morphemes" separated by hyphens in an English "word" usually do not correspond directly to Nunggubuyu morphemes (in meaning, order, or even number). The schematic "English" version of the text is therefore mainly useful for syntactic and discourse rather than morphological analysis. For a more idiomatic English translation see NMET, pp. 108-117.

Each string constitutes an intonational or breath group; i.e., is normally followed by a brief pause. Each string has a numeral (#1 to #253) shown on the left. We have also listed as distinct strings the components of lists and other series (e.g., #45-50 and #30-34) even when there is no pause or intonational break.

Brackets on the far left combine from one to about ten strings into groups. As we will see shortly, this level of structure is only loosely definable and the presentation given here is partly arbitrary (one could, for example, show higher-order groupings as well by combining bracketed groups into larger sections). Within a group we progressively indent new strings by two spaces, except that strings forming lists or other series are exactly aligned with each other. (Note that some strings spill over into two or more typed lines because of their length; spillover lines are more sharply indented, and in some instances succeeding strings forming parallel series with the last part of a string, spilled over or not, are directly aligned with that last segment rather than merely being indented two spaces from the applicable left margin.)

Underlining is used to indicate high monotone (HM), an intonation used chiefly in repetitions and some other backgrounded strings; see §17.4, below. It is also used for a couple of song fragments.

Double underlining is used for quotation intonation (Qu), essentially using a higher baseline pitch but with rises and falls rather than monotone, and usually with rapid speech rate as opposed to the drawn-out articulation in (some instances of) HM. See §17.4.

CAPITALS are used in the "English" version of Text A not to designate a particular intonation, rather to indicate primary event predications. This is a somewhat loosely definable discourse category, intended to put the spotlight on verbs, each of which describes a new instance of the relevant action.

Some subscripts are used in the text. Some merely index a grammatical category (see list at end of text). Note, though, that beginning with #121 we use $_m$ and $_w$ with third person pronouns to index referents (to distinguish protagonists, M and W). (Actually, both protagonists have names beginning with /w/ in this text, but the first has another name with /m/ and we base the index on this.)

To the right of the strings, we have symbols indicating the terminal pitch pattern of the string. Grave accent ` indicates the most common (unmarked) pattern, falling pitch. `~` indicates falling-then-rising pitch (the contour may involve the final two syllables or just the final syllable). HM indicates that high monotone continues to the end of the string, though it should be noted that some strings begin with HM (shown by underlining) but end with `. L indicates list intonation (§17.4), and Qu quotative intonation. Br indicates that the string was broken off, as in a false start or otherwise self-repaired formation.

The following "English" expressions are used systematically to index the Nunggubuyu elements paired with them below:

and$_1$	/n^{g}a/ §12.4
and$_2$	/mari/ §12.4
again	/n^{g}ijan^g/ §12.6
do-thus, say-thus	/=yama-/
kept-[VERB-]ing	Reduplication by P-2, §8.4, §3.3
no!	/girjag!/ §15.6
now	/adaba/ or /aba/ §12.3
oops!	/gada!/ §12.19
-still	/-w$_2$ugij/ §12.21
suddenly	/araga/ §12.7
whatchamacallit?	/(w)a:n^g/ §13.10

Especially with demonstratives (Imm, Dist, Anaph) and gender and number (FDu, MSg, etc.), we sometimes indicate additional grammatical categories in brackets.

It is suggested that readers now work through Text A once or twice. Further discussion of this text is given in §17.3, below, and in other succeeding sections of this chapter.

17.3 Information units in Text A (Echoes, Rephrasings, etc.).

It can be seen that neither the numbered strings (#1 to #253) representing intonation/breath groups, nor the bracketed groups of strings (see §17.2, above, for definitions of "string" and "group"), correspond exactly to information units.

In #3 to #114, there is a recurrent cycle of elements (with many variations) as shown in Figure 17-1.

Figure 17-1

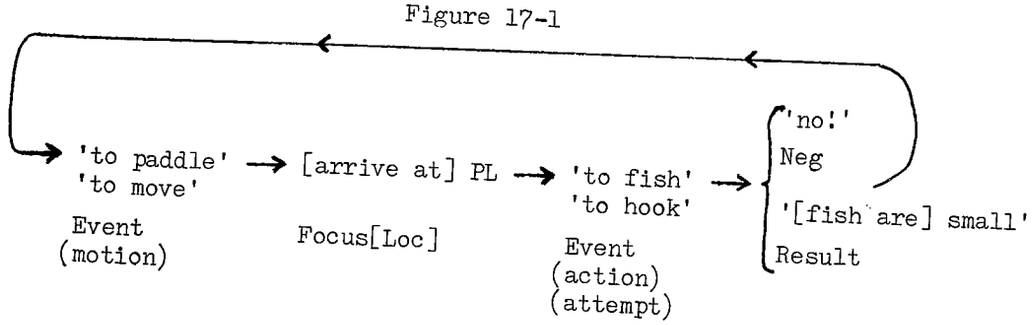


Figure 17-1

1.	another[MSg]	Focus
2.	I-will-tell-you$_c$	Aft[verb]
3.	HE-FISHED$_c$	Event
4.	M[man's n.]	Aft[NP]
5.	he-kept-killing-them$_c$ crabs$_c$	HM Backgr
6.	from-there$_p$ xxx from-Groote-Eylandt$_p$	Aft[Abl]
7.	he-kept-killing-them$_c$	HM Echo
8.	now canoe$_\emptyset$ indeed canoe$_\emptyset$	Focus
9.	HE-PADDLED$_p$	Aft[verb]
10.	he-kept-going$_c$ he-kept-paddling$_c$ PL-1$_\emptyset$	Echo Focus[Loc]
11.	he-paddled$_p$ and$_1$ no!	Echo Neg
12.	it-[was-]small	Result
13.	they-[were-]small	Correction
14.	again HE-MOVED$_p$ to-there to-PL-2$_\emptyset$ HE-PADDLED$_p$	Event
15.	he-kept-paddling$_c$	HM Echo
16.	PL-3$_\emptyset$	Focus[Loc]
17.	HE-FISHED$_p$	Event
18.	he-fished$_p$ and$_1$ no! [they-were-]small	Echo Neg Result
19.	again HE-PADDLED$_p$	Event
20.	to-there to-PL-2$_\emptyset$	Aft[All]
21.	he-kept-paddling$_c$ PL-4$_\emptyset$	Echo Focus[Loc]
22.	HE-FISHED$_p$	Event
23.	and$_1$ no! [they-were-]small	Neg Result
24.	HE-GOT-UP$_p$	Event
25.	he-kept-going$_c$	HM Echo
26.	PL-4$_\emptyset$	Focus[Loc]
27.	HE-FISHED$_p$	Event
28.	he-fished$_p$ and$_1$ no! [they-were-]small-still	Echo Neg Result
29.	HE-GOT-UP$_p$	Event
30.	PL-5$_\emptyset$ he-encircled-island$_c$	Foc[Loc] Backgr
	HE-HOOKED-IT$_c$ [it-was-]small	Event Result
31.	he-hooked-it$_c$ [it-was-]small	" "
32.	he-hooked-it$_c$ [it-was-]small (pause)	" "
33.	he-hooked-it$_c$ [it-was-]small	" "
34.	he-hooked-it$_c$ [it-was-]small	" "
35.	and$_1$ no! [they-were-]small-still	Neg Result
36.	HE-PADDLED$_p$	Event
37.	to-there to-another[-place]$_p$	Aft[All]
38.	PL-6$_\emptyset$	Focus[Loc]
39.	HE-FISHED$_p$	Event
40.	he-fished$_p$ and$_1$ [they-were-]small-still	Echo Result
41.	go![root form]	HM Event
42.	again he-went$_p$ PL-7$_\emptyset$ PL-8$_\emptyset$	Echo Focus[Loc]

43.	HE-FISHED$_p$	Event
44.	he-did-thus$_p$ HE-HOOKED-THEM$_p$ and$_1$ [they-were-]small-still	Event Result
45.	fish-sp.-1$_c$	L list
46.	fish-sp.-2$_c$	L "
47.	whatchamacallit?$_c$	"
48.	fish-sp.-3$_c$	L "
49.	fish-sp.-4$_c$	L "
50.	whatchamacallit?$_c$	L "
51.	he-hooked-them$_p$ and$_1$ suddenly small-still	Resumption[< #44] Result
52.	again HE-PADDLED$_p$	Event
53.	PL-9$_\emptyset$	Focus[Loc]
54.	HE-FISHED$_p$	Event
55.	they-[were-]small-still	Result
56.	again HE-PADDLED$_p$	Event
57.	PL-10$_\emptyset$	Focus[Loc]
58.	HE-FISHED$_p$	Event
59.	[they-were-]small-still	Result
60.	again HE-MOVED$_p$	HM Event
61.	PL-11$_\emptyset$	Focus[Loc]
62.	HE-FISHED$_p$	Event
63.	they-[were-]small-still	Result
64.	again HE-MOVED$_p$	HM Event
65.	PL-12$_\emptyset$	Focus[Loc]
66.	HE-FISHED$_p$	Event
67.	and$_1$ [they-were-]small-still	Result
68.	again HE-PADDLED$_p$ and$_1$ PL-4$_\emptyset$ oops! whatcha-	Event
69.	PL-13$_\emptyset$ macallit?	Focus[Loc] Correction
70.	HE-FISHED$_p$	Event
71.	and$_1$ [they-were-]small-still	Result
72.	again HE-MOVED$_p$ he-kept-paddling$_c$ and$_1$	Event
73.	PL-14$_\emptyset$	Focus[Loc]
74.	HE-FISHED$_p$	Event
75.	and$_1$ no! [they-were-]small-still again	Result
76.	PL-15$_\emptyset$ HE-PADDLED$_p$ and$_1$	Event Focus[Loc]
77.	HE-FISHED$_p$	Event
78.	"to-where? I-will-go to-far-side" [i.e., he decided to go around to far side]	Qu Quotation
79.	HE-MOVED$_p$	Event
80.	PL-16$_\emptyset$	Focus[Loc]

81. HE-FISHED$_p$ — Event
82. and$_1$ no! [they-were-]small-still — Result

83. HE-ENCIRCLED-ISLAND$_p$ and$_1$ — Event
84. whatchamacallit?
85. dangerous-island$_p$ that[Anaph]$_p$ — Focus[Loc]

86. HE-FISHED$_p$ and$_1$ no! — Event Neg
87. [they-were-]small-still and$_1$ HE-MOVED$_p$ whatchamacallit? — Result Event

88. PL-17$_\emptyset$ HE-FISHED$_p$ — Focus[Loc] Event
89. and$_1$ no! [they-were-]small — Result

90. "I-will-go-across — Qu Quotation
91. to-far-side — Qu "
92. to-PL-18$_\emptyset$" — Qu "

93. now HE-WENT-ACROSS$_p$ to-PL-18$_\emptyset$ — Event
94. he-kept-paddling$_c$ and$_1$ — Backgr
95. PL-18$_\emptyset$ — Focus[Loc]

96. HE-FISHED$_p$ — Event
97. now [they-were-]quite-big — Result

98. again HE-xxx whatchamacallit? — Event
99. PL-19$_\emptyset$ HE-FISHED$_p$ — Focus[Loc] Event
100. now [they-were-]big — Event

101. again HE-PADDLED$_p$ and$_1$ PL-20$_\emptyset$ — Event

102. HE-FISHED$_p$ — Event
103. now [they-were-]quite-large — Result

104. HE-KEPT-DOING-THUS$_c$ and$_1$ PL-22$_\emptyset$ — Event Focus[Loc]

105. HE-FISHED$_p$ — Event
106. now [they-were-]big — Result

107. HE-KEPT-DOING-THUS$_c$ and$_1$ PL-22$_\emptyset$ — Event Focus[Loc]

108. HE-FISHED$_p$ — Event
109. now [they-were-]huge — Result

110. HE-WENT-ACROSS$_p$ — Event
111. he-went-across$_p$ PL-23$_\emptyset$ — Echo Focus[Loc]

112. HE-FISHED$_p$ now [they-were-]big — Event
they-abounded[?] parrotfish$_c$ — Result

113. from-there[Anaph]$_c$ HE-PADDLED$_p$ PL-24$_\emptyset$ — Event Focus[Loc]
HE-FISHED$_p$ — Event
114. huge-ones$_c$ now he-fished$_p$ HE-HOOKED-THEM$_p$ — Result Event
there[Anaph] he-kept-fishing$_c$ — HM Echo

115. now HE-MADE-FIRE$_c$ there[Anaph] — Event

[interruption as narrator addresses comment to passerby]

116. HE-BUILT-UP-FIRE$_p$ — Event
117. he-kept-making-fire$_c$ — HM Echo

118. he-kept-cooking-them$_c$ — HM Backgr
119. he-kept-making-fire$_c$ and$_1$ now — Echo
HE[i.e. W]-SMELLED-FIRE$_p$ — Event
120. from-PL-25$_c$ — Aft[Abl]
121. W[man's n.] — Aft[NP]

[NOTE: To distinguish M, see #4, from the new actor W, see #121, we will henceforth index M as $_m$ and W as $_w$.]

122. [imitation of fire crackling] — HM Onomatopoeia
"someone-is-intruding-in-my-country$_p$ — HM Quotation[sung]
123. northeast-wind I-ran-to-it$_p$ — HM "
124. from-PL-26$_\emptyset$ from-PL-27$_\emptyset$ from-PL-28$_\emptyset$ — HM "
125. it[wind]-made-me-aware$_p$ I-became-aware$_p$ — HM "
it[wind]-hit-my-head$_p$
126. northeast-wind[songword$_1$] — HM "
127. northeast-wind[songword$_2$]" — HM "

128. he$_w$-said-thus$_p$ — Quot framer
129. this$_c$ it northeast-wind$_c$ — "
130. he$_w$-kept-saying-thus$_c$ — " [Echo]

131. now he$_w$ HE$_w$-CHASED-FIRE$_p$ now — Event
132. he$_w$-kept-chasing-by-smell$_c$ — HM Backgr
133. he$_w$-kept-chasing-by-smell$_c$ — HM Echo
134. he$_w$-kept-- — HM/Br Echo
135. he$_w$-kept-chasing-by-smell$_c$ — HM Echo
136. he$_w$-kept-chasing-by-smell$_c$ and$_1$ — Echo

137. now HE$_w$-LOOKED$_p$ and$_1$ he$_m$-[was-]that[Imm] — Event Result
138. HE$_m$-CAME-OUT$_p$ he$_m$-came-out$_p$ — Event

139. "[it's-]me![Emph] just this$_c$ — Echo
140. I-smelled-fire$_p$ I-went[i.e., came] from-there[Dist]" — Qu Quotation

141. he$_w$-said-thus$_p$ — Qu "

142. HE$_m$-RUSHED-AROUND$_p$ HE$_m$-GAVE-HIM$_w$[-a-look]$_p$ — Quot framer
143. he$_m$-rushed-around$_p$ he$_m$-gave-him$_w$[-a-look]$_p$ — Event
144. suddenly HE$_m$-HID-BEHIND-IT[tree] — Event

145. HE$_m$-RAN$_p$ — Event
146. he$_m$-ran$_p$ — HM "
147. he$_m$-ran$_p$ — HM "
148. he$_m$-ran$_p$ and$_1$ there[Dist] HE$_m$-HID-IN[trees]$_p$ — HM "
149. he$_m$-hid-in[trees]$_p$ — Event
150. M[name] — Echo
151. he$_m$-hid-in[trees]$_p$ — Aft[NP] Echo

152. as-for-him$_w$ HE$_w$-CHASED$_p$ there[Dist] — Event Focus[Loc]
153. he$_w$-chased$_p$ there[Dist] — " "
154. he$_w$-chased$_p$ again and$_1$ to-there[Dist] — " "
155. he$_w$-chased$_p$ west and$_1$ from-there[Dist] — " "
156. again and$_1$-- — Br Echo

157.	toilet$_{\emptyset}$		Focus[NP]
158.	[he$_m$-farted$_p$		Aft[verb]
159.	[he$_m$-farted$_p$ suddenly THEY[flies]-SWARMED		Echo Event
	they-smelled-his$_m$-excrement$_p$ flies$_{\emptyset}$		Reason
160.	THEY[flies]-RACED$_p$ and$_1$ from-there[Anaph] from-W		Event
161.	now they[flies]-were-visible$_c$ there[Anaph]$_c$		
	where-he$_m$-was-crouching$_c$		Result
162.	THEY[flies]-SWARMED-AT-HIM$_m$-c		Event
163.	they[flies]-were-visible$_c$		Echo
164.	suddenly to-there[Anaph]-still HE$_w$-CHASED-SWARM-STILL$_c$		Event
	HE$_w$-LOOKED$_p$ he$_m$-[was-]that[Imm] he$_m$-crouched$_c$		Event Result
165.	HE$_m$-GOT-UP-STILL$_p$ and$_2$ --	Br	Event
166.	chop![root form] here[i.e., nose]		
167.	[HE$_w$-CHOPPED-HIM$_m$-IN-NOSE$_p$		Event
	[he$_w$-chopped-him$_{m-p}$ now		Echo
168.	and$_2$ HE$_w$-JUMPED-AT[-him$_m$]$_p$ HE$_w$-LIFTED-HIM$_{m-p}$		
	and$_2$ --	Br	Event
169.	eat![root form] HE$_w$-ATE-HIM$_{m-p}$		Event
170.	he$_w$-swallowed$_p$		Rephrasing
171.	as-for-them[people] PL-29$_{\emptyset}$ they-sat$_c$		
	babies and$_2$ two-wives		Backgr
172.	now HE$_w$-MOVED$_p$		Event
173.	he-kept-going$_c$ and$_2$ HE-SAT-DOWN$_p$		Echo Event
174.	there[Dist] in-east[rdp.]		Aft[Loc]
175.	[imitates sound of belching and stomach gas]		Onomatopoeia
176.	he$_w$-belched[in English using 'cough']		Aft[verb]
177.	[continuation of sound of belching, etc.]		Onomatopoeia
178.	"what? again that[Imm] you-belch what?	Qu	Quotation
179.	what? xxx that[Anaph] you-killed-it$_c$ xxx		
	something-big you-keep-belching"	Qu	"
180.	they[FDu]-said-thus$_c$		Quot framer
181.	[continuation of belching, etc.]		Onomatopoeia
182.	[THEY[people]-GOT-TOGETHER$_c$		Event
183.	they[people]-got-together$_c$ people		Echo
184.	they[people]-got-together$_c$		Echo
185.	[they[people]-got-together$_c$		Echo
186.	now THEY[people]-SEARCHED-FOR-HIM$_{m-p}$		Event
187.	islands[Collective]$_c$ they-did-to-them[islands]$_p$		Rephrasing
188.	of-Groote-Eylandt$_c$ Anindilyakwa[people]		
	clan-n. whatchamacallit? elders	HM	Aft[NP]
189.	they-searched-for-him$_{m-p}$		Resumption
190.	[they-kept-doing-thus$_c$ PL-17$_c$		Echo Focus[Loc]
191.	[they-kept-doing-thus$_c$ PL-18$_c$		" "
192.	[they-kept-doing-thus$_c$ PL-23$_c$		" "
193.	[they-kept-doing-thus$_c$ and$_1$		" "

194.	PL-24$_c$		Focus[Loc]
195.	THEY[people]-LOOKED$_p$ and$_1$ of-it-killed-him$_{m-c}$		Event
196.	[his$_m$-mark[blood, etc.]-lay$_c$		Result
	[his$_m$-mark-lay$_c$ [of-]it-killed-him$_{m-c}$		Echo
197.	"oops! [it-is-]this it-killed-him$_m$ yes/no?"		Quotation
198.	now THEY-SEARCHED$_p$		Event
	they-kept-tracking-him$_{m-c}$ and$_1$		Rephrasing
199.	they-did-thus$_p$ they-went-in-curve$_p$		Rephrasing
200.	in-west they-stood-broadside$_p$ and$_1$		Backgr
201.	they-sniffed$_p$		Backgr
202.	[noise of belching, stomach gas, cf. #175]		Onomatopoeia
203.	of-he$_w$-belched$_p$ and$_1$		Aft[verb]
204.	[he$_w$-smelled$_p$		Result[of #201]
205.	[he$_w$-stank$_p$		Rephrasing
206.	and$_2$ and$_1$ fire$_c$		Focus[NP]
207.	in-east now THEY[people]-RUSHED$_p$		Backgr
208.	[they-lit-fire$_p$ PL-30$_{\emptyset}$		Aft[verb]
209.	they-lit-fire$_p$ whatchamacallit? PL-31$_{\emptyset}$		Focus[Loc]
210.	from-there[Anaph]$_c$ they-lit-fire$_p$ PL-32$_{\emptyset}$		"
211.	oops!		" "
212.	PL-33$_{\emptyset}$		Correction
213.	from-PL-33$_c$ from-that[Anaph]$_c$		" [for PL-32]
	they-lit-fire$_p$ whatchamacallit?		Aft[verb]
214.	PL-34$_{\emptyset}$ and$_1$ go![root form]	HM	Aft[Loc]
215.	and$_1$ to-PL-34$_{\emptyset}$		Aft[Loc]
216.	THEY[people]-GAVE-EACH-OTHER$_p$[?]	Br	Event
217.	ring[of fires]		Aft[NP]
218.	they[fires]-were-joined$_p$		Aft[verb]
219.	THEY[people]-LISTENED-STILL$_c$		Event
220.	"someone-is-intruding-in-my-country$_p$	HM	Quotation[sung]
221.	from-PL-28$_{\emptyset}$	HM	"
222.	I-ran-to-it$_p$	HM	"
223.	it[wind]-hit-my-head$_p$"	HM	"
224.	he$_w$-said[sang]-thus$_c$		Quot framer
225.	"it[wind]-hit-my- --" [pitch fairly high]	HM/Br	Quotation[W] (con't <#220-3)
226.	"[it-is-]that[Imm] and$_1$ [pitch very high]	Qu	Quotation[wives]
227.	[it-is-]that[Imm] and$_1$ it-hit-you-on-head$_p$	Qu	"
228.	this$_c$ now they-sent-to-us[InPl]$_p$		
	[it-is-]this$_c$ unknown-monster$_{\emptyset}$	Qu	"
229.	two-wives they[FDu]-said-thus$_c$		Quot framer
230.	xxx THEY[people]-PASSED-BY$_p$		Event
231.	they[people]-passed-by$_p$ and$_2$ and$_1$		Echo
	from-there[Dist] she SHE-LAUNCHED-IT[ritual]$_p$		
	SHE-DANCED[circumcision dance]$_p$		Event

(Text A, cont.)

232.	as-for-her[other wife] over-here she-danced[circumcision dance]$_p$	`	Contrastive event
233.	she-launched-it[ritual]$_p$		Rephrasing
	they[FDu]-cleared-ground-for-them$_p$ --	Br	Backgr
234.	babies	`	Aft[NP]
235.	theirs[FDu]	`	Aft[Possessor]
236.	they[FDu]-cleared-ground-for-them$_p$	`	Echo
237.	they[FDu]-danced$_p$ there[Dist]	`	"
238.	they[FDu]-danced$_p$ here	`	"
239.	they[FDu]-danced$_p$	HM	"
240.	they[Pl]-did-thus$_c$ xxx[few unclear words]		Backgr[?]
241.	THEY-ALL-KEPT-BURSTING$_c$ now		Event
242.	pop!	HM	Onomatopoeia
243.	pop! pop! pop!	HM	"
244.	pop!	HM	"
245.	pop! now it[fire]-burned-them$_c$ fire$_c$	`	Rephrasing
246.	[one]wife her-belly-burst$_p$	`	Echo
247.	and$_1$ as-for-her wife other her-belly-burst$_p$	`	Echo
248.	children	`	Echo
249.	as-for-him$_w$ THEY-KEPT-LISTENING$_c$ and$_2$ and$_1$ he$_w$-burst$_p$		Event
250.	his$_w$-belly-burst$_p$	`	Result
251.	HE$_m$-JUMPED[-out]$_p$ that[Anaph, MSg] of-he$_w$-ate-him$_m$-$_p$[Rel cl.]	`	Echo
252.	pop! and$_2$ and$_1$ he$_m$-jumped[-out]$_p$ and$_1$ there[Dist] he$_m$-lay$_c$		Event
253.	M[name]	`	Rephrasing
	[long pause] finish!	`	Aft[NP]
		`	Conclusion

Abbreviations:

Qu	quotation intonation
Aft	afterthought constituent
L	list intonation
HM	high monotone
Br	broken off [at end of segment]
M, N	abbreviations for two actors

Symbols:

`	falling pitch at end of segment
ˋˊ	falling-then-rising pitch

Subscripts:

m, n	refer to M and N (see #121-122)
c	continuous [verb/NC$_{infl}$]
p	punctual [verb/NC$_{infl}$]
ø	NC$_{infl}$ prefix absent

(for NC$_{infl}$ see §4.7-8; we mark c p ø here for nonhuman nouns only)

Although this cycle is repeated many times (with different PL, or place name, numbered PL-1, PL-2, etc.) to the point of inducing boredom in English-speaking readers, there is some variation from one cycle to another--occasional omission of one of the segments shown (ellipsis), different choice of verb, etc.

I have generally grouped the motion verb with the following place name as one bracketed group, and similarly the fishing verb with the 'no!' or 'small' segments as one group. However, these groupings are discussable. In the case of the motion verb and the place name, it is notable that the place n. is normally in zero case form (i.e., "Nominative" meaning locative, as usual with place names, §4.5). In particular, it is not in Allative[-Dative] case, as it should be if it were specifically associated with the motion verb (rather than the following fishing verb). The place n. is sufficiently independent in its morphology and intonation to permit us to label it functionally (in this context) as a separate information unit which we will label "Focus[Loc]."

The fishing verb (an intrans. verb meaning 'to fish with hook and line' or a trans. verb 'to hook/catch [fish]', occasionally both) is paired with a following expression of the type '[fish was/were] small'; the latter essentially indicates an unfavourable result of the fishing (the goal of which was larger fish). Often the 'small' predication is accompanied by a negative particle (glossed 'no!'), which essentially indicates the failure of the fishing activity (cf. English 'no soap', 'no dice', etc.).

Regardless of how we distribute the brackets at this relatively low level, Figure 17-1 appears to indicate a higher-order discourse unit (paragraph, not explicitly indicated in our notation). However, since there are many repetitions of the whole cycle (paragraph), it is not obvious that the motion verb should be regarded as the beginning of a new paragraph, and this will have to be justified. We will return to this point in a moment, but first we comment on some additional information units.

Alongside the minimal expression of the chunks in Figure 17-1 in its various repetitions (each repetition of the whole cycle referring to a distinct instantiation of the event sequence at a unique location), there is a certain amount of unnecessary or redundant material. For ex., 'he-kept-killing-them crabs' #5 is repeated as 'he-kept-killing-them' #7; 'HE-PADDLED' #9 is repeated as 'he-kept-going he-kept-paddling [place n.] he-paddled' #10-11; and so forth. I refer to such repetitions (when not describing clearly distinct instantiations of the activities) as echoes, using the term rephrasing for similar repetitions which use different verbs describing the same event from a different angle (#170, #187, #198, #199, #205, #233, #244, #251), resumption for a repetition returning us to an earlier point after a digression (#51, #189), and background for other clearly non-foregrounded matter (#5, #30, #94, #118, #131, #171, #200, #201, #207, #233).

I should emphasise that these distinctions are not sharp, either conceptually or formally, and my labeling of given strings or parts of strings using these labels is merely heuristic. Moreover, as already observed in §14.8, it is useful to distinguish more than one functional type of echo, as follows:

filler echo (gives speaker time to think of next string);
clarifying echo (repetition to make sure addressee understands or to add an additional morpheme or word);
lead-in echo (repetition functioning as framer for next string).

Of course, these functional subtypes may overlap in practice or otherwise be indeterminate, but there are some tendencies at least for lead-in echoes to be formally differentiated from the two other types of echo: lead-in echoes commonly have narrative high monotone (HM), are often reduplicated continuous verbs, for some speakers often have postposition /-maga:/ added to the verb (§12.21), and typically have particle /n^{g}a/ ('and$_1$' in Text A) either at the end of the lead-in echo string or at the beginning of the next string indicating continuity between the two strings. These features are not typical of clarifying echoes and are also not very common with filler echoes when the speaker clearly needs time to think the next string over. On the other hand, clarifying and filler echoes in particular show a tendency (when permitted by lexical items present) to include new compound initials vis-à-vis the original (primary) predication.

In Text A we mark echoes but do not attempt a rigorous marking of the subtypes just shown. It should also be mentioned that our concept of echo is rather generous, including expressions which designate the prolongation of an event whose beginning has just been predicated. For ex., the act of paddling from place A to place B is often expressed in Nunggubuyu by an initial punctual verb 'he-paddled$_p$', with subsequent echo(es) of the type 'he-kept-paddling$_c$' or perhaps one or more simple repetitions of the first punctual verb (note that $_p$ means "punctual," $_c$ "continuous," cf. end of Text A). Exx. of such echoes are #10, #15, and many others. In the case of #25 we tentatively label 'he-kept-going$_c$' as an Echo of the preceding 'HE-GOT-UP$_p$', despite the change in verb, since 'to get up' often implies not just literally arising but also leaving a location.

In #3 to #114 we note a certain gradual change in the structure of the cyclical pattern shown in Figure 17-1. In #30-#34 we get a sequence of rapidly spoken repetitions of identical strings of the type 'he-hooked-it$_c$ [it-was-]small'. These appear to indicate separate events (each event consisting of catching one fish) which took place in quick succession at a single location. I am reluctant to describe the noninitial instances as echoes since each event is distinct, but the whole sequence is clearly a discourse unit which we may call a narrative series. In this particular case, each string consists of a verb of fishing plus an expression ('[it-was-]small') indicating a disappointing outcome, so the fishing verb is in HM intonation while the NAdj ('small') is not. Note also that #35 ('and$_1$ no! [they-were-]small-still'), while characterisable in one sense as yet another expression of disappointing outcome, is also a summation of the the outcome expressions in #30-34; it thus uses the plural form of 'small' and includes the postposition /-w$_2$ugij/ 'still, only, nothing but'. (For a slightly distinct summative element used frequently to terminate lists, see §7.9; this element could have been used to end the list in #45-#50 but happens not to have been used in this instance.)

In #41 we find our first usage in this text of a verbal root form, an uninflectable interjection-like particle with verbal sense (§12.2). Other root forms in the text are at #166 and #169, though we might loosely associate with them the 'pop!' (i.e., bursting) onomatopoeia seen in #241-#244 and #251. (Belching is also represented by direct onomatopoeia in #175, #177, #181, #202.) There is a second occurrence of the root form for 'go!' in #214, but here the sequence 'PL-34 and$_1$ go!' means 'from [place n.] onward' (i.e., a trajectory beginning at PL-34). In general, root forms are not very frequent in this text since many verbs (including 'to paddle' and 'to fish') lack root forms.

In the block of strings from #52 to #77, we find some evidence for our earlier assertion that the cycle in Figure 17-1 correctly shows the motion verb as the initial item in each cycle (or paragraph). Note that the particle 'again' (/n^{g}ijan^{g}/) is regularly used in front of the motion verb, not the fishing verb, in each cycle in this part of the text. Note also that underlining, indicating high monotone intonation (HM), is applied in this sector to the motion verb (or the adjoined 'again' particle, as in #56), but not to the verb of fishing. Although the patterning is not totally sharp, these facts suggest that the motion verb functions here as a partially backgrounded predication which sets up the following (foregrounded) verb of fishing.

The use of the "empty" verb /=yama-/ ('to do thus' or 'to say/think thus') is also significant. Although in #44 'he-did-thus$_p$' may mean 'he-fished$_p$' or (equivalently) 'he-hooked-it/them[fish]', and thus function as an echo of 'HE-FISHED$_p$' (#43), later on it seems that 'HE-KEPT-DOING-THUS$_c$' simply replaces an expected motion verb like 'HE-PADDLED', whereas the verb of fishing is never simply replaced by this "empty" verb. (Another semantically empty verb, /=w$_1$anbi-/, does not occur in this particular text.)

In #78 and #90-#92 we have explicit reference to mental decisions made by the protagonist M, expressed as thought quotations. Such quotations are often followed by /=yama-/ in the sense 'he-said-thus'. This quotative framer is optional (quotations are usually identifiable by quotation intonation, #17.4), and happens not to occur after #78 or #90-#92, but does occur after songs or (other) quotations in #128, #141, #180, #224, and #229, in each case following (not preceding) the quoted material, as is normal.

Beginning with #97 the previously hapless fisherman M begins to have his luck change--the fish start to get bigger. Lexical resources, along with the cpd. initial /-malan^{g}aG-/ (glossed 'quite' here), are used to indicate a gradual increase in size. The sequence is 'quite-big' #97, 'big' #100, 'quite-large' #103, 'big' (with more emphatic intonation) #106, 'huge' #109, a special reduplicative plural form of 'big' in #113, and again 'huge' #114 (in explicitly nonpredicative form this time). The roots are /run^{g}gal/ 'big', /lhabarj/ 'large' (a little more emphatic than /run^{g}gal/), and the strong cpd. form /n^{g}agara-wugag/ 'huge, vast'. Even without a regular comparative/superlative system, Nunggubuyu thus uses lexical and derivational alternatives to accomplish a complex discourse function.

17.4 Discourse uses of intonation.

For pitch contours applying to individual words (in isolation) see §2.11. In this section we deal with certain types of intonation, either of whole phrases or just their terminal syllables, which have discourse functions. We deal first with special contours used in lists, quotations, and backgrounded strings of certain types, then we discuss more ordinary patterns.

Narrative high monotone (HM) is characterised by a steady high pitch, little pitch variation from one syllable to the next, and (usually) a similar uniformity in surface duration of syllables except for possible stylistic lengthening of one syllable (usually the final syllable of the string). It is characteristic of echoes, especially lead-in echoes, some types of background strings, and repeated items in narrative series (§17.3, above). Broadly, we can speak of all of these constructions as non-foregrounded strings which typically serve to frame a following, more foregrounded string (except in long narrative series where there may be no specific foregrounded string). HM is indicated in Text A by single underlining. Note that in some cases the HM applies to only part of a string, and may terminate or begin within a word (indicated rather crudely by partial underlining of the "English" translation). In the penultimate column at the right in the textual schema, HM indicates that the high monotone is maintained right to the end of the string. We also use this underlining for song intonation (#122-#127, #220-#223), and use "HM" in the penultimate column to indicate the pitch of string-final root forms (#41, #214). It would be desirable, though notationally messy, to distinguish songs from regular HM, and especially to distinguish the terse, interjection-like root forms from both of these.

List intonation (L) resembles HM. It is difficult to describe it rigorously, since typically Nunggubuyu speakers uttering lists, such as the sequence of names of fish spp. in #45-#50, do not rattle off the nouns in a fluent sequence, rather show hesitations here and there, often using the 'whatchamaaallit?' noun /(w)a:n^{g}/ (§13.10) as a filler (as in #47 and #50). However, allowing for this fluctuation, we can say that list intonation has some resemblance to HM in having a generally higher baseline pitch than in unmarked strings (cf. below). The final syllable in each string in the list (often just a single noun) may show a slight fall, a slight rise, or level pitch. (For a list-summative demonstrative see §7.9.)

Quotation intonation shares with HM a relatively high baseline pitch. However, quotations embedded in larger narratives are also characterised by sharp rises and falls in intonation from one syllable to another (as in normal conversation), and also by a somewhat exaggeratedly rapid speech rate. Intonation (as well, perhaps, as shift in pronominal perspective) is important in identifying quotations, since while there is an optional quotative framer (see §17.3, above) 'he-said-thus' following the quotation, there is usually no explicit framer preceding the quotation. Quotations occur in Text A at #78, #90-92, #139-140, #178-179, #197, and #226-228. At #226 the narrator particularly exaggerated the quotation intonation features and shifted to an unusually high baseline pitch,

apparently as a device to demarcate the boundary between this quotation and the preceding song segment.

Leaving these special contours aside, we now observe that the unmarked terminal pitch of words, especially at the end of strings (i.e., breath or intonation groups), is falling pitch, represented by grave accent ` in Text A (penultimate column, marking pitch only of final syllable in string). It should be mentioned immediately that the sharpness of the fall in pitch, as well as the absolute value of the lowest point of the fall, are quite variable and it would be possible to use a number of symbols to represent an arbitrary number of subtypes (sharply falling, moderately falling, slightly falling, etc.).

In opposition to falling pitch `, we recognise a marked pattern with falling-then-rising pitch. The fall-and-rise may involve the contour formed by the last two syllables, or may occur in the final syllable itself (e.g., falling pitch with a brief, last-instant upturn). We represent this pattern as ``.

In classifying particular instances, we should note that word-final long vowels, especially in words of at least three syllables with the penultimate syllable containing a short vowel, tend to have appreciably higher pitch than final short vowels. Thus in some verbal inflections (mainly Past$_2$ and/or Nonpast$_2$, i.e., basically continuous-aspect forms, of some verb classes), nouns ending in Dual /-w$_2$a:/, and any words ending in postpositions /-maga:/ or /-maji:/ (§12.21), we have an unmarked contour with a slight final rise. We therefore treat unmarked contours for such words as "falling" (`) even though this is not quite correct phonetically. (In Text A this proviso affects only a small number of strings and we can more or less disregard it here.)

My understanding of the difference between ` and ``, and more generally of the continuum of terminal pitch patterns which this (arbitrarily) binary notation (mis-)represents, is that `` implies anticipatory orientation (toward a succeeding string) while ` does not specifically do this. The sharper the fall, the less anticipatory orientation there seems to be. `` is a marked pattern at the end of an intonation (or breath) group, and this markedness relationship should be noted; the use of ` does not mean, for example, that the speaker is not planning additional strings.

Let us look at instances of `` in Text A. We find it with place names in #26, #57, #69, and #95 in contexts which can be explained with reference to Figure 17-1 (beginning of §17.3). Recall from our discussion of the cycle in that figure that the place name has a semi-independent status ("Focus[Loc]"), since it is normally not in Allative-Dative form and commonly forms its own breath group. It seems to be at least as much looking forward to and setting up the following verb (of fishing) as it is looking backward (as a specification of terminus for the motion verb). Although it does not always have `` final pitch, and ` is often shown for such place names (e.g., #38, #42), even in the ` cases the pitch is usually only gently falling. I interpret this as indicating that, to varying degrees, the place n. in this particular context is setting up the following predication.

There are also a small number of other instances of ˋˋ pitch. It is a little hard to explain them in a unified way, but we may hazard an observation or two. The strings with ˋˋ tend to involve motion verbs (interpreted broadly, e.g., including 'he-hid-in[-trees]'), tend to occur after significant narrative boundaries (e.g., after quotations or other intrusions or digressions), and involve the initial (primary) predication of a particular instance of the motion (i.e., not an echo, or a noninitial string in a narrative series). For exx. see #9, #110, #144, #148, #186, #189, #199, #207, #230. The other exx. are these: 'oops!' particle anticipating following self-correction (#211); 'HE-MADE-FIRE there' in first mention of important new type of activity, perhaps looking ahead to following verbs of fire-building and cooking (#115); focal noun 'fire' as separate string preceding series of verbs of setting fires (#206); and '...SHE-DANCED$_p$' at end of string mentioning the two wives' performance of circumcision rites, continued in the following strings (#231). In general, then, ˋˋ occurs at the end of strings, normally at or near the beginning of "paragraph" like groups of strings, which are closely linked with following strings in some way but which are not mere echoes of some earlier string.

Our remarks about intonation here have merely scratched the surface. Much could be said about intonation contours within (as well as at the end of) strings, but it is difficult to describe it notationally and more difficult to determine the "functions" of each rise and fall. Readers seriously interested in the analysis of Nunggubuyu narrative discourse as such are strongly advised to listen to the original tapes (now at A.I.A.S. in Canberra, see catalogue at end of my dictionary).

17.5 Referential tracking and disambiguation.

One essential job which every grammatical system must accomplish is the maintenance of a high degree of referential clarity, even in extended discourse chunks, without requiring constant repetition of full, referential NPs (such as personal names). Nunggubuyu has devices for doing this, though they differ sharply from the mechanisms found in most other languages.

In general, the most characteristic referential mechanism of Nunggubuyu is the unusually elaborate noun-class (NC) system, seen not only in affixes with nouns (§4.7ff.), pronouns (§6.2), and demonstrative pronouns (DemPro, §7.2-3), but also in subject- (and, for transitives, also object-) marking pronominal prefixes in verbs and predicative adjectival nouns (NAdj), see Chapter 9. Because of the large number of NC categories (MSg, MDu, FSg, FDu, [human] Pl, and five nonhuman NCs, one of which has two subclasses distinguished in object-markers in pronominal prefixes), full referential NPs can often be omitted. Even if a subject or object NP, for example, is represented on the surface only by a pronominal element in the prefix on the verb, this minimal marking is often sufficient in a given context to identify a particular real-world referent. Of course, it is usual for this reduction (from full NP plus concord to just the pronominal concord marker) to apply to noninitial occurrences of a given referent in a discourse chunk; we even have

cases where a full NP is omitted entirely (even in its initial mention), with the NC category plus the context (including, perhaps, semantic restrictions by a verb on its subject and/or object) left as the only clue given to the addressee(s).

In Text A, the NC system is helpful although it does not solve all referential problems. For ex., in going from #180 to #182, the shift from 3FDu to 3Pl (the latter requiring three or more referents) indicates a switch from the two wives to the larger search party. Similarly, the fact that 3MSg is distinct from most NC forms referring to nonhumans insures that such expressions as 'he-stank$_p$' (#204) and 'they-did-to-them[islands]' (#187) will be correctly understood (in the latter ex. note that '-them[islands]' is not specifically plural in form, since 3Pl applies to humans only, see §4.15).

However, in a good part of Text A it happens that the NC system is either redundant or unhelpful. In the long section in which the protagonist M is trying his luck at fishing (#3-#114), he is the only human referent (the others are fish spp. and place names), and no difficult referential transitions occur. M is cross-referenced in the subject markers of the pronominal prefixes on verbs and NAdj, and this is all that we need (and all we would need even if there were only a single third person singular NC).

In the section beginning with the injection of a second (MSg) protagonist W into the action (#119ff.), the fact that both M and W are MSg means that the NC system by itself is now insufficient. Let us examine the devices used in this section of the text to insure clear reference:

a) explicit use of full NP (i.e., here, the names) in #121, #150, #160;
b) use of Contrastive 3MSg pronoun /ni-ga:-'yun^g/ 'as-for-him' to indicate referential shift in #152 (note also Contrastive 'as-for-them' #171 shifting reference to the wives and children, 'as-for-her' #232 and #246 to distinguish one wife from the other, and 'as-for-him' #248 to shift from the wives and children back to W); cf. §6.8;

These devices are not used on every occasion where a referential transition occurs, essentially because the speaker presumes that listeners have enough of a general idea of what is going on not to require explicit referential marking in every clause, but also because some sequences intrinsically require a referential shift. For example, the sequence 'he-looked and$_1$ he-[was-]that' (i.e., 'he saw him') requires that the first and second 'he's (3MSg pronominals) be distinct persons, so there is no need to add other explicit markers of referential shifts (#137, #164). The same basic point can be made about 'they-sniffed' #201 followed by 'he-stank' #204 (even aside from different NCs), since the sniffer and the emitter of the smell are naturally distinct.

It is also important to mention the use of demonstrative categories (Chapter 7) in referential disambiguation. Demonstrative pronouns (DemPro) are useful here since there are several roots (Prox[imate], Imm[ediate], Dist[ant] and the non-deictic Anaph[oric]), plus additional affixes which among other things mark various kinds of definite/presupposed status.

Text A is not the best text to exemplify the disambiguating use of demonstratives, but if we include demonstrative adverbs (DemAdv) as well as DemPro we can see that demonstratives are used systematically to depict spatial configurations and thus indirectly help with reference. In the 'he-looked and$_1$ he-[was-]that' (i.e., 'he saw him') exx. #137 and #164, the Imm root is used (indicating fairly close approaching of the two protagonists), while in expressions indicating that first M and then W moved to other locations we have a string of Dist forms (#148, #152-#155). There are also Anaph DemAdv indicating that the location in question is the same as one which has just been mentioned (#160-#161, #164, #210, #213). Whether Anaph or one of the deictic categories, the speaker may add a cardinal-direction expression ('west' #155, 'east' #174), or the cardinal-direction adverb may be used by itself ('west' #200, 'east' #207). In other texts there is more extensive usage of Anaph DemPro to identify a referent in one clause as identical with a previously mentioned one (Chapter 7).

The combination of the fine system of NC categories, the rich demonstrative system, and the use of personal pronouns with specific discourse functions (notably Contrastive), are the essential ingredients in the Nunggubuyu system of referential tracking in complex discourse structures. There is no formal syntactic expression of coreferentiality across clauses by switch-reference, coreferential-NP deletion (Equi, etc.), or the like.

17.6 Focus, topic, definiteness, givenness.

Such discourse categories as "focus" and "topic" are very difficult to discuss because of the wide range of usage and misusage of these terms in the linguistic literature, but also because such discourse notions are intrinsically tricky and fuzzy. I will come right out and say that they are, at best, gradient (scalar) aspects of any given NP in context rather than crystalline categories. However, there are some morphological forms which constitute crystallised categories related to these (pregrammatical) discourse concepts and to which, for want of better terms, we have applied such "discourse" labels. In addition, some syntactic (mainly word-order) patterns merit consideration in this connection.

Let us begin with rough definitions of (pregrammatical) discourse categories as follows:

FOCUS: a constituent (usually NP) whose referential identity or substantive essence is foregrounded;

TOPIC: what the sentence or other string is about;

DEFINITENESS: quality of a constituent (usually NP) presumed to be understood as designating a particular referent because of prior mention, or intrinsic unique (or at least prototypical) reference of the constituent;

GIVEN (vs. NEW): recently mentioned and presumed to be in addressee's consciousness (vs. first mention, or first mention after long interval).

In the present section we will continue to use capitals to refer to these pregrammatical "categories," as opposed to labels for grammatical categories like Anaph and Contr[astive].

Some overlaps among the pregrammatical categories must be noted right away. First, NEW items have a natural tendency to be at least somewhat FOCAL in the sense that identity/substance is salient. However, NEWNESS is a property of a given NP regardless of what else is present in the immediate clause environment, while FOCUS is essentially a matter of foregrounding one NP or other constituent vis-à-vis others in the same environment. Our notion of FOCUS is sufficiently broad (it will be subdivided below) to include some instances of GIVEN constituents.

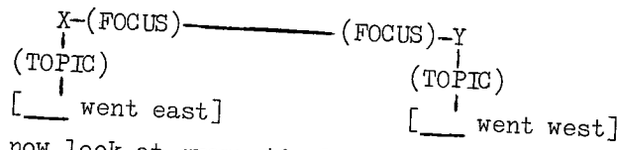
GIVEN constituents are ordinarily DEFINITE, since recent mention is a sufficient condition for DEFINITENESS with respect to particular referents. One could argue that DEFINITENESS is not really applicable to mass nouns like 'sand' in most contexts, so that a NP could potentially be GIVEN without being specifically DEFINITE; one could also argue that a term for a class of entities, such as 'whale', applied in succession to several individual members of the class, could be GIVEN (on one level) without being DEFINITE.

TOPIC is a notoriously shifty category which can be applied at various levels; we might say that a person X is the TOPIC of a particular clause, that a fight between X and Y is the TOPIC of the next larger discourse chunk containing this clause, and that traditional fighting methods are the TOPIC of the whole text. It is not necessary for the TOPIC to be overtly expressed as a constituent.

Since TOPIC with regard to larger discourse units has few specifically grammatical consequences, we concentrate on TOPIC at the level of clauses and similar small units. In this context, the relationship between TOPIC and FOCUS is delicate. Consider a two-clause sequence like this:

[X went east] and [Y went west]

It is reasonable to say that within each clause the subject, X or Y, is the TOPIC (since 'went east' or 'went west' are clearly predications "about" this NP). However, in the larger construction, because of the contrastive structure X and (especially) Y may be foregrounded and emphasised in their respective clauses, which permits us to consider them as at least partly FOCAL (in a broad definition of FOCUS):



Let us now look at grammatical phenomena in Nunggubuyu which are related in some way or other to these discourse notions. We begin with morphology.

First, summarising the exposition in §4.8, there is a system of NC$_{infl}$ (inflectional noun-class) prefixes used with nouns, and with modifications also with DemPro (demonstrative pronouns). Aside from their immediate disambiguating value (§17.5), they have discourse functions expressed by the opposition of Punctual and Continuous prefix series, and by the option of omitting the prefix altogether.

The rules are rather complex, and for human nouns the Continuous and Punctual series are not distinct (so there is just the choice between presence/absence of prefix). Negation, and case category of NP, systematically influence choice of prefix form. However, for the important Nominative case form (subject or object) in positive contexts, the basic choice is between Continuous prefix and zero (absence of prefix). The choice here is not so rigorously controlled by discourse factors that we can always predict the outcome, but there is a clear statistical correlation of zero with foregrounding the referent/substance of an NP, and of (Continuous) prefix with absence of such foregrounding. Thus zero prefix is common or required with a) initial occurrences of NPs (especially nonhuman); b) attached postposition /-$w_2$ugij/ 'still, only, nothing but' (§4.32, §12.21), which foregrounds the identity/substance of the NP; c) NP functioning as predicate (cf. also the use of unprefixed DemPro as predicative demonstrative, §7.4).

Although the prefix opposition does not exactly match the pregrammatical discourse notions mentioned above, we can say that for positive Nominative nouns (notably nonhuman ones other than place names and NAdv), zero prefix is used to give a (slight) foregrounding to the semantic essence of a noun (or DemPro), whether specifically predicative or not; it is not, however, the effect of a major clause-level FOCUS-assignment rule which would implicitly or explicitly downgrade the status of other constituents.

In Text A, many of the nonhuman nouns are place names, which differ from ordinary nonhuman nouns in preferring the absence of NC_{infl} prefix (always ANA class for places), see §4.5. Thus most are shown in Text A with subscript $\emptyset$ indicating absence of prefix, e.g., "PL-$3_\emptyset$" in #16. However, note the use of Continuous ($_c$) prefix in three place names #190-#192; here the factors favouring this prefix may be the previous mention of these particular place names (#88, #95, and #111, resp.), and perhaps aspect-harmony (§4.8) influenced by the strongly continuous form of the verbs.

Of the other nonhuman nouns in Text A (aside from NAdv, which usually have no prefix), we have the following types: Punctual NC_{infl} prefix for 'dangerous-island' #85 (a compound), suggesting that this is a Pseudo-Nominative (§4.8) which has the prefix pattern corresponding to its semantic category (here allative, or at least some spatial category); Continuous NC_{infl} prefix for 'crab[s]' #5, items in a list of fish spp. #45-50, a repeat of one of the fish spp. terms with explicit reference to plurality #112 (cf. also 'huge' referring to these fish in #114), and 'fire[s]' #206--in all of these cases I feel that aspect-harmony is involved, favoured by the fact that these nouns refer to substantial numbers of individuals; and zero (absence of NC_{infl} prefix) with the clearly identificational 'fly[flies]' #159, interrogative 'what?' #178, and the highly foregrounded 'monster' (i.e., unknown terrible being) #228.

Turning from nouns to personal pronouns, attention is called to our earlier discussion of five morphologically distinguishable forms of independent pronouns with different discourse functions (§6.8 to §6.10), and also to our observation (§6.3) that Nominative forms tend to function (in some contexts) as attenuated forms of the Contrastive type in /-ayun^g/ (§6.8).

The role of independent pronouns in the discourse system operates at clause-level and higher. That is, the discourse categories are not merely local properties of particular NPs not affecting the rest of the clause; rather, discourse categories marked by pronouns clearly involve the relationship of the referent in question to the rest of the clause or to NPs in other clauses.

The most important discourse category is the Contrastive, marked regularly by /-ayun^g/. This form is tailor-made for the type '[X went east] and [Y went west]' mentioned earlier in this section. Y is likely to be preceded by a Contrastive pronoun in /-ayun^g/ (even if Y is expressed by a full, referential NP) to make retrospective contrast, and in the first clause there may be a Contrastive pronoun (or the attenuated Nominative pronoun) at the beginning or end for anticipatory contrast. Contrastive pronouns are predominantly associated with NPs functioning as (trans. or intrans.) subjects in their clauses, though direct objects and others are also permitted. In general, the structure shown earlier in this section with X and Y functioning on one level as Contrastive FOCI toward each other, and separately within their own clauses as TOPICs, is appropriate here in the broad sense of FOCUS.

It must be emphasised, though, that in this context FOCUS has nothing to do with NEWNESS, or indeed with foregrounding the semantic essence of a noun. Typically, a long text dealing with two or more protagonists will use numerous Contrastive pronouns at points in the text where a referential switchpoint occurs, as in role reversal ('X-hit-Y and Y-hit-X') or shift from one actor's actitity to the other's ('...X-sat-down; as-for-him, Y-got-up,...'). Contrastive forms may be used with the first mention of a new referent, but there is no specific association with NEWNESS.

Contrastive pronouns with /-ayun^g/ are glossed 'as-for-him/her/them' in Text A. We have already mentioned how these forms clarify referential transitions in our discussion of tracking (§17.5).

Closely related to /-ayun^g/ is a type in /-ayun^g-gaj/ (end of §6.8), a less common pronoun form of the type '[me/him/you...] too', requiring that the two Contrastive referents be involved separately in more-or-less identical actions in the same roles. In addition, there is a Sequential type in /-abilhan^{g}u/ with similar contrastive sense, but requiring that the actions be sequentially ordered in time (hence we may gloss such forms as 'he-in-turn', etc.). The existence of these forms shows that our notions of FOCUS and TOPIC must be yet further subdivided into more precise categories which explicitly describe the relationships between the overall events contrasted. There are no exx. of /-ayun^g-gaj/ or /-abilhan^{g}u/ in Text A; see end of §6.8, and §6.10, for discussion and exx.

In addition, there is an Emphatic pronoun in /-waj/ (§6.9). This form is characteristically used with specific human NPs, and functions as clause-internal, identity-foregrounding FOCUS marker. It is used chiefly in answers to WH interrogatives and in other contexts where the specific identity of a referent (as opposed to others in a pool of potential referents for the same "slot") is strongly emphasised. At #139 in Text A we see the Emphatic 1Sg form 'it's-me!' used by the actor W as he suddenly presents himself to the other actor M.

Unlike the Contrastive, the Emphatic is not explicitly compared to another NP in a neighbouring clause, except in the trivial sense that an utterance with Emphatic pronoun may follow an interrogative. The emphasis in question is vis-à-vis other referents which might have fit into the same "slot" in the clause in question.

Turning now to DemPro (§7.2ff.), we begin by observing that in contrast to personal pronouns these operate at the level of individual NPs rather than at clause-level, though of course the larger context (e.g., GIVENNESS) may affect the choice of forms. An additional qualification is that, because of the strong tendency of Nunggubuyu speakers to use deictic categories based on the here-and-now of the speech event to indicate configurations of (relative) location within a narrated event (§7.26, cf. §7.21 and §7.22), actors in a narrative passage may be associated with demonstrative categories in such a way that the latter may have disambiguating (identifying) value.

In addition to deictic (pointing) categories, the demonstrative system has Anaph[oric] as one of its four basic roots, and a number of affixes marking discourse statuses, in addition to the same NC_{infl} prefixes just mentioned above for nouns (the NC_{infl} prefixes are omitted in the unprefixed DemPro used predicatively, though minimal marking of NC is still possible because of a special set of NC suffixes required with DemPro, §7.2).

It is useful to distinguish between the grammatical category Anaph and the related but wider pregrammatical category DEFINITE/GIVEN. This is because the Anaph demonstrative root is generally not used with reference to anything in the Prox[imate] or Imm[ediate] regions, so it effectively competes directly with the outermost deictic category Dist[ant]. This means that Prox and Imm forms are sometimes (pregrammatically) DEFINITE/GIVEN. Indeed, they approach DEFINITENESS almost by definition because of the sharp spatial restrictions on which referents these categories can apply to, but aside from this they may be used to refer to someone or something which is prominent in the preceding discourse. (Prox and Imm forms may also be used in apposition to 1st and 2nd person pronouns, respectively, in which case they are again DEFINITE, see §6.14, §7.27.)

The most important affixes (other than NC_{infl}) with discourse significance added to DemPro are Concrete /-u/ (§7.6) and Absolute /-yun^g/ (§7.7). In simple forms, /-u/ is very common with Imm with a complex significance usually including a slight DEFINITE nuance, though the DEFINITENESS in question is centred on physical presence with discourse-internal GIVENNESS only accessory in significance; for ex., /-u/ is regular in the 2nd person appositional use of Imm, and elsewhere is more common in nonpredicative (including TOPICAL) forms than in predicative ones. /-u/ is infrequent with Anaph and is not used (in simple DemPro) with Prox or Dist, so it has a deictic as well as discourse character.

Absolute /-yun^g/ (§7.7) is very frequent with Anaph DemPro, especially in nonpredicative (i.e., maximally GIVEN) forms; see Table 7-6. That GIVENNESS rather than just DEFINITENESS is the main ingredient is shown by its association with the Anaph root (though it may occur with Prox and Imm), which is primarily a discourse-

internal indexing marker though it can also be applied to entities thought to be known to addressee. In addition, GIVENNESS is suggested by the fact that, with Imm DemPro, /-yun^g/ has explicit discourse-summative function (summing up a preceding discourse stretch, §7.7), and occurs in one construction with list-summative function (§7.9).

It is not always easy to distinguish DEFINITENESS from GIVENNESS as operative pregrammatical categories, but in these DemPro formations we can at least primarily associate Concrete /-u/ with DEFINITENESS and Anaph root and Absolute /-yun^g/ with GIVENNESS.

Let us briefly go over the demonstratives in Text A, starting with forms based on the Prox root. We have /ya:-ji/ 'here' (§7.12) at #166 (pointing to nose in perspective shift, §7.26) and at #238 as part of a series including Dist 'there' (#236-#237) in a construction basically meaning 'in several spots' (again with partial here-and-now perspective shift). Predicative DemPro /ya:-ni/ 'it is here' occurs #228 in a quotation, and nonpredicative /ana:-'-ni/ 'this' occurs #129, and again with 1st person sense (§7.27) at #139. Centripetal adverb /ya:-ji:-'la/ 'over here' occurs at #232, again in perspective-shift (here-and-now spatialisation) usage (§7.15). The only instance of a discourse-marking suffix is Absolute /-yun^g/ in /ya:-ni-yun^g/ 'it is this' in quotation #197, where the point is that the search party has finally found the looked-for location (hence there is an extra dose of GIVENNESS/DEFINITENESS).

Imm form /da-gi/ 'he is/was that' occurs at #137 and #164 in near-identical constructions of the type 'X looked and there was Y' (i.e., 'X saw Y'). Concrete /-u/ is absent since this context has the absolute minimum of DEFINITENESS possible with Imm DemPro. In #226-#227 we have /da-nu:-'/ 'it is that' in a quotation, apparently with 2nd person reference (i.e., 'it is you!'); in this usage Concrete /-u/ is regular (§7.27), presumably on the grounds that addressee is DEFINITE by definition. Both /da-gi/ and /da-nu:-'/ are predicative DemPro.

The Dist forms in Text A are adverbial rather than pronominal (referential) in nature, though /o:-'wa:-ni:-'la/ #5 'from there' is formally a nonpredicative DemPro 'that' (§7.3) with Punctual NC_{infl} prefix //a-// and with Centripetal suffix (§7.5). Allative DemAdv /yu:-guni/ 'to there' (deictic, not anaphoric) occurs at #14, #37, and #154 indicating motion toward a not-previously-specified location. Likewise, Locative /yuwa:-gu/ 'there' (distant, deictic) occurs in #148, in a series #152-#154, in #174, in another series #236-#237 (also with 'here' #238), and finally in #251. Also, Centrip DemAdv /yuwa-ga:-'la/ 'from there' (origin indefinite or at least not GIVEN) occurs in #140, #155, and #231. Of course, a deictic Dist DemAdv may be followed by a specific place name, but at the time of uttering the DemAdv it is deictic (pointing) or sometimes just indefinite, rather than GIVEN/DEFINITE. None of our Dist forms in Text A take discourse-sensitive affixes.

Anaph forms in Text A are likewise mainly adverbial. There is one good ex. of a nonpredicative DemPro with Absolute suffix, namely /nu:-'ba-gi-yun^g/ 'that [man]' #250, referring to a GIVEN protagonist (further [re-]specified by a following relative clause). Anaph /yi:-ba-gi/ 'that one [NA class?]' #85 is problematic because

the noun class is not regular for 'island' (usually ANA, though perhaps NA class is an alternative for this noun, cf. NA class noun /yinin^{g}ira/ 'sandbar'), but the use of Anaph here (for an apparently NEW referent) is not unusual, since Anaph is often used in connection with 'whatchamacallit?' expressions (see #84) where the speaker is having trouble remembering a name or word for a referent which is (painfully) clearly in mind.

The adverbial Anaph cases are Locative /ba-gu/ 'there, at that [same] place' #114-#115; the same form with Continuous NC_{infl} prefix /an-uba-gu/ #161 (with accompaning relative clause specifying location by reference to a previously mentioned activity); Allative /bu-guni-wugij/ including postposition '-still' at #164, hence 'to that same place [where the other man was]'; Centrip /ba-ga:-'la/ 'from that [GIVEN] place' #160, and with prefix /an-uba-ga:-'la/ #210 (referring to place name PL-31 in preceding line), #213 (directly following the relevant place n.), and #113. Although the number of exx. in Text A is small, our list hints at a correlation of Anaph (as opposed especially to purely deictic Dist) with a) postposition /-$w_2$ugij/ 'still, only'; b) Continuous NC_{infl} prefix (see above for comments on this prefix's slight DEFINITE/GIVEN nuance); c) Centripetal forms (since the usual sequence is of the type 'X went to [place n.], then from there...' with the DemAdv GIVEN by the preceding place n.). These patterns are borne out by larger-scale statistical analysis (see, e.g., §7.30 on postpositions, §7.11ff. on DemAdv forms including prefixation, and §7.15 on Centrip; for similar remarks about Ablative forms of place names see §4.5).

For more on postposition /-$w_2$ugij/ 'still, only, nothing but', which has a role to play in the discourse system (emphatically insisting on sameness, in one of its uses), see §4.32, §6.13, §7.30, and for verbs §12.21.

17.7 Preposed and "afterthought" constituents.

Taking the verb or other predicative element as central, how do we interpret NPs and other constituents which are (arguably) in the same clause (cf. §15.5) but which are preposed or postposed to the verb, especially when also separated from it by a pause?

Because word order even within a "clause" uttered fluently as a single intonational/breath-group unit is highly flexible (§15.5), we cannot expect a simple, pat answer to this question. Nunggubuyu grammar and discourse structure is such that a given NP, for example, may be directly juxtaposed to the verb, may be uttered as a prelude to a verb (or string thereof), or may be held off and given as an afterthought constituent; of course, in many clauses the full NPs are omitted entirely (except for pronominal prefix concord in the verb).

There is every reason to think that Nunggubuyu speakers show distinct "psycholinguistic" constraints on the surface cohesion of "clause" structures than do, for ex., English speakers. Aside from the frequent usage of afterthought constituents (following pauses), we should also mention the very frequent usage of /(w)a:n^{g}/ 'whatchamacallit?' and its derivatives (§13.10). For ex., in Text A

we see this element in #47 and #50 (fish spp. list), #68, #84, #87, #98, #209, and #213 (mainly place names); there are other texts in NMET where the element is even more common. In other words, there is considerable evidence that Nunggubuyu production strategies are far more oriented toward chunk-by-chunk production than in, say, English. (Cf. also our remarks on the virtual absence of tightly-knit multiple-word "NP" constituents, §15.2.) Of course, this "broken" clause structure is compensated for by the elaborate morphology, with grammatical relations expressed by case marking and/or by noun-class indexing, and some types of "discourse" statuses (§17.6) expressed directly by affixation.

By afterthought we normally mean a clarifying constituent added to an earlier string after a pause or sharp intonation boundary. The concept is somewhat informal, and there is some freedom in how we may wish to code particular textual exx. In general, we may say that some types of echoes, notably clarifying echoes but also perhaps filler echoes (§17.3), are functionally similar to afterthoughts, though lead-in echoes (§17.3) functioning as framers for a following string should be differentiated from this cluster. We use the expression "echo" for an afterthought-like repetition involving basically the same linguistic material as in the earlier string, with perhaps a change or two in aspect, reduplication, presence/absence of compound initial, or the like; we use "afterthought" when the added string contains basically distinct material, usually a full NP or other constituent omitted (but perhaps implied or pronominally marked) in the preceding string.

In Text A we mark numerous strings as "Aft[erthought]" in the analytical column on the far right. Among others, we may mention nominal or adverbial afterthoughts in #4 (subject of preceding intrans. verb), #6 (Ablative construction including Centripetal DemAdv), #20 (Allative construction), #120 and #121 (Ablative place name, then subject of trans. verb at end of #119), #150 (subject of flanking narrative series of identical intrans. verbs), #174 (Locative construction), #188 (long NP including Relative noun, the whole functioning as trans. subject in #186 and #187), #217 (apparently trans. object of verb in #216), #234 (Benefactive object of verb in #233), and #235 (possessor of #234, which is itself an afterthought; formally #235 is a Relative, i.e., genitive pronoun, see §6.4). Clearly the afterthoughts can represent a wide range of grammatical and semantic relations, and if we look at other texts we can also find many exx. involving an NAdj, for instance, added as an afterthought referring to some (overt or covert) NP in the preceding string, as in 'fan-palm, very-tall-one[s]' (117.1.1 in NMET).

The question whether to recognise some verbs or other predicates as "afterthoughts" clarifying an earlier nominal or similar expression also arises. Some instances in Text A where we might consider this to be happening are #2 ('another[-man], I-will-tell-you [about him]'), #158 ('toilet [i.e., general reference to excrement], he-farted'), #176 ('[imitation of belching], he-belched') and similar case #203, #208 ('and and fire, in-east now they-rushed, they-lit-fire [place n.]') and similar case #213, finally #218 ('ring-of-fires, they[fires]-were-joined').

In this connection, we note that the sharp morphological distinction between nouns and verbs (predicative NAdj being intermediate formally but clearly distinct from both) does not always correspond to a sharp semantic difference. In particular, there are a number of "abstractive" nouns like /wun^{g}a:ri/ 'fight[ing], battle, fisticuffs' with verbal meaning (§4.33), and these can naturally be followed by fully inflected afterthought verbs with the same meaning; thus /wun^{g}a:ri/ in 36.4.1 is followed by a Reciprocal verb meaning 'they hit each other'. Even in the exx. from Text A just cited we have roughly similar instances; 'toilet' (actually the English word laundry meaning 'toilet') is used there as a general word for defecation so that the following verb 'he-farted' is a clarification, while 'fire' in the relevant context implies the act of setting fires. I am inclined toward a similar analysis of #8 ('now canoe indeed canoe, he-paddled'), where 'canoe' seems to imply (in context) the act of paddling.

Because of these considerations, it has been difficult for me to distinguish constructions of the following types (schematically):

(a) preposed (FOCAL) NP
nuclear string including verb

(b) (nuclear) NP
afterthought string including verb

In general, I am inclined to analyse the relevant sequences in Text A (and elsewhere) using the following schema:

(c) (FOCAL) NP
afterthought string including verb

This analysis avoids taking either of the strings as completely nuclear or central. The NP is regarded as having some kind of prominent (FOCAL) status (for the use of capitals with pregrammatical "discourse" categories see §17.6) with respect to the overall construction, while the verbal string is analysed as a filling-out or clarifying expression. Hence, in our presentation of Text A, the NP string preceding a verbal afterthought ("Aft[verb]") is labeled "Foc[NP]" in the far-right column.

However, this analysis is not applied to the place n. in the recurrent cycle ('he-paddled, place n., he-fished...') shown in Figure 17-1 (beginning of §17.3), which occurs repeatedly in the first part of Text A (e.g., #16, #26, #38). We do recognise the place n. as having a kind of FOCAL relationship to the following verb of fishing, since from one cycle to another the new place n. is usually the only change, since the place n. is usually carefully set off intonationally and carefully identified, and since in general Nunggubuyu are much more concerned with geographical anchoring of textual passages (especially in myths) than westerners. However, since the following verb of fishing cannot be analysed as a simple afterthought-type expansion on the place n., we categorise the verb as an (autonomous) "Event" rather than "Aft[verb]" in the far-right column. (On the other hand, the place n. in #20 is in Allative case form and is therefore clearly bound to the preceding motion verb; we classify the place n. there as an afterthought to the motion verb.)

Our use of the term FOCUS (FOCAL) to describe preposed NPs or similar constituents should not be taken as implying a strict discourse status applicable to all exx. Preposed NPs such as those we have been discussing actually do a variety of things in discourse terms--setting the scene, introducing a new actor, inaugurating a new "paragraph" by an abstractive noun anticipatorily summarising a new activity (spelled out in more detail by following strings), etc. We should also note that preverbal position (with or without a clear pause or similar intonational boundary) is characteristic of WH interrogatives and the most important discourse-marked pronouns (with Contrastive /-ayun^{g}/ and Emphatic /-waj/). In other words, there is a general prominence associated with preposing and (other) preverbal position, but it is difficult to pin this rather vague notion down in a way which would be generally valid. Moreover, the chunk-by-chunk production strategy mentioned at the beginning of this section means that some NPs which might be intuitively FOCAL or otherwise prominent end up as afterthoughts. (In addition, we point out in §6.8 that Contrastive pronouns in /-ayun^{g}/ may be postposed, especially when the contrast is with a following, not preceding, clause.)

17.8 Compounding in Text A.

We noted in §14.8 that some types of compounding (notably the addition of a noun-like cpd. initial to a verb or predicative NAdj) have a partial discourse motivation.

There are many cpds. in Text A (not clearly indicated in the "English" transposition, which is word-for-word rather than morpheme-for-morpheme for the most part). Some are clearly lexical cpds. (§14.1-2) which function as though they were simple stems; e.g., /n^{g}agara-wugag/ 'huge' #109 (with "unmarked," i.e., dummy cpd. initial, cf. §14.10), /-man=burda-/ 'crouch' #161, #164, and "auxiliary" cpd. (§14.4) /=w$_2$argad-bu-/ 'belch' #176ff.

Of somewhat greater interest are verbs with body-part (including emissions) cpd. initial. The verbs 'it-made-me-aware', 'I-became-aware', and 'it-hit-my-head' in the song segment #125 all contain /-lan^{g}-/ 'top of head', in the first two exx. with expanded meaning (Table 14-3). In #159, 'they[flies]-smelled-his-excrement', the Nunggubuyu stem is /-gi=yara-/ with /-gi-/ 'excrement' as cpd. initial (morphological direct object is 'him'). In #195-#196 we find /-mari=murgulha-/ '[his-]mark-lay' (subject is 'he') with cpd. initial meaning 'mark, trace'. In these instances the body part is rather central to the meaning of the verb, and a paraphrase without the cpd. initial would either be awkward or just incorrect.

More interesting cases with body parts also occur. In #166 we have /-yudur=dha-/ 'chop-[bridge-of-]nose-of[-him]' (dir. object is 'him'), with simpler /=lha-/ 'chop[-him]' then given in #167. As noted in §14.8, it is more usual for repetitions (echoes) to show compounding than for the first mention, but here perhaps the body-part location is so crucial that it is not held off for a second, less foregrounded repetition of the verb (body parts and sensory perception are structurally central to the myth). On the other hand, the more typical pattern with cpd. initial in the noninitial

occurrence[s] is found elsewhere in Text A. Thus /-mun=dharma-/ 'to track' (lit., 'foot-chase') #198 occurs after a similar expression not referring to body parts, /-$w_1$alhaga=lharma-/ 'to chase, search' (no direct object expressed, see §14.9). Although the latter is also a cpd., it functions here as semantically neutral since the cpd. initial is an inert element whose only effect is to intransitivise the simple transitive /=lharma-/ 'to chase, follow'. Another case where the precise cpd. with body part initial follows the simple (neutral) form is at the end, where /=ambada-/ 'to burst' #241 is followed by /-gulmun^g=ambada-/ 'to have one's belly burst' (person is intrans. subject) #245 and #246; the same sequence occurs then at #248 ('burst') and #249 ('belly-burst') with reference to a distinct person. We thus find at least some confirmation for our position that more "condensed" (semantically precise) cpd. forms tend to follow simpler forms.

Another body-part type is seen in the verbs glossed 'stank' and 'smelled' (#204-#205), which essentially paraphrase each other. The first is /-$w_1$arawuj=ban^{y}ja-/ and the second /-$w_1$uril=wan^{y}ja-/, both with verb /=$w_2$an^{y}ja-/ (intr.) 'to emit a smell'. The first cpd. initial is the comparatively neutral element /-$w_1$arawuj-/ 'smell, odour', while the second has the stronger initial /-$w_1$uril-/ 'rotten, rotten-smelling, foul'. The basic principle of increasing "condensation" is visible here, though taking a different form.

Moving away from body-part initials, we turn to /-raN-/ 'flock, swarm', a special initial (Table 14-1, bottom right) used with reference to groups of insects, birds, flying foxes, etc. It is used as a kind of index for 'flies' in Text A; it is part of /-ran=dharara-/ '[flies-]be-visible' #161 and #163 (intrans. subject) and /-ran=dharma-/ '[he-]chase-swarm' #164 (direct object). As usual with cpd. initials, /-raN-/ is not used with trans. subject reference in '[flies-]swarmed-at-him' #162 (cf. §14.6 on predominantly "absolutive" patterning of such cpd. initials). The use of /-raN-/ obviates the need for repetitions of the noun 'flies' (#159).

Cpd. initial /-rilji-/ 'island' (same as regular noun form) occurs in /-rilji=wurama-/ 'to go around island' #30 and #83. It is not an overt condensation of a previous simpler verb form. However, in #30 the cpd. verb is preceded by a place n. coreferential to 'island' in the cpd., and in #83 it is obvious that the narrator has a particular island in mind but is having difficulty remembering its name (cf. #84-#85 with 'whatchamacallit?' then descriptive expression). In other words, although /=wurama-/ is not used just before /-rilji=wurama-/, the 'island' component of the cpd. seems to have GIVEN discourse status (§17.6, above).

/-rilji-/ also occurs in the Nc-NAdj cpd. (§14.5) in #85, /rilji-maragarj/ 'island-dangerous', where it appears to be the nucleus of the cpd.

The other cpd. involving /=$w_1$urama-/ 'to go around [it]' is the special intransitivised form /-an^g=gurama-/ 'to go around, go in circle, go in curve' #199, whose only discourse function is to get rid of the direct object (as with /-$w_1$alhaga=lharma-/ 'search', mentioned earlier).

The other notable cpd. initials are /-yiga-/ 'fire' and the closely related /-anig-/ 'ashes, embers'. The cpd. /-yiga=wa-/

'to make fire' ('fire' is dir. object) occurs #115, #117, and #119. Though the cpd. final is /=w_2a-/ 'to bite', which makes no sense semantically, the cpd. (also attested in other texts) seems to be a slight reshaping of a putative */-yiga=na-/ 'to burn fire' (/=w_2a-/ 'to bite' and /=na-/ 'to burn' constitute, with one other root, the rare N^gA_3 inflectional verb class, Table 11-5, and may simply have been confused and interchanged because of their identical suffixal paradigms). The cpd. seems somewhat lexical and has no obvious discourse motivation here.

/-yiga-/ 'fire' also occurs in /-yiga=lharma-/ 'to chase (follow) fire' #131. It is followed by a somewhat lexicalised Reflexive cpd. with the same root (in "antipassive," not reflexive, sense, §10.5), /-yimun=dharmi-'-/ 'to chase by smell' (lit., 'snout-chase-Refl') #131-#136 (in NMET 16.11.1 some of these repetitions were inadvertently omitted), which shifts perspective to the actor (who "smells" and follows the fires). Similarly, /-ani=jara-/ (//-anig=yara-//) #140 in a quotation means '[I-]smelled-embers' (more loosely, '[I-]detected-fire').

In general, then, we find the usual complex set of conditions for usage of cpds.--some alternations suggesting systematic discourse usage (condensation, dropping a direct object, etc.), but also a good deal of lexical or other semantically-motivated characteristics.

17.9 Particles in Text A.

Among particles which occur once or twice in Text A but are not of much discourse importance we mention these:

/gada!/	'oops!' (self-correcting)	#68	§12.19
/muga/	'indeed'	#8	§12.11
/yagu/	'but; just' (adversative)	#139	§12.10
/yu:ga/	'yes/no' (interrogative)	#197	§13.1

A much more common form in Text A is negative /girjag!/, which unlike other negative elements is a one-word "clause" which can have no adjuncts within its scope; it is used in Text A to indicate an unsatisfactory result or failure of the activity in the preceding sequence ('no!' in #11, #18, etc., cf. Figure 17-1 in §17.3). See the general discussion in §15.6.

Verbal root forms (§12.2) have been mentioned in §17.3.

We are mainly interested here in particles which seem to have some kind of framing function. These elements, along with their conventional glosses in Text A, are shown here:

/adaba/, /aba/	'now'	§12.3
/n^{g}ijan^g/	'again'	§12.6
/n^{g}a/	'and$_1$'	§12.4
/mari/	'and$_2$'	"
/araga/	'suddenly'	§12.7

It is perhaps best to begin with 'and$_1$', which differs from the others in that it normally stresses the continuity between preceding and following expressions, particularly clauses (rather than simple conjoined NPs). It occurs regularly in the sequence type 'he-fished and$_1$ no! [fish-were-]small' in the first half of the text, e.g., #11, #18, #23. It is sometimes used in the type 'he-paddled and$_1$ [arrived at] place n.', as in #68, #72, #76, #83, #94, etc. (though

omitted in earlier instances of this cycle, e.g., #10, #30, #42, #53, #57, #61, #65, suggesting that the overall cycle shown in Figure 17-1 is more sharply separated into semi-discrete strings earlier in the text than in the more abbreviated and condensed repetitions later on). Other instances in subsequent episodes showing the linking quality of 'and$_1$' are #119, #137, #148, #155, #160, #193, #214, #251 (second occurrence). For the sequence 'and$_2$ and$_1$' (i.e., /mari n^{g}a/) see below.

'And$_2$' (/mari/) is much less common in this text than 'and$_1$'. In specifically conjunctive function (as in 'NP$_1$ and NP$_2$') we have no exx. in this text; note that conjunctions are not necessary in lists like that in #45-#50. Instead, 'and$_2$' (along with the related sequence 'and$_2$ and$_1$') occurs in Text A primarily as a marker of discourse segments (see below).

It turns out that 'now', 'again', and to some extent 'suddenly' likewise function in this text primarily as markers of discourse units. Let us see how the various elements interact.

First, we can see that 'now' (/adaba/ or reduced /aba/) occurs frequently at the beginning of strings introducing significant new activities and developments. Although the literal meaning 'now' (which we interpret broadly to mean '[and] then' in a past tense context, indicating sequencing of closely spaced events/situations) is technically justified by the fact that no large time gaps are present, the actual usage of the particle suggests strongly that it is a framer which puts the spotlight on the predicate in the new string. Thus we get 'now' at #8 with the first mention of paddling in the canoe (but not in subsequent repetitious cycles of the type 'he-paddled, place n., he-fished, no!, [fish-were-]small'). We then get it several times after the repetitious section when the actor M goes across to the good fishing area (#93), and then with NAdj like 'big' and 'huge' indicating progressively increasing size (and abundance) of the fish caught (#97, #100, #103, #106, #109, #112); cf. our remarks at the end of §17.3 on lexical/derivational resources used in this passage. Continuing to the end of Text A, we again find 'now' at the beginning of significant strings involving new actions: #115 (making fire), with 'and$_1$' #119 (second actor W mentioned for first time, smelling fire), #131 (W begins to follow the fire), #137 (W catches sight of M), #172 (W leaves scene of killing), #186 (search party takes off after W), #198 (search party resumes search after finding scene of killing). In these cases, 'now' regularly occurs at the beginning of the string.

There are only a handful of other instances of 'now' in the text, in which 'now' occurs noninitially in the string and perhaps has less clearcut framing effect: #114 (follows 'huge' in context of increasing size of fish), #131 (second occurrence, following verb in string also begun by 'now'), #161 (string-initial, but in middle of a group of strings on same theme), #207 (between adverb and verb), #241 (between verb and onomatopoeia), and #244 (after onomatopoeia).

The other common framing particle in this text is 'again' (/n^{g}ijan^g/), which effectively replaces 'now' at the beginning of noninitial instances of the repetititious cycle 'he-paddled, place n., he-fished, no!, [fish-were-]small' and its variants: #14,

#42 (preceded by verbal root form), #52, #56, #60, #64, #68, #72, #75 (where no pause occurs between end of one cycle and beginning of another), #98, #101. It is string-initial and used before the motion verb in these instances.

There are only a couple of instances of 'again' later in the text: #154 and in the broken-off string #156 in a narrative series of identical punctual verbs (but 'again' is not needed and indeed infrequent in such stylised sequences, cf. #131-#135 and other series without particles); and #178 in a problematic instance in a quotation apparently emphasising W's continuing belching.

The particle 'suddenly' (/araga/) is not, like 'now' and 'again', characteristically used to set off paragraph-like groups from each other. Instead, 'suddenly' is a local framer which dramatises the immediately following sequence; it is more emphatic than 'now'. Typical exx. in Text A are #144 ('<u>suddenly</u> he-hid-behind-tree'), #159 ('he-farted [and] <u>suddenly</u> flies-swarmed'), and #164 ('<u>suddenly</u> he-followed-swarm-of-flies [and thus found the other man]'). A more problematic case in #51. The translation 'suddenly' is perhaps not entirely correct but is as good as any other. (Another interesting and important particle, /yin^{g}ga/, does not happen to occur in Text A; see §12.7.)

It goes without saying that the framing effects of some of these particles interact functionally with intonation contours (§17.4) and with other framing devices. For example, 'now' as string-group framer does not co-occur with narrative high monotone (HM), 'again' co-occurs with it only when the context involves multiple repetitions of some activity so that individual instances lose their sharply profiles character, but 'and$_1$' as a predication linker often comes at the end of a HM echo string.

Our last comment here is on 'and$_2$' (/mari/) as a framer in Text A. Even including the sequence 'and$_2$ and$_1$' (/mari n^{g}a/), it is less common in this text than 'now' or 'again'. Simple 'and$_2$' occurs at §168, conjoining two strings describing dramatic, closely related actions, and at #173 linking a motion verb with a verb of sitting. We get 'and$_2$ and$_1$' in #206 as a string-group framer, #231 in the middle of an intonation string but preceding an important new verb, #248 before a dramatic verb ('he-burst') and again #251 in a similar context. In other words, 'and$_2$' (with or without following 'and$_1$') is roughly intermediate between 'suddenly' (highly dramatic, local framer) and 'now' or 'again' (marking beginning of new section with low to moderate dramatic quality).

Appendices

APPENDIX A

Because of space pressure, the present discussion of English interference in Nunggubuyu will be limited in scope, and based mainly on borrowings and code-switchings visible in the texts.

Our narrators for these texts were elderly and middle-aged persons whose English ranged from very little to middling, depending on generation. Younger persons living at Numbulwar have learned English from schools, contacts with resident whites, films, etc.

Forms of "English" in the area include the standard Australian spoken by virtually all resident whites and used in schools; a creole spoken in various forms in the region, particularly at nearby Ngukurr community (formerly Roper River Mission), now often as first language; and a range of idiosyncratic pidgins or jargons spoken as contact languages by Aboriginals not fluent in the above, based on the standard or creole forms. The creole as such is not well-established at Numbulwar, especially now that some groups of North-East Arnhem Landers (speakers of Ritharngu, etc.) have left Numbulwar. The Ngukurr creole has been described in a number of publications by John Sandefur published by the Summer Institute of Linguistics, Darwin branch, with accompanying cassettes.

The texts in NMET include many brief code-switched segments, often functioning as glosses for the benefit of the linguist, and thus often co-occurring with more or less synonymous Nunggubuyu phrases. Such code-switches, and many borrowings (showing some formal assimilation), are generally underlined in NMET, so it is easy for readers to locate them. To ease comprehension, much of the code-switched material has been presented in conventional English orthography even when pronounced in a distinctively creole fashion. Hughes' texts, TNT and MT, have edited out English material. We now comment on particular types of English interference, with emphasis on borrowings rather than code-switches.

A.1 Nouns and NPs.

English nouns used in Nunggubuyu generally take NC_{infl} prefixes (§4.7-8) and case suffixes under the usual rules. Number marking (§4.15), including Pl reduplication (§4.14) is possible but not

as reliable. Forms consisting of a simple English stem without affixes can be taken as code-switches especially if the context would normally require affixes for Nunggubuyu words, but the status of such forms may be ambiguous since NC_{infl} prefixes are often omitted, especially with nouns in focal or new-information usage (§4.8), and since the zero Nominative case is used in several major syntactic functions (§4.19).

Assignment of noun-class (NC) to borrowed nouns is fairly predictable. Nouns with existing (near-)synonyms in Nunggubuyu take the NC of the existing word. Exx. are /n^ga:-emu/ 4.4.2 (cf. /wa:yin/) in N^gARA class; /na-catfish/ 18.4.3 (cf. /nan^{g}uru/) in NA class; many MANA class borrowings like /mana-laundry/ 'toilet, excrement' 13.9.2 and 16.13.5 (cf. /n^ggurya/ 'excrement'), /mana-saltwater/ 9.4.3 and with punctual prefix 143.12.1 (cf. /lhagayag/), /mana-bin^{y}ji/ 'belly' from creole (cf. /gulmun^g/), /mana-pandamus/ 'pandanus' with local /m/ for /n/ 155.1.2ff. (cf. /maguj/), and /ama-potato-yi:/ 'like potatoes' 113.6.3, 113.8.1 (cf. terms for similar root foods like /jaladi/; and a very large number of ANA class borrowings like /ana-story/ 7.16.2 and /a-language/ 47.22.7 (cf. /lha:wu/ 'talk, language'), /a-country/ 9.1.1 and /ana-country/ 30.3.2 (cf. /lha:l/), /ana-billabong/ 21.9.3, 149.1.1 and /a-billabong/ 34.4.2 (cf. /wurugu/), /ana-corroboree/ 167.13.3 (cf. /wulan^{g}ur/, /wun^{g}ubal/), /a-ba:bulu-jin^{y}un^g/ from root /ba:bulug/ 'buffalo' 162.1.1 (cf. /mu:ri/), /torch/ with ANA_{wu} concord 162.7.2 (cf. /n^gura/ 'fire'), /ana-tucker/ 'food' 114.2.3 (cf. /marya/), /ana-bush/ 109.4.1 and Pergressive case /ana-bush-baj/ 121.3.7, usually referring to 'bush time' before settlement at Numbulwar (cf. /yu:l/), etc.

MANA is also the standard noun class for terms for vehicles: /mana-truck/ 143.10.4, /mana-workboat/ 161.23.4, and by extension /mana-aerodrome/ 'airstrip' 161.26.3. It is used for canvass and similar materials: /ga:ligu/ 'canvass, calico', /mana-swag/ 'swag, sleeping bag' 163.13.6, perhaps by extension from native /n^gadugu/ 'rope', cf. /ama-rope-ji:/ 'like rope' 122.1.6.

ANA class is usual with abstract nouns including nouns referring to activities; this is also the pattern for native nouns. Exx. are /ana-song/ 9.8.3, 29.3.5, /ana-law-yin^{y}un^g/ 'of the law [traditions]' 54.1.4, /a-trouble-wuy/ 'to trouble' 47.9.6, /ana-work/ 161.18.5, /ana-loading/ 161.19.3, /ana-dreaming/ 9.11.5, 30.3.4 and /a-dreaming/ 19.1.2, 54.2.2 (but WARA class form 29.11.2 referring specifically to dog dreaming, i.e., dog totem). ANA is also the usual class for locations and dwellings: /a-Groote Eylandt-gala/ 'from G. E.' 16.1.3, cf. 16.17.2, /a-mission-ji:/ 'like a mission' 13.8.2, /a-house-duj/ 'in/at the house' 41.14.7, /a-school-wuy/ 161.17.2, /ana-jail-wuy/ 'to jail' 90.2.7, /ana-sawmill/ 161.27.3, etc. It is also used for diseases and medicines: /ana-yidji/ 'itchi[ness]' 139.2.2, /ana-badgul/ '[bad] cold' 139.2.2, /ana-diarrhoea-yin^{y}un^g/ 'of d.' 132.5.4, /ana-sick/ 'sickness' 127.2.3, /a-medicine/ 127.5.2/3 (cf. /mana-medicine/ 139.10.1 'medicinal', essentially an adjective here referring to /wurgala/ tree, which is MANA class). ANA class is also common with food terms: /ana-sugar/ 163.13.5, /ana-tea/ 163.19.5, /ana-supper/ 163.25.1.

Most of these ANA nouns are ANA_{wu} for concord (Table 9-14), except for the food terms, which are $ANA_{\emptyset}$ (Table 9-1, 9-13).

Exx. in preceding lists also illustrate several case suffixes like Allative-Dative /-$w_1$uy/, Locative /-ruj/, Ablative /-$w_1$ala/, Pergressive /-$w_2$aj/, Similative /-yi:/, and Relative /-yin^{y}un^g/ (§4.20ff.). Exx. of postpositions (§4.32, §12.21) are /medicine-bindi:yun^g/ 'real [good] medicine' 134.1.3, /truck-bugij-maga:/ 'strictly truck' with two postpositions 164.3.5, and /good tucker-maji:/ 'if good food' 103.2.5.

Overt number marking involving HumSg /-yun^g/ or /-n^{y}un^g/, Du /-w_2a:/, and Pl by prefixing /mij-/ or by reduplication (P-2), is not consistently applied. If formally pluralised within the stem, loanwords take reduplication rather than /mij-/. HumSg suffix is found in /na-dugdabala-yun^g/ 'medicine man, curer' 1.3.2 (a well-assimilated stem), /na-policeman-jun^g/ 'policeman' 99.3.2, 89.2.2, and /na-marinmin-jun^g/ 'married man' 166.18.1. Du /-w_2a:/ is fairly freely used: /dreaming-ba:/ 126.1.1, creole /bandiyan-ba:/ 'king brown snakes' 20.14.3. -Rdp- often but not always follows normal rules for choice between monosyllabic (with initial stop) and bisyllabic forms: /ji-jijda/ 'sisters, nurses' 139.1.4, /gri-grijdan/ 'Christians' 162.16.4, /bigfe-bigfella/ 50.2.2, /oldme-old men/ 50.2.4, etc. In the bisyllabic type the second vowel in the reduplication need not be identical to the first vowel, as in native words, but pronunciation is variable. Sometimes the full stem is repeated: /old fella old fella/ 'old people' 68.2.5/6.

Semantically human nouns take NC based on actual number/gender, as expected: MSg /na-Old Bob-jin^{y}un^g/ 'of Old Bob' 72.5.3, FSg /n^gara-Chris/ 161.15.1, Pl (or WARA) /wa:-children/ 161.17.2, cf. also 9.1.4 (white men) and 138.5.3 (doctors). Dogs may be treated as MSg, etc., if personalised (as with 'Rusty' 162.9.3), or treated in their usual WARA class status, as in /wara-babab/ 'pup'. Another marginally human category is that of 'devils' (or 'ghosts'), hence /wa:=devil devil/ 41.9.1 in WARA class but /a-devil devil/ 41.22.3 in ANA class, showing the same fluctuation seen with native synonym /badirin^{y}a/.

In many exx. already listed, an English complex of more than one word is treated as a unit in Nunggubuyu, with one set of prefixes and one set of suffixes flanking the whole sequence. Further exx. are /a-ring place-guy/ 'to ritual ground' 17.11.9 and 65.9.3, /ana-old mission-guy/ 'to o. m.' 55.10.3, 55.12.3. In addition, a number of English-style compounds have become reasonably productive, with the first word sometimes a native one: /badirin^{y}a song/ 'devil song' 9.7.3, /n^garugalij dreaming/ 'dugong dreaming (totem)' 30.1.1 (cf. 60.1.2), /murun^{g}un tribe/ 64.1.2 (a clan), /murun^{g}un country/ 41.10.1/2, /granny mob/ 'MoMoBr's clan or residential group' 72.7.2, /anbana time/ 'rain-time, wet season' 36.2.1. In the case of /ana-mission area/ 161.22.3 'missionaries residential area' and the parallel /wara-people area/ 'Aboriginals' residential area' 161.22.4, the noun class is that of the first noun rather than of /area/.

Kin terms are often borrowed from creole. They may take Pl suffix /-$w_1$an^g/ (§5.2) but do not take special affixes for 2nd or 3rd person propositus. Exx are /na-daddy-yan^g/ 'Fa-s' 72.1.1, /granny/ 'MoMoBr' 72.7.1, /auntie/ 'FaSi' 72.7.6, /mommy/ 157.15.2, and creole /banga/ 'SiCh' 76.1.6 (affixes omitted in some of these).

NC_{der} prefixes (§4.7, §4.9) are not commonly applied to borrowed noun roots. However, alongside /ana-timber/ 161.18.4 we have derivative /(w)u-timber/, see as /ana-wu-timber/ 161.33.3, also as /a-wu-timber/ 161.33.6. The inner prefix resembles ANA class NC_{der} prefix /uG-/, which occasionally behaves like /wuG-/ but more often acts like vowel-initial morpheme, hence combines with //ana-// to give /an-uG-/ by phonological rule P-46. The /w/-initial treatment tends to apply in cases where the derivation is opaque with morpheme-boundaries fuzzy, rather than in productive uses of NC_{der} prefixes to give part-of-whole derivatives. Similarly, neologisms /(ana-)wu-liwa/ '(paper) money' and /(ana-)wu-nuga/ '(coin) money' have been created, using native roots /liwa/ or /liba/ 'paperbark' and /nuga/ 'stone'; here the derived status is formally apparent but as with /wu-timber/ the semantics of the derivation are unclear.

NAdj (adjectival nouns, §4.2) are often borrowed from standard or creole English. The ending /-bala/ (/-fella/) is common in creole and is sometimes imported: /ana-wulbala/ 'old one' 163.20.6, cf. 65.15.6, /na-dugdabala-yun^g/ 'medicine man' ('doctor-fella') 1.3.2. However, this ending is no longer commonly imported; contrast the last ex. with /wa:-doctor/ '(modern) doctors' 138.5.2. The form /early fella/, pronounced /alibala/, is a frozen expression meaning 'early in the morning' 30.5.2. Note, however, /diyabala/ 'dear' 85.1.5.

Adjectives are now often borrowed in simple form or with /-one/. English clean comes in as /gilin/ 2.3.5/7, cf. 132.4.5. Similarly, /wu=salty/ 'it is salty' 163.18.4 shows predicative NAdj form based on simple borrowed stem. This may also be the case with /ma=smell/ 'it was smelly' 132.8.5 (unless this is really a NC_{der} form with /maG-/ prefix). Exx. with /-one/ are /good-one/ 132.4.6, /red-one/ 156.2.2, /black-one/ 127.2.1, /pretty-one/ 157.3.1, /color[ed]-one/ 157.1.2, and /cheeky-one/ 143.9.4--note that this type is common with color adjectives in particular. Another frequent expression, /number-one/ 'excellent, best', is sometimes taken by Nunggubuyu as belonging to the same pattern; the full form occurs 127.3.2/4, but by analogy to the others we can also have back-formed /number/ meaning 'best, excellent', as in 157.2.2. Usually the forms with /-one/ are less well-assimilated borrowings and usually avoid native affixation.

Another ex. of predicative NAdj, this time a human noun with subordinating suffix, is /ni=assistant man-gaj/ 'back when he was an assistant' 138.1.4 (suffix is //-$w_1$aj//, §16.6). Inchoatives and Factitives (§10.8-9) are not common with borrowed stems but are not impossible, hence Fact /=ma:yla-wa-/ 'cause to become deaf' 66.3.3 from a creole root.

Sometimes a regular English noun allows NAdj treatment with variable noun class as a borrowing. Thus /devil-devil/ (pronounced /dibuldibul/) is usually a common noun (Nc) of WARA or ANA class, but is a predicative NAdj /ma=devil-devil/ 'it[eye] was ghostlike' 71.11.5; /mana-medicine/ 139.10.1 is a nonpredicative NAdj agreeing in noun class with a tree sp. On the other hand, English sick and itchy come into Nunggubuyu as nouns (127.2.3, 139.2.2).

Reflecting the frequent ambiguity between borrowed and code-switched nouns, English noun-like forms do not always obey Nunggubuyu syntactic rules with regard to affixation. For example, in 103.2.5

the form /good tucker-maji:/ 'if good food...' is syntactically improper since nouns within the scope of a conditional protasis need Continuous series NC_{infl} prefix (§16.7).

A.2 Verbs.

It is relatively easy to distinguish borrowings from code-switches, since the former can be defined operationally by the presence of regular Nunggubuyu pronominal prefixes and inflectional suffixes. It appears that a number of basic verbal borrowings are now quite well assimilated, generally from creole forms. However, code-switched forms like /after all-about sing-'em-bout/ 'since then they often sing' 33.6.2, are common nowadays; this one is pronounced /abda alabat jin^{g}imbat/.

The borrowed forms take a creole stem, which for transitives and a few others includes /im/ (from 'em, representing *him or *them), and usually add /-dha-/ as a thematiser before inflectional suffixes, which are of A_2 class ($Nonpast_2$ /-dhi:-'/, $Past_2$ /-dha-n^{g}i/, etc., see Table 11-1). Exx. from NMET are /=watch-'em-dha-/ 71.2.3 (pron. /=wajimdha-/), /=hunt-'em-dha-/ 71.2.2, /=wirin-dha-/ 'wear' 65.7.5, /=rulun-dha-/ 'roll' 4.5.2, /=yijim-dha-/ 'use' 13.9.1, 139.15.2, variant /=yujum-dha-/ 152.1.1, /=duguba(d)-dha-/ 'discuss, talk about' 33.6.2, 47.17.6, 64.9.5, /=wajgin-dha-/ 'ask, enquire' 47.7.2, /=wuguba(d)-dha-/ 47.19.2 or more often /=guba(d)-dha-/ 161.18.2 (reduplicated), 162.1.2 'hike, walk about', cf. Caus /=guba(d)-dhi-jga-/ 161.17.3 'take (someone) on a hike', /=fix-'em-up-dha-/ 49.2.3, /=shoot-'em-dha-/ 71.29.2, /=promise-dha-/ 'bestow wife on' 73.1.2/4, 73.4.7 (cf. noun /promise/ 'bestowal, marriage arrangement' 73.1.1, 74.1.5), /=(w)abun-dha-/ 73.2.3 or /=(w)abum-dha-/ 92.1.2rdp 'have', /=married-dha-/ 'get married' 73.4.6 (singular subject in this ex., cf. noun /ana-married/ 'marriage' 73.4.7), /=ja:lin-dha-/ 'share' 112.8.4, /=dha:rin-dha-/ 'stir' 127.2.1, /=bu:lim-dha-/ 138.3.6rdp or /=ba:lin-dha-/ 132.6.3, 157.1.4 'boil (it)', /=look-after-'em-dha-/ 'take care of' 138.1.5, /=$w_2$ar-dha-/ 'work' 138.5.6 (from noun /work/, pron. /warg/; other verb forms are irregular monosyllabic rdp. /-w_2a=$w_2$ar-dha-/ 138.4.3, 143.7.4, and Multiple /-n^{g}ara=bar-dha-/ 'all work, work a lot' 161.32.4rdp, from //-n^{g}araG-// §10.4), /=walbum-dha-/ 'help' 161.25.1, 161.34.4, /=burum-dha-/ 'put down' 161.27.2, /=jawim-dha-/ 'saw (wood)' 161.27.3, /=ma:gim-dha-/ 'mark' 161.22.2, 161.22.3rdp, and /=bayan-dha-/ 'buy' 166.2.1. Phonological patterns seen in some of these exx. include frequent assimilation of /m/ in transitive /-im-/ creole morpheme to /n/ before /dh/, and some fluctuation in the vowel quality of the same creole morpheme under the influence of the preceding vowel, or of preceding /b/ which favours /u/ vocalism.

The above list includes Multiple and Causative derivatives, and other productive derivations (Chapter 10) are also possible. If the lexical sense is reciprocal, the borrowed form usually takes Recip suffix: /=midim-dhi-n^{y}ji-/ 'meet, come together' 161.24.1/3, /=(w)agiman-dhi-n^{y}ji-/ 'argue, quarrel' (from /argument/) 161.2.2, 161.6.1, 161.8.5/6. Borrowing /=promise-dha-/ 'bestow' (preceding paragraph) is found in Recip form as /=promise-dhi-n^{y}ji-/ 'bestow wives on each other' 74.1.2.

Factitive /-w$_1$a-/ (§10.9) is seen in /=butcher-wa-/ 'carve up, butcher (carcass)' 112.8.2, cf. noun /wara-butcher/ 'butchers, those cutting up carcass' 112.6.4.

A.3 Grammatically significant particles and other elements.

Some significant elements from English now common in texts are:

/lha/ 'to, into, in, at' from creole, preceding noun 5.18.1 (followed by Allative noun), 131.2.2, 50.5.6 (with following noun in Punctual form); still used mostly with creole noun as in 26.3.1, 27.1.3, 114.10.2;

/bla/ 'of, for' from creole, preceding noun 30.2.4, 41.2.6 (followed by Allative noun), 41.24.5, 50.3.3/4, 71.1.1, 71.12.3/4, 71.21.3, 71.27.1; used mainly in code-switched phrases;

/gari/ 'having, equipped with' from creole, before noun 5.17.4, 14.3.2, 39.1.2, 50.1.3, 71.14.1, 71.19.4, 71.27.1, 98.11.2, 119.2.3 (with accompanying /-yij/ Proprietive derivative, §14.14), 122.4.4, 123.2.4;

/na/ 'now, just then' from creole, enclitic to any word, used somewhat like /adaba/ §12.3 5.11.5, 5.12.2, 41.7.1/2, 41.21.3, 71.6.2, etc.

For /lha/ in necronyms ('he who died at X') see §4.4, and textual exx. 161.6.3, 167.17.2.

Additional particles and common creole or English borrowings:

/right up/ 'all the way to' 139.13.5, 139.14.1, 140.4.5, 168.3.4 (with /lha/), precedes noun, time or space;

/labda/ or /after/ 'after, afterwards' 67.2.2, 165.1.4;

/before/ 28.8.3 (may require negative harmony for nouns only, see §15.6, esp. p. 530, above);

/too/ after noun/pronoun, sometimes Emphatic pronoun §69 41.12.4, 71.26.3, 114.3.5, 114.11.6, 166.17.1, 170.1.4;

/only/ before noun 29.7.3 (with /-w$_2$ugij/), 68.2.1, 108.1.2;

/there/, pron. [jeya] 5.14.4, 26.3.4;

/wanim/ 'whatchamacallit?' from creole 26.4.5, 161.25.5;

/finish[ed]/ '(this is) the end, that's all' 15.11,4, 47.9.6;

/anyway/ 160.1.5, /(ana-)anything/ 163.13.5, used somewhat like /arbidi/ §12.14;

/sometimes/ 170.1.5, 170.2.3, used like native /argi/;

/something/ 'monster, awful thing' 10.11.3, like /ga:n^{g}gan^{y}un^{g}/;

/but/ 42.6.3;

/jaldu/ 'only' (from *that'll do) 47.23.1, 161.25.3;

/might be/ 'maybe' 62.1.5 (with /ari/ §12.11), 68.3.5;

/altogether/, pron. /aldagija/ 'for good, permanent[ly]' 37.6.7, 120.6.2[NAdj], 128.1.5, 132.8.1, 161.10.3;

/all right/ 27.1.1, 5.11.4/6, 42.6.2, often at topic switch;

/little bit/ 'a little' [lilbit] 117.4.3, 115.4.3, 156.4.4;

/no more/ 'no, not; does not exist' 50.1.5, 50.2.3, 71.25.1;

/more/ NAdv '[go] further, deeper' 47.9.6, 162.10.2, used somewhat like /an^{g}udu/;

/wrong/ 'improper (e.g., for marriage)' 14.9.4;

/mijal/ 'separate, distinct, alone' 157.2.2 from creole;

/mijimid/ 'together' 119.5.2, 125.14.2/4, 139.1.3;

/-gija/ after kin term forms dyadics (§5.6), 76.1.2;

/laybl/ 'together, same' 72.1.2/5, 72.6.4.

APPENDIX B

B.1 Phonology.

The writer's views on the historical context of Nunggubuyu have been presented in part in Linguistic Diffusion in Arnhem Land (1978, this publisher).

The most significant development in the time since Nunggubuyu separated off from a proto-language resembling Ngandi was a chain shift involving lenition of initial and intervocalic (also post-liquid) lenis stop to homorganic continuant: *g and *b > /w/, *dh > /lh/, *d > /r/, *j > /y/, perhaps occasionally *d > /r/; also a contextual phonetic lenition of older fortis stops *k, *p, etc., to the presently attested single stop series /g b dh d d j/ (of which only /dh/ is still usually pronounced fortis, that is, voiceless and long); also deletion in some contexts of old *w, generally before the creation of new /w/ from old *g *b. The present Hardening rule P-18 reflects the alternation of stop with continuant (stop following another stop or nasal), but represents in most cases a reversal of the historical process, with the continuant now basic.

*y is sometimes hardened to /j/ or /n^{y}/ syllable-finally.

In addition to *w, occasionally other consonants like *n^{g} and *r have been lost initially or intervocalically. Thus /a:mun^{y}/ 'fly' is related to a word /n^{g}a:mun^{y}/ which I recorded from a Dhay'yi (Yuulngu) speaker; cf. also /(n^{g})anamba-/ prefix in Table 9-2. *r is lost in ANA noun-class forms like /a-/ (§4.7), cf. Warndarang /(r)a-/; note also alternation /yilidili/ vs. /rilidili/ 'banksia tree', where the reduplicative structure suggests that the latter form is archaic.

Prefix-Truncation P-35 may have been affected by this, at least in the kin terms /muruyun^{g}/ 'elder Br' and /mun^{y}un^{y}un^{g}/ 'younger Br', which take prefix /na:-/ instead of expected /na-/ (MSg). A form /na-rumuruyun^{g}/ for the first of these occurs as a songword and shows an older form with stem-initial syllable subsequently contracted with the prefix after loss of *r.

Some additional contractions are seen historically in verbal inflectional suffixes realised as long vowel, though these are not derived as such synchronically. Taking /X/ as root, minus final vowel,

in Table 11-1 compare Nonpast$_2$ /Xa-ni/ (A_3 class) and /Xi:-'/ (A_2 class). These are historically identical, the latter showing contraction. Similarly, compare in Table 11-5 Nonpast$_2$ /Xa-ṟa/ (N^gA_2 class) and /Xa:-'/ (N^gA_1), again identical etymologically. Back in Table 11-1, Past$_2$ /Xa:-'/ (A_1 class) is cognate to Ngandi /Xi-ṟi/, the ancestral form being perhaps something like *Xe-ṟe. This contraction analysis does not apply to monosyllabic stems (see §3.45), nor to Nonpast$_3$ forms such as /Xu:-'/ (from *Xu-y), but may apply to other cases of /Xu:-'/ in Table 11-3.

The strange n^gu-Epenthesis rule P-1, inserting /-n^gu-/ before stops in some contexts, represents redistribution of a morpheme *-gu- (as in Mara, Ngandi) or *-n^gu- (Warndarang) found at the end of pronominal prefixes in verbal morphology. Originally this was a dative element which became a phonologically conditioned allomorph of a general Oblique (i.e., accusative or dative) marker in such pronominal prefix complexes; it becomes the "Inverse" morpheme in Ngandi (whereas in Nunggubuyu the other allomorph, *-n-, became the Inverse morpheme). The variant *-n^gu- rather than *-gu- was probably due to assimilation of nasality in the combination *-n-n^gu-. In Nunggubuyu /-n^gu-/ has consolidated its phonological (as opposed to grammatical) status, but must be thought of in part as a functionally motivated element maintaining the distinction between stem-initial underlying stops and continuants (§3.2).

Initial Reduplication P-2 (§3.3) has approximate parallels in Ngandi, but the bisyllabic/monosyllabic split depending on initial segment of stem in Nunggubuyu is an innovation. Also, in Ngandi there is a preference for reduplicating just the root in verb stems of the type /ROOT-dhu-/ or the like with thematic augment, but in Nunggubuyu most such forms are now unsegmentable unit roots (often in A_2 inflectional class), and the reduplications have been reshaped accordingly.

Most other phonological rules in Chapter 3 are Nunggubuyu innovations, at least in their particular forms; few have direct counterparts in Ngandi. For example, VV-Contraction P-49 is mainly the result of new input vowel sequences following loss of a consonant in the development of Nunggubuyu.

B.2 Nouns.

The split between Punctual and Continuous forms of NC_{infl} prefixes (§4.7), such as /a-/ vs. /ana-/ for ANA class, appears to reflect an old opposition of the type *CV- vs. *CV-n-. This is not found in Ngandi, which generalises *CV-, but does show up at least vestigially in several other languages such as Mara, Ngalakan, and Kunwinyku, which have doublets like /gu-/ vs. /gu-n-/ (Kunwinyku). The *-n- is probably originally an ancient accusative suffix, but the usage of the opposition in these languages, as in Nunggubuyu, is not so simple and may involve discourse as well as case category.

Continuous /ana-/ and /mana-/ show addition of a final vowel vis-à-vis prototypes *ṟa-n- and *ma-n-. A similar development is seen in /n^gara-/ from prototype *n^gar- or perhaps better *n^gal- (FSg), and /wara-/ from *bar- (Pl).

The nonhuman classes ANA and MANA have cognate noun class markers in Ngandi, Warndarang, etc. Most of these languages also have a third

nonhuman class of form *gu- (Ngandi /gu-/, Warndarang /wu-/, etc.). In Nunggubuyu this class has merged with ANA (*ṟa-). The merged class has NC_{infl} prefixes based on *ṟa-, but the corresponding NC_{der} prefix is /uG-/ from *gu-, and the basic marker in pronominal prefixes in verbs is //-w_1u-// from the same source. The two are still distinguished by direct object concord in the verb; the ANA_{wu} subclass (Table 9-14), which keeps //-w_1u-// as basic object marker, is the old *gu- class, while $ANA_{\emptyset}$ subclass (Tables 9-1, 9-13) with basic /-∅-/ object marker is the old *ṟa- class. Such $ANA_{\emptyset}$ forms as 1Sg⟶ $ANA_{\emptyset-a}$ /n^ga-∅-/ involve phonological contraction from longer forms, here *n^ga-ṟa- (recall that *ṟ is sometimes dropped), with later analogical spreading of /-∅-/ allomorph.

We now turn to number markers. HumSg /-yun^g/ or /-n^yun^g/ (§4.15) is a specialisation of a suffix also seen in other forms as Contrastive /-ayun^g/ in pronouns (§6.8), Absolute /-yun^g/ for demonstratives (§7.7, with some givenness value in discourse terms), and 3rd person propositus ending /-yun^g/ or /-n^yun^g/ with kin terms (Table 5-1). Ngandi has /-yun^g/ as a high-frequency Absolute suffix with nouns, pronouns, and demonstratives, with an additional Contrastive usage with pronouns; Nunggubuyu has greatly specialised the usages depending on word-class but some specialisation was probably present in the immediate common language. Moving farther away, at least genetically, Warndarang to the south has a high-frequency Absolute, with allomorphs /-yu/ and /-n^yu/, among others; the suffix is permitted in the otherwise unsuffixed Nominative, and is required with following Locative /-yan^{g}a/. Mara, which is close to Warndarang genetically, has/-yu(r)/ or /-n^yu(r)/ as Allative or Locative case suffix. It looks like Warndarang shifted the function from Locative to Absolute, under Ngandi influence, so the Mara and Warndarang forms may not be originally closely related to the Ngandi and Nunggubuyu ones.

Dual suffix /-w_2a:/ looks at first sight as though it should be reconstructed as *-bula with phonological contraction. In addition to numeral stem /$w_2$ula-/ 'two' in Nunggubuyu itself, we can cite Ngandi postposition /-pula/ with basically dual meaning, and the Yuulngu languages to the north have forms like /bulal/ 'two'. However, Anindilyakwa /-giya/ suggests another possible reconstruction for /-w_2a:/, either *-giya with subsequent analogical *g > *b (or, if following the lenition chain, */w_1/ > /w_2/) under the influence of /$w_2$ula-/, or *-biya assuming that Anindilyakwa has changed *b to *g (as may also have happened with the Anin. equivalent of Nungg. B morpheme /-$w_2$an-/ in pronominal prefixes). Indeed, a place name /l̲andhurbiyaruj/ (see dictionary, p. 384) can be analysed as //l̲andhurg-$w_2$iya-ruj// 'at the two dogs', a mythically appropriate gloss; if so it shows //-$w_2$iya-// (*-biya-) as archaic Dual form.

In general, Nunggubuyu seems to have innovated in marking number more or less within the core noun stem as opposed to the NC_{infl} prefixes. Pl /mij-/ has no obvious cognates in this usage, and Pl reduplication is more widely used in Nunggubuyu than in its neighbours.

Etymological identification of case suffixes is problematic but not hopeless. The following list gives some proposed cognates, either true cognates or diffusional sharings:

All-Dat	/-$w_1$uy/	Ngandi /-gi/ (Loc)
Abl	/-$w_1$ala/	Ngandi/Rembarrnga /-wala/
Per	/-$w_2$aj/	Ngandi /-pič/ (Pergressive)
Per	/-$w_1$aj/	Ngandi /-gič/ (All)
Purp	/-yun^{g}guyun^g/	Ngandi /-ku/, Yuulngu /-gu/
Loc	/-ruj/	possibly Ngandi/Yuulngu /-thu/ (Erg)
Inst	/-miri/	Yuulngu 'having' derivative /-miri/
Origin	/-mira:dhu/	possibly contains Inst /-miri/
Simil	/-yi:/	perhaps Ngandi/Ritharngu /-ʔwan^{y}ji?/
Rel	/-yin^{y}un^g/	Ngalkbon /-gun∼-gɨn/, Kunwinyku /-gen/, etc., plus Absolute *-yun^g.

There is no Ergative case marker in Nunggubuyu, unlike most of the other languages in the area (but like Warndarang and Anindilyakwa). It is conceivable that Loc /-ruj/ goes back to earlier Erg *-thu- seen in Ngandi (borrowed from Ritharngu, a Yuulngu language to the north, whether before or after Ngandi and Nunggubuyu split up). The final /j/ is problematic, but for sporadic *th > /r/ see also Ngandi /-wathu-/ vs. Nungg. /=a:ru-/ 'to abandon' (with strikingly similar, obviously cognate paradigms). If this suggestion is correct, the old Erg became specialised as Loc (or reduced to Loc-- some languages have a single Erg/Loc case marker), perhaps triggering a chain shift with Loc *-guy shifting to All-Dat function, and All *-gač becoming one of the Pergressive suffixes /-$w_1$aj/ (this one has retrospective angle). This assumes that Ngandi case functions are conservative; this is supported by the observation that *-guy probably also shows up in the Nunggubuyu demonstrative system as NC suffix /-gi/ in (static) forms with locative function, presumably reanalysed from fortis *-ki Locative allomorph with demonstrative adverbs, preserved exactly in Ngandi as /-ki/.

Nunggubuyu has two Pergressive forms, /-$w_2$aj/ and /-$w_1$aj/, close in meaning but differing in morphophonemics and in the extra retrospective nuance of the latter form. To judge from Ngandi, though, these are unrelated elements which have partly converged.

I have suggested elsewhere that Inst /-miri/ ultimately reflects Yuulngu (including Ritharngu) /-miri/, giving 'having' (Proprietive) derivatives. Anindilyakwa /-mura/ may be related but is now a very high-frequency postposition, also used commonly with verbs.

Similative /-yi:/ may be related to /-ʔwan^{y}ji?/ in Ngandi and Ritharngu; if so, it has undergone contraction by loss of the medial cluster, with *w > /y/ under the influence of the resulting contracted /i:/ vowel. Initial /w/ from *w or *g is unstable before /i/ vowel.

Rel /-yin^{y}un^g/ is tricky, but may be a composite of Dative forms like /-gVn/ with variable vowel, and Absolute *-yun^g. This would involve *g > *w_1 > /y/ in the initial segment, both steps being reasonable. On the other hand, Purposive /-yun^{g}guyun^g/ seems to be a composite of two instances of *-yun^g flanking another Dative form *-gu- or *-ku- (found in Ngandi and in Yuulngu languages). It is quite possible that *-ku- is a more recent Dative form than *-gVn and that *-ku- came into the ancestor of Ngandi and Nunggubuyu as a borrowing from Yuulngu, as I argue elsewhere. Ngandi Originative /-kun^{y}un^g/ may be an exact cognate of Nungg. /-yin^{y}un^g/ (*-gVn-yun^g), though Ngandi also has Rel /-yin^{y}un^g/, which I have argued to be a late borrowing from Nungg.

B.3 Kin terms.

The important affixes special to these nouns have following cognates:

2nd/3rd person /(r)an^g-/	Ngandi /-ron^g-/ (3rd person)
3rd person /-yun^g∼-n^{y}un^g/	< Absolute suffix, see p. 629mid)
Dyadic /-yij/, etc.	Ngandi /-koʔ/, Ritharngu /-kaʔ/

The last of these correlations is phonologically problematic but could involve *-koʔ > *-goʔ > *-woʔ > *-woj > *-wij > /-yij/. Both the lenition of suffix-initial stops, and replacement of final glottal *ʔ by /j/, are elsewhere attested (Nungg. /-$w_2$ugij/ 'only, still' §4.32, cf. Ngandi /-bugiʔ/); the penultimate change in the derivation is a special case of V-Fronting P-50.

It is conceivable that Ngandi 1st person suffix /-n^g(i)/ shows up in Nungg. as the final segment in a few 1st person kin term forms like /rigan^g/ 'mother', cf. Dyadic /rigi-j/, but segmentation is no longer clearcut.

Internal etymology: note that /bibi/ 'MoBr' (1st person form) is related to //-$w_2$ibi-// in 2nd and 3rd person forms of 'Mo' (Table 5-1, Bii and Biii).

Suppletive Dyadic form /n^{g}ali-j/ for pair involving MoBr (Biii in Table 5-1) is related to suppletive 2nd/3rd person root /-n^{g}ele/ in Ngandi and a similar form /n^{g}ala/ in Man^{g}arayi. Suppletive Dyadic root //-$w_2$awan-// and variants for pair involving Fa (Aii in table) is probably not really suppletive, just a disguised variant of the basic 1st person form /baba/. (The 2nd/3rd person root for 'Fa', /-n^{y}ara-/, occurs in all forms for 'Fa' in Ngandi.) Suppletive Dyadic /ali-jij/ 'spouses' (Diii in table) may be related to a kind of dyadic derivational suffix /-$w_2$alij/ §14.22, with /w_2/ perhaps under analogical influence from Dual /-w_2a:/. Ngandi /galič/ '(some) other' is possibly related.

The alternation /ni-gi/ 'man's son' and /n^{g}ari-yi/ 'man's daughter' (Avi-vii in table) suggests /niG-/ with final stop as masculine derivational prefix vs. /n^{g}ari-/ without /G/ as feminine. The regular NC$_{der}$ prefixes are /niG-/ and /n^{g}ariG-/, both with /G/, the effect of which is to induce Hardening P-18 in following morphemes (hence the root in the forms cited could be *-w_1i). A striking comparison is seen with similar Mara forms: /ni-ja-/ 'son', /n^{g}ayi-ya-/ 'daughter', cf. also Mara /ni-ba-/ 'sister's son' and /n^{g}ayi-wa-/ 'sister's daughter'. Though the roots are probably noncognate (or at least involve irregular reshaping), the specific alternations involving frozen noun-class (gender) prefixes are identical (allowing Mara /y/ as a reflex of *r).

B.4 Pronouns and demonstratives.

The basic personal pronouns (Chapter 6) can in many cases be directly compared to Ngandi counterparts. Nungg. /-ga-/ or /-gu-/, the root to which noun-class and person markers are added to form pronouns, shows up in Ngandi as /-ka-/, /-ko-/, etc., for 1st/2nd persons with a possibly distinct 3rd person root /-wan/. Nungg. MDu /-ni/ and Pl /-ru/ are matched by Ngandi /-ni/ and /-r/, but Ngandi lacks a counterpart to FDu /-rn^{g}i/. Nungg. and Ngandi agree in lacking the *-kV- root morpheme (/-ga-/, /-ka-/, etc.) in 1ExPl pronouns, Nungg. /nu-ru/, Ngandi /n^{y}er/, though Ngandi 1ExMDu /n^{y}owoni/ suggests that there may have been a morpheme *-wV- here subject to contraction.

As for 1st/2nd person prefixes, Ngandi has forms beginning in /n^{y}/ for 1InDu and 1ExPl vs. /n/ in 2nd person forms. Nungg. has initial /n/ corresponding to both Ngandi /n^{y}/ and /n/, suggesting that Nungg. has partly levelled out consonantism (in Nungg., /n^{y}/ is rare as stem-initial morpheme and does not occur initially in and prefix). The absence of *-kV- in 1Ex and its presence in 2Du/Pl forms permits retention of the opposition among persons in the independent pronouns, but consonantal leveling has produced some homophony in pronominal prefixes used with verbs, hence /nuru-/ as both 1ExPl and 2Pl intransitive prefix, A series.

Nungg. and Ngandi agree in having /n^{g}/ as initial nasal in 1Sg /n^{g}aya/ and in 1InPl forms.

Nungg. Oblique suffixes /-a/, /-i-/, /-wi-/ are etymologically problematic at this time.

Nungg. Contrastive suffix /-ayun^{g}/ has a parallel in Ngandi, where Absolute suffix /-yun^{g}/ can have contrastive sense when used on an independent pronoun. For specialised cognates in other word classes see p. 629, above. Nungg. Emphatic /-waj/ §6.9 matches a similar Ngandi suffix /-ʔwiǰ/.

Demonstratives are difficult etymologically, even the four basic roots in Nungg. being apparent innovations. Ngandi has Proximate /-ni-/ vs. Nonproximate /-na-/, other distinctions being made by affixes. It is possible that /-na-/ is related to Nungg. Immediate root /-da-/.

The noun-class affixes used with Nungg. demonstrative pronouns (DemPro) seem to be based on a combination of regular nominal NC prefixes plus the dual and plural suffixes used with personal pronouns. In Ngandi, these suffixes occur with personal pronouns but not DemPro, and it is possible that Nungg. inherited them only with personal pronouns and extended them to DemPro.

However, the MSg and FSg suffix with DemPro is /-gi/, which has no pronominal or noun-class origin. It is probably identical to Ngandi /-ki/, a fortis variant of Locative case suffix /-gi/ used to form Locative DemAdv as in /na-ki-ʔ/ 'there'. The reconstruction is probably *-kuy, assuming that Ngandi case suffix /-gi/ is related to Nungg. All-Dat /-w$_{1}$uy/ (*-guy). It appears that Nungg. was under pressure to develop at least a partial noun-class suffix system with (since Nungg., unlike Ngandi, systematically omits noun-class prefixes in some discourse contexts with DemPro, though not personal pronouns). Locative DemAdv ending *-kuy was reanalysed as MSg/FSg, while other innovative suffixes like MANA class /-ma ~ -mi/, ANA class /-ni/, and WARA class /-wa ~ -wi/ were based on previously existing prefixal forms for these classes with a partial shift to /i/-vowels under the influence of /-gi/ from *-kuy.

Nungg. now has Loc DemAdv in /-ji/ or /-gu/ depending on root (§7.12). For /-ji/ compare Ngandi Allative DemAdv suffix /-ǰu-/, which becomes /-ǰi-/ by phonological rules in two of the four possible combinations. Nungg. /-gu/ could possibly be a distinct reflex of *-kuy (preceding paragraph). Some analogical interaction involving vocalism of *-kuy and *-ǰu may have taken place.

Absolute /-yun^{g}/ §7.7 has a counterpart in Ngandi Absolute /-yun^{g}/; Ngandi permits wide usage with nouns, while in Nungg. the nominal form has been specialised as HumSg suffix, as noted earlier.

Allative DemAdv /-guni/ §7.13 may involve Loc /-gu/, mentioned above, plus another element obscurely related to ANA class suffix /-ni/, though details are obscure.

Concrete /-u/ §7.6 is etymologically problematic.

Centripetal /-ala/ §7.5 is a specialised reflex of Ablative /-w$_{1}$ala/. Centrifugal /-ali/ §7.5 may be a secondary spin-off of this, possibly involving shift to /i/-vowel under the influence of some other demonstrative forms, but I cannot work out details. Transverse /-waj/ §7.5, which also has occasional definite meaning §7.17, is most obviously related to Pergressive /-w$_{2}$aj/ and /-w$_{1}$aj/, but could conceivably also represent the same element seen in Emphatic pronouns with /-waj/; for these three elements the Ngandi counterparts, already mentioned, are /-piǰ/, /-giǰ/, and /-ʔwiǰ/.

Nungg. roots Prox /(y)a:-/, Imm /da-/, Dist /(y)uwa:-/, and Anaph /(-u)ba-/, are very problematic. We mentioned above that /da-/ could possibly be related to Ngandi /-na-/.

Another approach might be to consider the possibility of a major reinterpretation of earlier forms of the type /NC-ROOT/ as having a distinct morphemic structure. We have already noted that Loc DemAdv in *-kuy have been reanalysed as DemPro, with *-kuy (now /-gi/) now interpreted as NC ending.

Suppose that, in roughly the same way, a sequence *a-ni consisting of ANA class prefix *a- (earlier *ra-) and Proximate root *-ni (cf. Ngandi /a-ni-ʔ/) was reinterpreted as ending in ANA class suffix /-ni/, the link being the sharing of /n/ in this form with the more common ANA prefix form /ana-/. This reanalysis, "creating" a new ANA suffix /-ni/ used only with demonstratives, would have been part of the larger process of creating NC suffixes for this word-class (along with reanalysis of Loc *-kuy as MSg/FSg suffix, and the further analogical creation of new MANA and WARA suffixes). Such reanalysis of *a-ni might have entailed reanalysis of *a- as Proximate root, eventually reading to Nungg. Prox /(y)a:-/, where the /y/ is used only word-initially and may be a secondary, epenthetic insert. This is only a speculation, but if correct would account at least for the basic formative impulse leading to the creation of new roots.

B.5 Verbs: pronominal prefixes

The most significant structural features of the pronominal prefix system (Chapter 9) are the hierarchically rather than case-determined order of elements (in transitive prefixes), usage of Inverse morpheme //-N-// to distinguish inverse from direct combinations with the same pronominal components, and distinction of A and B series for all prefixes with choice among series depending on tense, aspect, etc.

The point of departure seems to have been a very old system involving accusative *-n- and dative *-gu- merging into allomorphs of a single Oblique suffix, the affected pronominal being interpreted as direct object in unmarked verb forms, but as dative if a "Benefactive" marker was also present. (Nungg. Benef. /-aG-/ is rather old, cf. Ngandi and Rembarrnga /-bak-/; other languages such as Mara have similar structures with a non-cognate Benefactive morpheme.) The choice between *-n- and *-gu- allomorphs was based on phonology, *-n- after vowel and *-gu- after consonant (1Sg *n^{g}a-n- but 3Pl *bar-gu-, etc.). This type of system can be shown to underlie

not only Nunggubuyu and Ngandi, but also the Mara/Alawa/Warndarang group to the south (hence presumably also Man^{g}arayi, which however I have not analysed in this connection). See J. Heath, "Substantival hierarchies," pp. 172-90 of Dixon, ed., Grammatical Categories in Australian Languages, this publisher, 1976 (esp. p. 176ff.).

In Ngandi and Nunggubuyu, a previously incipient trend toward direct-inverse patterning has been completed. Ngandi generalises /-gu-/ as Inverse morpheme while Nungg. generalises /-N-/ (*-n-), these being of course the original allomorphs of the Oblique. These two languages also fill out the system by introducing markers for the various nonhuman classes into the pronominal prefix system (contrast Mara, etc., with class prefixes on nouns but a simple third person form in verbs). Thus an old form like *n^{g}a-n- 'me' (used for 3Sg--> 1Sg, possibly also 2Sg--> 1Sg) has been elaborated by adding noun-class markers to specify the subject more precisely, hence ANA class subject /n^{g}a-n^{g}-gu-/ (*n^{g}a-n-gu-) in Nunggubuyu and A class subject /n^{g}a-gu-ṛa-/ in Ngandi. The use of nonzero 3rd person elements makes the direct-inverse patterning more apparent, since the order of elements is clearly dependent on a pronominal hierarchy rather than case, and since //-N-// or /-gu-/ in the two languages can now be taken as a relational marker specifying the relationship between the two co-occurring pronominals rather than being a simple case marker for one of them.

In connection with the dropping of *-gu- as Inverse marker in Nungg., some reshaping of preceding pronominal forms takes place, hence 3Pl object form *bar-gu- drops the *r to become /w$_2$a-N-/. Compare 3Pl intrans. /w$_2$u-ru-/, trans. 3Pl--> 3Pl /w$_2$a-ra-/, etc., where *r survives as /-rV-/; for the additional vowel compare NC$_{infl}$ forms like Pl /wara-/ (*bar-), ANA class /ana-/ (*[ṛ]an-), etc.

The usual B morpheme is /-w$_2$an-/ added to an A series form. However, for 2Sg we have suppletion in which the A form is based on /nuN-/ and the B form is /ba-/, /(w)a-/, or /a-/. These latter seem to be variant reflexes of something like *ba-, and since /-w$_2$an-/ should reconstruct as *ban- it may be that all the B morphemes are related. It might be, then, that /ba-/, /(w)a-/, and /a-/ for 2Sg$_b$ are not original 2nd person morphemes, just a B morpheme with zero person marker.

Ngandi has no parallels here. However, Anindilyakwa has A/B oppositions, sometimes involving an element /-gu-/ in a position similar to that of /-w$_2$an-/ in Nungg. We noted before Anindilyakwa /-giya/ as a possible cognate of archaic Nungg. Dual suffix /-w$_2$iya-/, now usually /-w$_2$a:/. In addition, a number of mainland languages have something like an A/B series distinction in pronominal prefixes, at least for 3rd person. For example, in Mara there is a prefix /-wa-/ (becomes /-ga-/ after stop or nasal) used in 3rd person pronominal prefixes only in Present tense (and Evitative); in Mara this forms part of a functionally complex verbal system also involving some special 3rd person inflectional suffix forms. There is thus a set of probably cognate morphemes at the intersection of pronominal and tense/aspect/mood/negation inflections. A more thorough history would bring out extensive differences in function among the cognate morphemes, probably involving functional adaptation within rather different language-specific verbal systems.

We noted at the beginning of B.4 that Nungg. has merged *n^{y} and *n into /n/ as initial consonant of several important pronominal forms. This merger applies also to pronominal prefixes in verbs.

B.6 Verbs: derivational affixes.

Prefixes: we have mentioned that Benef. /-aG-/ from *-bak- has cognates in Ngandi and other languages; Comit /-an^{y}ji-/ §10.3 and the minor 'together' prefixes §10.10 are etymologically obscure; Mult /-w$_1$ara-/ and /-w$_1$aragara-/ match Ngandi /-gara-/ and rdp. /-gara-kara-/, while Mult /-n^{g}aran-/ is a language-specific grammatical specialisation of a root meaning 'heap'; Refl suffix /-i-/ matches Ngandi /-i-/ or /-yi-/, the latter allomorph being the oldest one (cf. /-yi-/, /-dhi-/, etc., in many other languages); Recip /-n^{y}ji-/ has Ngandi counterpart /-ydhi-/ (and extended variants), where I suspect that the older form is that in Ngandi (Nungg. does not like syllable-final /y/, for one thing, so a shift *y > /n^{y}/ is reasonable--see below, B.7--, with subsequent assimilation of the stop also within reason); Caus /-jga-/ may be a composite of now unproductive abstractive nominaliser *-j (§14.16, cf. §14.15) plus Factitive /-w$_1$a-/; Inchoative /-ma-/ has cognates in Rembarrnga and some other languages though not in Ngandi (which has borrowed /-thi-/ from Yuulngu--this shows up in Nungg. in a few probably nonarchaic forms, §10.8 s.v. /-dhi-/); Factitive /-w$_1$a-/ itself may be related to Ngandi Causative /-guba-/ or /-n?-guba-/, the fuller allomorph /-n?-guba-/ apparently being an abstractive nominaliser /-n?-/ plus /-guba-/.

B.7 Verbs: inflectional suffixes.

The paradigms of Chapter 11 show inflectional classes each with particular paradigms. Many of these classes have exact counterparts in Ngandi, as follows (class labels based on J. Heath, Ngandi Grammar, Texts, and Dictionary; this publisher, 1978):

Nunggubuyu	Ngandi
A$_1$	4a, 4b (Nungg. forms match 4a)
A$_2$	1, 2 (Nungg. generalises /a/ vowel)
I$_1$, I$_2$	3a, 3b

Nungg. A$_3$ consists chiefly of forms based on /=ma-/ 'to get, pick up, take'; Ngandi has a verb /-ma-/ of similar meaning and with a cognate paradigm. The small number of stems ending in /u/ in the two languages means that there are no substantial "classes" of such stems for comparison. Nungg. /=a:ru-/ 'to abandon' has Ngandi cognate /-wathu-/ with similar paradigm. Other comparisons are difficult because of absence of exact cognates, and apparent analogical reshaping of the paradigms influenced by larger classes.

Nungg. N class corresponds to Ngandi class 5, which has a precisely similar augment /-n-/, hence Past Continuous /-n-di/ matching Nungg. Past$_2$ /-n-di-/.

Other comparisons involving individual roots or very small groups: Nungg. /=lha-/ and Ngandi /-dho-/ 'to chop'; Nungg. /=lha-/ and Ngandi /-jaka-dhu-/ 'stand' (N^{g}A$_2$); Nungg. /=yi-/ and Ngandi /-yu-/ 'to sleep' (N^{g}A$_2$); Nungg. /=w$_2$a-/ and Ngandi /-ba-/ 'to bite' (N^{g}A$_3$); Nungg. /=na-/ and Ngandi /-ṇa-/ 'to burn' (N^{g}A$_3$); Nungg.

/=w_2u-/ and Ngandi /-bu-/ 'to hit, kill' (MA_1); Nungg. /=na-/ and Ngandi /-na-/ 'to see'; Nungg. /=yan^{g}a-/ (*-yan^g=n^{g}a- with cpd. initial meaning 'sound', now unsegmentable) and Ngandi /-n^{g}a-/ 'to hear'; Nungg. /=n^{g}u-/ and Ngandi /-n^{g}u-/ 'to eat'; Nungg. /=yi-/ and variants, and Ngandi /-wo-/ 'to give' (*-wo-); Nungg. /=yu-/ 'to produce, carve out' and Ngandi /-yu-/ 'to put on'. Class labels in parentheses refer to Nunggubuyu in the above list. In all cases the inflectional paradigms show many specific identities.

Nungg. /=ya:-ri:/ 'goes' (part of suppletive paradigm, Table 11-8) may be related to Ngandi /-rudhu-/ 'to go' (Present /-rudhu-ni/), by *dh > /r/ and stem-initial *r > /y/. Neither change is fully regular, but they are sporadically attested.

The specific inflectional forms which are generally cognate from Nunggubuyu to Ngandi are these:

Nunggubuyu	Ngandi
$Past_1$	Past Punctual
$Past_2$	Past Continuous
$Nonpast_1$	Future
$Nonpast_2$	Present
$Nonpast_3$	Evitative
Evitative	Potential

The Ngandi Potential corresponds semantically to the Past Potential ('should have, was just about to', etc.), which is expressed in Nungg. by a combination of $Past_2$ with B-series pronominal prefix. Ngandi has only one pronominal prefix series and so needs a suffixal form for this category.

The $Nonpast_3$ is used chiefly in Nungg. with Future Negative (in combination with preverb /yagi/), but is occasionally used in evitative sense ('lest...'), so there is some linkage between the functions of the fifth items down in the list above.

Ngandi uses none of the six forms shown in negatives. Instead, there is a negative stem (not shown) which takes additional special suffixes for past, present, and future negative.

Some developments which seem to have taken place in the history of Nunggubuyu since the breakup with Ngandi:

a) /-n^y/ spreads at expense of *-y in $Past_1$.
b) /-n^g/, another $Past_1$ allomorph, replaces the anomalous $Past_1$ *-m, in the form *-bo-m 'hit' > Nungg. /=w_2a-n^g/.
c) /-n^g/ as $Past_1$ or $Nonpast_1$ allomorph becomes associated with preceding surface /a/-vowel; stems ending in /i/ or /u/ either ablaut to /a/ before this suffix or adopt /-n^y/, hence /-n^y/ introduced as one allomorph of $Nonpast_1$ (as well as $Past_1$ where it is old).
d) uncommon $Nonpast_1$ allomorph *-n (retained in Ngandi) replaced by /-n^g/ or /-n^y/.
e) possibly stimulated by partial phonological neutralisation due to (c), and to shift of vowel to /i/ before /-n^y/ after (a), augments *-dhu- and *-dha- (cf. Ngandi classes 1 and 2) merge as *-dha-, forming bulk of big Nungg. A_2 class; the *-dha- is not usually segmentable now.
f) pattern with $Past_2$ /-ni/ and $Nonpast_2$ /-na/ spreads from I_1/I_2 to small number of verbs ending in /u/ with some exceptions in $Past_2$; this assumes that Ngandi (where verbs ending in /u/ have very different paradigms from those ending in /i/) is archaic, but it could be that the Nungg. situation is more archaic on this point.
g) some augmented forms have been reduced, by a combination of analogy and optional phonological processes, hence $Nonpast_1$ /=ma-n^g/ 'will get' vs. Ngandi Future /-mi-ya-n^g/ (Nungg. A_3 class), Nungg. $Nonpast_1$ /=$w_2$ann^{g}a-n^g/ 'will tread on' vs. Ngandi Future /-benn^{g}a-ra-n^g/, etc.

There are a number of other differences between Nungg. and Ngandi, e.g., in details of distribution of various Evitative allomorphs, but unraveling the historical relationships cannot be attempted here.

The N^gA_2 class, which is basically the nonmonosyllabic variant of the N^gA_1 class (of whose three members two have Ngandi cognates), has apparently expanded greatly to become a productive class, especially for stance verbs (this is also true of Anindilyakwa). The RA class, which is fairly productive for verbs of carrying, is a probable Nungg. innovation. The YA class is also hard to connect with classes in other languages, though the somewhat similar irregular verb /=ra-/ 'to spear' may be archaic.

B.8 Postpositions.

The correlations I know of are these:

/-$w_2$ugij/ 'still, only'.....Ngandi /-bugi?/, Ritharngu /-buki?/, Warndarang & Mara /bugi/;

/-$w_2$indi:yun^g/ 'very'.....Warndarang /bindi/, Ngandi deriv. prefix /-bindi-/, cf. Nungg. /$w_1$arawindi/ 'many'; postpos. form contains Absolute *-yun^g;

/-maji:/ 'if', /-magi/ 'lest', /-maga:/ §12.21 — perhaps related to negative elements like Ngandi /-may?/ and cognates in lgs. to west

B.9 Minor compounding and similar elements.

A few correlations involving special cpd. initials (Table 14-1):

/-lha(G)-/ 'mouth'.....Ngandi /dha:/;
/-lhaN-/ 'foot'.....Ngandi /dhen^g/;
/-li-/ 'side'.....perhaps Ngandi /lay/ 'cheekbone';
/-n^{g}uraG-/ 'penis'.....perhaps Warndarang /(n^g)gura/ 'semen';
/-n^{g}u-/ 'guts'.....Ngandi /n^{g}uk/;
/-ra-/ 'tooth, edge'.....Warndarang /raba/ 'nail, tooth';
/-yi-/ 'face'.....perhaps frozen segment beginning Ngandi /gibal/ 'tooth' and /giban/ 'nose';
/-galan^g-/ 'egg'.....Ngandi /galan^g/;
/-$w_1$adji-/ 'water game'.....Ngandi /woǰo/;
/-mar(G)-/.....perhaps Ngandi comparative prefix /-mar-/;
/-mij-/ 'name; throat'.....Ngandi prefix /n^{g}iǰ-/ 'name';
/-run^g-/ 'behaviour'.....Ngandi prefix /rum-/;
/-ya:l-/ 'mood, attitude'...Ngandi prefix /jal-/;
/-n^{g}aN-/ 'breast'.....Ngandi /n^{g}am/ 'milk';

/-ij-/ 'truth, thought'....Ngandi prefix /yič-/;
/-yir-/ 'foliage'.....perhaps root in Ngandi /-jir-ga-/ 'to roll grass for fish trap'.

Correlations involving other minor compounding and derivational affixes:

/-yij/ 'having' §14.14.....Ngandi /(bata-...)-wič/;
/-man-/ Pl §14.20.....Ngandi prefix /man-/;
/-$w_2$in^{y}ig/ /-$w_2$irig/ §14.23.....Ngandi /-gan^{y}a?/ and /-girikirin^y/;
/nuÑ-/ Gentilic §14.11.....most nearby languages;
/bala-/ 'side' §14.12.....Ngandi /bala-/;
/malG-/ 'time(s)' §14.12...Ngandi /malk-/;
/-in/ nominaliser as in /adadin/ 'shore' §14.25..Ngandi /-in?/ as in /yimin?/ 'thing, matter' [unproductive].

B.10 Genetic subgrouping.

As explained in previous publications, Nunggubuyu is apparently about equally close genetically to its neighbours to west and east, Ngandi and Anindilyakwa. We do not yet have substantial published materials on the latter language.

Of other languages along the coast, the group containing Mara and Warndarang to the south is reasonably closely related but less closely than Ngandi. The analysis of pronominal prefixes (B.5) is supportive of this analysis. It is less easy to work out the historical relationships among verbal inflectional suffix paradigms, but there are some striking parallels, e.g., between Nunggubuyu and Mara paradigms for /=na-/ 'to see', and between Nunggubuyu and Warndarang paradigms for Nungg. /=lha-/ 'to stand', Warnd. /-jV-/ (citation form /-jura/), an auxiliary verb used with stance verbs.

Languages farther inland (Ngalkbon/Dalabon, Ngalakan, Man^{g}arayi, Alawa, etc.) are apparently closely related to either the Nunggubuyu/Ngandi/Anindilyakwa group or the more southern group, but we have not yet done fine-grained historical analysis.

Yuulngu languages to the north, of which Ritharngu and Dhay'yi are most relevant to Nunggubuyu, are more closely related genetically to Central Australian languages than to Nunggubuyu. However, they have been important as sources of diffusional interaction.

APPENDIX C

C.1 J. Heath, Nunggubuyu Myths and Ethnographic Texts.

Note on line references: For this publication, which is mostly Nungg. texts with interlinear translation, along with separate paragraph-length free translations, line refs. are as follows. For Nungg. text we use formulae like 1.4.5, meaning fifth line of Nungg. text in section 1.4 (i.e., section 4 of text 1). Immediately attached interlinear glosses use the same line number as the Nungg. text above them, plus @ (if there is a second line of interlinear glosses, as in the first few texts, we use @@ to indicate second line). Material in free translations (TRANS), notes (NOTE), and comments (COMM) shows line number counting down from first line of actual segment indicated; thus "1.4TRANS 3" means line 3 of the TRANS for text section 1.4.

At the end of this list of regular errata, we also show the correct transcription of some sections unfortunately unclear in the published volume due to problems with the photography (p. 643).

page	line	for	read
10	15 up	Hu_2 72	Hu_2 4
27	2.5.5@	3MSg/ANA(ø)a	3MSg (i.e., intrans.)
"	2.5.7	-'r=	-'r=
32	3.7.3@	-ø=	[omit]
"	3.7.6	nun^{g}ga:='maji-ø	nun^g=gamaji-ø (fr. /=amaja-/)
"	" @	2Sg/ANA(wu)a-...	2Sg$_a$-...
36	4.8.1@	1Sg$_a$=	1Sg$_b$= (most likely)
46	5.19.3	yaga	yaga:
50	7.1TRANS 4	* -ambal	* -ambara
53	7.11.3	n^{g}iwu-waraga-	n^{g}i-waraga- (intrans.)
54	7.13.3	-'mbal-wadja-	-'mbal=wadja-
55	7.15.3	hit and	cut and (gloss for /daj!/)
57	7.19.7	=rabali:::,	=rabali:::-',
63	9.2TRANS 1	Warawaralhulu	Wuwarawaralhulu
69	10.6.1	n^{g}i-wudhi-ø	n^{g}i=wudhi-ø
70	10.11.2	-munbu=mun=	-munbu-mun=
73	10.17.3	arbidi [2nd of 3]	araga ['suddenly' correct]

page	line	for	read
79	12.3TRANS	[add note]	* /an^{y}jabal/ is more common than /n^{g}an^{y}jabal/
82	13.1.3	n^{g}ini-ga_ra=	n^{g}ini-ga-ga_ra= (with rdp.)
85	13.9.1	win^{g}ima-	win^{g}ima=
86	13.14.4	nima:-'=	nima:-'y=
88	13.20.1	nima:='ryara-	nima:-'rya:='rya- (/=w$_1$arya-/)
89	13.22.3	*win^{g}i-	*win^{g}i=
"	13.24.4	win^{g}i-	win^{g}i=
90	13.27TRANS 2	"Is is..."	"Is it..."
93	13.36.3	**nun^{g}gu=wurura-	nun^{g}=gurura- (/=w$_1$urura-/)
94	13.40TRANS	[add notes:]	a) /=w$_1$ayajarda-/ b) NC$_{der}$ form from /-n^{g}ul-/
98	14.7.1	winiwa:-'lhaga=	wini-walhaga= (intrans.)
"	14.7.5@	she got it$_c$	she gets it$_c$
102	section head	14.18	14.19
104	15.6.5	=madhand:-'	=madhandi:-'
110	16.7.1	*n^{g}and-	*n^{g}and=
111	16.9.1	:::	[omit]
		(There is also some material not shown in transcription after /ba-gu/ on this same line; it sounds like /ni=wayan^{g}andi:-'-ni xxx, niwu-wad=bari-n^{y} ba-gu/ 'he used firedrill [antipassive Refl?], he put it[fire] down there')	
112	16.10.1	-dhal=wa_li:::-n^{y}	-dhal=wali:::-n^{y} (/=w$_2$ala-/)
"	" @	...rubbed...	...arrived at...
"	16.11.1	[last word on line repeated total of 5 times]	
113	16.13.3-4	[omit /n^{g}ijan^{g}...ni-yalhaga=lharmi-n^{y}/, inadvertently repeated in transcription from 16.13.2-3]	
"	16.14TRANS 1	flied	flies
115	16.17.8	nin^{g}gu=wi-ni,	[Relative suffix /-yin^{y}un^{g}/ partly audible at end of word]
"	16.19.2	[/a:n^{g}/ 'whatchamacallit?' before /gan^{g}ijiyun^{g}/]	
116	16.20.1	[same correction as for p. 112, 16.10.1]	
117	16.23TRANS 3	their	there
119	17.2.4	"nu:n^{g}unu-	nu:n^{g}unu- (omit ")
122	17.9.6	=n^{g}i:-'"	=n^{g}i:-Ø"
125	17.16.4	-manda=	-manda-
128	18.6.3	wiri-na-n^{y},	wiri=na-n^{y},
"	18.6.6	wama-jujurgi-n^{y},	wama=jujurgi-n^{y},
131	18.13.2	[add /ya:-nu:-'-wuy/	'this way' at end of line]
132	18.13.5	wu-wa_di-n^{y}	wu=wa_di-n^{y}
143	20.5.2	-gilyirin^{g}gilyiri	-gi_lyirin^{g}gi_lyiri
"	20.5TRANS 2	Gi_lyirn^{g}gi_lyiri	Gi_lyirin^{g}gi_lyiri
159	24.1.2/3/5	=gara_r-ba-	=garar-ba- (from /=w$_1$arar-bu-/)
160	24.3.6	"	"
161	24.4.1/4	"	"
165	26.2NOTE 1	line 1 of	line 2 of
192	34.4.1@	big [2nd of 2]	river (gloss for /ala/)
193	34.8.3	=gala:wi-	=gala:di- (from /ala:di/)
201	36.5TRANS 1	It did that,	It (hole) was like this,
203	37.4.6	ma=yabi:-ni	ma=yabi:-'-ni
204	37.6.7	ma-wuguwuguni.	ma=wuguwuguni.

page	line	for	read
205	39.1.4@	looks for its	collects (/=_raga-^{1}/, not /=_raga-^{2}/)
"	39.1TRANS 4	looks around for	collects
207	40.4.3	=garan^{g}ga:	=garan^{g}ga:-'
208	40.7.5	[form /-bu-bu=bura-/	is anomalous and irregular double reduplication, cf. usual /-bu=bura-/]
214	41.6.1@	they reached it$_p$	they reached him$_p$
223	42.4.3	=jibari-n^{y}	=jibari-n^{y} (/=yiba_ra-/)
224	42.6.4	=ni-Ø,	=ni:-Ø,
"	42.5.4	-maji	-maji:
228	43.7.4/5	-_dun	-_dun
248	47.10TRANS 4	who will do that.	who will ask.
251	47.17TRANS 5	the one who	the ones who
252	47.19.6	**n^{g}an=da:gi-n^{y}	**n^{g}and=a:gi-n^{y} (cf. P-20)
268	54.4.2	wu:=wurdhi:-'-Ø,	wu:=wurdhi-'-Ø,
270	55.3.3	[unclear word with squiggly line under it sounds something like /ni=ya_rba-ni-yin^{y}un^{g}/ 'he who was running' or '[saw] him running']	
276/7		[for restoration of material lost by photographic lapse, see below, end of C.1]	
284	60.2.3	=riga-	=_riga-
296	65.5.1@	(InDu)$_p$	(ExMDu)$_p$
309	69.3.3	=_ri-n^{y}ji:-Ø	=_ri-n^{y}ji-Ø
"	69.3.5@	will (not) be	are (not)
310	69.4.2	=_lamumundhi:-	=_lamumun-dhi:-
"	69.5.6	-gara_n^{g}ay-	-gara_n^{g}gay-
311	69.7.3	ambu-	ambu:-
313	69.12.7	n^{g}a-wulmur-waj,	n^{g}a=wulmur-waj,
314	69.13.4@	which they sang$_c$	they who sang$_c$ [probably]
315	69.16.2	wu:-nun^{y}-	wu:=nun^{y}-
321	71.13.4/5	numba=wu-Ø",	numba=wu:-'",
"	71.14.2/4	[prefix /nu=/ in /nu=magi-Ø/ probably shortened from 2Sg→ 3MSg$_a$ /nunu-/]	
323	71.18.2	-rigi=riga-	-_rigi=_riga-
"	71.18TRANS 2	erected	erecting
324	71.23TRANS 3	relatives),	relatives) slept,
326	71.28.1@	[gloss of /yuwa:-ga-waj/ perhaps oversimplified, see §7.24 of grammar]	
339	75.2.6	-'-ma:-'	-'-ma-n^{g} [probably]
340	76.2.3	-_dagal-	-_dan^{g}gal-
342	77.2.1@	sister	brother
347	83.1.3	='rawa_li:-Ø	='rawa_li-Ø
348	84.1.5	=wu-Ø.	=wu:-'.
350	88.3.1/3	"	"
351	89.1.6	"	"
"	89.1TRANS 1	it as him,	it as his,
352	90.2.5	anu=maya-n^{y}	[either /n^{g}anu=maya-n^{y}/ 'I named him' or /nu=maya-n^{y}/ 'he named him']
359	93.2.1	yi:-ja_lja,	yi:-ya_lja (/a_lja/)
362	95.4TRANS 2	shovels spears,	shovel-spears,
366	97.1.2	-'jga-	='jga- (=ijga-)

page	line	for	read
377	100.4.3	[disregard line drawn through final word in line]	
384	105.3.5	=n^{g}adugumbi:-	=n^{g}adugumbi:-
397	111.4.3	n^{g}an^{g}u-barawuda-	n^{g}an^{g}u=barawuda-
400	112.8.2	wirin^{g}a-butcher-	wirin^{g}a=butcher-
407	114.1.3	war-uwa-wa:-'la	war-uwa:-wa:-'la
"	" @	it is on this side	it is on that side
"	114.1.4	yuwa-wa-wa:-'la	yuwa:-wa-wa:-'la
409	114.7.2	wu:-riga-	wu:=riga-
413	115.4.2	=wadawadan-	=wadawadan- (/w$_2$adawadad/)
"	115.4.5	=murmbulhi:-'	=murmbuli:-'
417	116.8TRANS 3	neices	nieces
421	117.5TRANS 1	hungry)	hungry,
422	118.1.1	wiri-'r=	wiri:-'r=
427	119.7.1	ana:-argi	ana:-'rgi
430	120.6.2	-maga:-'	-maga:
435	123.2.2	ar-ma-mawura:duj	[possibly /arma:-'r-mawura:duj/ with rdp. including cpd. initial; unclear on tape]
442	126.1NOTE	[could be I. abrupta instead of I. velutina]	
448	132.3.1	wu=ya-n^{g}i	wu=ya-n^{g}gi
452	133.1.3	-jimun^{g}=gaba	-jimun^{g}=gaba:-' (/=w$_1$aba-/)
459	139.7.3	a-yidham	[can now be identified as East Arm, apparently a part of the hospital--thanks to K. Warren for this info; cf. note following 139.7.]
465	142.2TRANS	[for restoration of material lost by photographic lapse, see end of C.1, below]	
"	142.3.2	[gloss for /-n^{g}aran=galima-/ might really be something like 'spoon out honey', with /-n^{g}aran-/ taken here as variant of /-n^{g}arag-/ 'honey, honeycomb' rather than as Multiple prefix]	
469	143.5.3/4@	(-la=lala:- ambiguous; could be simple rdp. of /=lala-/oor could be cpd. involving /-la-/ 'shell')	
472	143.12.4@	as for it (ANA)	[may refer to bees, hence be WARA class here, instead of referring to place, ANA class]
490	157.6.2	ba-n^{g}ari-	ba-n^{g}ari=
491	157.7.2	wiri wadawadad-	wiri=wadawadad
492	157.9.5	nu:-mij-	nu:-mij=
494	157.14.3	=yura-n^{g}gi-	=yura-n^{g}i-
514	162.13.3	ni=garaji-n^{y}	[on tape sounds like /wu=garaji-n^{y}/ 'it(buffalo) 'jumped']
"	162.13.5/6	-malbij	-malbij
521	163.6TRANS 5	on the Anba:li	on to Anba:li
526	163.20.5	nuru=wuda=	nuru-wuda=
530	165.1TRANS 2	[insert: Whites will send canvass and building materials if they like us. And if they think it over, they will furnish us with canvass (calico) and building materials.]	

page	line	for	read
535	166.14.2	[first word in line is formally trans.; usually it is intrans. with regular intrans. pronominal pref.]	
538	166.24NOTE	Vigna vexillata	Boerhavia diffusa
542	167.10.1@	(place n.)	in the east (cf. §7.29)
545	167.20.5	[perhaps /ma=wuguwuguni/ has 'ship' instead of 'rope' as subject, hence 'it left for good']	
548	168.6.4	ana:-'-ni+,	ana:-'-ni,
"	168.7.3@	spoken to you(Sg)	spoken to you(Pl)
553	170.3.6	ama-lhalun^{g}u	ama-lhalun^{g}gu

material in NMET lost by defective photographic plates

p. 276 (57.2ff.)

... an-i-dun^{g}gu-run^{g}gal ...
big words (big business)

... an-uwa:-gu ...
there

... nuru=da:li:-'-yin^{y}un^{g} ...
which we sing

... there, (from the ritual ground) ...
... (secret) business is separate. ...

p. 277, top right

... wara-mananun^{g}
women

p. 465 (translation of 142.2)

(Acacia torulosa)
bark
to get
Acacia
(tree

C.2 J. Heath, Nunggubuyu Dictionary (1982).

page	entry	for	read
33	gan^{y}jagan^{y}ja	[analysis with NC$_{der}$ prefix supported by NA class form /yi:-ni-gan^{y}jagan^{y}ja-ruj/ MT 28]	
46	ji:ji (NAdj)	18.8.1	28.8.1
50	=lha- 'cut'	Nonpast$_3$	Nonpast$_1$
57	lhamba:mburg	=lhamba:mbur-ga	[add hyphen at end]
72	lhuruman	ma-n^{g}ari-mara-yun^{g}	ma-n^{g}ari-mara-yun^{g}
90	malala:di	69.4.3pred	68.4.3pred
91	=malan^{y}ji-	-ar=malan^{y}ji-	-ar=malan^{y}ji-
107	=milga-	=milgi- (cont.	=milga- (cont.
114	=munduwa-	VTrA2	VTrA1
120	=na-^{2}	-w$_2$an^{y}=na-	-w$_2$an^{y}=a-
"	=nagi-	119.3.4	119.3.6
131	n^{g}algi	nigula:nja	nin^{g}ula:nja
142	=n^{g}awi-'-	future negative	present negative (line 2)
148	=n^{g}uyuga-	VIntrA4	VIntrN
167	-riN-	[form may actually be /-rin^{y}-/; in list of cross-refs. for /=yalala-/ read /=yaljala-/]	

page	entry	for	read
168	=w_2a-	162.13.4	162.13.6 (-malbij=ba-)
170	$w_1$ãba:ru	[also /$w_2$aba:ru/]	
171	abulu	ar-abulu	ar-abulu
182	-$w_1$aji-	[list of verbs should be =yala-, =yaba-]	
"	=ajirbarga-	VIntrA4	VIntrN
190	=$w_2$ala-	121.1.2/3	121.3.2/3 (-ran^{g}a=bala-)
204	-$w_1$an-	=$w_2$alayida-	=$w_2$alayida-
207	$w_2$anja	=$w_2$ali-n^{y}ji-	=w_1a:li-n^{y}ji-
"	"	=$w_2$ala-	=w_1a:la-
208	=ann^{y}alin^{y}aliga-	[prob. A1 instead of A2 class]	
215	-ari	[cpds. with /-lhud-/ alluded to are to be found in 66.3.4, 67.2.2]	
220	=$w_1$arar-bu-	[form with two /r/'s is correct]	
240	w_2ũlalwulal	an^{y}ji-wulawulal	an^{y}ji-wulalwulal
"	"	166.18.4	166.18.3 (this correction only line 2 up of entry)
244	=$w_2$ula-	[/-$w_1$ara=wula-/ is transitive]	
261	yaljalgu	n^{g}an^y=jalgu	n^{g}an^y=jaljalgu
272	ibi, ibi-yun^g	-$w_1$ibi(-yun^g)	-$w_2$ibi(-yun^g)
275	yinag	=bura-	-burda- (line 2 of entry)
278	yirija	n^{g}ari-irija-yun^g	n^{g}ar-irija-yun^g
280	yiwan^{g}gu	-mi=jiwan^{g}gu-wa-	-mi=jiwan^{g}gu-ma-
285	ACCOMPANY	=adalaga:ga-	=adalaga:ga-
299	PREGNANT	gulmu-munder	gulmu-mundur
318	1.F.vi	[/dhabararag/ is WARA class]	
320	2.B.i	[/lha:n^y/ means 'tongue']	
324	3.G	[/yila:ri/ and /ma:da/ are NA class]	
"	3.H	[/a:l/ is MANA class]	
326	5.D.i	[/min^{y}n^{g}u/ is ANA$_{wu}$]	
330	6.C [line 3 up]	marig	marig
331	7.A.iv [2 up]	madayin	madayin
332	7.A.v	=$w_2$ada-	=$w_2$ada-
"	"	=lililiri-bu-	=lililiri-bu-
370	wulhurnnyanay	wu-lhun=n^{y}ana^y	wu-lhun=n^{y}anay
371	niraga	(=raga-^{2})	(=raga-^{2})
372	wurawarawidangi	wu-rawa-ra=wida-n^{g}i	wu=rawarawida-n^{g}i
"	nimadhamadhalwuli	=lhawulha-	=lhalwulha-
"	marnbulhayini	-anbul-	-anbul-

C.3 J. Heath, Ngandi Grammar, Texts, and Dictionary (1978).

page	line	for	read
8	10	voiced	lenis
40	29	P-6	P-3
55	7	Mar-ṯu	Mer-ṯu
96	12	'to show up'	'to show'
125	§13.4	[other exx. of Rel clause are Texts 8.5, 12.10]	
190	Text 1.9.5@	3Pl/now-	3Pl-now-
194	" 2.9.2@	1PlEx-	1PlEx/A-
197	" 2.16.4	ma-wolo	mo-wolo
201	" 2.28.2@	-now-Pr	-now-hit-Pr
202	" 3.1.2@	-Rel	-Abs

page	line	for	read
202	Text 3.1.3	[gloss for /gu-danič-gič/ is GU-fire-All]	
204	" 4.1.3@	1PlIn-Sub-	1PlIn/A-Sub-
208	" 5.1.1@	3Pl-Rdp-go-Pr	3Pl-go-Pr
221	" 7.4.1@	3MaSg-still-	3MaSg/A-still-
223	" 7.8.3@	-camp-All	-camp-Loc
225	" 8.3.2@	-one-Inst-	-one-Erg-
231	" 10.4.6@	there	here
253	" 12.13.3	[insert quotation marker ' before /may?/]	
265	" 12.39.5@	1PlEx/GU-call-	1PlIn/GU-call-
"	" 12.40.5@	-shoot-Aug-PCon	-shoot-Aug-PPun
272	" 12.55TRANS	They tried him	They didn't try him
"	" 12.56.3@	-day-	-say-
"	" 12.56.5	'ṇi-ṟiḏ-i',	ṇi-ṟiḏ-i',
273	" 12.57.2@	that way	this way

note: for symbols @ and TRANS and text citation numbers we use here the same system as for the Nunggubuyu texts volume, see discussion at beginning of Appendix C.1, above.

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comments: the present volume along with Heath 1980a and 1982 contain substantially all I know about the language, in some cases presenting more complete or final analyses than those in earlier articles; these publications are also designed to supercede the earlier works by Hughes, a mission chaplain, except that Hughes text volumes TNT and MT remain valuable. The material in Hore's 1979 paper is covered in more detail in the present grammar; the analysis of length and stress in his 1981 paper is somewhat different from my own.

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d) other materials

Aside from material which has now been published, my field materials which might conceivably be of some value include song texts (Nunggubuyu, Yuulngu including Ritharngu, a little Anindilyakwa, and some boomerang-clapstick singing from Mara and Warndarang); some Dhuwal and Dhay'yi (Yuulngu) texts, mostly secret/sacred but including some historical Dhay'yi texts; and elicited material, mostly flora/fauna terminology, for several languages including Yanyula (Anyuwa), Dhay'yi, and some Barkly languages.

Ethnographic materials on the Nunggubuyu and nearby people were discussed in NMET, pp. 10-12.

A catalogue of my tapes on Australian languages and songs is in pp. 376-82 of my Nunggubuyu Dictionary.

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