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A PHONETIC ANALYSIS OF THE OLD HIGH FRANCONIAN OBSTRUENTS

by

Robert Russell Catura

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Germanic Languages & Literatures)
in The University of Michigan
1973

Doctoral Committee:

Professor William H. Bennett, Chairman
Professor Valentine C. Hubbs
Professor Sherman M. Kuhn
Associate Professor Robert Kyes

FOREWORD

The subject of this dissertation was suggested to me by Professor Herbert Penzl now of Berkeley. To him and to all my other teachers at Michigan and elsewhere who helped me during the course of my graduate study, I give heartfelt thanks. My special gratitude I offer to the man who took over the chairmanship of my doctoral committee in mid-stream so to speak and has directed work on the dissertation since then, Professor William H. Bennett. My thanks are also due Professors Ralph Lowet and Werner K. Suttner of California State University, Sacramento, for allowing me the time in which to finish this study.

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SYMBOLS AND ABBREVIATIONS

A	Anmerkung, note	R	any non-syllabic resonant
C	any consonant	V	any short vowel
F	any fricative	VV	any long vowel or diphthong
+	shows morpheme juncture		
´	primary stress	'	lack of aspiration

<> enclose forms in their actually attested spellings

Ø indicates the non-occurrence of phonemes in certain phonetic environments that are significant for Old High German

C̥ indicates voicelessness and implies lenition

C̲ indicates fortisness; [s̲], however, indicates blade articulation

/sK/ capital letters in phonemic transcriptions indicate units in positions of no contrast or units which one need not at the moment assign to one phoneme or another

AzfdA Anzeiger für deutsches Altertum

Beitr. Beiträge zur Geschichte des deutschen Konsonantismus

Denkm. Denkmäler deutscher Poesie und Prosa aus dem VIII-XII. Jahrhundert

INTRODUCTION

0.1. The phonology of Old High German is characterized by a series of phonemic changes which occur variously and to different degrees in its several dialects. The most noteworthy of these is the High German Consonant Shift whereby the Germanic voiceless stops became affricates and fricatives with an accompanying rearrangement of the whole phonemic system. This shift together with the Germanic Consonant Shift has been the subject of scholarly writing since the late 18th century. Indeed, one might say, it was attention to these two sets of phonemic splits and mergers which began the science of Germanic linguistics.

In the two southernmost dialects, Alemannic and Bavarian, the shift appears to have been more nearly complete, as witness the modern dialects of Switzerland and Tyrol. However, in the three Franconian dialects of Central Germany, the shift is incomplete in varying degrees. Fortunately, there are documents in each Franconian dialect from the OHG period which contain corpora of sufficient length to permit a detailed phonological investigation. However, as the definitive editions of these texts were all written well before the end of the 19th century, a careful reexamination of the text appears profitable and instructive. This investigation will attempt to determine the phonetic nature of the positional variants of the Franconian obstruents from the orthography of texts themselves and from comparative

evidence in the light of modern linguistic knowledge. The results of such an analysis could then validly serve as the basis of further investigations of either historical or dialectological character. The object of the following, then, will be to determine as exactly as possible the phonetic make-up of the obstruent phonemes of Franconian in their various occurrences.

I

The obstruent patterns of Rhine Franconian as mirrored in the Old High German Isidor

1.1. The texts. The texts to be used here are the Paris MS of the Old High German translation (Hench I) of Isidore of Seville's De fide catholica contra judaeos, the longest and oldest text, which dates from the end of the eighth century, and where helpful, the Bavarianized Monsee Fragments (Hench M).

1.2. The dialect of the Paris Isidor MS. Although the exact place of origin of the Paris MS of Isidor has not been determined, there is no longer any question that its language is Rhine Franconian (Braune-M, §10c and Hench I, pp. 110-3). Accordingly, a comparison of Isidor's phonology with the general phonological characteristics of modern Rhine Franconian dialects would appear to be in order. Isidor-Paris as well as Isidor-Monsee is a copy of a lost original (Hench I, Einleitung pp. XVII-XVIII). Some orthographic peculiarities of the Paris MS may be ascribable to the mechanics of copying, and perhaps some can be ascribed to the variant dialect of the copyist himself, e.g. Hench's 'Low Saxon forms' (Hench I, pp. 77 and 83).

The considerations which speak against the dialect of Isidor's being Rhine Franconian are limited to four forms containing reflexes of Germanic */p/ (1.9c), and

the morphologically peculiar <seegi>, which does not concern us here. Additional Rhine Franconian texts will be discussed under 1.10.

1.3. The phonemes. Penzl's phonemic analysis (Penzl M, §11, p. 361) of the consonants of Isidor has yielded the following inventory of contrasting units: (a) in the orthography of the text, and (b) in stylized simple graphs.

(a)			(b)		
p	t?	ch	p	t?	k
b	d	g(h)	b	d	g
	l r m n uu i			l r m n w j	
u	dh	h	v	θ	h
	s			s	
f(f)	zs(s)	hh	f	ß	χ
pf?	z		<pf>/vv/	ȸ	[ʤß]

Except for the status of <t> (1.7a, Penzl M, §9.1, p. 359, and Hench I, pp. 79 and 80) and the interpretation of <pf> (Penzl M, §5, p. 356), this is what a synchronic phonemic analysis of the language would produce.

1.4. Double or long consonants (Penzl M, §9.3, p. 360). Thirteen of the foregoing consonants contrast intervocalically with doubled or lengthened varieties of themselves. Because of the brevity of the text, it is in many instances impossible to find exact minimal pairs.

/g/:/gg/; <flugun> 'they flew': <hrucca> 'back'
/flugun/ /hrugga/

/h/:/hh/; <hooho> 'highly': <boohho> 'of books'
/hooho/ /boohho/

/j/:/jj/; <biiihti> 'confession': <zuueiio> 'of two'
/bijihti/ /ʓwejjo/ or /ʓweijjo/

/d/:/dd/; <bidande> 'awaiting': <bitdande> 'asking
/biidande/ /biddande/

/θ/:/θθ/; <uuidhar> 'against': <fethdhahha> 'wings'
/wiθar/ /feθθahha/

/s/:/ss/; <uuesan> 'be': <chiuuisso> 'certainly'
/wesan/ /giwisso/

/r/:/rr/; <nara> 'redemption': <nerrendin> 'redeeming'
/nara/ /nerrendin/

/l/:/ll/; <ali> 'other': <alle> 'all'
/ali/ /alle/

/n/:/nn/; <inan> 'him': <innan> 'by'
/inan/ /innan/

/b/:/bb/; <scribun> 'they wrote': <sipbea> 'peace'
/sKribun/ /sibbeja/

/v/:/vv/; <arheuit> 'lifts': <hepfu> 'I lift'
/arhevit/ /hevvu/

/w/:/ww/; <farauua> 'color': <freuuui> 'rejoice'
/farawa/ /frewwi/ or /freuwwi/

/m/:/mm/; <quhoman> 'come': <gomman> 'husband'
/kwoman/ /gomman/

When these long consonants become final they are shortened, e.g. <sprehhan>, but <sprah>;<lantscaffi>, but <lantscaf>. One should expect to find some reflexes of /kk/ (and possibly the other doubled stops) which have become final and hence shortened. However, in no Rhine Franconian text do such forms appear. In addition, a contrast single vs.

double appears to be merely allophonic in four other instances, viz.:

(a) Intervocalic /kk/ appears in two morphemes (Hench I, p. 86): /θekk/- 'cover' and /wekk/- 'wake', where it is variously written <cch> twice, <ch> twice, and <hh> 5 times, an indication that it was somehow different from /k/ which otherwise does not occur intervocalically.

(b) Intervocalically after long vowels, we find <f>, after short vowels <ff>: <chiscuofi>:<chiscaffan>, pret. subj. 3 sg. and past part. of 'create'.

(c) Intervocalically after long vowels, <z> is written; after short vowels <tz> occurs: <liuzil> 'little': <sitzit> 'sits'.

(d) Intervocalically we find <zss>; finally after vowels <zs> occurs: <uuazssar> 'water': <huuazs> 'what'.

Where, for historical and comparative reasons, we should expect to find the geminate of /v/, the text has <pf>.[1] Of the remaining consonants, /p/ does not occur doubled in our text. Significantly, (t) and /d/ share one doublet, variously <tt>, <td>, e.g. <mitteru> 'middle' or <bitdande> 'asking'.

1.5. Limited contrasts. (a) Because long consonants are confined to intervocalic position, it is only here that they contrast with the corresponding short consonants.[2] (b) /v/ contrasts with /f(f)/ only intervocalically, as will be shown in 1.9b. (c) <t> contrasts with /d/ only,

if at all,when initial before /r/ (Penzl M, §3, p. 355 and §9.1, p. 359): <chi-teda>, <deta>, <deda> 'did'.

1.6. Phoneme distribution. As noted above, our document is of insufficient length to provide contrasting minimal pairs in more than a few instances. We must be satisfied with forms with analogous environments. More seriously, because of the brevity of the text, some phonemic environments do not occur at all and it has been necessary to take forms from other documents or to reconstruct them on the basis of comparative evidence. Where this has been done, the source is cited in footnotes.

(a) Word- and morpheme-initial position.

	CV-	Cw-	Cr-	Cl-	Cn-
/k/	chalp /kalB/	quhalm /kwalm/	chraft /krafT/	(klaga)[1] */klaga/	chnehte /knehTe/
/g/	ganc /ganG/		grab /graB/	(glat)[1] */glaD/	*gnuoc[2] /gnuoK/
/h/	halp /halB/	huuelih /hweliih/	hruoft /hruofT/	hluda /hluuda/	hneige /hneige/
/t/	Ø	Ø	triuuua /driuwwa/		
/d/	dohter /dohTer/	(katuualota)[3] /gidwaaloda/	dribit /dribiD/		
/θ/	dhoh /θoh/	chi-dhuuingu /giθwingu/	dhrii /θrii/		
/ȼ/	za /ȼa/	un-zuuiflo /unȼwiiflo/	Ø		
/s/	so /so/	suuor /swuor/		ar-sluoc /arsluok/	dhuruh-snuoh /θuruhsnuoh/
/p/	(pendinc)[3] */pendinG/		predigon[4] /predigon/	(pluag)[1] */pluoK/	

/b/	beremes /beremes/	chi-breuido /gibrevido/	bluchisoe /bluugisoe/
/f/	bi-fenc /bifenG/	freuuui /freuwwi/	flugun /flugun/

[Footnotes for Chart (a)]

[1]Otfrid. [2]Reconstructed preterite of */gnagen/ 'gnaw'. This cluster is rare in Old High German and in Germanic in general, secondary <gnada> in the Monsee Fragments from */ginaaθa/. [3]Monsee Fragments. [4]From Latin praedicare.

(b) Medial postconsonantal position.

	-rCV-	-lCV-	-NCV-	-fCV-	-hCV-
/k/	uuerchum /werkum/	folches /folkes/	(dranche)[1] /dranke/		
/g/	berga /berga/	folghet /folgeD/	strango /sTrango/		
/h/	(*)[2]	(*)[2]			
(t)	ø	ø	ø	after /afTer/	dohter /dohTer/
/d/	ardon /ardon/	haldan /haldan/	endi /endi/	ø	ø
/ɛ/	erdha /erɛa/	(sculdhi)[3] */sKulθi/	iugundhi /jugunθi/	ø	ø
/ȼ/	uurza /wurȼa/	(holce)[4] /holȼe/	sibunzo /sibunȼo/	ø	ø
/s/	(uuirsirun)[5] /wirsirun/	(also)[6] /also/	chidhinsit /giθinsiD/	*lefse[7] /lefse/	sehse /sehse/
/p/	aruuorpanan /arworpanan/	hilpit /hilpiD/	(ardempant)[5] /ardempanD/		
/b/	arsterbandemu /arsTerbandemu/	selbe /selbe/	lambu /lambu/		

/f/ huuerfandi (uuolua)[8] (fimfi)[5]
/hwerfandi/*/wolfa/ /fimfi/

[Footnotes for Chart (b)]

[1]Mainz Confession. [2]*-rh(-) and *-lh(-) have developed a prothetic vowel between the resonant and the /h/, e.g. <forahta>, 'fear', <dhuruh>, 'through'. [3]Weissenburg Catechism. [4]Lorsch Bee Charm. [5]Monsee Fragments. [6]Cantica Fragment. [7]Reconstructed forms, MHG lefse and OE wlisp. [8]Otfrid.

(c) Intervocalic position.

/k/	Ø		/kk/	dhecchidon, aruuechu /θekkidon/ /arwekku/
/g/	flugun, augom /flugun/ /augom/	:	/gg/	hrucca, duacgal /hrugga/ /dauggal/
/h/	aboho, infahu /aboho/ /infaahu/	:	/hh/	boohho, sahha /boohho/ /sahha/
/d/	deta, deda; bidande /deda/ /biidande/	:	/dd/	dhritto, bitdande /θriddo/ /biddande/
/θ/	uuidhar, heidheno /wiθar/ /heiθeno/	:	/θθ/	fethdhahha /feθθahha/
/ȼ/	liuzelu /liuȼelu/	-	/(t)ȼ/	setzu /se(t)ȼu/
/ß/	Ø		/ßß/	chiheizssit, chiuusizsses /çiheißßiD/ /çiwißßes/
/s/	uuesan, dhese, uuisi /wesan/ /θese/ /wiisi/	:	/ss/	dhesses, chiuuisso /θesses/ /çiwisso/
/p/	Ø		/pp/	(drophon),[1] (aphuon)[1,2] /droppon/ /appilon/[2]
/b/	dribit, scribun /dribiD/ /sKribun/	:	/bb/	(crippon),[1] sipbea /kribbon/ /sibbe(j)a/
/f/	chiscuofi, hreofun /çisKuofi/ /hreofun/	-	/f(f)/	scheffidhes, chiscaffan /sKeffiθes/ /çisKaffan/

/v/ arheuit, zuuiuun /arheviD/ /ȼwiivun/	:	/vv/ hepfu, ubarhepfendi /hevvu/ /ubarhevvendi/

[Footnotes for Chart (c)]

[1]Cantica Fragment. [2]The text shows <aphuon>, which Steinmeyer (39, p. 303) and others emend to <aphilon> /appilon/.

(d) Morpheme- and syllable-final position.

	-VC	-rC	-lC	-NC	-FC
/k/	Ø or (quek)[1] /kweK/	(uuerc)[2] /werK/	folc /folK/	chidhanc /giθanK/	
/g/	mac /maG/	burc /burG/	(irbalg)[1] */arbalG/	fenc /fenG/	
/h/	noh	(*)[3]	(*)[3]	(*)[3]	
(t)/d/	got /goD/	uuort /worD/	uueralt /weralD/	fyrstant /firsTanD/	chiscaft /gisKafT/ rehd /rehT/
/θ/	dodh /dooθ/	uuardh /warθ/	(golth)[4] /golθ/	chindh /kinθ/	Ø
/ȼ/	dhiz /θdiȼ/	(kurz)[1] /kurȼ/	(salz)[1] /salȼ/	(ganz)[1] /ganȼ/	Ø
/ß/	dhasz	Ø	Ø	Ø	
/s/	dhes /θes/	(uuirs)[1] /wirs/	(hals)[1] /hals/	ardhans /arθans/	? -/fs/ sehs /sehs/
/p/	Ø or uph /uup/	*aruuarp(h)[5] /arwarP/	(hilph)[6] /hilI/	*chilamp(h)[5] /gilamI/	
/b/	chiscrip /giskriB/	(irstarp)[1] */arstarB/	halp /halB/	(lamp)[1] /lamB/	
/f/	lantscaf /landskaf/	(tharf)[1] /θarf/	uuolf /wolf/	fimfzuc /fimfȼuG/	

[Footnotes for Chart (d)]

[1]Otfrid. [2]Cantica Fragment. [3]See footnote 2 for chart (b). [4]Monsee Fragments. [5]Reconstructed from <aruuorpanan> and *(gi)limp(h)an. [6]Lay of Ludwig.

1.7. Phonetic identification and description of the velar phones by position. The velar phonemes are /k/, /g/, /h/ and their geminates.

(a) /k/ contrasts with /g/ except when pretonic-initial, intervocalic, after /s/, or final after a vowel. It is consistently written <ch> everywhere except before /w/, where it appears as <q-h>. One may not assume merely from the presence of <h> in these digraphs thay they indicate an aspirate. Thus, /g/ is sometimes written with <ch>. Other stops (and even fricatives) are also spelled with graph plus <h>, where it is clear that they are not aspirated (e.g. Hench I, p. 87). However, /k/ was almost certainly aspirated initially, in gemination,[3] and probably as well in internal postconsonantal syllable-initial position, although here perhaps more weakly. In this instance,then, the <h> may have been intended to show aspiration, especially in view of the fact that the inventor of the orthography added <h> in the combination <quh>/kw/, a combination peculiar to the Paris MS. <ch> for /k/ has a long history in Merovingian orthographies.[4] Both Romanic and Germanic speakers must have noticed the difference between <c> = unaspirated [k] and Germanic <ch> = [k^h]. Otfrid himself comments on this difference (2.4). All modern Rhine Franconian dialects that preserve a distinction between the stops /k/ and /g/ have fortis [k^h] (Keller, pp. 172 and 175, §14.8 and 14.10 for Rhine

Franconian; pp. 264 and 265, §12.1 and 14.1, 2, and 3 for Central Franconian). /k/, then, appears to have been a fortis aspirated voiceless velar stop. Examples for /k/ in the orthography of our text are: <chalp>/kalβ/ 'calf', <chneht>/knehD/ 'boy', <chrumba>/krumba/ 'crooked', <uuerches>/werkes/ 'of work', <folches>/folkes/ 'of a people'.

(b) /g/, where it contrasts with /k/, is usually written <gh> before front vowels, as in <gheba>/geba/ 'gift', <anghila>/angila/ 'angels', <aughidom>/augidom/ 'showed', and as <g> elsewhere, e.g. <ganc>/ganG/ 'course', <grab>/graB/ 'grave', <sungun>/sungun/ 'sang' (Hench I, p. 87). Doubled it is written once <cc> (<hrucca>/hrugga/ 'back') and once <cg> (<daucgal>/dauggal/ 'secret'). This is an orthographic indication of voiceless stop pronunciation. This interpretation is supported by the reflexes of /gg/ in all modern High German dialects, including Central Franconian. The fact that /kk/ contrasted with /gg/ indicates that /gg/ was unaspirated. That /gg/ later coalesced with /kk/ in all High German dialects in which /k/ was not an affricate, indicates that /gg/ was not only voiceless but fortis as well. Long consonants appear to have been fortis generally in Old High German as well as in later stages of the language. Even in the dialects where /kk/ was an affricate, /gg/ also became an affricate sporadically (Lessiak, p. 16). /gg/ was, then a long fortis

or half-fortis unaspirated voiceless velar stop: [kk] or [kg][5].

Examples for /kk/ are (1.4a): <dhecchidon>/θekkidon/ 'covered', <antdhecchidero>/andθekkidero/ 'revealed', <aruuechu>/arwekku/ 'I wake', and from the Monsee Fragments: <acchar>/akkar/ 'field', etc. /kk/ would appear to have been a long fortis aspirated voiceless velar stop: [kk^h]. The grapheme <cch> itself lends support to this description.

The phonetic values of /g/ in all other environments also appear to be quite clear. First, Isidor uses the Romanic allograph <gh>, which (in Romanic) was used to indicate stop pronunciation in contrast with an affricate or fricative value before front vowels.[6] Stop pronunciation of /g/ in Isidor is also supported by the fact that in positions where /g/ does not contrast with /k/, the digraph <ch>, elsewhere indicating /k/, appears sporadically for /g/.[7] In pretonic initial position, the perfective prefix /gi/ is spelled <chi> 278 times, only once <ghi>. (Germanic apparently does not possess a prefix or proclitic with initial /k/.) Intervocalically, we have one occurrence, viz. <bluchisoe>/bluugisoe/ 'let doubt'. In final position there are the 5 occurrences of <einich>/einiK/ 'any', elsewhere always <einic>.[8]

Secondly, morphemes containing <g> in other environments are consistently spelled with <c> (<einic>, <ganc>) when /g/ occurs in final position. This, together with the

fact that postconsonantal final /k/ is also written with <c>, would indicate voiceless stop pronunciation of /g/ in final position, at least.

Thirdly, in those modern Rhine Franconian dialects that appear to be the most conservative (Lessiak, pp. 134-42), /g/ also retains stop pronunciation in final position,[9] as well as in initial position and in the reflexes of /gg/.

Fourthly, there is no orthographic confusion in Isidor between /g/ and /j/ on one hand or among /g/, /hh/, and /h/ on the other (although there is such confusion between /kk/ and /hh/, Hench I, p. 86).

Fifthly, the Latin loan word praedicare 'preach' is spelled once with <c> and twice with <g>, perhaps indicating as well that /g/, intervocalically at least, was lenis as well as stopped. (Hench ascribes the <g>-spelling to Romanic influence.)

In addition, in initial and final position and when doubled, /g/ was voiceless. This is indicated in part by the spellings in our text cited above and in part by the fact that in those same environments all modern Rhine Franconian dialects pronounce /g/ as a voiceless lenis stop (Keller, p. 174, §14.3, etc.; also footnote 8, Lessiak, p. 131, Martin, L., p. 11, and Bauer, p. 7). Lenis pronunciation does not, as we have seen, apply to /gg/ in Isidor. Initially, /g/ was certainly more lenis that /k/.

Medially, modern Rhine Franconian has various fricatives. The most original pattern would appear to be with [j] after

resonants and front vowels and [w] after back vowels (Keller, p. 175, §14.7ii and his footnote). This development indicates both further lenition and voicing in voiced environments, processes which have affected /k/ and /h/ as well. Whether medial /g/ in Isidor was more lenis or had more (non-significant) voicing in voiced surroundings, we have no way of knowing. There is no indication of such lenition or voicing in the orthography, nor do the Monsee Fragments throw any light on the matter. Certainly this lenition and voicing began in Rhine Franconian at some quite early time. Thus, /g/ appears to have been, except when doubled or final, a voiceless lenis unaspirated velar stop, viz. [g].

(c)Postconsonantally in final position, the orthography shows a lack of contrast between /g/ and /k/. (It is to be remembered that /k/ does not occur postvocalically in final position in our texts.) Both are written <c>, e.g. <chidhanc> /giθanK/ 'thought', <folc>/folK/ 'people' from /k/ and <ganc> /ganG/ 'course', <burc>/burG/ 'fortress' from /g/. In modern Rhine Franconian there is also no contrast in this position, except that /ng/ has become [ŋ], while /nk/ has not. This is probably a secondary development from forms with internal /ng/ (1.11a, chart footnote 2). With that exception, a voiceless lenis unaspirated velar stop occurs (Keller, p. 174, §14.3(i), (ii), and (iii); p. 175, §14.10). In Isidor, this sound must have been a voiceless unaspirated

velar stop, but that it was lenis appears questionable because /g/ survives as a stop finally after vowels as well; that is, it does not become a fricative, as it does medially.

After /s/ also, only one sound occurs; it is written <sch> before front vowels as a rule,[10] <sc> elsewhere. The use of this Romanic device to show pronunciation indicates that the change of /sk/ to /š/ had not yet taken place. On the other hand, the use of <sc> and <sch> parallels that of <g>, <gh>, and <c>, which would indicate the occurrence of /g/ rather than /k/. In view of later developments in German and of data from other Germanic languages, it appears best to describe the sound as a voiceless unaspirated lenis velar stop (Braune-M, §146). Examples of /sK/ are: <scal>/sKal/ 'shall', <himilisca>/himilisKa/ 'heavenly', <fleisc>/fleisK/ 'flesh'; <scheffidhes>/sKeffiθes/ 'creator's', <himilischin> /himilisKin/ 'heavenly', <fleisches> /fleisKes/ 'of the flesh'.

(d) Initial and intervocalic /h/, it is generally agreed, was already in Isidor a voiceless glottal fricative [h] (Braune-M, §151.4A and §152; Hench I, p. 89). The exact phonetic makeup of the sounds reflected by the graphemes <hl>, <hr>, <hn>, and <huu> is obscure. Whether they were voiceless resonants or clusters of [h] or even [χ] plus resonant we cannot say. Isidor is the last Rhine

Franconian document to indicate these sounds consistently. Out of 101 occurrences,<h> is left out only twice and written incorrectly once (Hench I, p. 89). Intervocalic <h> is left out only once but appears elsewhere in the same word: <spaida> vs. <spahida>. This would indicate that the sounds in question still existed in this dialect and that these spellings were not simply part of an orthographic tradition.

Final postvocalic /h/ was most probably a voiceless fortis velar fricative [χ], as it still is today.

/h/ does not occur in original postresonant medial or final position in any Franconian document. All Franconian dialects show a prothetic vowel before the /h/. In Isidor we have only two examples of /h/ in postresonant medial position: <forahtun> 'fears' and <berahtnissi> 'brightness'. The morpheme /bi-fElVh/- <*/bifElh/- appears once in the Monsee Fragments as <bifalah> 'commended'. It is the only occurrence of a reflex of *-Rh(-) in our Rhine Franconian documents. However, in the South Rhine Franconian of Otfrid and the East Franconian Tatian, this morpheme occurs in internal position in various forms: <bifiluhu> Otfrid and Tatian, <bifellahanne>, <bifilihit>, <bifuluhun> Tatian. After /r/, one finds again in Otfrid and Tatian the morpheme <ferah> <*/ferh/ 'life' which recurs medially in Tatian as <ferahe>. In the East Franconian Salic Law there occurs a similar but distinct morpheme, <farah> <*/farh/ 'pig'. Thus, medial and final /h/ were always postvocalic in these dialects.

Phonetically, the reflexes of postconsonantal medial and final /h/ are now indistinguishable from original intervocalic and postvocalic final /h/ and follow the pattern: syllable-initial /h/ is the glottal fricative [h]; syllable-final /h/ is the velar fricative [χ].

Whether there was any tendency toward voicing in intervocalic position is impossible to say. There is no orthographic indication of it here. Later Rhine Franconian documents appear to show it. Examples for /h/ from Isidor are: <hoho>/hooho/ 'high', <hreuun>/hreuwun/ 'rue', <huuer>/hwer/ 'who', <dheoh>/θeoh/ 'thigh'.

It appears uncontroversial that <hh> indicated a long fortis voiceless velar fricative [χχ] (Braune-M, §145; Hench I, p. 86). Examples are <boohho>/boohho/ 'of books', <firbrihhu>/firbrihhu/ 'I shatter', <mihhil>/mihhil/ 'much. Its modern reflexes are still fortis, but in some instances they are no longer velar and they are never long.

(e) Of the velars, only /h/ occurs historically before /s/ in the same morpheme. In Isidor and the Monsee Fragments we find three (possibly four) different spellings for historical /hs/: twice <hs> as in <sehs>, twice <xs> as in <uuexsal>, once <xss> in <oxsso>, and once <ss> in <foluuassan> (Hench I, p. 89). If this reflects Latin influence, it is peculiar that <hs> occurs twice in the word which most resembles Latin, i.e. <sehs>, <sehse> 'six', Latin sex. This does not represent the general Old High

German loss of /h/ before /s/ plus consonant, because in the one occurrence of this environment we have <uuaxsmin> 'fruit'. The doubled <s> of <oxsso> 'ox' is probably a scribal error, as may also be the supposed loss of <h> in <foluuassan> for *<foluuahsan> 'full-grown'. This last morpheme /wAhs/ - 'wax, grow' occurs five times in the Monsee Fragments (Hench M, p. 204), in which it is spelled twice <hs>, twice <xs>, and once <x>. Nowhere is the /h/ lost. The supposed loss of /h/ before /s/ has been described as being imported from farther north or as mirroring a sporadic Rhine Franconian development of /hs/, which is assumed to be the actual phonetic reality that is obscured by traditional spellings in the other examples (Braune-M, §154, A5). At any rate, it is impossible to know whether we have in Isidor [χs], the historical form from which the later and more modern form [gs] derives, or [hs] with later voicing and complete loss of /h/ with compensatory lengthening of /s/. This latter development is found sporadically in Franconian, especially in place names. Inasmuch as I am here interested in the older conditions, I shall proceed from [χs].

1.8. The dental phones. The dental phonemes are /ȶ/, /d/, /θ/, /ß/, /s/, and their geminates.

(a) In spite of the three symbols <t>, <d>, and <dh> that our text uses, it appears clear that allophones of only two phonemes are involved. The difficulties in

phonetic identification are two. First, whereas morphemes with original Germanic */d/ are variously spelled in most environments with <t> or <d>, those morphemes which contain original (unshifted) */t/ show <t> with remarkable consistency (four final <hd>'s appear in <rehd> and <uuihd>). The use of <t> in the clusters <st>, <ft>, and <ht> is probably to be explained in terms of Latin, Romanic and hence Old High German orthographic tradition. The position after these fricatives is also a point of no contrast. Thus after /s/ only one obstruent per order appears; after /f/ and /h/, only a dental stop or /s/ appears.

<t> appears doubled after /h/ twice in <rehttunga> 'justice', the only occurrence of the word. That this indicates, as so often stated, a real long consonant 'durch Verschiebung der Silbengrenze' seems unlikely (Hench 1, pp. 79 and 80; Braune-M, §161, A5). This would be the only instance of such a postconsonantal long consonant in our text or, for that matter, in Old High German in general. Here <tt> cannot be interpreted simply as a fortis. Voiceless stops following voiceless fricatives remained unshifted in both Germanic and High German supposedly because they were here both lenis and unaspirated, and still are in all modern Germanic languages. In one occurrence of <rehttunga> in our text, the line-break comes between the <t>'s (<reht tunga>), and in the other there is a space left between (<reht tunga>). This may well indicate that the scribe

paused and upon returning to work, simply gave the second syllable its initial consonant by rewriting the <t>. Other occurrences of the morpheme, /rehT/ 'right', show <t> or <d>: <reht> or <rehd>. Hence it is best to interpret <t> here as an allograph (and/or allophone) of /d/ occurring after fricatives. The interpretation is supported by the fact that -<hd> occurs in absolute final position 4 times, viz. twice in <rehd>/rehT/ and twice in <uuihd>/wihT/ 'wight, thing'. Later Rhine Franconian documents show a great increase in the spellings <sd>, <fd>, and <hd> as well as <sb> for /sP/ and <sg> for /sK/ (Braune-M, §161, A.3). No modern Rhine Franconian dialect distinguishes more than one dental stop in native words, including those containing reflexes of */θ/ (Keller, p. 164, §2.4(2) and (9); pp. 174 and 175, §14.2 and 14.9).

The interpretation of the cluster <tr> is another matter. Unshifted <tr> occurs only four times in three morphemes: <triuuu>- 'faithful' (occurring twice), <eitar> 'poison', and <hluttror> 'purer'. It is generally assumed that medial /r/, directly following /t/, not only prevented it from shifting but caused it to geminate as well. The geminates, it is traditionally stated, were then shortened again after long syllables (Braune-M, §161). This appears to have been the case with <eitar>. It is, at least graphically, indistinguishable from the <t> <*/d/ in <fater>, <muoter>. <hluttror>, we know, also contained

a long stem vowel, although this particular text does not show it. Thus one may assign /d/ to both words, or /dd/ (as in <dhritto>/θriddo/ 'third' to <hluttror>. No third phoneme is necessary. With <hluttror>, we must hold the orthography suspect. In the MS, there is a space left between the two <t>'s: <hlut tror>, as in <reht tunga>. In order to support my earlier statement (1.4) that long consonants appear only intervocalically, one must make one of two assumptions. First, it is quite possible that one of the <t>'s is superfluous. The scribe may have paused after writing <hlut- and, upon returning to work, may have written -tror>, though he should have written *<hluutror>/hluudror/. The single <t> would agree with <eitar>, with shortened long consonant after long vowel. Secondly, the scribe may have written the second <t> instead of the expected prothetic vowel from */hluudar/, viz. *<hluut(a)ror>/hluudaror/, or he may simply have left out the vowel of *<hluuttaror>/hluuddaror/.

Initial <tr> in <triuuu-$^{a}_{i}$> is more difficult to assign. In Isidor, unlike other Old High German texts, no original initial */dr/ is written with <tr>. However, there are only two examples of initial <tr> from */tr/. Although on the basis of the text alone we might set up a phoneme /t/, such a unit would have an almost incredibly limited distribution, i.e. initially before /r/ and here only. Initially, this <t> cannot have been a fortis

geminate, as has been proposed for <t> in medial position. It also cannot have been aspirated because it would have shifted. Because it was not originally aspirated,[11] it also was probably not fortis (although, if it did still contrast with /d/ here, this is how one would have to distinguish it from lenis initial /d/). Hence, it must have coincided before the shift with original */d/ in all phonetic components except voice, as it did also in the clusters /sT/, /fT/, and /hT/. The South Germanic gemination before /r/ supports the hypothesis concerning the time of the change, viz. the pre-Old High German period or even earlier. Inasmuch as the component of voice as a phonemic criterion was almost certainly abandoned during the High German shift, it is difficult to imagine how initial <tr> and <dr> could have differed phonetically.[12] Certainly, in all later Rhine Franconian dialects, such a contrast does not exist.[13] The use of the symbols <dh> and, intervocalically, of <u> < */f/ would appear to indicate that a certain amount of lenition had already taken place elsewhere in the dialect of Isidor.

(b) The graphs <t>, <d> and <dh> are employed to render the two phonemes /d/ and /θ/. One is faced with the ambiguous status of the graph <d>, which may represent /d/ or /θ/. In contemporary Romanic orthography, <d> was used to indicate a voiced dental stop, and, intervocalically, a voiced dental (or interdental) fricative, both being

positional variants of the same phoneme /d/.[14] In German, however, these were separate phonemes. Romanic orthographic tradition is probably in part the source of the spelling <d> for /θ/, at least intervocalically, if not everywhere medially (For complete listings of spellings, Hench I, pp. 81-2). In part also, one can ascribe some of the seeming confusion in Isidor to simple haste. In the MS <d> has been corrected to <dh> three times by the addition of <h> above the line. It is significant that there is only one instance of <d> for <dh> out of approximately 770 occurrences in initial position, whereas in other environments, the confusion with <d> often exceeds 50 per cent. Furthermore, <t> occurs once in initial position for <d> in <chiteda> /gideda/ 'did'. Initial <d> in Romanic never indicated [ð], except perhaps in sentence sandhi with unaccented words following a vowel.

On the other hand, we also have a great deal of morphophonemic alternation caused by the action of Verner's Law, according to which /θ/ does alternate with /d/. It is exactly these morphemes which account for the majority of fluctuations between <dh> and <d> in our text, especially in the morphemes /wErθ~d/- 'become, /kwEθ~d/- 'speak', as also in /dooθ~d/- 'death', /ȼiiθ~d/- 'time', /kinθ~d/- 'child', /aaθ~dm/- 'breathe', 'breath'. (Braune-M, §163, A.6; §167, A.4 and A.7).

Here, as in once-occurring morphemes which one would

expect from comparative evidence to contain <dh> /θ/ or to show Verner's morphophonemic alternation, one cannot be sure, when one finds <d>, whether one has to do with a leveling out of this alternation. In Isidor this is sometimes unique for Old High German, as in <ziidh> 'time', and <adhmuot> 'blows, breathes', <findis> 'findest', and <bifant> 'found out' for expected *<findhis> and *<bifand(h)> from South Germanic */fInθ~d/- 'find' (Braune-M, §336, A.2). It cannot be known whether it is a question simply of scribal laxity, as appears to be the case with the noun-formant morpheme -/i~oθ/-, e.g. usually -<idh> (as in <freuuuidha> 'joy'), but -<id> or -<od> occur about 5 times (as in <chiuualdidu> 'power', <uuizssodes> 'testament'). It is uncertain, furthermore, whether the two orthographic systems were unconsciously interchanged in the heat of the moment, i.e. Isidor's and the Romanic system, in which latter noninitial <d> could represent [ð] as well as [d], e.g. <ablide> 'downfall', <bilidun> 'examples', or <magad> 'virgin'.

From the text alone, inasmuch as all occurrences of /d/ in final position are written <t> (Hench I, p. 81), one could state that all occurrences of <d> as well as <dh> in final position represent /θ/, including <quhad> and <uuard>. To state that this <d> may be analogical with internal spellings is to ignore Isidor's apparent

rule, otherwise almost perfectly carried through, of showing Auslautsverhärtung with a change of symbol. The six examples of <b> in final position are the only exceptions in the entire text (1.9). And finally, one cannot be sure whether in some instances an actual phonemic merger of /θ/ and /d/ had taken place in certain environments, as is often stated for position following /l/ and /n/ (Hench I, pp. 81-2; Braune-M, §167, A 4).

/d/ in the final position is written with <t> 136 times, e.g. <beit> 'expected', <got> 'God'; with <d> once: <firstand> 'reason, understanding'. Hench (I, p. 41) explains this last spelling as a misunderstanding on the part of the scribe, *<firstant endi chidhanc> 'reason and thought' being taken to represent <firstandendi chidhanc> 'understanding thought'. Final /d/ is written once with <th> in <ithniuuues>/idniuwes/ 'again', which is parallel with the spellings of <ch>, for /g/ already noted in 1.7 and those with <ph> for /b/ as well (1.9b). All three spellings ... <d>, <t> and <th> ... were theoretically possible in this position of no contrast. The almost exclusive use of <t> in 136 of 138 instances would appear to indicate fortis or semi-fortis allophones of /d/ in final position for this otherwise lenis dental stop.

On the basis of this admittedly incomplete evidence, it would appear that /d/ was an unaspirated dental stop

that was both voiceless and lenis in most environments. It is still voiceless in all modern Rhine Franconian dialects (Keller, p. 164, 2.4(1)). This interpretation is likewise supported by the fact that in our text we find the greatest proportion of <t> for <d> exactly in the environment of greatest voice, viz. in intervocalic position (Hench I, p. 80). Possibly the frequent use of <t> in this position was intended to distinguish stop pronunciation, but at any rate voice does not seem to have been phonemic. /d/ is also lenis in modern Rhine Franconian dialects (Keller, p. 164, §2.4(1)). Whether the various spellings with <t>, especially in final position, indicate strengthening toward fortis articulation is difficult to determine. The four spellings with final <hd> would appear to speak against this, but we must assume some allophonic variation in intensity according to environment. A postulation of fortis or half-fortis articulation in final position would agree with what we have seen with the velars and with the 136 spellings with final <t> (Hench I, p. 81). As already observed, the spellings in the clusters <st>, <ft>, and <ht> are probably due to Latin orthographic tradition and probably do not represent a phonological distinction between original */t/ and */d/. The dental stop in these clusters was almost certainly lenis as well as voiceless and unaspirated, as it still is in all modern Germanic languages.

/θ/, where contrasting with /d/, appears to have been a voiceless, lenis dental (or interdental) fricative. The choice of the graph <d> in the digraph <dh> suggests lenition rather than voicing. How much nonsignificant voicing was present in the various environments of /θ/ is impossible to say. However, to call /θ/ a voiced sound, as is done in many handbooks (e.g. Braune-M, §166 and Hench I, p. 81), would be to make it the only voiced obstruent in High German. It is probably the general European and even modern Standard German (i.e. non-High German) phonetic value of the graph <d> which has led to its being described as representing a voiced sound in Old High German as well. Yet it is still usually spelled <th> even in later documents (Braune-M, §166). After /n/ and /l/ in final position, original /θ/ appears as <t> 3 times in Isidor. This would apparently indicate stop pronunciation. Two of these occurrences, however, appear in morphemes which are subject to morphophonemic alternation, viz. <dhuruhchunt> 'manifest', <unchunt> 'unknown' and <bifant> 'found out'. Both -<chunt> and -<fant> appear in other environments with <d> (Hench I, p. 82). They may show reflexes of */d/ rather than of */θ/. In <baltliihho> 'boldly', however, stop pronunciation of this reflex of */θ/ does indeed appear to be indicated, although some of the foregoing interpretations may also apply here. Other later documents appear to show /θ/ still distinct from /d/ after /l/ and /n/.

(c) /ȼ/. /ȼ/ occurs in all environments except in postconsonantal medial and final positions after obstruents. There is no reason to assume that its phonetic value was much different from that of its modern reflex, viz. a dental affricate consisting of a voiceless dental stop ... lenis everywhere except perhaps intervocalically after short vowels ... followed by a voiceless grooved fricative release. A real phonetic distinction between /ȼ/ intervocalically after long and short vowels appears to be mirrored by the orthography of our text, e.g. in 5 occurrences of <setz>- and 4 of <sitz>- as against 3 of <liuz>- and one of <lyuz>- (Hench I, p. 80). The traditional interpretation is that, because intervocalic /ȼ/ derives from *-/tt/-, the Old High German reflex was everywhere [tt^{β}] with the stop element doubled; and that in the course of time [tt^{β}] became shortened to [t^{β}] after long vowels or diphthongs but remained after short vowels (Braune-M, §159, A 3). It appears likely that when fortis aspirated */t/ became the affricate /ȼ/, the energy of articulation was transferred in part to the sibilant release, causing the stop element to become lenis [$\underset{o}{d}^{\beta}$], as it still is today. In intervocalic position, then, the reflex of *-/tt/- would first have been [$\underline{t}\underset{o}{d}^{\beta}$] everywhere, later being reduced to [$\underset{o}{d}^{\beta}$] after long syllabics. This interpretation agrees with what we have seen with some of the other long consonants, viz. fortis syllable closure plus lenis syllable

onset (<cg>[1.7], <td>, <thdh>[1.8], and <pb>[1.9]). The difference between [$\underset{o}{td}^{ß}$] and [$\underset{o}{d}^{ß}$] is demonstrably dependent upon the length of the preceding vowel. However, the writer of our text consistently distinguishes the two spellings in his orthography. Hence a phonemic distinction may have been involved. If so, it may have been simply phonemic vowel length or, more likely, phonemic syllable division that our writer intended to represent. At any rate, this distinction is also included here in phonemic transcription (as also with <f(f)>), e.g., /liu¢il/ : /sed¢u/.

The choice of the graph <z>, which had affricate value in contemporary Latin and Romanic orthographies, supports the interpretation of /¢/ as an affricate. Isidor is the only Old High German text which consistently shows a graphic distinction between the affricate and fricative reflexes of Germanic */t/. That is, the affricate is always indicated by <z> or <tz> and the fricative always by <zss> or <zs>. Examples for /¢/ are: <zala> /¢ala/, 'number', <zuuene> /¢weene/, 'two'; <liuzil> /liu¢il/, 'little', <setzu> /sed¢u/, 'I set'; <dhiz> /θi¢/, 'this'.

(d) /ß/ and /s/. It is in the phonetic description of these two phonemes that we encounter a problem that has plagued linguists for years. Until well into the Middle High German period, these two fricatives were kept strictly separate in writing, as they are in Isidor. /ß/ occurs only intervocalically and finally after vowels and contrasts

only here with /ss/ or /s/, e.g., intervocalically in <chiuuizsses> /giwißßes/ 'of knowledge' : <chiuuisso> /giwisso/ 'certainly' : <uuisi> /wiisi/ 'wise, manner'; in final position in <uuzs> /uuß/ 'out' : <huus> /huus/ 'house'. Except for two bound occurrences of the morpheme /uuß/, which usually appears unbound, viz. <uzsi> and <uzsonondi>[15], /ß/ appears as <zss> intervocalically and as <zs> finally after vowels. These orthographic devices are usually interpreted as reflecting a voiceless fortis dental fricative in final position and a long voiceless fortis dental fricative intervocalically (Braune-M, §160, A 2, and Hench I, p. 79). This again agrees with the principle that long consonants are restricted to intervocalic position, here and in Old High German generally. Compare the above-described distribution with that of intervocalic <hh> and final <h> (1.8). There is no indication in our orthography that /ßß/ or /hh/ was shortened after long vowels, whereas /dȼ/ and /ff/ exhibit shortening in this position, unless <uzsi>, <uzsonondi> could be interpreted as showing such shortening (footnote 19, for later vacillation between V<z> ~ VV<zz>, Braune-M, §160 and 2.6f).

/ss/, which was always intervocalic, was almost certainly fortis and voiceless, e.g. in <chiuuisso> /giwisso/ 'certainly', <dhesses> /θesses/ 'of this', etc. In our text /s/ also contrasts with /ß/ finally

after vowels, e.g. <uuas> /was/ 'was', <huues> /hwes/ 'whose' : <huuazs> /hwaß/ 'what'.

In all modern High German dialects, including Rhine Franconian, the intervocalic reflexes of /ss/ and /ßß/, like those of postvocalic final /s/ and /ß/, have merged completely, usually as fortis or semi-fortis [s] (Keller, p. 174, §14.5). In addition, the other allophones of /s/ have split into three separate phonemes: /š̆/, /s/, and /z/ (o). These have varying distribution in the various High German dialects. In general, modern Rhine Franconian agrees in the distribution of the reflexes of /s/ with that of Standard High German, i.e. [š] preconsonantally and after /r/ (Keller, p. 174, §14.6), lenis [s] or [z̆] before vowels, and fortis [s] elsewhere. Examples, all from original /s/, are: Stein /štain/, Schein /šain/, Sein /zain/; Liese /liize/, ließe /liise/; Kirsche /kirše/ . Hirse /hirze/; Hirsch (<*/ß/) /hirš/ . Hals /hals/, lies! /liis/.[16]

/ss/ and ßß/ ... and probably also -V/s/ and -V/ß/ ... can have contrasted only in manner or in place of articulation. The distinction cannot, as we have seen, have been dependent upon voice, intensity, or duration. In order to avoid idle speculation, I shall sum up the possibilities as briefly as possible.

(di) Manner of articulation. The new /ß/ may have been a slit fricative, not a grooved fricative or sibilant. It has been suggested that, as in the Proto-

Germanic consonant shift, the shifted */t/ may have been a dental or interdental slit fricative [θ]. The objection to this hypothesis is that the language already had a [θ] which shows, in its further development, a reflex altogether different from that of /ß/, viz. a dental stop in all of continental Germanic.

(dii) Place of articulation. /ß/, as well as /s/, may have been a grooved fricative, as are all its reflexes today. It is traditionally stated that /ß/ was more dental ([s]) and /s/ more palatal 'š-artig' ([ś]) (Braune-M, §168). Certainly the pre- and postconsonantal allophones of /s/, in view of their later development, may have had palatal articulation. The use of these Old High German graphs in the Old Slovene Freising Monuments indicates such differentiation. That is, Slavic /š/ and /ž/ are rendered with <s>, and Slavic /s/ and /z/ appear as <z> (Braune, W. 'Die altslovenische Freisinger Denkmäler' Beitr. 1, 527-34). Note that these documents, which were written by Old High German-speaking scribes, make no attempt to distinguish voiced from voiceless sounds. One assumes that the scribes were unable to hear the distinctions of voice. It is, however, difficult to ascribe palatal articulation to the pre- and postvocalic allophones of /s/, exactly where, in other words, it contrasted with /ß/.

There is much to be said for the hypothesis most recently advanced by Joos and Twaddell.[17] According to them, /ß/ and /ś/, as well as those allophones of pre-Old High German */t/ which were their source, were characterized by dorsal, i.e. lowered tongue-tip or blade articulation. The reflexes of */s/, on the other hand, supposedly 'retained' their apical or raised tongue-tip articulation. Thus, /ß/ = [s̲] and /s/ = [s̰]. (This is Joos' own transcription.) Certainly, the two different sibilant articulations are presently found in free variation in most western European languages. They are, however, phonemically distinct only in Basque. Some Slavic languages which have phonemic palatalization and some Indic languages which have a separate retroflex series of phonemes, also possess a similar opposition (Joos, p. 223).

In addition, Joos' analysis would better explain how /ß/ and /s/ could coalesce at a time when an /s̆/ : /s/ opposition was coming into existence. If /s/ was already [s̆] or [ś] and the new phoneme /s̆/ from /sK/ (and from other combinations of /s/ plus /C/[18]) was appearing, how could this /s/ = [s̆] reverse the trend and become [s] in some positions? Most phonetic realizations of [s] in the modern language appear to be apical (Joos, p. 223) and so support Joos' interpretation. Hence, for lack of a better hypothesis, I have followed Joos' analysis of the sibilants in the phonetic charts (1.11b and elsewhere).

Whether the prevocalic allophones of /s/ in Isidor already show signs of the lenition that is mirrored by the above-described phonemic split in the modern dialects would be difficult, if not impossible, to say. The orthography of our text certainly gives no indication of it, nor, for that matter, does modern German orthography. Already in the 14th century, however, the Dukus Horant, a Middle High German epic written in Hebrew characters, sharply distinguishes prevocalic from preconsonantal /s/, as well as from the third phoneme /s/ from /sK/. Unfortunately, by this time, /ßß/ and/ss/, as well as -/ß/ and -/s/, appear to have merged (Dukus Horant, pp. 45-48).

(e) The doubled consonants. The long dental consonants are: /dd/, /θθ/, /tȼ/, /ßß/ and /ss/, as in <dhritto> /θriddo/ 'third', <fethdhahha> /feθθahha/ 'wings', <setzan> /setȼan/ 'set', <chiuuizsses> /giwißßes/ 'of knowledge' <chiuuisso> /giwisso/ 'certainly'. The phonetic interpretations of these as long fortis voiceless dental obstruents appears to be uncontroversial. The graph sequences <td> and <thdh>, along with <cg> and <pb>, have been interpreted as indicating long consonants with fortis onset and lenis release, the first ending the preceding syllable, the second beginning the following syllable (Hench I, p. 81 and Paul, p. 129). Inasmuch as this interpretation appears to have been generally accepted and to offer a credible working hypothesis, I have

adopted it. If this phonetic interpretation of graphemes is correct, it may indicate an incipient medial lenition that is also characteristic of later Rhine Franconian ... one of the few such indications in our text. On the other hand, it may reflect, as is often stated, the simple phonetic reality of a long obstruent belonging to two contiguous syllables (Paul, p. 129 and Braune-M, §164, A 1).

1.9. The labial phones. The labial phonemes are: /p/, /b/, /f/, /v/, and their geminates.

So far, we have seen that the consonantism of our text agrees with modern Rhine Franconian dialects. There is no reason to believe that this close correspondence should suddenly stop with the labials. However, as carefully written as our text is, one encounters several problems arising from 3 sources: first, the paucity of forms containing reflexes of Germanic */p/, especially initial */p/; second, the interpretation of the digraphs <ph> and <pf>, e.g. <uph>, <screiph>, <hepfu>; and third, some seeming scribal errors, viz. <scaap>, <ubarhlaupnissi>.

(a) /p/ and /b/. One should expect here, as with the velars (and in part the dentals), a voiceless fortis aspirated bilabial stop and a voiceless lenis unaspirated one, contrasting initially and medially after resonants. Furthermore, one might look for a position of no contrast after /s/ and perhaps finally after resonants. Lastly, one might expect not to find /p/ intervocalically and in final

position after vowels. In part, at least, these expectations are fulfilled by the text: (i), in initial position, <pardu> /pardus/ 'leopard' :<chi-bar> -/bar/ 'bore'; <predigon> /predigon/ 'preach' : <chi-breuido> -/brevido/ 'shortened'; (ii), medially, after resonants, <hilpit> /hilpid/ 'helps' : <selbes> /selbes/ 'of self'; <aruuorpanan>/arworpanan/ 'thrown out' : <arsterbandemu> /arsterbandemu/ 'dying'; <tempel> /dempel/ 'temple' : <lambu> /lambu/ 'lamb' ; (iii), after /s/, <sprah> /sPrah/ 'spoke' <foraspel> /forasPel/ 'prophecy';)iv), intervocalically only <b> appears, <dribit> /driibid/ 'drives'.

Unfortunately, all examples of initial /p/ appear in Latin words, as does the postresonant medial /p/ in <tempel>. There are no examples of /p/ in final position, except for two <p>'s from Germanic */p/ after vowels where /f/ would be expected: <scaap> 'sheep', <ubarhlaupnissi> 'pride' for regular *<scaaf>, *<uberhlaufnissi>. These forms must either be regarded as scribal errors or be treated as contaminations of some kind. Hench appears to prefer to treat <scaap> as a 'Low Saxon form' (Hench I, p. 83). However, following Braune-M, I prefer to treat this apparently unshifted /p/ as another of Isidor's sporadic <pf>'s for /ff/ (Braune-M, §132, A 2 and §139, A 4). In our text, the context is <scaap fona> (<hepfu>, etc. for *<heffu>, 1.9c). <pf> cannot show bilabial as against labio-dental articulation because both Germanic

*/p/ and */f/ are involved. Hench's interpretation of <ubarhlaupnissi> is that this morpheme had been influenced by other morphemes containing Germanic */b/, e.g. <chilaupnissa> <*/laub/ (Hench I, p. 83 and Braune-M, §139, A 4). At any rate, these forms do not fit the phonemic pattern, and any interpretation that might be given to them would be arbitrary.

Whether there were tendencies toward non-significant voicing and/or lenition on the part of /b/ in voiced surroundings, especially in intervocalic position, we cannot know. Voicing and lenition in voiced environments have taken place in modern Rhine Franconian. Our text, however, shows no indication of it. It is exactly because /b/, /w/, /f/, and /v/ are all orthographically distinct that we know that Isidor represents Rhine Franconian and not Central Franconian.

In Isidor's lexicon, as we have seen in 1.7 and 1.8, final position after vowels is a position of no contrast for homorganic stops (also Penzl M, §9.1, p. 359). For this reason it has been assumed here that the writer of our text was free to choose among three different symbols for the single stop in each series. As already observed, final /g/ never appears as <g>; it appears as <ch> 5 times and as <c> 61 times. Final /d/ appears twice as <d>, once as <th>, and 136 times as <t>. For final /b/, <b> occurs 14 times, <ph> 4 times, and <p> 11 times. For two reasons, perhaps, the choice of expected <p> is not so statistically

overwhelming as in the other series: first, the general rarity (in our text, the non-existence) of forms with final postresonant /p/, with which /b/-forms might contrast, and, second, the fact that 9 of the 14 final <b>'s appear in the Latin loan form <ab>, and, hence, could have been influenced by the Latin spelling. <ab> is both a preposition and a prefix that is usually rendered elsewhere by <fona> (Hench I, pp. 84 and 117). The other 5 final <b>'s: <gab> 'gave', occurring 3 times, and <grab> 'grave', occurring twice, Hench explains as being derived from forms in which the morpheme was internal, e.g. <b> in <ghibu> 'I give', hence also <gab> 'gave' for expected *<gap> (Hench I, p. 84). This orthographic evidence is admittedly inconclusive, but it is exactly paralleled by the spellings of the dentals and velars. The modern dialects preserve /b/ in final position as a voiceless bilabial stop (Keller, §14.1, p. 174), a value which probably has survived from Old High German times. Its preservation as a stop may well reflect the tendency toward fortisness that has been observed in the other two lenis stops. Examples for final /b/ are: <hapta> /habda/ 'had', <chalp> /kalb/ 'calf', <selp> /selb/ 'self'; <screiph> /sKreib/ 'wrote' ; <grab> /grab/ 'grave'.

The natively rare /p/ must also be treated here, although we have very little evidence from Isidor or from any of the Old Rhine Franconian texts. What evidence we

have agrees only partially with the modern dialects (Keller, p. 175, §14.8). As much evidence as is available would appear to indicate that /p/ had three positional variants as well as a position of nonoccurrence. Initially it probably was a voiceless fortis aspirated bilabial stop [p^h] as also in modern Rhine Franconian, e.g. <portun> /pordun/ 'door', <pendinc> (from the Monsee Fragments) /pendinG/ 'penny'. Medially and finally after resonants, it may well have had the same value, e.g. <hilpit> /hilpid/ 'helps', <aruuorpanan> /arworpanan/ 'thrown out'; <hilph> (from the Lay of Ludwig) /hilp/ 'help'. It is to be noted, however, that modern Rhine Franconian has /f/ in these non-initial positions. When intervocalic, as also in modern Rhine Franconian, it was probably a long fortis [pp^h] from Germanic *-/pp/-, as in <drophon> (from the Cantica Fragment) /droppon/ 'drop'. Intervocalically and finally after vowels, /p/ does not occur.

(b) /f/, /ff/, and /v/. The labial fricatives are similar to the velars in distribution and origin. Their distribution is quite clear. As with /ȼ/ (1.8c), in accord with the apparently phonemic intent of the writer of Isidor, I write /ff/ after short vowels and /f/ after long vowels and diphthongs, although the phonemic contrast may not reside in the length of the consonant. Initially and finally, we find <f> only: initially, <fater> /fader/

'father', <fleisc> /fleisK/ 'flesh', <fraghet> /fraged/ 'asks'; in final position, <fimf> /fimf/ 'five', <uuolf> /wolf/ 'wolf', <lantscaf> /landsKaf/ 'landscape', <chiscuof> /gisKuof/ 'created'.

Intervocalically, we consistently find <ff> after short vowels: <lantscaffi> /landsKaffi/ 'landscape', <offono> 'openly', <offerunc> 'offering'; <f> after long vowels and diphthongs: <chiscuofi> /gisKuofi/ 'might have created', <slafis> /slaafis/ 'sleepest', <hreofun> 'they called'; and, in contrast, /v/: <auur> /avur/ 'but', <arheuit> /arhevid/ 'lifts', <hreue> /hreve/ 'womb' (dat.).

In postconsonantal medial position, a labial fricative occurs 4 times in the same morpheme after /r/, twice written <f>: <huuerfandi> /hwervandi/ 'turning', <chihuurfi> /gihwurvi/ 'might have turned', and twice written <u>: <chihuuoruan>, <chiuuoruan> /gihworvan/'turned' (this last is also the only instance of approximately 80 occurrences of <huu> where the <h> in /hw/ was omitted). The modern dialects are of little help here because everywhere medially, the reflexes of /w/, /b/, and /v/ have all coalesced as a voiced bilabial fricative [β], which indicates only that /v/ might have been lenis here as well as in intervocalic position (Keller, p. 176, §14.14). We must conclude that, because postconsonantal medial position was a position of no-contrast in this text, ...

/f/ from Germanic */p/ does not occur (1.8a) ... the writer was free to use either <u> or <f> here and did so.

Intervocalically, as we have seen, the two phonemes are kept strictly separate orthographically. A certain amount of lenition may also be ascribed to /v/ in the language of our text because of the choice of symbols and because it foreshadows later developments. Whether either, both, or neither phoneme had bilabial allophones is impossible to say. /b/, /f/, /v/, and /w/, where they contrast, are all kept orthographically distinct in our text.[19] The bilabial articulation of the reflexes of /v/ in modern Rhine Franconian seems to come rather from /b/ and /w/ with which /v/ has coalesced, than from any original bi-labiality of /v/ itself. That the <u>, which represents a voiced fricative in Romanic, also indicates voicing here, as Hench and others have stated, seems unlikely (Hench I, p. 84; Braune-M, §138, A 1; but Braune-M, §139, A 1). I must again assume the lenis : fortis : (length) distinction which pervades this whole phonology. Although some modern Rhine Franconian reflexes of obstruents show (non-significant) voicing, an opposition of voice : non-voice still does not exist.

(c) The long consonants. From comparative evidence, we should expect, in addition to /f(f)/ from Germanic *V/p/V, discussed in 1.9b, to find reflexes of Germanic *V/pp/V> *[pp^{h}], of Germanic *V/bb/V> [pb̥], and, finally, reflexes of Germanic *V/ff/V> */vv/.

There is one occurrence of one morpheme containing <pb>, <sipbea> /sibbe(j)a/ 'of the lineage', and because it agrees with the previous findings concerning long consonants cited, I analyze it as containing [p$\underset{o}{b}$], again with fortis syllable closure and lenis syllable onset (<cg>, 1.7b and 1.9a; <td>, <thdh>, 1.8e).

There are no examples at all of intervocalic Germanic */pp/. However, we do find two occurrences of <uph>, <uphstigan> in the text, and 4 more occurrences in the Monsee Fragments, all spelled <uph> (Hench M, p. 111, §4). This may represent [p^h] as the reflex of pre-Old High German */pp/ (thus Hench I, p. 83. Also Braune-M, §132, A 2 and §135, A 2 for further references). The digraph <ph> is ambiguous. It occurs in two words from Latin: <seraphin>, elsewhere written <syrafin>, and <propheta>. Here <ph> must represent [f]. However, <ph> also occurs 4 times elsewhere, 3 times in <bileiph> 'remained' (all on leaf 35) and once in <screiph> 'wrote'. These morphemes occur elsewhere, and more often, written with <b> and, in final position, with expected <p>, e.g. <chiscrip>/gisKrib/ 'scripture'. Final position after vowels is a position of no contrast for /p/ and /b/ as well as for /k/ and /g/ where we also find final /g/ written <ch> 5 times for expected <c> (1.7b and footnote 8). Here one must construe <ph> as representing an unaspirated (semi-fortis) voiceless bilabial stop [p']. <ph>, therefore, represents both [f] and [p].

In interpreting <uph>, then, there are two possibilities. First, one might interpret the form as /uuf/. This would agree with modern reflexes, but, as we have seen, Isidor is not in complete agreement with modern forms, viz. Germanic */p/ in postconsonantal medial position is /p/, not /f/. It would also be the only /f/ from */p/ to be written <ph> in the entire text.

Second, one could interpret <uph> as /uup/ [uup^h] from *[$uupp^h$], in which case it would correspond to our intervocalic /kk/[kk^h], shortened in final position. Hench prefers to interpret <uph> as still containing a long consonant (Hench I, p. 83), but this appears unlikely in view of general Old High German phonology which restricts long consonants to intervocalic position. I prefer to read /uuf/ for <uph> because it is the simplest and agrees best with later forms (but cf. <scaap>, <ubarhlaupnissi>, 1.9a and 3.6c for other instances of <ph> spellings).

In two occurrences of one morpheme where we expect the reflexes of Germanic */ff/, we find <pf>: <hepfu> 'I lift' and <ubarhepfendi> 'superior'. Latin /ff/ appears twice as <ff> in <offerunc> 'sacrifice', i.e. exactly like High German /ff/ from Germanic */p/. It appears that our translator intended to distinguish the two reflexes, but exactly what phonetic reality was to be represented is difficult to say. Compare, however, the rendering of two supposed contiguous /f/'s, one High German, the other

Germanic, in <scaap fona> (1.9a, Paul, p. 129, and Braune-M, §164, A 1).

If Rhine Franconian and Isidor had the affricate [p^f] from Germanic */p/- and */pp/-, one could interpret -<hepf>- as contaminations from verbs with /p^f/ from */pp/, as some linguists have done in spite of the fact that /p^f/ does not exist elsewhere in Rhine Franconian (thus Hench I, p. 85). On the other hand, some authorities have seen indications of bilabial articulation in this <pf> (Braune-M, §139, A.4). However, it seems unlikely that /ff/ from Indo-European */p/ should still have maintained bilabial articulation, while the /ff/ from Germanic */p/ should already have become labio-dental. This morpheme also shows morpho-phonemic alternation: <hepfu> 1st pers.sg., but <arheuit> 3rd pers.sg. Thus exactly how the rare /vv/ was distinguished from /ff/, if it was distinguished, remains a moot question. I have simply noted the possible existence of /vv/ : /ff/ in the chart.

1.10. Evidence from other texts. The texts to be investigated here are the Straßburg Oaths (Steinmeyer, §XV, pp. 82-4) from A.D. 842; the Lay of Ludwig (Steinmeyer, §XVI, pp. 85-8) from about A.D. 882; the Confession of Lorsch (Steinmeyer, §XLVI, pp. 323-6) from the 10th century; the Confession of Mainz (Steinmeyer, §XLIX, p. 329-31) from about A.D. 950; the Rhine Franconian Cantica Fragment (Steinmeyer, §XXXIX, pp. 301-4) from

the 10th or 11th century; and the Lorsch Bee Charm (Steinmeyer, §LXXVII, pp. 396-7) from the 9th century. These other Rhine Franconian texts of the Old High Period are much shorter than Isidor and from fifty to two hundred years later. In addition, none of them show the careful orthography of Isidor. Along with much other inconsistent orthographic usage, all six of our texts confuse the following phonemes orthographically: /k/ and /hh/ are both written with the digraph <ch>, e.g. in the Mainz Confession, <chirichun> /kirihhun/ 'church'; in the Cantica Fragment, <michillichi> /mihhillihhi/ 'many', etc. However, /k/ and /hh/ are mutually exclusive in distribution. Only /kk/, which occurs nowhere in Old Rhine Franconian documents outside Isidor, would contrast with /hh/. Hence this usage would appear to be almost legitimate.

/ȼ/ and /(ß)ß/ are confused in <z>, <zz>, and other digraphs, as is general in Old High German, e.g. in the Lorsch Bee Charm, <hucze> /uußße/ 'outside', <sizi> /sidȼi/ 'sit!' ; in the Cantica Fragment, <gesezet vuoza> /gesedȼed fuo(ß)ßa/ 'sets foot'; in the Lay of Ludwig, <heizsit> /heißßid/ 'is called', <uueiz ih> /weiß ih/ 'I know' <lietz> /ließ/ 'let' (past), <magaczogo> /magaȼogo/ 'teacher', <gibuozta> /gibuo?da/ 'cleansed'.

Most important of all, the reflexes of Germanic */p/, */pp/, and */f/ are all confounded in the digraph <ph>,

e.g. from Germanic *-/Rp/ in the Lay of Ludwig, <hilph> 'help!', but <sigikamf> 'victory' ([p^h], [φ], or [f]?); from Germanic */pp/, in the Cantica Fragment, <drophon> /droppon/ 'drop', <aphuon> for *<aphilon> /appilon/ 'apple', but <aruophon> /aruofon/ 'call', but possibly /aruoppon/ (Gothic hrôpjan); from Germanic */p/ in the Confession of Mainz, <sclaphun> but <slafanti> /slaaf-/ 'sleep'; from Germanic */f/, also in the Confession of Mainz, <thurphtigon> /θurftigon/ 'needy', and <nintphie(n)c> /ne intfienG/, 'did not receive'.

Obviously, the conclusions to be drawn from these short texts and from these inconsistent orthographies will not be too reliable. However, the phoneme distribution chart receives a few more forms and more support for some of the above statements is gained. Except, perhaps, with /k/ : /g/ in postconsonantal position after /n/ and possibly in the labial series, we find nothing which appears to contradict our previous findings.

(a) The velars. In the Lay of Ludwig's <urankon>, <urancono> /frankon-o/ 'Franks', <thancodun> /θankodun/ 'thanked'; in the Confession of Mainz's <dranche> /dranke/ 'drink' ; and in the Confession of Lorsch's <ubartrunchi> /ubardrunki/ 'overindulgence in drink', adequate examples are found of medial /k/ following /n/ for the phoneme distribution chart. The Lay of Ludwig appears to distinguish /k/ and /g/ in absolute final position after /n/,

as Isidor and the other texts do not e.g. Lay of Ludwig, <thanc> /θank/ 'thanks : <lang> /lang/ 'long', <sang> /sang/ 'sang'. With the exception of 3 <hch> : <forbrihcht> /forbrihhid/ 'breaks', in the Straßburg Oaths; <erahchon> /erahhon/ 'avenge', and <uuidarsahchon> /widarsahhon/ 'criminals', in the Lay of Ludwig, /hh/ is now written with <ch> everywhere: <bruche> /bruuhhe/ 'enjoy' from the Lay of Ludwig; <uuachun> /wahhun/ 'awake' from the Confession of Mainz; <michillichi> /mihhilliihhi/ 'many' from the Cantica Fragment.

However, /h/, whether [h] or [χ], is still spelled with <h> intervocalically and finally after vowels, e.g. in the Lay of Ludwig, <sihit> /sihid/ 'sees', <sprah> /sprah/ 'spoke', <uaht> /fahd/ 'fought'.

With the exception of the traditional spelling of the king's name, <hluduig> /(h)luudwiiG/ in the Lay of Ludwig, /h/ before /l/, /r/, /n/ and /w/ has disappeared completely in all these later texts, e.g. from the Lay of Ludwig: <thanne sprah (h)luto -- hluduig ther guoto> or <so(h)uuer so>.

In the two Confessions, /j/, in the morpheme /jeh/ 'confess', is written consistently with <g>: <gihu>, <bigihtic>, instead of expected *<iihu>, *<biiihtic>. This was probably done to avoid double or triple <i> which symbolizes /ii/, not /(i)ji/, everywhere else (cf. Otfrid's usage in 2.5a).

/h/ is also written once with <g> in the Straßburg Oaths: <mig> /mih/ 'me'. This is best interpreted simply as a scribal error. I necessarily reject interpretations of /g/ as a fricative in view of modern reflexes (1.7b) and the apparently unambiguous evidence of the texts themselves (Braune-M, §82.4, A 1, also Franck, p. 86-7, and Lessiak, p. 272 ff).

(b) The dentals. If initial <tr> and <dr> contrast in Isidor, as I concluded they did not (1.8a), they certainly do not contrast in these later documents, e.g. in the Lay of Ludwig, <trostet> 'comforts' from */tr/, <truhtin> 'lord' from */dr/; in the Confession of Lorsch, <gidrosda> 'comforted', <untriuuono> 'unfaithful' both from */tr/, and <tragi> 'might carry', <gidruog> 'carried', <ubartrunchi> 'overdrinking' from */dr/.

In addition, as further proof of the symbols <t> and <d> representing the same phoneme, viz. /d/, we find many <sd>, <fd>, and <hd> for <st>, <ft> and <ht>, as well as a few <sg> for <sk>, e.g. in the Confession of Mainz, <unrehdes>, <unrehtero> 'impious', <priesda> 'priests', <gidrosda> 'comforted'.

In the older Straßburg Oaths and Lay of Ludwig, /θ/ is distinguished orthographically from /d/. It is written with <th> in initial and final position and with <dh> intervocalically. Examples are: (i) in intial position, <thes> /θes/ 'of the' from the Straßburg Oaths, and <thionot> /θionod/

'serves', <githigini> /giθigini/ 'prosperous' from the Lay of Ludwig, but <biduuungan> /biθwungan/ 'forced' also from the Lay of Ludwig; (ii) in final position from the Lay of Ludwig, <lioth> /lioθ/ 'song', <northman> /norθman/ 'Normans', <uuarth> /warθ/ 'became'; (iii) in intervocalic position, <bedhero> /beeθero/ 'of both' from the Starßburg Oaths; <leidhor> /leiθor/ 'unfortunate' from the Lay of Ludwig. In the later documents, /θ/ and /d/ appear already to have begun to merge as they have in modern Rhine Franconian. Compare <crucithrahto> /kruuɕidrahdo/ 'cross-bearing' in the Confession of Lorsch, where <thr> is written for expected <dr> or *<tr>.

*/nθ/ and */lθ/ have coalesced, at least orthographically, with /nd/ and /ld/ in these texts as they appear to have done already in Isidor (1.8a), e.g. in the Lay of Ludwig, <gundfanon> /gunθfanon/ 'war banner', <holdun> /holθun/ 'pious'.

The Straßburg Oaths employ the digraph <dh> in the Romanic text for Old French [ð]: <aiudha> 'aid', <cadhuna> 'any', but <podir> 'power'. This is often cited, rather circularly, as proof of fricative articulation for both intervocalic Romanic /d/ and the Old High German reflexes of Germanic */þ/.

/θθ/ appears in the Cantica Fragment in <fetechon>, Isidor's <fethdhahha> /feθθahha/ 'wings'; /θ/ is elsewhere <d> in the Cantica Fragment. Reminiscent of Isidor

is the Confession of Lorsch's <bitdiu> /biddiu/ 'I ask' (also <pb> for /bb/ in 1.10c). In addition, the Lorsch Bee Charm offers an example of /ȼ/ medially after /l/: <holze> /holȼe/ 'woods'.

(c) The labials. More consistently, perhaps, than even Isidor, these documents do not hesitate to write triple <u> for /wu/ and /uw/, e.g. <uuurdun> /wurdun/ 'became', <biduuungan>/biθwungan/ 'forced' from the Lay of Ludwig; <getruuuir> /gedr(i)uwir/ 'true, loyal' from the Cantica Fragment.

/v/ has become /b/ in <hebit> 'lifts' and <abur> 'but', in the Cantica Fragment (Isidor's <heuit> /hevid/, <auur> /avur/). This is the general High German development of these two morphemes.

One finds increased use of <u> for Germanic */f/ in initial position in addition to Isidor's use of <u> in postconsonantal medial and intervocalic positions. <u>, however, does not occur in final position. Initial and postconsonantal medial positions are positions of no contrast with /(f)f/. Examples are: in the Confession of Mainz, <gefremidi>, <geuremidi> /gefremidi/ 'it was seemly'; <ferliezzi> /ferließßi/ 'might forgive', <uerliez> /ferließ/ 'forgave'. This would appear to indicate increasing lenition, a trend which the modern Rhine Franconian dialects have followed. Compare Isidor's <fater> with the Cantica Fragment's <vader> /fader/ 'father'.

/b/, in final position, is still preferentially spelled with <b>, but again many <p>'s occur, e.g. from the Confession of Lorsch, <uuip> /wiiB/ 'woman', <giloupda>, <giloupta' /gilouBda/ 'believed'.

Two more examples of /bb/ are found in the Cantica Fragment: <stuppe> /stubbe/ 'dust', and <crippon> /kribbon/ 'crib, manger'. The spelling supports my description of the reflexes of Germanic */bb/ as voiceless, fortis and long. In the Confession of Lorsch one finds another <pb> in <unsipberon> /unsibberon/ 'unfriendly' (exactly the spelling of the same morpheme in Isidor's <sipbea>).

In the Lay of Ludwig and the Cantica Fragment, only <uf> /uuf/ 'up', appears. This spelling agrees with the above analysis of Isidor's <uph> as /uuf/ (1.9c).

There are two, possibly three, examples of Germanic */pp/ in the Cantica Fragment: <drophon> /droppon/ 'drop'; <aphuon> for *<aphilon> /appilon/ 'apple'; and <aruophon> /aruoppon/? (1.10) 'call'. These spellings appear to support the phonetic interpretation postulated in 1.9c, viz. [pp^{h}]. The inconsistent use of <ph> for both High German /(f)f/ and Germanic */f/ in the Confession of Mainz has nothing to do with the use of <ph> in the Cantica Fragment. I prefer to interpret <sigikampf> in the Lay of Ludwig as containing [p^{h}] along with the same sound in <hilph>. These are the only occurrences, in any Old Rhine Franconian connected text, of /p/ finally after consonants

(Braune-M, §131, esp. A 2 and Franck, pp. 102-4). The Monsee Fragments contain <ardempant> /arθempand/ 'steaming', i.e. an occurrence of /p/ in postconsonantal medial position in addition to the example in Isidor.

1.11. Summary of the allophones of the Rhine Franconian of Isidor. Because of Isidor's unique orthographic consistency and despite its brevity, it has been possible to assemble an almost complete inventory of the putative allophones of its obstruent phonemes in 5 crucial environments. These are: (i) initial, (ii) postconsonantal medial, (iii) intervocalic, (iv) postvocalic final, and (v) postconsonantal final positions. In most instances, where a given form is not attested in Isidor, it is possible to find it in other, later Franconian texts of the Old High German period, if not always in Rhine Franconian texts. In very few instances was a reconstruction necessitated. The results of the above phonetic investigations and interpretations will now be summarized in chart form by series.

(a) The stops.

	C	$-\overset{R}{\underset{F}{}}C-$	-VCV-	-VC	-CC
/g/	$\underset{o}{g}-$	$-Rg_{(o)}-$[1]	$-\underset{o}{g}-$	-k'	-Rk'[2]
/k/	$\underline{k}^{h}-$	$-Rk^{(h)}-$	ø	ø[3]	-Rk[2]
/kk/			$-\underline{kk}^{h}-$		

	C-	$-\overset{R}{\underset{F}{}}C-$	-VCV-	-VC	-CC
/gg/			-kg-		
/d/	d- (o)	-Rd- (o) [1]	-d- (o)	-t'	-Ct'
/ȼ/ [5]	ds- (o) V- w- 6	-Rds- (o)	-VVds- (o)	-ds (o)	-Rds (o)
	Ør-	-FØ-			-FØ
/dȼ/			-Vtds- (o)		
/dd/			-td- (o)		
/b/	b- (o)	-Rb- (o) [1]	-b- (o) [7]	-p'	-Rp' [8]
/p/	p^h-	$-Rp^h$- [9]	Ø	Ø [10]	$-Rp^h$ [9]
/pp/			$-pp^h$-		
/bb/			-pb- (o)		

[Footnotes to Chart (a)]

[1]Lenis articulation in this position appears certain, but there is no orthographic evidence of voicelessness after resonants, which are the only consonants which the velar and labial stops follow (cf. /d/, footnote 4).

[2]None of the texts consistently distinguish final -/nk/ from final -/ng/, except possibly the Lay of Ludwig which contains one instance of /nk/ in <thank> 'thanks' and several of -/ng/ as in <lang> 'long'. Most texts including Isidor write both phones in final position after /n/ with <c> or

<k>. Modern evidence shows that final -/l/ or -/r/ + /g/ or /k/ have merged as appears to be indicated by the Old High German texts. Hence, it would appear that the modern distinction between final -/ng/ > -/ŋ/ and -/nk/ > /ŋk/ has been carried over from internal forms, e.g. original [laŋgə]: [laŋk] > [laŋə] : [laŋ].

[3]The reflex of final *-/kk/ does not occur in the Old Rhine Franconian documents, although morphemes containing intervocalic -/kk/- appear, e.g. */θekkan/, */wekkan/, */kwikkan/ as in modern Gedeck, weck!, keck. It is impossible to determine whether these rare forms with final /k/ < *-/kk/ contrasted with final -/g/. If they contrasted, the contrast must necessarily have been one of aspiration vs. lack of aspiration. These reflexes do not contrast in Middle or New High German except in the dialects in which /k/ is an affricate.

[4]After the fricatives /f/ and /h/, of the stops, only /d/ occurs, usually written as <t>. Voiceless articulation is certain.

[5]It is clear that /ȼ/ fills the slot in the phonemic pattern occupied by the fortis aspirated stops in the other orders.

[6]Note that [s̲], following Joos, indicates a grooved fricative articulated with the blade of the tongue, and not a fortis obstruent per se, as underlining elsewhere indicates.

[7]In contrast to the other orders, there is no orthographic indication of voicelessness in intervocalic /b/, although it certainly must have been lenis.

[8]There is not so much orthographic indication of a tendency toward fortisness on the part of final -/b/ as there is in the other orders (practically one hundred percent).

[9]It is here that Old Rhine Franconian appears to differ most in its consonantism from the modern dialects.

[10]As with /k/ (footnote 3), the reflexes of *-/pp/ may possibly be contained in the morpheme */uup/ or */uuf/ 'up', modern auf. Isidor and the Monsee Fragments have only <uph> (6 instances); the later documents, just as consistently, show <uf>. Today the op/uf isogloss runs appreciably farther north than the wat/was isogloss. As we have seen, Isidor's treatment of unaccented words containing Germanic final *-/t/ is that of Rhine Franconian without exception in literally hundreds of examples, e.g. <huuazs> /hwaß/ 'what'. We must either conclude that <uph> represents /uuf/ or that the op/uf isogloss has moved to its present more northerly position (footnote 9).

(b) The fricatives.

	C-	-CC-	-VCV-	-VC	-CC	-C stop (-)
/h/	h-	ø[1]	-h-	-X	ø[1]	- d(-)[6] (o)
/hh/			-XX-			

	C-	-CC-	-VCV-	-VC	-CC	-C	stop (-)
/θ/	ð-	-Rð-[2]	-(ð)-[3]	-θ[4]	-Rθ[2,4]	ø	
/θθ/			-θð-				
/s/	s-[5]	-Cs-[5]	-s-[5]	-s[5]	-Cs[5]	sg,d,b[6]	
/ss/			-ss-[5]				
/ß/	ø	ø	ø[7]	-s[8]	ø	ø	
/ßß/			-ss-[8]				
/v/	ø[9]	-Rv-?[10]	-v-[11]	ø	ø	ø	
/vv/			-??-[12]				
/f/	f-	ø[10]	-VVf-	-f	-Rf	-fd(-)[6]	
/ff/			-Vff-				

[Footnotes to Chart (b).]

[1]Postresonant /h/ does not occur in Old Upper Franconian. A prothetic vowel has developed between the resonant and the /h/.

[2]There appears to be some orthographic indication that /θ/ following /l/ and /n/ was already merging with /d/, but later texts (and even Isidor itself sporadically) preserve many spellings with <l> or <n> plus <dh> or <th>. Hence, I have assigned /θ/ to these positions, since it is the older distribution.

[3]There is no orthographic indication of medial /θ/'s having any voice in these voiced surroundings, but the choice of the digraph <dh> has been taken to indicate, at least, its

lenis character.

[4]The only orthographic indications of the development of final fortis allophones of /θ/ in Isidor are the 3 ambiguous spellings with final<t> (1.8b).

[5][s̩] is Joos' transcription for apical /s/. There is no orthographic indication of allophones of /s/ which might foreshadow the later threefold split.

[6]Up to this point, I have avoided phonemicizing the stops following the fricatives /h/, /s/, and /f/. They have been written with capital /K/, /T/, and /P/ in the phonemic transcriptions. In English and in the other living Germanic languages, the stops, /k/, /t/, and /p/, in this position are always lenis and unaspirated. Hence, they contrast with the corresponding voiced stops, /g/, /d/, and /b/ only in being voiceless. In High German dialects, however, the phonemic criterion of voice does not exist. It is clear, then, that we should assign these units to /g/, /d/, and /b/, especially in view of the fact that we do not have a phoneme /t/.

[7]/ß/ occurs only long, /ßß/, intervocalically.

[8][s̲] is Joos' transcription of dorsal /s/.

[9]Our text shows no orthographic distinction between the reflexes of Germanic */f/ in initial position and those of Germanic */p/ in other positions. Later texts show a great increase in spellings with initial <u> as well as continuing Isidor's spellings with medial <u>. These are graphic indications of the lenition which initial and medial /h/ = [X] had already undergone and which initial

and medial prevocalic /s/ was to undergo by the 14th century.

[10]/v/ should, perhaps, be restricted to intervocalic position and <u> elsewhere should perhaps be assigned to /f/. The lenis character of the sound in this environment may possibly be shown by the spellings with <u> and its voiceless character by the spellings with <f> in the same word.

[11]/v/ was probably both lenis and voiceless here as it demonstrably was in postresonant medial position (footnotes 9 and 10). However, the orthography shows only lenition here.

[12]Isidor is the only OHG text which appears to differentiate the reflexes of Gmc. *-/ff/- from Gmc. *-/p/-. cf. chapter footnote 1.

FOOTNOTES TO CHAPTER I

[1]It is probable that <pf> is merely the author's way of distinguishing /vv/ from /f(f)/, Hench I, p. 85 and 1.9c. That it is a scribal error is unlikely because it appears only and always (twice, but 8 pages apart) for Germanic */ff/. If it is a loan form from Upper German (Penzl M, §5, p. 356, with bibliography), it is the only one in our text and the borrowing would have introduced the form into a dialect where intervocalic /p^f/ < Germanic *-/pp/- does not exist, e.g. skepfen, Isidor's <scheffidhes> (Hench I, 35, 18; 36, 3 and Lessiak, AzfdA, p. 211). The few other sporadic forms, apparently foreign to Rhine Franconian, point in the opposite direction, i.e. north (cf. Braune-M, §139, A 4).

[2]The two occurrences of <tt> in <rehttunga> (Hench I, Glossary), are open to interpretation as scribal errors or as occasional spellings (1.9a, also <hluttror>,1.9a).

[3]Hench I, p. 85; Nörrenberg, Beitr. 9, p. 384 f.; especially, Lessiak, AzfdA, 34, p. 203 ff. and Lessiak, p. 16 ff.; more references appear in Braune-M, §143, A 3; against aspiration, notably Franck, §115.1, p. 148 and Kögel, AzfdA 19, pp. 222-6. In the latter treatment Isidor is considered Central, not Rhine Franconian.

[4]Bruckner, Binz Festschrift, 1935, p. 74. Müllenhoff says Alemannic model, Denkm. p. XXIX.

[5]Paul, Beitr. 7, p. 129, suggests that the spellings <cg>, <td>, <pb>, and <thdh> were meant to indicate a lessening of strength of articulation during production, i.e. fortis syllable-final and lenis syllable-initial = [kg]. If phonetic intent can be assumed for these spellings at all, this is the best explanation to date.

[6]For bibliography, Braune-M, §148, A 4. Kögel, esp. AzfdA 19, 1893, pp. 222-6, and Kaufmann, Schwäbische Mundart, p. 245 call it a fricative. Hench I, p. 88, sees in <gh> an aspirate or a spelling indicating some sort of palatization. However, modern reflexes show that if vowel quality did cause a split in the /g/ phoneme, it was the preceding vowel, not the following one, which was the causative factor, e.g. Rhine Franconian and Low Alemannic [riijel] for Riegel : [saawa] or [saaXə] for sagen, Keller, p. 175, §14.7 and footnote, §14.14 (iv), and §14.15 (ii); Keller, p. 134, §14.12 (ii) and 14.13 (ii).

[7]So far as I know, in spite of all that has been written about this puzzling orthographic usage, this simple fact has never been pointed out.

[8]It is interesting to note that all 5 occurrences of <einich> appear in the 5 contiguous lines, 17-21 on the 35th leaf of the MS. Leaf 35, oddly enough, also contains 3 of the 4 examples of <ph> for expected <p> or <b> representing /b/ in final position, i.e. 3 <bileiph> (1.9), as well as a few other irregularities, e.g. <ziidh> (1.8a),

<antdheccitero> with <d> written above the <t>. Why should these puzzling 'superfluous <h>'s', practically the only examples in the entire MS, appear all lumped together toward the bottom of leaf 35?

[9]Keller, p. 174, §14.3 (i) and his footnote 2; also Keller, p. 175, §14.6 (iv) and 14.7 (ii) and his footnote 1 with reference to Born, E. 'Die Mundart in Darmstadt und in seinem Umland' Fränkische Forschungen 12, pp. 58-60. Erlangen, 1938.

[10]Hench I, p. 86. Hench's explanation here of /sk/ > /š/ is untenable. [sk^h], as indeed any voiceless aspirated stop following /s/ (or any other voiceless fricative) appears to have been an impossible combination in Germanic languages from pre-Germanic to modern times. There is also no indication that the change was in any way determined by the following vowel.

[11]It is easier to conceive the reason for this lack of aspiration if one assumes uvular /r/, at least in some positions, possibly as dissimilation after dentals as is or was the case in quite a few modern Bavarian dialects, Penzl, Language 37, p. 488 and his footnote 1 for bibliography. This is one of the few instances where the High German shift does not parallel the Germanic shift.

[12]Perhaps an early period of fortis vs. lenis contrast should be assumed. But, aside from the 'evidence' of Isidor, only Notker distinguishes original /tr/ from /dr/ and then

only medially in the cluster /nCr/ where gemination cannot be assumed, Braune-M, §161, A 2.

[13]Central Franconian apparently has a voiced : voiceless opposition (Keller, pp. 252-3, §2.4; p. 263, §12.1; and p. 266, §§14.4, 5, and 6).

[14]In the Romanic version of the Straßburg Oaths, <dh> is used to indicate the fricative [θ], an unusual usage for Old French.

[15]Hench I, p. 79, explains these quite acceptably as spellings carried over from the much more frequent unbound form <uuzs>. I accept this interpretation, especially because another bound form <buuzssan>, i.e. /bi/$_{+}$/uußßan/, occurs with expected medial <zss>.

[16]Many Rhine Franconian dialects do not preserve this threefold phonemic contrast, viz. /š/ : /s/ (: /z_o/), because the last two phonemes have merged, i.e. ließe = Liese. North of the area and in standard German the distinction is one of voice, [$\underset{\cdot}{s}$] : [z]; to the south, it is one of intensity, [s] : [z_o].

[17]Joos, Martin, 1952. 'The medieval sibilants'. Lg. 28. 222 ff. Twaddell, W.F. 'Pre-Old High German */t/' For Roman Jakobson. Mouton, The Hague. 1956, 559ff.

[18]The Dukus Horant, a transliteration of a Middle High German epic into Hebrew characters, shows that the reflexes of /sK/ and /s/ plus other consonant were still distinct in the 14th century, although /sK/ had already become [š].

[19]Only before the vowel /u/ might there be confusion between /v/ and /w/ in the language of our text, purely on orthographic rather than phonological grounds, e.g. /wu/ is written as /vu/ might also be if it occurred, which in our text it does not, <hreue> /hreve/ : <hreuun> /hrewun/. Only here might we have to rely on comparative evidence. Everywhere else the distinction /w/ : /v/ is immediately clear from the orthography.

II

Otfrid and South Rhine Franconian

2.1. The texts. The texts to be used here are the Weißenburg Catechism (Steinmeyer, VI, pp. 29-38) from about 810-20 A.D. and Otfrid of Weißenburg's Book of Gospels (Kelle I, pp. 1-394) of about 860 A.D., of which latter there are three complete MSS and one fragmentary one. These MSS are usually identified by the first letter of the Latin name of the place where they were found: (D) (Codex) Discissus, a dismembered MS, is the youngest, least reliable, and least complete; (F) (Codex) Frisingensis from Freising, found in Munich, is heavily influenced by Upper German; (P) (Codex) Palatinus, found in Heidelberg, is slightly incomplete but very carefully written; and (V) (Codex) Vindobonensis found in Vienna, is complete, most exact, and has many corrections, which some say stem from Otfrid himself (Kelle I, p. 159 and p. 161 f.). Kelle's definitive edition is a comparison of all MSS, especially the Vienna (V) and the Heidelberg (P) MSS. It is these two MSS with which we shall be mostly concerned here. P appears to be a copy of V (Kelle II, pp. III-VIII). To all intents, V is the first clean copy made from the author's rough draft. Then it was more or less painstakingly corrected and, in many instances, altered by the author on all levels from the orthographic to the lexical

(Kelle II, p. XXI-XXXVI). Both V and P appear to have been copied in Weißenburg itself (Kelle II, pp. XXIX-XXX).

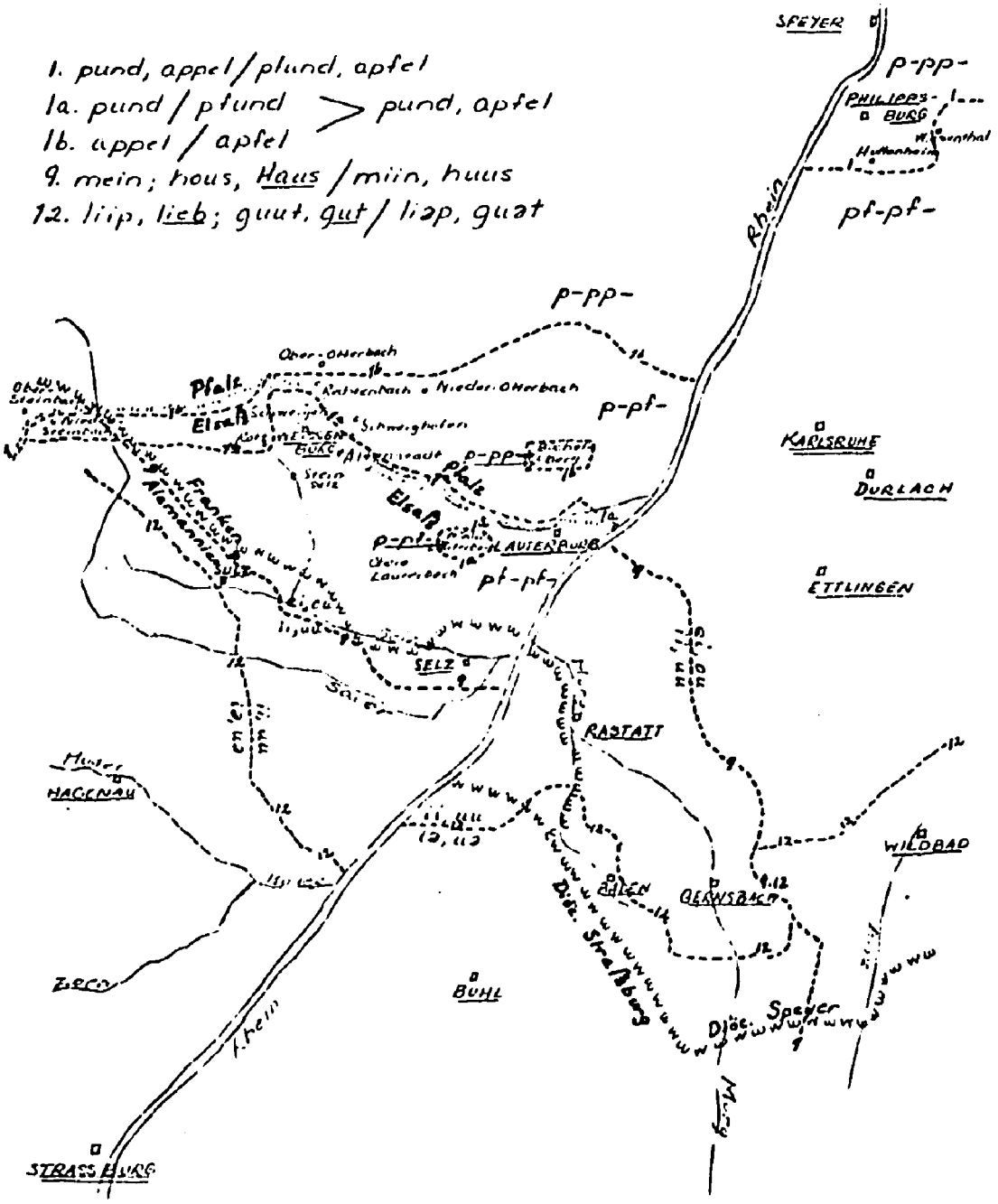
2.2. Orthographic and other difficulties. All our MSS are written more or less clearly in Carolingian minuscule. V is contained on 194 quarto leaves of parchment, P on 202. It is obvious that in so long a work, many scribal errors will occur. Fortunately, many of these have been corrected, as stated above. Where the corrector fails to make a given correction which he has made elsewhere, one may assume, in many instances, that the error simply escaped his notice. In some instances, the corrections have been ignored by the copyist of P.

In addition, the copyists of V and P, as well as F, appear to have spoken a dialect other than South Rhine Franconian (Kelle II, p. XXXI-XXXII and p. XXII). Hence, they have introduced variant forms from their own dialects into the text. The corrector of V has only partially freed the text of such foreign forms. The copyists of V and P appear to have been Alemannic speakers (Kelle II, p. XXXII); the one of F, a Bavarian (Kelle II, p. XXII). Since, however, the vast bulk of the MSS, as well as all the corrections, point unambiguously to the South Rhine Franconian area and more specifically to Weißenburg (2.3 and Kelle II, p. XXIX), and because so much is known or can be deduced about the MSS, their origins, histories and even their copyists, one can, I feel, validly ignore those

forms which appear to be Upper German.

The Weißenburg Catechism, although written by one copyist, appears to unite the translations of various authors (Steinmeyer, p. 36). Hence, as in Chapter I, I shall refer to it only to support the analysis of Otfrid.

2.3. Otfrid's dialect and that of modern Weißenburg. With no other Old High German document can we pinpoint the place and time of origin and the dialect of the author so precisely as with Otfrid's Book of Gospels. Although we do not know whether Otfrid was a native of the city of Weißenburg itself, the South Rhine Franconian area is small and circumscribed and evidently has been so since Old High German times (Kelle II, p. XXVIII f.)[1] The pund/pfund isogloss, which is one of the isoglosses separating the South Rhine Franconian area from the Alemannic part of Alsace, runs west to east in an almost straight line from the Vosges to the Rhine, except that as it approaches Weißenburg, it turns sharply north to include the city in the pfund-area and then, just as abruptly, dips south to the same level it had on the western side (Bohnenberger, map, between pp. 208-9, partially reproduced here, p. 68). To the eye, it appears that the isogloss has indeed been pushed north into a bubble around Weißenburg, which is the only major city near it. Weißenburg lies north of other isoglosses separating Franconian from Alemannic. For example, Weißenburg both diphthongizes MHG ii, uu to ai,



After Behaghel, 1905

au and monophtongizes MHG iə, uə to ii, uu, thus agreeing with Franconian and Standard German. These isoglosses and others lie far to the south between the Selz and Sauer rivers, i.e. the boundary between the old duchies of Franconia and Alemannia. Here lay also, according to Stoeckicht, the northern boundary of Alsace until 1660. That Weißenburg now says pfund instead of pund, as it evidently did in Otfrid's time, is to be explained by the fact that the city and its monastery, which at first were under the religious jurisdiction of Franconian Speyer, came, at the end of the middle ages, under the religious and, later political domination of Alemannic Straßburg. It is to be noted that the region between the Selz and the Lauter has followed Straßburg where it agrees with standard German, i.e. Pfund and Apfel, but has resisted Alemannic influence where this agreement is lacking, i.e. no /miin/ 'my', nor /liəp/ 'dear' for /main/ and /liip/.

2.4. Otfrid's own 'phonemic' statements. The Book of Gospels is also unique in that it contains several passages in the Latin letter of dedication to Bishop Liutbert which deal with phonology and versification. Otfrid says that with many expressions writing:

> 'is difficult either because of the conglomeration of letters or unknown sound. For sometimes, as I think, it requires three <u>'s in sound, the first two are consonants as it seems to me, the third remaining one, a vowel sound.'[2]

Here Otfrid refers to the three <u>'s in the multigraph <uuu> in which the first two letters represent /w/, the third /u/, although he could also mean the three phonemes /w/, /v/, and /u/.

He also says:

> 'This language [OHG] beyond Latin usage more often uses <k> and <z> which the grammarians say are superfluous among the letters. In this language they use <z>, as I think, because of the hissing [or buzzing?] of the teeth, <k>, on the other hand, because of the noisiness [or noise?] of the throat.'[2]

Exactly what sound(s) Otfrid is trying to describe in the case of <z> is impossible to say since he uses <z> to represent both /ȼ/ and /ß/. According to Joos, apical [s̻] which is produced with a 'resonance chamber under the tongue tip and behind the lower incisors' -- 'has a lower resonance' and is 'blunt' while dorsal [s̲] without this chamber 'has a higher resonance and sounds relatively sharp' (Joos, p. 222). Joos also says that his dorsal [s̲] which is his normal English /s/ is a musical fourth higher in pitch than his apical [s̻] which in turn is a musical fifth higher than his /š/ (Joos, p. 222, ftn. 2). My own reaction is that, whereas my English [s̻] is indeed lower in pitch than my [s̲] which, incidentally, I use in speaking German in some positions, it is the [s̲] which sounds 'blunt' to me and the [s̻] which seems 'sharp'. This is, of course, the

difficulty when such terms are used impressionistically. In Jakobsonian terms the two sounds [s̻] and [s̲] would be described as follows: /ß/, i.e. dorsal [s̲], is more diffuse, mellow, acute, and sharp; /s/, i.e. apical [s̻], more compact, strident, grave, and flat. [s̀] agrees with apical [s̻] in all the above mentioned features and intensifies them (Jakobson, pp. 29-32). It is possible that Otfrid could have been referring to these features with his 'hissing of the teeth'. At any rate, it is clear that he was conscious of a phonemic distinction between /s/ and /ß/.

With <k> and 'the noise of the throat', Otfrid is obviously referring to either aspiration or affrication, the feature which strikingly distinguishes Germanic /k/ from Romanic /k/.

It is amusing to note that Otfrid feels he must apologize because his 'barbarous' German does not have the same phoneme inventory as Latin.

2.5 The velar phones. (a) In the V and P MSS, /g/ in initial and postconsonantal medial positions, and both /g/ and /gg/ in intervocalic position are always spelled <g>, <gg> in all morphemes, e.g. <galgen> /galgen/ 'cross, gallows', <gras> /gras/ 'grass', <glauue> /glawe/ or /glauwe/ 'careful', <berge> /berge/ 'hill' (dat.), <folge> /folgee/ 'follow!', <singe> /singe/ 'may sing', <fogala> /fogala/ 'birds', <liggan> /liggan/ 'to lie, recline'.

The Latin loan praedicare 'to preach' appears in each of its 24 occurrences with the Latin <c> written with <g>. viz. <bredig>-, 3 instances of <fig>- /fiig/- 'fig' from Latin ficus, and the Latin ecce, Romanic ecco 'behold!' is rendered by Otfrid as <eggo>. This is a good indication that both /g/ and /gg/ were voiceless. Otherwise, there are no indications in these spellings of allophonic variation in these 3 positions, nor are there any other orthographic clues in general to the phonetic features of /g/, as there are in Isidor. The modern dialects show that initial /g/ must have been a voiceless, lenis unaspirated velar stop [g̥'] (1.6 and Chap. I, footnote 10; Bauer, p.7 and Martin, L., p. 11). In medial position, modern Weißenburg showed, in 1905, a fortis fricative [ç] in accord with the general Central urban German adoption of this Northern German pronunciation (Chap. I, footnote 6, and Keller, p. 119), e.g. [reeçə], Regen.[3] However, the more northerly village of Schweigen, which had formerly belonged to Weißenburg but which was then in the Palatinate, still said [raijə] for Regen (Bohnenberger, p. 156). Following Weißenburg, Schweigen has adopted pfund for pund, although Rott to the southwest, which also had belonged to Weißenburg, still says pund (see the appended map on p. 68). This appears to indicate that the change of medial /g/ to [ç] or [s̆] in Weißenburg is secondary and quite recent. It also indicates that /g/ in medial position

developed more lenis allophones. Whether this lenition had already begun in Otfrid's time is impossible to say.

Medially, in the V and P MSS, /g/ and /j/ are never confused orthographically. Medial /j/ is always <i> (however, see Kelle II, p. 517, §6 for MS F). On the other hand, both V and P use initial <g> for /j/ in two morphemes, /jEh/- 'affirm, confess' (1.9a), and /jen/- 'that, yon'. These are the only morphemes in the entire corpus which begin with /j/ before a front vowel. When /jEh/- appears in the preterite as /jah/-, it is written <iáh> consistently. Elsewhere, when it is /jeh/- or /jih/-, it is just as consistently written <geh>- or -<gih>-, e.g. <iáh> /jah/ 'he confessed' (two occurrences) and <iáhi> /jaahi/ 'might confess' (two occurrences), but <gíhu> /jihu/ 'I confess', <irgéhent> /ir-jehend/ 'they confess', and <bígihti> /bi-jihdii/ 'confession' (Kelle II, pp. 515-6, §4). The morpheme /jen/- occurs 14 times in the corpus. In 10 instances /jen/ had been written <ien> or <ién>, but 9 of these have been changed to <gen> or <gén> by the corrector. One occurrence evidently escaped his notice (Kelle II, p. 516). Otfrid used a system of accents to distinguish /ja/, /jo/, and /ju/ from /ia/, /io/, and /iu/, all written ambiguously <ia>, <io>, and <iu> (1.9a and Braune-M, §116, A 1 and 4). /ia/, /io/, and /iu/, with very few exceptions, are written either <íá>, <íó>, <íú>, or <ía>, <ío>, <íu> (Kelle II, p. 470, §9), whereas

/ja/, /jo/, and /ju/, also with very few exceptions, are written <iá>, <ió>, <iú>. <ie>, on the other hand, appears to have had an ambiguous phonemic status in that it replaces /ia/, /io/, or /iu/ seemingly at random in the same morpheme (Kelle II, p. 471-2), and no morpheme appears to contain <ie> exclusively. In addition, <ie> is always accented, if at all, as <íe>, never *<íé> as with the other diphthongs (Kelle II, p. 471, §1). Evidently for this reason, Otfrid felt obliged to distinguish /je/ from <íe> in some manner other than with his usual accents. However, 10 of the 14 occurrences of /jen/-, including the one occurrence of <ién>-, show the accent as well, i.e. <gén>-. These are not the same 9 instances which have been corrected to <gen>- from <ien>-. <ii> with Otfrid and elsewhere appears to have been reserved exclusively for long /i/ (Isidor is a notable exception). /ii/, not being a diphtong, could not be written with an accent. Therefore, Otfrid was forced to distinguish it from /ji/ in some other way, viz. by writing <gi>. However, one occurrence of /jih/- also shows an accent, viz. <gíhu> /jihu/ 'I confess'. At any rate, these spellings of /j/ with <g> would appear to be purely orthographic in intent. If phonetic value is to be attached to them, they apparently point more to the constriction of /j/ when compared with /i/ rather than to any fricative pronunciation of /g/ itself (Braune-M, §82b4 and A 1).

/g/ in final position is discussed with /k/ below.

(b) /k/ in word-and morpheme-initial position except before 'w' and after /s/ is written in the overwhelming majority of instances with <k>, e.g. <kan> /kan/ 'can', <kruagi> /kruagi/ 'water jugs', <klaga> /klaga/ 'wail, plaint', <knio> /knio/ 'knee'. Discounting traditional spellings of biblical names, such as <cain> 'Cain', <iacob> 'Jacob', but <kaiphas> 'Caiphas', and a few Latin loan words which vacillate between <c> and <k>, e.g. <cruzi> but more often <kruzi> 'cross', as well as those instances of <c> or <ch> for /k/ which are demanded by the acrostic,[4] one finds the following situation. Initial /k/ before /r/ or /l/ is spelled with <c> a total of 8 times in MS V, only 6 times in MS P. Because <c> before vowels often represents /ȼ/, /k/ is never written with <c> before vowels or /n/. Of the 4 morphemes in which these spellings with <c> occur, all appear elsewhere and much more often written with <k>, e.g. two instances of <cleini> as against 17 instances of <klein>-; two occurrences of <craft> against 28 <kraft>, etc. (Kelle II, p. 519, §2). In addition, MS V contains 9 instances of initial /k/, all before vowels, spelled with <ch>; MS P shows only 7, e.g. one instance of <chuning>- 'king', as against 63 occurrences of <kuning>-; two instances of <chind> 'child', compared with 46 of <kind>-. The corrector has changed some of these <ch> spellings to <k>. It would appear, then, that these spellings with <c> and <ch> can be ascribed to scribal

laxity, to a reversion to tradition, or, as Kelle says, to the variant dialect of the copyists (Kelle II, p. 520, §4). With the generalizing of <k>- spellings, Otfrid was, after all, introducing an innovation.

For the combination /kw/, Otfrid uses the Latin digraph <qu>, e.g. <quena> /kwena/ 'woman, wife'.

With the cluster /sK/ or now /sg/, one encounters an orthographic peculiarity. Aside from two instances of <sch> in MS V which are written <sk> in P, and approximately 24 occurrences of <sk> in V, 21 in P, initial /sg/ is written as <sc> in approximately 60 morphemes with literally many hundreds of occurrences (Kelle II, p. 506, §4). Otfrid says that he chooses to write <k> instead of <c> 'because of the noise of the throat'. This has been interpreted as meaning that /k/ had strong aspiration (2.4). Now we find that Otfrid did, indeed, not write <sk> but <sc>, exactly where /k/ and the other voiceless stops were not and are still not aspirated in the Germanic languages, viz. after voiceless fricatives, especially /s/. Medial and final /sg/ are discussed in 2.5c.

In postconsonantal medial position except after /s/, /k/ is written with <k> in all but 3 instances in MS V, in only one in P (<archa>, Latin arca 'ark', shared by V and P), and in V only (<francon>, elsewhere always <frank>- 'a Frank'), and <scalches> /sgalkes/ 'servant's'. The first two instances may be discounted in that they had

traditional Latin spellings, or the first and third may be ascribed to the variant dialect of the copyist of V (Kelle II, p. 521, §II.2). Examples of medial postconsonantal /k/ are: <uuerke> /werke/ 'work' (dat.), <folke> /folke/ 'people' (dat.), and <drinku> /drinku/ 'I drink'.

Those morphemes which one would expect from comparative evidence to contain /kk/ are written with single <k> in the vast majority of instances (Kelle II, p. 521, §II.2). In only 9 occurrences of 5 morphemes do we find orthographic indications that this <k> was a long consonant. It is written <kk> twice, <ck> 6 times, and <gk> twice, e.g. <zukke> /ʒukke/ 'may take away', <gilocko> /gilokkoo/ 'ease, loosen!', <irquigken> /irkwikken/ 'to (re)vivify' (Kelle II, p. 523, §4). Four of these 5 morphemes occur elsewhere and are more often written with medial <k>. The one remaining instance is the once-occurring <nidarskrikke> /niθarsgrikke/ 'may jump down'. More puzzling are the 10 occurrences of 5 morphemes containing /kk/ which are written with medial <ch>, the usual symbol for /hh/, instead of <k> (Kelle II, p. 521, §11.2b). These morphemes also occur elsewhere and more often written with <k>, e.g. <uuachar> and <uuakar> /wakkar/ 'alert, awake'. In some instances the corrector has changed these <ch>-spellings to <k> or <ck> (Kelle II, p. 522, §II.2b). It appears likely that in these rare <ch>-spellings it is a question of scribal errors or, again, of the variant dialect

of the copyist. Kelle (loc.cit.) was also of this opinion. It is to be remembered that there was also vacillation in the rendering of /kk/ even in Isidor (1.3a). The use of single <k> to render /kk/ is phonemically quite defensible because any intervocalic <k> will automatically represent /kk/ for /k/ does not occur between vowels and never contrasts with /kk/. Although the digraphs representing /kk/ all appear after short vowels, in view of the regular orthographic representation of other long consonants, including /gg/, it appears very unlikely that there can be any question of the single graph spellings' mirroring a shortening of /kk/.

One is probably justified, then, in describing (i) syllable-initial /k/ as a fortis voiceless aspirated velar stop and (ii) intervocalic /kk/, contrasting with long voiceless /gg/, as a long fortis voiceless aspirated velar stop.

(c) In internal morpheme-final position, MS V records every occurrence of /g/ with <g>, e.g. <fuagtun> 'they crowded', <hangta> 'permitted', etc. In MS P, /g/ in this position is written <c> in only one instance, viz. <gihuct> /gihuGT/ 'reminder, memorial'. Otherwise, P also has <g> without exception (Kelle II, p. 517, §3). This might appear to be unambiguous orthography of no phonetic significance, were it not for the fact that /k/ in this same environment, is also written with <g> and, indeed, more

often than with <k>. This environment occurs most notably in the syncopated preterites of first class weak verbs. The postvocalic /k/'s here are the result of the shortening of /kk/ when not intervocalic. Otherwise, medial and final /k/ occurs only after resonants. We find for preconsonantal morpheme-final /k/ in MS P, 19 instances of <g>, 5 of <c>, and 14 of <k>; in MS V, 17 of <g>, 5 of <c>, and 16 of <k> (Kelle II, p. 523, §3). Examples are: <drangtun> 'they gave to drink, drenched' and <drangta> 'he gave to drink', <irquicta> 'he gave life, quickened' (from /kwekk/- 'alive, quick'), <irruagtun> 'they awaked' and <irruaktin> 'they might awake. In addition,/sg/, which is written preponderantly <sc> in morpheme-initial position (2.5b), is rendered in intervocalic position with <sg> in the overwhelming majority of the occurrences of approximately 22 morphemes, including the very common adjective formant -/isK/-. Aside from the words biscof 'bishop' and gi-eiscôn 'to ask', there are only two instances of medial <sk> and only one of <sc>. These occur only in MS V, not in P. Oddly enough, in the 10 occurrences of /bisgof/ and in the 15 occurrences of /gi-eisgoon/, one finds 4 <sk>-spellings and 21 with <sc>, none with <sg>. It would be difficult to say exactly why these two words have this special treatment. biscof is, of course, a Latin loan, but seemingly already so far removed from episcopus as to be regarded as a native word. Possibly the traditional

spelling of this religious word was able to override Otfrid's orthography. Aside from the fact that eiscôn is the only word in the corpus containing medial /sg/ preceded by a diphthong or long vowel (cf. <asgu>, ash' [dat.]), there appears to be nothing unique about it. All occurrences of /sg/ in absolute final position appear as <sg> without exception (Kelle II, p. 507, §II.3).

The significance of this orthography would appear to be, first, that <g> ... at least in internal syllable final position and medially and finally after /s/ ... represented a voiceless lenis sound and that, hence, /g/ was here voiceless, as was -/gg/- (2.5a). Secondly, if <g> could be employed to represent /k/, it appears that /g/ might have been voiceless everywhere. Thirdly, such a striking positional alternation in the representation of /k/ apparently indicates that /k/ had allophones which were both lenis and unaspirated in internal syllable-final position, especially in view of Otfrid's own emphasis on the letter <k> in other positions. Fourthly, we are apparently dealing with a position of no contrast between /g/ and /k/ in this environment. Finally, Otfrid's conception of the phonetic values represented by these three letters evidently was this: <k> was fortis, voiceless, and aspirated; <c> was fortis(?), voiceless, and unaspirated; and <g> was lenis, voiceless, and unaspirated.

Approximately 42 morphemes containing final /g/, many

of which occur more than once, are written with absolute final <g> (Kelle II, pp. 517-8, §III.1), e.g. <dag> /daG/ 'day', <barg> /barG/ 'he hid', <giang> /gianG/ 'he went'. In 4 instances in V, however, and in 3 additional ones in P, morphemes elsewhere appearing with final <g> are written with <k>, e.g. <gank> /ganG/ 'course, walk', <sank> /sanG/ 'song'. Four additional occurrences (which are, however, caused by the acrostic) also show final <c> (Kelle II, p. 518, §1b). It was evidently Otfrid's intention to write <g> everywhere (except, of course, in the acrostic), because he has elsewhere corrected final <k> to <g> in some instances. Nevertheless, final /k/ is also written <g> 5 times in V, twice more in P, e.g. <uuerg> /werK/ 'work' (Kelle II, p. 524, §III.1). The corrector has changed five other <g>'s for /k/ back to <k>. In addition, the peculiar tautological construction formed from German /umbi/ 'around' and Latin circa 'around', which occurs twice in the corpus, is written both times <umbikirg> 'round about', with <g> again representing Latin <c>. It appears possible that there might also have been a position of no contrast between /g/ and /k/ in absolute final position. It is significant that many of the confusions of final <k>, <c>, and <g> occur in the rhymes, e.g. (cf. Kelle III) <uuanc/k/g>, /wanK/ and its rhymes in -/nK/ and -/nG/. One must then assume that the great number of 'regular' spellings in this position, i.e. those which distinguish /g/ from /k/, have been

pedantically introduced from other environments of the morpheme in question. Unfortunately, the orthographic evidence alone is not of much help, as it conclusively was in Isidor (1.6b). One must rely on outside evidence and the patterns of the other series. As mentioned above, /k/ is rare in syllable final position.

(d) Out of hundreds of occurrences, initial /h/, always written with <h>, was dropped once in MS V and added twice where one would not expect it. In all three instances, this has been corrected in both P and F, although the latter both contain similar errors elsewhere (Kelle II, p. 527, §2). It is clear that these are simple scribal errors. Examples of initial /h/ are: <hals> /hals/ 'neck', <hiar> /hiar/ 'here', <hoho> /hooho/ 'highly' (Kelle II, p. 526-7, §I.1).

Otfrid no longer distinguishes respectively between the clusters /hw/ (Kelle II, p. 485, §8), /hr/ (Kelle II, p. 510, §I.2), /hl/ (Kelle II, p. 509, §2), /hn/ (Kelle II, p. 513, §2) and simple /w/, /r/, /l/, /n/ as the Isidor still consistently does (1.6d). In none of the many occurrences of the 66 words which historically contained these clusters do Otfrid or any of his copyists indicate that they were aware of a tradition of writing these words with an initial <h>. Even the king's name, which occurs 4 times, is always spelled <ludouuig>, although the slightly later Lay of Ludwig still preserves the traditional <hluduig> (1.9a). This loss before the resonants and /w/ apparently indicates

a lenition of initial /h/ and would appear to support a description of prevocalic /h/ as a glottal fricative already at this period (cf. medial /h/).

/h/ no longer occurs in postconsonantal position. A prothetic vowel has developed between the /h/ and the preceding resonant, e.g. <bifiluhu> 'I entrust', <bifalah> 'he entrusted' from */fIlh/- (1.6d). All non-initial /h/'s are, then, postvocalic.

/h/ contrasts with /hh/ only in intervocalic position. The orthographic convention which Otfrid obviously meant to use to distinguish the two phonemes was to have <ch> represent /hh/ and <h> stand for /h/ (Kelle II, p. 522, §c and p. 527, §II.1). MS V shows only one instance of <ch> for intervocalic /h/, viz. <firliche>, elsewhere 3 times <firlihe> /firliihe/ 'grant!' (Kelle II, p. 528, §7). This one occurrence is evidently simply a scribal error.[5] The opposite confusion of graphs, viz. <h> for <ch>, is slightly less rare. MS V contains 12 instances of <h> for <ch> in 7 different morphemes (Kelle II, p. 522, §c). Two of these occur once, viz. <rouhenti> /rouhhendi/ 'perfuming (with incense)', <spihiri> /sbiihhiri/ 'pantry, Speicher'. One other occurs once elsewhere written with <ch>, viz. <firsuahun> /firsuahhun/ 'they rejected', but <firsechit> /firsehhid/ 'he rejects, ignores'. Of the remaining 4 morphemes, /liihh/- 'like' (adjective formant) occurs once with intervocalic <h> but hundreds of times with <ch>.

-/riihh/- 'rich, rule' is written 4 times with <h> but well over 60 times with <ch>. /sgaahhari/ 'robber' appears with <h> 3 times, with <ch> 4 times. /ȥeihhan/, 'token, sign' has <h> once, <ch> 23 times. It is apparent from this statistical evidence that one is again encountering scribal errors.

The morpheme /mihhil/ 'great', however, is quite another matter. From other Old High German documents and from historical evidence, we know that this word must have contained -/hh/-. In MS V it occurs a total of 91 times, written <mihil>- 84 times, <michil>- only 7 times.[6] One would conclude from Otfrid's evidence alone that the morpheme contained /h/ and not /hh/, especially in view of the careful orthographic distinction in most other instances. If it is a traditional spelling, it comes from a tradition unknown today. It cannot be called a scribal error because of the overwhelming statistics. If Otfrid actually said */mihil/ and not /mihhil/, he was alone in this usage so far as we know. At any rate, Otfrid otherwise distinguishes intervocalic /hh/ and /h/ quite sharply. Otfrid's is the only major work under consideration here that seemingly restricts the usage of the digraph <ch> to the long, voiceless, fortis velar fricative /hh/, the reflex of Germanic medial */k/.[7] /hh/ is also represented very sporadically in MSS V and P by <kh> 3 times, by <hh> 3 times, and by <hch> twice (Kelle II, pp. 525-6, §I.1).

It appears valid to interpret the use of these multigraphs, including <ch>, as an indication of /hh/'s length. This interpretation is especially supported by the fact that, in final position, where /h(h)/ from Germanic */k/ was supposedly short, it is written with a single <h>.

The only orthographic indications in MSS V and P of the phonetic character of intervocalic -/h/-, if they can be interpreted as such, are two in number. First, <h> appears sporadically as a 'glide' in the controversial morphemes /knaa(w)/- 'know', /kraa(w)~(j)~(h)/- 'crow', /waa(w)~(j)/- 'blow, wehen', and /hii(w)/- 'spouse' for a total of 7 times (the <h> has been partially erased in V in some instances, Kelle II, p. 528, §8). Second, intervocalic /h/ is not written twice and is inserted once where it is not to be expected (Kelle II, p. 529, §8). If this evidence were not so scanty and so easily interpretable as scribal errors, one might use it to describe intervocalic /h/ as a lenis glottal fricative, which it possibly was already at this period, especially in view of our interpretation of initial /h/ above. Both are prevocalic. The single occurrence in the whole corpus of <ch> for medial /h/ would also tend to support this description. However, the evidence for medial /h/ is inconclusive. Examples of /hh/ are: <buacho> /buahho/ 'books' and <sacha> /sahha/ 'thing'. Examples of intervocalic /h/ are: <buhila> /buhila/ 'hills' and <fihu> /fihu/ 'animal'.

The pattern of /h/ in syllable-final position, in both medial and absolute final environments, is orthographically quite clear and consistent. Final /h/, representing the reflex of Germanic */h/, is everywhere written <h> without exception in MSS V and P (Kelle II, p. 529, §§III.1 and 2). Final /h/ as the reflex of Germanic */k/ also appears almost exclusively written with <h> (Kelle II, p. 524, §III.1b). In MS V there are 5 instances where final /h/ from Germanic */k/ are written <ch> (Kelle II, pp. 524-5, §III.1b). They are, of course, all contained in morphemes which show medial <ch>, i.e. /hh/, when they have suffixes attached, viz. once we find <brach> /brah/ 'he broke', but twice <firbrah> /firbrah/ 'he tore, broke' from -/brehhan/ 'to break'; 4 times in V we find <sprach> /sbrah/ 'he spoke', but 66 times <sprah> from /sbrehhan/ 'to speak'. Because these 5 verb forms are all directly followed by an enclitic subject pronoun <er> 'he', the /h/ was technically intervocalic and therefore /hh/, according to Kelle (II, p. 525). However, I have found at least 8 other instances where either <ih>, 'I', or <er> directly follow the verb where it appears as <sprah>. It is perhaps better to explain these instances of <sprach> as having been caused by the regular <ch>-spellings of this very common morpheme when its /h/ is intervocalic, i.e. /hh/. At any rate, it is clear that final /h/ from Germanic */h/ has coasleced with /hh/ from Germanic */k/ after /hh/ was shortened in final position.

In view of its modern reflex, one need not hesitate to describe final /h/ as a voiceless fortis velar fricative. Examples of final /h/ are: <buah> /buah/ 'book' and <ih> /ih/ 'I', both reflecting Germanic */k/, and <hoh> /hooh/ 'high', <zoh> /ȥooh/ 'he pulled', reflecting Germanic */h/.

2.6. The dental phones. (a) The orthographic system which Otfrid intended to employ to distinguish /d/ and /θ/ is clear. Initial /θ/ is represented by <th>, medial and final /θ/ by <d>. Initial /d/ is written as <d>, medial and final /d/ as <t>. That is, /θ/ appears as <th-d-d>, and /d/ is represented by <d-t-t>. The potential scribal confusion in the system is apparent in that <d> stands for either /θ/ or /d/, depending only on the position in the morpheme, and that the digraph <th>, representing /θ/, contains a <t> that outside the digraph means /d/. As we shall see, Otfrid, if he was indeed the corrector, occasionally became confused himself. Here especially, Kelle added greatly to the confusion, albeit unwittingly, in that he was ignorant of the workings of Verner's Law and apparently also of the regular Old English and Old Saxon merger of Germanic */lð/ and */lþ/ in /ld/. His book was written in 1856, some 20 years before Verner's formulation was published.

Initial /d/ is written <d> in the vast majority of instances. If there was doubt in Isidor (1.7a) as to whether the reflexes of Germanic initial */dr/ and */tr/ should be considered as belonging to one phoneme, Otfrid resolves it.

With two exceptions, all morphemes (including most Latin loans) are written consistently with initial <dr>, no matter whether they reflect original */dr/ or */tr/ (Kelle II, p. 493, §§4 and 7). Happily enough, the exceptions, viz. <trahta> (elsewhere <drahta>) 'demeanor' and <truhtin> (elsewhere <druhtin> and <thruhtin>!) 'Lord', contain the reflex of Germanic */dr/-.

The other instances of initial <t> for /d/ outside the cluster /dr/- are rather puzzling. Aside from the related morphemes /dooθ/ 'death' and /dood/ 'dead', <t> occurs for initial /d/ only 11 times in 6 morphemes, all of which occur elsewhere and are more often written with <d> (Kelle II, p.492, §I.2). Aside from the fact that 5 of these morphemes occur in verb forms and have initial /d/ plus vowel, there is nothing about them that appears to warrant this special treatment. Neither can their immediate environments be called upon to explain their variant spelling, for these 11 occurrences of initial <t> appear indiscriminately following vowels, resonants, obstruents and line-initial silences. Except for the one morpheme /dErr/ 'to harm' vs. /θerr/ 'to dry', there are no rhyming morphemes with initial /θ/ that might be construed to require an orthographic distinction from these 5 with initial /d/. Inasmuch as the <t>-spellings occur in only 11 out of approximately 1,000 instances with initial <d>, they might well be called scribal errors if it were not for the fact that the corrector has

changed most of them from original <d> to <t>. If the corrector was actually Otfrid himself, it is difficult to imagine a reason for these 'mis-corrections', unless it was simple fatigue.

It is a different matter, however, with /dooθ/ 'death' vs. /dood/ 'dead'. Here also the corrector has changed some original initial <d>'s to <t>'s. We should expect the noun to appear in Otfrid's orthography as <dod>, the adjective as <dot>. Indeed, out of 16 occurrences of the adjective, <dot> is written 14 times, <tot> only twice. The 4 occurrences of the verb <gidot>- /gidood/ 'to kill' and the 4 occurrences of <douu>- /doow/- 'to die' all show normal spellings. The noun /dooθ/, however, occurs only 13 times as <dod> out of 63 occurrences. On the other hand, we find 7 instances of <doth>, 9 of <toth>, one <tot>, and 33 of <tod>. <tod> almost appears to have been the normal spelling because it occurs in slightly over half the total instances with their 5 different spellings. It is to be remembered that initial <t> was a superfluous letter in Otfrid's orthography. Aside from the above-cited instances (and a few recent Latin loan words) in which initial <t> also vacillates with initial <d>, there are no examples of initial <t>. That is, according to Otfrid's orthographic system, no prefix or base morpheme begins, or should begin, with t. The morpheme <dod> /dooθ/ contains two distinct phonemes, separated only by a vowel, which are to be spelled

with the same letters. /dooθ/ is the only morpheme in the corpus where this phonemic environment exists. Nowhere else is the ambiguity of the orthographic system so graphically demonstrated. Hence, it would appear that with /dooθ/, Otfrid was simply attempting to clarify phonemic conditions, even though in doing so he transgressed his own rules. This may also possibly serve to explain the above-mentioned sporadic miscorrections of initial <d> to <t>. In summary, then, there are only 13 instances of regular <dod> as against 49 occurrences of <doth>, <toth>, and <tod>, where the two phonemes are kept orthographically distinct. The one instance of <tot>, which occurs at the end of a line and rhymes with <oth> 'possible, feasible', is, I think, a scribal error. An original initial <d> has been corrected to <t> and something, probably a juxtaposed <h>, has been erased between the <o> and the second <t>. That is, original <doht> has been corrected to <to t>. The corrector evidently then neglected to rewrite the <h> following the second <t>, i.e. *<toth>.

These sporadic spellings of initial /d/ with <t>, as well as its regular medial and final spelling with <t>, clearly reflects /d/'s voicelessness.

The two occurrences in MS V of initial <th> for /d/ are evidently nothing but scribal errors, viz. the one instance of <thruhtin>, elsewhere 3 times <truhtin> and well over 100 times regularly <druhtin> /druhdin/ 'lord'

and the one occurrence of our infamous /dooθ/ as <thod>. This particular misspelling, viz. initial <th> for /d/, is slightly more common in MS P and even moreso in F (Kelle II, p. 503).[8]

(b) Aside from the morpheme /θraad/- 'immediate, immediacy', there are 28 instances in which initial /θ/ is written with <d> (Kelle II, pp. 502-3, §I.1). In 7 of these occurrences, the /θ/ is internal in the word, although in morpheme-initial position, e.g. <gidigini>, elsewhere <githig>- 'pious, perfect', <bidihan>, elsewhere <bithihan> 'to accomplish', both from /θIIH/- 'develop'. Here, the /θ/ might have been construed as medial by the copyist. At least, because it was internal to the word, it more easily escaped the corrector's notice. Eighteen of the remaining 21 instances occur in forms of the morphemes: <thu> 'thou', <thoh> 'though', <thulten> 'to endure', and <thArf> 'need'. The remaining 3 instances appear sporadically in 3 other morphemes, viz. <thusunt> 'thousand', <thorn> 'thorn', and <drIngan> 'to press, force'. All the foregoing morphemes occur elsewhere and are much more often spelled with initial <th>. One might attempt to explain these initial <d>'s for /θ/'s as being weakly stressed and hence lenis, especially the 18 forms of the second personal pronoun and the two modals mentioned above. However, one would then expect similar examples among the many hundreds of occurrences of the definite article <ther>, <thaz>, etc.

If there were such <d>-spellings for <ther>, etc., all have been corrected to <th>. This is also the case with many other morphemes (Kelle II, p. 503). Hence it would appear that all instances of initial <d> for /θ/ are due either to the variant dialect of the copyist or to his errors.

In the morpheme /θraad/- 'immediate, immediacy', however, we encounter another puzzling orthographic phenomenon. /θraad/- may appear in a noun, an adjective, and an adverb. In the 66 occurrences of the adverb, it is written 38 times regularly <thrato>, 28 times <drato>. The noun shows only 4 instances of regular <thrati> but 12 of <drati>. The adjective occurs 4 times, always with 'irregular' initial <d>. In summary, we have 42 instances of regular <thrat>- and 44 of <drat>-. The reasons for this 'orthographic dissimilation' or seeming phonemic assimilation are unclear. Although reminiscent of the situation in /dooθ/, above, there is no question here of writing different adjacent phonemes with the same symbol. There are at least seven other morphemes in the corpus that contain initial /θ/ and medial or final /d/, and not one shows a similar spelling. It must remain a mystery, whether this reflects assimilation in a weakly stressed syllable, is some sort of traditional spelling, or has some other cause. The great number of occurrences of initial <d> appear to speak against mere scribal error.

The use of the digraphs <th> and <dh> to represent

initial /θ/, a dental or interdental voiceless slit fricative, as against the use of medial and final <d> from contemporary Romanic orthographies has been discussed in 1.7b.

Examples of initial /d/ are: <daga> /daga/ 'days', <duacha> /duahha/ 'cloths', <dregit> /dregid/ 'carries', <duala> /dwaala/ 'hesitation'; of initial /θ/: <thageta> /θageeda/ 'was silent', <thu> /θuu/ 'thou', <threuuit> /θrewid/ 'threatens', <thuingan> /θwingan/ 'to force, compel'.

Initial /sT/ or /sd/, the reflex of Germanic */st/, always appears as <st>, e.g. <stillo> /sdillo/ 'quietly' (1.10b, footnote 6).

(c) In postconsonantal medial position, /θ/ is written with <d> in the vast majority of instances, e.g. <baldlicho> /balθliihho/ 'bravely' ... the single occurrence of this word in Isidor was (mis)spelled <baltliihho> (1.7b) ... ; <ander> /anθer/ 'other', <erda> /erθa/ 'earth' (Kelle II, p. 494). In addition there are in MS V 21 instances of spellings with <th> in this position, e.g. 4 times <anther> /anθer/ 'other' (normally <ander>), <finthit> (elsewhere <findit>) /finθid/'finds', 3 times <irthisg>- /irθisg/ 'eartly' (elsewhere <irdisg>-), <uuirthig> and <uuirdig> /wirθiG/ 'worthy' (Kelle II, p. 494, §2). Significantly, this postconsonantal <d> for /θ/ shows no sign of assimilation in the orthography of 21 occurrences in which verb morphemes containing this -R<d>- (i.e., -/Rθ/-) have the

past suffix -<ta> (i.e. -/da/), e.g. <gifundta> /gifunθda/ 'he undertook', <huldta> /hulθda/ 'he obligated', <kundta> /kunθda/ 'he announced' (Kelle II, p. 52, §4). This apparent lack of assimilation and the sporadic spellings with <th> would appear to indicate fricative pronunciation of /θ/ even in this environment. Otherwise, one would expect to find such nonexistent spellings as *<kuntta>, *<kundda>, *<kunta>, or *<kunda> for actual <kundta>, especially in view of the fact that in the same environment /k/ appears as <g> (2.5c) and /b/ is often written with <p>, e.g. <gikrumpti> 'may have distorted' from /gikrumban/ or <uuarpta> 'he turned' from /werban/. Another indication of the probable fricative articulation of /θ/ is the fact that, so far as I can determine, there are no instances of /ɵ/'s being written with <t>'s in the entire MS V.

/d/ is, in the overwhelming majority of instances, written with <t> in postconsonantal medial position (Kelle II, pp. 497-8, §II.1a and b). Examples are, following the resonants /l/, /n/, and /r/, <faltonti> /faldoondi/ 'folding', <anton> /andoon/ 'to perceive', <herti> /herdii/ 'harshness', and, following the voiceless fricatives /f/, /h/, and /s/, <ofto> /ofto/ 'often', <rehto> /rehdo/ 'rightly', and <fasta> /fasda/ 'a fast'. As has been pointed out, /fd hd sd/ are the reflexes of Germanic /*ft *ht *st/ that have coalesced with the reflexes of Germanic */d/. In MS V, this /Fd/ from Germanic */Ft/ has been written other than with <t> only

twice so far as I can determine. It appears once written with <d> in <rehddeila> 'equal apportionment', in which the following <d> obviously influenced the copyist. MS P shows normal <rehtdeila>. In addition, /Fd/ appears once as <th> in <gislahthaz>; normal <gislahtaz> in MS P. Both spellings are obviously instances of scribal error.

The situation with /d/ from Germanic */d/ in post-resonant position is only slightly different. It appears written with <d> only 10 times in MS V. It is never spelled <th> (Kelle II, p. 495). The word for 'penny' appears as <pending> in MS V, as <penthing> in P. Because the derivation of the dental obstruent, sporadically intercalated into this word in South Germanic, is unclear, the above spellings must remain unexplained (cf. Kluge, under Pfenning and Pfand). Perhaps the spellings in Otfrid reflect a folk etymology to 'Pfand Ding', and hence the <d> would not represent /d/ at all, but rather /θ/. In the other 9 instances, because all derive from Indo-European */t/, the alternation may depend upon Verner's Law. The 9 instances occur in 3 morphemes, viz. 3 times in <manag-fald-> 'manifold' (elsewhere <falt>-), twice in <undar> (usually <untar>) 'under'; and 4 times in the ending of the present participle -<end>, (hundreds of times -<ent>). However, because /d/ also appears 3 times as <d> in intervocalic position where there can be little question of morphophonemic alternation (2.6d) and in view of the extreme rarity of -<Rd>- for -/Rd/-, it appears best to treat the above-mentioned 10 instances as scribal errors

rather than as examples of the workings of Verner's Law. /wErθ~d/ 'become' and /fInθ~d/ 'find' are morphemes that contain this postresonant environment and are also subject to Verner's Law. With only one exception in MS V, they regularly appear spelled with <d>, or rarely <th>, in the present system and in the preterite singular, but with <t> in the preterite plural system and the past participle (Kelle II, p. 27, §b).

In addition, Latin postresonant /d/ in /provenda/ 'provender' appears written with <t> in the two occurrences of this loan word in the corpus, viz. <pruanta> /pruanda/ 'nourishment, provender' and <pruantota> /pruandooda/ 'nourished, fed'.

One last peculiarity in the orthographic representation of supposed /d/ concerns the past formant of weak verbs, viz. /da/, /dun/. Although, strictly speaking, the dental stop occurs here in morpheme-initial position, Otfrid usually treats it like any other medial /d/, writing it <ta>, <tun>, etc., even after /θ/. However, the preterites of biginnan 'to begin' and unnan 'to grant, permit, gönnen', invariably appear in Otfrid spelled with -<da>, -<dun>, etc. (Kelle II, p. 6, §I.6 and pp. 107-8, §I.1). <bigond>- 'he, they began' occurs consistently 24 times in MS V; <ond>- 'he, they granted' occurs 3 times. The perfective form of the latter verb appears twice, each time written <gionst>- 'granted', which is reminiscent of Isidor's <bigunsta> 'began'. These forms with <d>, which appear to be the normal preterite

forms of these verbs in Old High German generally, have never been satisfactorily explained (Braune-M, §§336, A3 and 373, A2). Exactly what this variant orthographic representation means in phonetic terms is therefore impossible to determine. One can only say that the consistent spellings with <d> in these two verbs as against the just as consistent <t> in all other verbs must also indicate a phonetic difference of some kind. Perhaps the morpheme /da/ (etc.) had an allomorph /θa/ (etc.) in some environments. Another compound of unnan, irbunnan (i.e. er-ab-unnan) 'deny, mißgönnen' appears twice in the preterite, once as expected <irbonda>, but once a <irbonth>! Otherwise, <da> for <ta> appears only twice in the whole corpus, viz. <ougdun> 'they showed', elsewhere and much more often <ougtun> (Kelle II, p. 96, §B). These last two instances appear to be scribal errors because in one other instance <ougdun> has been corrected to <ougtun> in MS V, and MS P shows <ougtun> consistently everywhere.

(d) In intervocalic position the regular orthographic representation of /θ/ is again <d>; that of /d/ is <t> (Kelle II, p. 494 and p. 497, §II.1). Examples are: <bede> /beeθe/ 'both', <bita> /biida/ 'hesitation, expectation', <bruader> /bruaθer/ 'brother', <fruater> /fruader/ 'mature' (masc. nom. sg.), <leide> /leiθe/ 'sorrow' (dat.), <leite> /leide/ 'may lead'.

Sporadically, intervocalic /θ/ is here as elsewhere written with <th>, viz. in 12 occurrences of 9 morphemes

which elsewhere and much more often contain regular <d> plus the 16 instances of <doth>-, <toth>- discussed in 2.6a. Examples from the above-cited morphemes are: 3 occurrences of <beth>- 'both', one instance of <bruather>, 'brother', and one occurrence of <leithes> 'of sorrow' (Kelle II, p. 494, §2).

Out of about 1,000 occurrences of <t> for intervocalic /d/, only 3 instances of <d> are attested in MS V (Kelle II, p. 495). There are one instance of <idal> (elsewhere 5 times <ital>- /iidal/ 'empty'), one occurrence of <drudu> (elsewhere 65 times <drut>- /druud/ 'friend, beloved'), and one instance of <gisido> (elsewhere 17 times -<sit>- /sid/ 'arrange'). Because 3 similar occurrences of <d> for /d/ have been changed to <t> by the corrector, and in view of the overwhelming statistical evidence, one appears justified in designating the above 3 instances as scribal errors.

In addition, one verb in MS V shows regular morphophonemic alternation of /θ/ and /d/ in intervocalic position, although there are signs of leveling (Kelle II, p. 495): <quedan> /kweθan/ 'to speak' : <quatun> /kwaadun/ 'they spoke'. Otherwise, the /θ/ has been generalized as with <midan> /miiθan/ 'to avoid', although here both MSS P and F show sporadic forms with <t> where one would expect them (Kelle II, p. 495). Also, some verbs which might contain such alternation are attested only in one or the other morphological category and hence show only one obstruent, e.g. <snide> /sniiθe/ 'may cut', <thanasneid>

/θanasneiθ/ 'he cut away' occurs only in the present and preterite singular, but compare the noun <snitun> /snidun/ 'piece of food' (acc.).

Long /θθ/, which appears in two of the morphemes attested in Otfrid, is distinguished in MS V from single /θ/ only in that it is represented everywhere by <th>, never by <d>. The two morphemes are <ethes>- /eθθes/ 'some' (in 'someone, somehow, somewhere'), which occurs 10 times in the corpus, and <mithont> /miθθond/ 'just now', which is attested 14 times (Braune-M, §167, A 10). In sum, in the 24 instances where /θθ/ appears, it is always written <th>, never <d>. In MS F, /miθθond/ is written once as <middon>. This is the only instance of <dd> outside of compounds in the corpus (Kelle II, p. 496). In MS P, /eθθes/ appears twice as <etthes>. These are the only examples in the corpus of orthographic evidence for the length of /θθ/. The potential ambiguity here of the polygraph <tth> can be seen when compared with compounds such as <drutthegan> /druudθegan/ 'beloved subject'. This may well have been one reason, in addition to the general rarity of /θθ/, that Otfrid did not choose to show its length in a manner other than consistently writing <th> in non-initial position.

/dd/, whether it is the reflex of South Germanic */ttr/ or */ddj/ or the result of compounding, as in the preterite of weak verbs with stems ending in -/d/, always appears as <tt> or, if shortened, as <t>. Examples are: South Germanic

*/dj/ > /dd/ in <bittu> /biddu/ 'I request', and -/d+d/- in <beittut> /beiddud/ 'you (pl.) forced' from <beiten> /beiden/ 'to necessitate, compel'. It is to be noted that here the long consonant even occurs following a diphthong. MS V has shortened these compounded <tt>'s only 4 times, probably out of error, e.g. <leita>, elsewhere <leitta> 'he led'; P always has <tt> (Kelle II, p. 56, §5). So far as I can determine, -/dd/- from South Germanic *-/dd/- is always written <tt> where one expects it. However, the reflex of South Germanic *-/ttr/- appears to have been shortened following long vowels and diphthongs, e.g. one instance of <eitere> and one occurrence of <eittar> /eiddar/ 'poison', the only two occurrences in the corpus. MS V always shows <lutar>- /luudar/? 'pure'. However, MS P has one instance of <lutteren> /luudderen/ 'pure' (dat. pl.).

One appears justified by the orthographic evidence in stating that /θθ/ still had fricative articulation and was probably fortis and long, whereas /dd/ was a long fortis (?) voiceless stop.

(e) In morpheme- and word-final position, aside from the foreign place name, <nazareth> 'Nazareth', the digraph <th> is attested in only two instances in MSS V and P, viz. in the same line where <oth> /ooθ/ 'possible, feasible' rhymes with <toth> /dooθ/ 'death'. These two morphemes are rhymed in one other line in the corpus, but here they appear as <od> and <tod>. Otherwise, final /θ/, following both

vowels and resonants, is invariably written <d>, whereas final /d/, after vowels, resonants and fricatives, always appears as <t>. Examples are: <bad> /baθ/ 'bath' : <bat> /bad/ 'asked', <luad> /luaθ/ 'loaded' : <guat> /guad/ 'good', <hold> /holθ/ 'favorably inclined' : <halt> /hald/ 'rather', <mord> /morθ/ 'murder' : <uuort> /word/ 'word', <mund> /munθ/ 'mouth' : <munt> /mund/ 'cover, protection', and <gift> /gifd/ 'gift', <maht> /mahd/ 'power', <gast> /gasd/ 'guest'.

It is to be noted that Otfrid's regularization of the use of the graphs <th>, <d>, and <t> in part obscures ... but in part also aids ... in phonetic analysis. It is clear that Otfrid wrote /d/ with <d> in initial position but everywhere else with <t>, not because /d/ was more lenis or voiced in initial position, but because absolute initial <d> was the only <d> which unambiguously indicated a stop in contemporary Romanic orthographies. It is just as clear that his writing <t> for /d/ in the environment of greatest voice, viz. intervocalically, indicates that /d/ was voiceless. His choice of <d> for /d/ in initial position may well indicate that /d/ was nowhere very fortis, because what is known of Germanic phonology in general would indicate that intervocalic position is an environment of much greater potential lenition than is absolute initial position. Otfrid could, after all, have written <t> for /d/ everywhere. In addition, the orthographic representations of /d/ give absolute proof that the reflexes of unshifted Germanic */t/, i.e. in the clusters /tr st ft ht/,

have indeed merged with those of Germanic */d/.

Initial <th> vs. medial and final <d> for /θ/ would appear to suggest fortis initial vs. lenis medial and final /θ/, but what has been observed with respect to /d/ makes such an analysis suspect on orthographic evidence alone. Initial <th> was used, again in all probability, because initial <d> did not represent a fricative in Romanic orthography. However, the sporadic use of <th> in both medial positions apparently demonstrates that /θ/ was still everywhere a fricative. In addition, the very strict orthographic separation of /θ/ and /d/ in all positions would appear to indicate a difference in manner of articulation (fricative vs. stop) rather than one of mere intensity (fortis vs. lenis stop).

Otfrid's avoidance of the digraph <dd> must mean that /θθ/ also had fricative articulation, for Romanic <dd> indicated a stop, but /θθ/'s fortisness can only be inferred. Evidently the digraph <th>, as with <ch> for /hh/, was for Otfrid's purposes a sufficient indication of length. <tt> indicates the length, voicelessness, and (just possibly) the fortisness of /dd/. The following orthographic parallel is to be noted: <gg> for /gg/ is to <tt> for /dd/ as <ch> for /hh/ is to <th> for /θθ/. <k> for /kk/ stands apart but is phonemically defensible, as has been shown in 2.5b.

(f) In Otfrid's orthographic representation of /ȥ/ and /ß/, one again encounters the problem that pervades all Old

High German texts except Isidor. Except for 11 instances of <c> for /ȼ/ in the Latin loan <kruci>, <cruci> beside 13 instances of <kruzi>, <cruzi> 'cross' (Latin crux, crucis), <c> occurs only once in one native German word, <cessa> /ȼessa/ 'surf' (Kelle II, p. 521). Otherwise, both /ȼ/ and /ß(ß)/ are written with <z> and, intervocalically, with <zz>. The cause of this complete orthographic confusion of phonemes is obscure. The reason most often given, viz. that the Latin alphabet lacked a symbol wherewith /ȼ/ and /ß/ might have been distinguished, is rather weak, as witness Isidor's spellings and others' unfortunately sporadic attempts at orthographic distinction of /ȼ/ and /ß/ (Braune-M, §160, A 2). Older attempts to analyze this ambiguous orthography as indicating that no phonemic distinction existed between /ȼ/ and /ß/ in Old High German times have been conclusively rejected for five reasons,[9] internal to the language itself, as well as from comparative and modern evidence (Braune-M, §158, A 1). Hence one must assume that Otfrid's language possessed the same opposition of /ȼ/ and /ß/ that Isidor so consistently showed, even though there is little if any orthographic indication of it. Otfrid's orthography, of course, also gives no indication of the phonetic nature of /ȼ/ and /ß/. His own statement concerning <z> has been discussed in 2.4.

We may assume that in initial position and in post-consonantal medial and final positions, <z> indicates /ȼ/. In intervocalic position and in postvocalic final position,

however, one must rely on outside evidence to determine whether /ȼ/ or /ß/ is present in any given instance.

On the other hand, Otfrid apparently did attempt to distinguish the length of the obstruents in intervocalic position. When they follow short vowels, Otfrid usually writes <zz>; after long vowels and diphthongs, <z> usually appears. In the paradigm of /eßßan/ : /aaßun/ 'eat' vs. 'ate', we find, for example, <ezz>- vs. <az>- with one single exception, and, with 3 exceptions, in /siȼen/ : /saaßun/ 'sit' vs. 'sat', we find <sizz>-, but <saz>-. The exceptions always involve /ȼ/ or /ß/ being written with single <z> after short vowels. There are only two occurrences of <zz> after diphthongs, in both cases representing /ßß/. None occurs after long vowels in the entire MS V (Kelle II, p. 501, §b).

Any 'pattern' which one might use to distinguish /ȼ/ and /ß/ orthographically would be based on very inconclusive statistics, e.g. the fact that when single <z> occurs after short vowels, it usually appears to represent /ȼ/, not /ß/, but in contrast one finds 15 instances of <uuazar> compared with one occurrence of <uuazzar> /waßßar/ 'water'.

/ȼ/ and /ß/ are sharply distinguished from /s/. The only apparent exceptions occur when the neuter nominative singular adjectival ending -<az> /aß/ is confused with the genitive singular -<es> /es/, or when sporadically there appears to have been assimilation of the final /ß/ in <uuaz>

/waß/ 'what' to a following initial /s/, as in <so uuas so>, 'whatever' (Kelle II, p. 508, §III.2). Whether this assimilation was phonological as well as orthographic is difficult to determine. If, however, this orthography should mirror a real phonological assimilation, it would be another good indication that /ß/ was a groove fricative, not a slit fricative, as has already been stated for other reasons in 1.7d. Neither /θ/ nor /h/, viz. slit fricatives, shows any tendency to assimilate to /s/. Kelle's inclusion of <uuas> /was/ 'sharp', <uuasso> /wasso/ 'sharply' among the instances of <s> for <z> is spurious, for this morpheme contains the reflex of Germanic */ss/, not */t/.

Examples of initial and postconsonantal /ȼ/ are: <zala> /ȼala/ 'number', <zuiual> /ȼwiival/ 'doubt', <salzan> /salȼan/ 'to salt, spice', <salz> /salȼ/ 'salt', <ganzan> /ganȼan/ and <ganz> /ganȼ/ 'whole' <smerza> /smerȼa/ 'pain'. Final /rȼ/ is accidentally not attested, but one might expect *<wurz> /wurȼ/ 'plant'. Examples of intervocalic and postvocalic final /ȼ/ and /ß(ß)/ are: <scazze> /sga(d)ȼe/ and <scaz> /sgaȼ/ 'treasure' : <fazze> /faßße/ and <faz> /faß/ 'container', <thiz> /θiȼ/ 'this' : <thaz> /θaß/ 'that', and <iz> /iß/ 'it' : <es> /es/ 'of it'.

Except for <giuunxti> /giwunsgdi/ 'might wish', where <x> is written instead of usual <sg>, and <fórspotun>, in MS F <forskotun> /forsgotun/ 'investigated', where <sp> appears for normal <sg>, both scribal errors, there are no

irregularities in the orthography of /s/ and /ss/ in all of MS V. There are accordingly no indications of the phonetic nature of /s/, nor of any allophonic variation. Examples of /s/ are: <so> /soo/ 'so', <sense> /sense/ 'of meaning', <uuessa> /wessa/ 'knew' : <uuesan> /wesan/ 'to be', <giuuisso> /giwisso/ 'certainly' : <uuizzi> 'wi(d)ʓi/ 'wit' : <wizo> /wiß(ß)o/ 'knowing'. Needless to say, /s/ has the greatest frequency and range of occurrence of all obstruents. To list examples of each of its possible environments would be pointless. For complete listings of the distribution of /s/, see Kelle II, pp. 505-8. Where pertinent, some of the clusters in which /s/ occurs are discussed in connection with the other member of the cluster, e.g. <sg> in 2.5c.

2.7. The labial phones. (a) /b/ is a phoneme of very frequent occurrence in all positions in the word, whereas /p/ is the most infrequent obstruent, and, with the possible exception of /j/, the most infrequent phoneme as well. Fortunately, however, the great length of Otfrid's corpus offers instances of <p>, <ph>, and <pf> in all environments, even though in some instances they occur in shifted, i.e. thoroughly Germanicized, loans from Latin. As with /θ/ and /d/, Otfrid has regularized the orthographic representation of /p/ by position. Again, he distinguishes initial position from all others. Initial /p/ appears everywhere written <p>; elsewhere we find <ph>, <pf>, and <f>, with only 6 <p>'s in MS V. With /θ/ and /d/, I was of the opinion (2.6a-c) that

the orthographic distinction was caused mainly by the ambiguous status of the graph <d> in Romanic orthographies. In the case of /p/, however, modern evidence shows that this orthographic distinction in all probability mirrors actual phonological conditions (2.3).

In initial position, we find <bad> /baθ/ 'bath' : <pad> /paθ/ 'path', <blugo> /bluugo/ 'indecisively' : <pluagi> /pluagi/ 'plows', <branta> /branda/ 'burned', <bruader> /bruaθer/ 'brother' : <pruanta> /pruanda/ 'provender'.

The Latin loans pix, picis 'pitch', and praedicare 'to preach' appear in MS V as <beh>, <bech>- /beh(h)/- 'burning pitch, torment' in 9 occurrences and <brediga> /breθiga/ 'teaching, sermon' in 7 occurrences, <bredigari> /breθigaari/ 'preacher' in two occurrences, and <bredigon> /breθigoon/ 'to preach' in 15 occurrences with no orthographic variation. This would appear to indicate that initial <b> represented a voiceless sound, as did initial <d> in, e.g., <dunichun> /dunihhun/ 'tunic' (acc.) from Latin tunica (2.6a). If initial /b/ was voiceless, then one must assume that initial /p/ must have been fortis and aspirated, as it still is (at least before vowels) in the modern p-dialects[10] (Keller, p. 175, §14.8).

(b) In intervocalic position, /p/ does not occur as such. However, beside a host of examples of intervocalic /b/, one encounters also instances of /bb/ and /pp/. There are no orthographic irregularities in the representation

of intervocalic /b/ and hence no clues to its possible phonetic shape, except that it was a bilabial stop (Kelle II, p. 474, §II.1). Its morphophonemic alternation with /f/ is discussed in 2.7d. Intervocalic /b/ is written in all occurrences with <b>, e.g. <gilouben> /gilouben/ 'to believe', <firleiben> /firleibeen/ 'may leave over, wanting'. /bb/ is also written in all its 12 occurrences with <bb>, e.g. <ubbigaz> /ubbigaß/ 'superfluous', <sibbu> /sibbu/ 'blood relationship' (dat.). (Kelle II, p. 475, §6). The orthography of /pp/ is slightly more revealing. /pp/ appears 22 times in 10 morphemes, 7 of which are unfortunately once-occurring forms. /pp/ is written with <pf> 3 times, with <ph> 5 times, with <pph> 13 times, and once with <fph>, which is probably a scribal error (Kelle II, pp. 477-8; §§II.1, 2, 4, and 5). Examples are respectively: <aphules> /appules/ 'apple's'; <intslupfe> /indsluppe/ 'may slip away'; <opphoron> /opporoon/ 'to sacrifice',[11] and <scefphe> in MS V, <scepfe> in MS P, <scephe> in MS F, <scepphe> in MS D, /sgeppe/ 'let him create, provide'. Since the trigraph preponderates 14 to 5 over the more common of the two digraphs, it appears that Otfrid was attempting to indicate the length of /pp/ as well as its voicelessness and strong aspiration (or better, affrication). Such orthographic indication of length occurred only very sporadically with /kk/, as observed in 2.5b. The 3 and only occurrences of <krippha> /krippa/ 'manger, crib', which one would expect to contain /bb/,

evidently demonstrate a variant stem with a p-formant also occurring in Kraft beside the more usual b-formant seen in Korb (Kluge, under Krippe and Kraft; but Braune-M, §135, A 1, calls it an Upper German import.).

(c) In postconsonantal morpheme-medial position /b/ is written with <b> everywhere. Hence, it again always contrasts with both /p/ and /f/ in this position. The spelling of the reflex of Germanic */p/ in this position, however, vacillates among <p>, <pf>, <ph>, and predominant <f>. It is never written with <v> or <u>. On the other hand, the phoneme that has Germanic */f/ as its source appears in this position spelled with <u> or more often with <f>, never with a digraph containing <p> or with <p> itself. The reflex of Germanic */p/ in postconsonantal medial position in its 55 occurrences in our text is written twice with <p>, 4 times with <pf>, 13 times with <ph>, and approximately 36 times with <f>, i.e. slightly less than twice the number of non-<f> spellings. The two morphemes /hElp/ 'help' and /wErp/ 'throw' account for well over half the 55 occurrences of -/Rp/- and for the vast majority of the <f>-spellings. In the other 6 words that contain the environment in question, the other spellings preponderate over the <f>-spellings. Examples are: once <helpfa>, once <helpha>, and twice <helfa> /helpa/ 'help' (noun). The reflex of Germanic */f/ in the environment in question is contained in only 3 morphemes. Fortunately, each of the 3 contains a different resonant,

so that all the 3 resonants possible in this environment are represented. Unfortunately, the fairly common form representing Germanic */hwErf~b/ 'roll, turn' has leveled the /b/-alternate completely in Otfrid (Isidor, it will be noted, has leveled the one with /f/). The statistics are: twice <u>, 16 times <f>. Examples are: once <finui>, twice <finfi> /finfi/ 'five'; once <uuolua> /wolfa/ 'wolves'; and 14 times <thurfu>- /θurfu/- 'need'.[12] Whereas the intervocalic reflexes of Germanic */p/ and */f/ are phonemically distinct in our corpus, the orthographic evidence is inconclusive for separating these same reflexes into two phonemes in postresonant position. What evidence there is, however, appears to demonstrate an appreciable amount of uncertainty on the part of the scribes and perhaps of Otfrid himself as to the identity of these sounds. This problem was not encountered in Isidor per se (1.8a) but was found in the later Rhine Franconian documents, especially in the Lay of Ludwig, contemporary with Otfrid within two decades. I have arbitrarily chosen to phonemicize the postresonant reflexes of Germanic */p/ as /p/ in order to bring the transcriptions more into accord with those of Isidor and with their historical sources. More discussion of this problem will be found below. Examples of postconsonantal medial /b/, /p/, and /f/ in juxtaposition are: <kolbon> /kolbon/ 'clubs', <selba> /selba/ 'self' : <hulpfin> /hulpiin/ 'might help', <uuelpfa> /welpa/, 'puppies' :

<uuolua> /wolfa/ 'wolves'; <gizimbiri> /gi∂imbiri/ 'construction' : <limphit> /limpid/ 'it is fitting' : <finui> /finfi/ 'five'; and <tharbe> /θarbee/ 'may do without' : <thorfon> /θorpon/ 'villages' (dat.) : <thurfi> /θurfi/ 'may need'.

The situation in final position is more complicated. The only /p/ which may occur in postvocalic final position is the reflex of Germanic */pp/, which was shortened upon losing its intervocalic position in, for example, an adjective without an ending (cf. <quek> /kwek/ 'alive' for such a final reflex of */kk/) or in the preterite of first class contract weak verbs. We have only one such occurrence of final postvocalic /p/ in the entire corpus, viz. in <intslupta> /indslupda/ 'slipped away' vs. <intslupfe> /indsluppe/ 'may slip away'. This <intslupta> plus the above-mentioned two occurrences of <limpit> /limpid/ 'it is fitting' (usually <limphit>) and 3 occurrences of <gilumphlih> /gilumpliih/ 'seemly' (elsewhere <gilumflih>, <gilumpflichu>) are the only instances of non-initial <p> for /p/ in the corpus. The spelling <limpit> with /p/ in syllable-initial position is unambiguous though unusual. However, <intslupta> and <gilumplih> are ambiguous, because /b/ in this position is also often spelled with <p>, e.g. <gikrumpti> /gikrumbdi/ 'might have distorted' or <gilouptun> /giloubdun/ 'they believed'. Since there is no evidence for merger of the reflexes of non-initial /b/, /p/, and /pp/ in modern dialects south of the apfel-isogloss

... and in view of the vast number of 'regular' spellings occurring elsewhere ... one must consider these 5 instances of <p> for non-initial /p/ as scribal errors. It is to be noted as well that these 5 occurrences appear in MS V. The other MSS show normal spellings in some of these 5 occurrences but contain other instances of <p> for -/p/(-) of their own elsewhere (Kelle II, p. 478, §5).

/b/ in final position, along with a host of <b>-spellings, is spelled with <p> approximately 39 times (Kelle II, pp. 474-6, §§II.3 and III.1). Four of these final <p>'s are required by the acrostic. In some additional instances an original <p> has been corrected to <b>. This is reminiscent of <c> or <k> for final /g/ (2.5c). The fact that it appears to be only absolute final <c> and <k>, on one hand, and <p> on the other, which have been corrected to <g> and <b> respectively, probably signifies only that final letters are more easily noticed than medial ones. However, it is possible, if unlikely, that there was a real phonetic difference between medial syllable-final position and absolute final position, as in <uuarpta> /warbda/ 'rotated' as against <irstarp> /irsdarb/ 'died'. At any rate, these 'nonmorphemic' spellings of final /b/ with <p> certainly indicate /b/'s voiceless stop character and perhaps also a more fortis articulation in final position than in other environments. More examples are given with -/p/, below.

The reflex of Germanic */sp/ appears in a great many

morphemes in many occurrences in morpheme-initial position, where it is always written <sp>, e.g. <spati> /sbaadi/ 'late', <spile> /sbile/ 'game, pastime' (dat.) (Kelle II, p. 476, §1.5). Interestingly enough, medial and final /sb/ appears in only one morpheme, /θwesb/- 'destroy, exterminate', which recurs 5 times in the corpus. Here, the reflex of Germanic *-/sp/ is consistently written <sb> even before the past formant /d/, viz. 3 times -<thuesben> -/θwesbeen/ 'to destroy' and twice -<thuasbti> /θwasbdi/ 'might destroy'. This orthography is parallel to initial <sc> and medial and final <sg> for /sg/ (2.5b and c). It also supports the thesis that the stop in each series following the voiceless fricatives belongs to /b/, /d/, and /g/, rather than to /p/, (?), and /k/.

/p/ in final position, except as noted above, occurs only after resonants. Besides the 4 occasional spellings with <p> mentioned above, final /p/ is spelled variously with <ph>, <pf>, and <f>. Again the MSS vary among themselves, with P showing slightly more non -<f> spellings than V. Only 4 morphemes in the corpus appear with final /p/ for a total of 18 occurrences. In MS V we find one <ph>, two <pf>'s, and 15 <f>-spellings. MS P has only 13 <f>-spellings as against 5 with <pf>, e.g. <hilph>, <hilf> /hilp/ 'help!', <gelpfheit> /gelpheid/ 'arrogance', <lamf> (in MS P <lampf>)/lamp/ 'it was fitting', <gilumpflichu>, <gilumflih> /gilumpliih/ 'seemly', <uuarf> (in MS P <uuarpf>)/warp/ 'threw'. Aside

<lamf> /lamp/ 'it was fitting' : <finf> /finf/ 'five', <gisuarb> /giswarb/ 'dried off', <starb> and -<starp> /starb/ 'died' : <uuarpf> and <uuarf> /warp/ 'threw' : <tharf> /θarf/ 'need(s)', <halb> and <halp> /halb/ 'half' : <hilph> and <half> /hElp/ 'help(ed)' : *<uuolf> /wolf/ 'wolf', reconstructed from <uuolua> /wolfa/ 'wolves'. The reflex of final Germanic */f/ following /l/ is not attested in our corpus.

An additional orthographic ambiguity, perhaps inherent in digraphs similar to those already mentioned in the other series, is that encountered in such compounds as <liphaftes> /liibhafdes/ 'of (the) living' : *<gilephes> (actually <gilepphes> /gileppes/) 'thou ladlest' or <dumpheit> /dumbheid/ 'stupidity' : <gilumphlih> /gilumpliih/ 'seemly'.

(d) Except in the cluster /fd/ and in absolute final position, where it invariably appears as <f>, the reflex of Germanic */f/ is written with both <u> or <f> in all other environments.

In intervocalic position, /f/ is written with <f> sporadically only 10 times in MS V, viz. 3 times <afur>, 21 times <auur> /avur/ 'but' ; once <zuelifi>, once <zueliui> /ƀwelivi/ 'twelve'; once <einlifo>, in MS F <einliuo> /einlivo/ 'eleven'; in MSS V and P 3 times <f> in /avaroon/ 'to repeat', twice <u> ... in MS F these numbers are reversed ... once <afaloti> /avaloodi/ 'might strive', once <giaualon> /giavaloon/ 'to strive'; and

from the many occurrences in the cluster /fd/, /f/ from Germanic */f/ also appears 18 times in the two morphemes <finf> /finf/ 'five' and <tharf> /θarf/ 'need(s)'. As is to be expected, it is always written with <f>. Although the orthographic evidence is even more inconclusive than in medial postconsonantal position, I again phonemicize the postconsonantal reflex of Germanic */p/ in final position with /p/. It must be borne in mind, however, that this putative allophone of /p/ had probably passed beyond the aspirate [p^h] or affricate [pf] stage seen in -/pp/- to a new bilabial fricative [φ] which was soon to coalesce (or was already in the process of coalescing) with the old labiodental [f]. In addition to the orthographic evidence, this distinction in the place of articulation is indicated by the fact that all original Germanic */m/'s before */f/ had become /n/ in Otfrid's language, viz. in all occurrences of /finf/ 'five', /kunfd/ 'advent, coming', /ȼunfd/ 'decorous behaviour', and probably /sunfd/ 'swamp', whereas /m/ remains before the fricative allophone of /p/ in all occurrences of /lImp/ 'to be fitting, seemly' (Braune-M, §§123, A 1 and 132, A 3). As examples of postvocalic final /b/ and /p/ we find <bileip> and <bileib> 'remained', <gab> /gab/ 'gave', <kleipta> and <kleibt er> /kleibd/- 'he paste(d)(s), fasten(ed)(s), <uaptun> and <uabta> /uabda-un/ 'exercised, praticed'. For postconsonantal final /b/, /p/, and /f/, one encounters <lamp> /lamb/ 'lamb': <lampf> and

once <zuifolo> in MSS V and F, but <zuiuolo> in MS P, 19 times <zuiuol> /ƀwiivol/- 'doubt'. In addition to the above-mentioned 44 instances of intervocalic <u>, there are 15 more occurrences of <u> for the reflex of Germanic */f/ in this position, plus 23 instances in three Latin loan words, viz. in all occurrences of <frauil>-, <fraual>- /fravil/-, /fraval/- 'outrage(ous)(ly)' and <reues>, <reue> /reve(s)/ 'womb' (gen. and dat.), as well as in all occurrences of <brieuenti> /brievendi/ 'writing', <liuol> /livol/ 'book', and <euangelio> /eevangelio/ 'gospel' (Kelle II, p. 480, §§ 2 and 5). This amounts to a grand total of approximately 82 <u>'s as against 10 <f>'s in MS V representing /v/.[13] On the other hand, /f(f)/ from Germanic */p/, is never written with <u> or any spelling other than <f> or <ff> in all the occurrences of the 21 morphemes containing it (Kelle II, p. 477, §II.3).[14] As in Isidor, intervocalic /v/ appears to have been phonemically distinct from /f/. The Latin loan <diufal>- /diufal/- 'devil' from diabolus appears to contain /f/ in Otfrid's language, for in its 26 occurrences it always is written with <f>.

In initial position and, as we have seen, in post-resonant medial position, the reflex of Germanic */f/ is represented by <u> only very sporadically before vowels, never before consonants. Out of hundreds of occurrences, initial <u> appears in only 14 instances, e.g. one <uaz>, twelve <faz>- /faß/ 'container' (Kelle II, p. 479, §I.2).

These sporadic spellings with initial <u> may indicate the same lenition that has been assumed for intervocalic position in Isidor. If so, the distribution of allophones would exactly parallel that of /h/, i.e. [ɣ] and [h] in syllable-initial position and [f] and [χ] in syllable final, with long [ff] and [χχ] contrasting intervocalically with the lenis allophones. However, because Isidor shows no orthographic evidence of such lenition in initial position on the part of /f/, and because /ff/ appears to have lost its length after long syllabics, a process which Otfrid possibly carries even further, I have chosen to phonemicize the reflex of Germanic */f/ in initial and postconsonantal medial positions as /f/. /f/ from Germanic */p/ does not occur in these environments. Examples of initial /f/ are: <fahs> /fahs/ 'hair', <fihu> /fihu/ 'animal', <funs> /funs/ 'apparent, manifest', <fluah> /fluah/ 'curse' <frua> /frua/ 'early'.

In final position after vowels, the reflexes of Germanic */f/ and */p/, as in Isidor, have merged completely. Both are spelled uniformly with <f>, e.g. <drof> /drof/ 'drop', <houf> /houf/ 'heap', <hof> /hof/ 'yard' (Kelle II, p. 478, §III.1, and p. 480, III.1).

Though the author of Isidor apparently attempted to distinguish orthographically the reflex of South Germanic */ff/ from that of intervocalic */p/ (1.9c), this is not the case with Otfrid. The reflex of Germanic */hafj/- 'to lift' occurs a total of 3 times in the corpus, always

spelled <heff>- (Kelle II, p. 474, §II.2). This is a morpheme that shows regular morphophonemic alternation between /f/ and /b/ in accord with Verner's Law. Hence we find an additional 21 occurrences from the preterite system which show /b/, <huab>- /huab/- 'lifted'. Unfortunately, no forms of the morpheme occur in which one might expect the reflex of */f/ rather than of */ff/, viz. the second or third person present singular. The derived substantives which might be expected to contain /v/ have leveled /b/, viz. nineteen occurrences of <hebig>- /hebig/- 'weighty, heavy, important' and <hebigi> /hebigii/ 'weight, heft'.

The reflex of Germanic intervocalic */p/ appears written exclusively with <f> or, sporadically, <ff>. It is attested in all occurrences of approximately 17 morphemes (Kelle II, p. 477, §II.3). <ff> occurs only once after a long vowel, viz. in <uuaffanon> /waafanoon/ 'weapons' (dat.), elsewhere eleven times <uuafan>- plus a host of occurrences of <f> after long vowels and diphthongs in other morphemes. Even following short vowels, single <f> preponderates over <ff> 17 to 14 in Germanic words, plus 6 occurrences of inflected forms of the loan word <biscof> 'bishop', all containing single <f>. In question are one instance of <giscaffota> /gisgaffooda/ 'formed, shaped' as against one other instance in <ungiscafan> /ungisgaffan/ 'uncreated, shapeless' ; and 13 occurrences of <offan /offan/ 'open(ly), <offon>-/offon/-

'to open'. This evidence appears to indicate that, as in Isidor, /ff/ was shortened following long vowels and diphthongs but retained (allophonic) length after short vowels. Furthermore, because /f(f)/ then contrasted only with /v/ and not with /f/, Otfrid apparently did not feel constrained to indicate length orthographically, as with /kk/. It is, however, possible that /ff/ was losing its length everywhere. However, since this orthographic vacillation in indicating consonant length occurs only with those long consonants which do not contrast with a short variety, viz. /ff/ and /kk/, and because length is consistently indicated for all consonants which do show a short vs. long contrast, I have again elected to transcribe /VVf/ and /Vff/. In intervocalic position there is no orthographic indication that /f(f)/ contrasted with /v/ in place of articulation or in any other manner except strength of articulation and length (Braune-M, §132 and A 3 tends to consider /f(f)/ bilabial.). /v/ appears to have been a short voiceless lenis labiodental fricative; /f(f)/, a long or short voiceless fortis (labiodental) fricative. As stated above, all 3 instances of /heff/- 'lift' show <ff>. More examples of intervocalic /v/, /f/, and /ff/ are: <zuival> /ƶwiival/ 'doubt' : <scafinen> /sgaafiineen/ 'of sheepskin' : <giscaffota> /gisgafooda/ /shaped', and <reues> /reves/ 'of the womb', <riafun> /riafun/ 'they called' : <drifit> /driffid/ 'concerns, hits'.

(e) /w/, as was /j/, is of interest here only in so far as /v/, /u/, and /ua/, /uo/, /ue/ can be distinguished orthographically from /w/ and from each other. Ideally, Otfrid's orthographic rule that he himself mentions (2.4) appears to be that <uu> stands for /w/, <uuu> for /uw/ or /wu/, <uua> for /wua/, 'intervocalic' <u> for /v/, and <u> elsewhere for /u/. The system of accents mentioned in connection with /j/ (2.5a) also aid in identifying the syllable nucleus and in distinguishing it from the accompanying consonants, except, of course, where they are misplaced. The copyist of MS F apparently failed entirely to appreciate the significance of the accents and evidently considered them mere decoration, for he places them helter skelter on all syllables and on all vowel symbols, e.g. from the angel's salutation to Mary, 'Giuúihít bístú ín uuíbón. ióh úntár uuéróltmágádón. íst fúrist állés vuíhés. uuáhsmó réués thínés' (Kelle I, pp. 155-8), while the same line in MS V reads: 'Giuuíhit bistu in uuíbon, ioh untar uuóroltmagadon; ist fúrist alles uuíhes uuáhsmo réues thínes' (I, 6, 7-8) 'Hallowed art thou among women and virgins of the word; (the) product of thy womb ist first (highest) of all (that is) holy'. To be noted, in addition to the jumble of accents, are the misplaced accent on the /w/ in <giuúihit> and the use of the letter <v> in <vuihes>, which occurs sporadically in all MSS as an allograph of <u>.

Unfortunately, there are many apparent scribal errors

in the representation of /w/ and in the placement of accents even in MS V and P. The rule of double <uu> appears to fail completely when initial /w/ is preceded by another consonant, as the following juxtaposition of forms shows: <suas>, <suahta>, and <suar> containing respectively /swáa/-, /súa/-, and /swúa/-. Kelle devotes eight pages to his discussion of /w/, more than twice as many as for any other phoneme (Kelle II, pp. 481-9). Needless to say, in some instances one is entirely dependent on morphemic evidence or even on comparative sources for determining the phonological shape of a given word. For example, only modern evidence (and, in part, other Old High German texts) show that Otfrid's word for 'sorrow, care' was /sworga/ and not /súorga/ because it is just as often written <súorga> as <suórga>. With the word for 'sweet', it is actually uncertain whether it was /swuaß/ or already /suaß/ in Otfrid's language. MSS V and P appear to show /súaß/ while F apparently wrote /swúaß/ (Kelle II, p. 483).

2.8. The Weißenburg Catechism. As mentioned in 2.2, although the MS is in one hand, the Weißenburg Catechism appears to be copied from as many as five different sources (Steinmeyer, p. 36). I shall proceed, therefore, to mention by series only those results of my analysis which support, clarify, or are otherwise pertinent to the analysis of Otfrid's language.

(a) The velars. The graph <k> is never used in this text. /k/ is usually written with <c> in all its positions,

e.g. <cuning> /kuninG/ 'king'; <cnuat> /knuad/ 'substance'; <craft> /krafd/ 'power'; <truncali> /drunkali/ 'drunkenness'; <uuerc> /werK/ 'work'. /k/ occurs twice as <ch> in <gotchundi> /godkunθi/ 'divine' and <geuuurchen> /giwurken/ 'to effect'. For the cluster /kw/, <qu> appears, as in Otfrid, e.g. <quemendi> /kwemendi/ 'coming'. Long /kk/ appears twice, both times spelled significantly with <cch>, e.g. <quecchem> /kwekkem/ 'living' (dat.) and <secchia> /sekkia/ 'strife'. The occasional spellings with <ch> appear to support the analysis of /k/ as an aspirate and <cch> graphically demonstrates both /kk/'s length and aspiration.

The cluster /sK/, /sg/, appears, as in Otfrid, as <sc> initially and before consonants, but as <sg> before vowels and silence, e.g. <sculdhi> /sgulθi/ 'sins, guilt'; <fleiscnissi> /fleisgnissi/ 'incarnation' and <fleisge>, <fleisg> /fleisg/- 'flesh'; <gimiscnissi> /gimisgnissi/ 'mixture' and <gimisgente> /gimisgende/ 'mixing'. It is clear from this that Otfrid's similar treatment of /sg/ is a traditional one and that it apparently does not reflect the later change of /sg/ in the direction of [š].

/g/ is almost everywhere written with <g>, with one instance of <gh> reminiscent of Isidor, viz. in <eittarghebon> /eiddargebon/ 'poison-givers'. There is no orthographic indication of a position of no contrast between /g/ and /k/ in final position, although there is only one occurrence of /k/ in this position in the corpus

(2.8). /gg/ does not occur. Examples are: <guat> /guad/ 'good' <bigraban> /bigraban/ 'buried' <singan> /singan/ 'to sing', <arbolgan> /arbolgan/ 'angry', <baga> /baaga/ 'disagreement', <euuig> /eewiiG/ 'eternal', and <cuning> /kuninG/ 'king'.

/h/ both as [h] and [χ] is written with <h>. It still remains before /l/, /r/, and /w/. Examples are: <hiutu> /hiudu/ 'today', <hruamames> /hruamamees/ 'let us praise', <huuer> /hwer/ 'who', <hluttru> /hluuddəru/[15] 'pure', <uuiho> /wiiho/ 'holy', <thih> /θih/ 'thee (acc.), <niuuiht> /niwihd/ 'nothing'. /hh/ appears always as <ch>, as with Otfrid, e.g. <lichamo> /liihhamo/ 'body', <michila> /mihhila/ 'many', as against Otfrid's <mihil>.

There are also, as in Otfrid, sporadic spellings of <g> for /j/ in the morpheme /jEh/-, e.g. <biiehames> /bijehamees/ 'we confess' vs. <gigehanne> /gijehanne/ 'to confess'.

<cch> for /kk/ is the most important additional evidence in the velar series from the Weißenburg Catechism.

(b) The dentals. In initial, postconsonantal medial, and intervocalic positions the graphs <t> and <d> appear to be written interchangeably for /d/, sometimes in the same word in adjacent lines, e.g. in the creed <tóotem> and <dóodem> /doodem/ 'dead' (dat. pl.), <suntar> and <sundar> /sundar/ 'but, separately', <gote> and <gode> /gode/ 'to God'. <tr> always appears for both Germanic */tr/ and */dr/,

e.g. <truhtin> /druhdiin/ 'lord' (from */dr/) and <triulicho> /driulihho/ 'truly, faithfully' (from */tr/). All this supports the conclusion that there was only one phoneme /d/, which was represented variously by <t> or <d>. After the fricatives /s/, /f/, and /h/, however, we find only <t>, e.g. <afteren> /afderen/ 'following', <almahtigon> /almahdiigoon/ 'almighty', <arstuat> /arsduad/ 'arose, stood up'.

/dd/, both from Germanic /dd/ and South Germanic -/ttr/-, appears always as /tt/, e.g. <eittar>- /eiddar/ 'poison' and <bittem> /biddeem/ 'we ask'; the last morpheme also appears with regular morphophonemic alternation in the third person singular containing single /d/ in <bitit> and <bidit> /bidid/ 'he asks'.

/d/ in final position is always spelled with <t>, e.e. <broot> /brood/ 'bread', <giuualt> /giwald/ 'force, power', <uuort> /word/ 'words' vs. <uuorde> 'word' (dat.), <arstantnisse> /arsdandnisse/ 'resurrection' vs. <arstandanne> /arsdandanne/ 'to rise up'.

/θ/, in contrast with the practice in Otfrid, is regularly written in intial position with <th> and in postconsonantal medial and intervocalic positions with <dh>, sporadically also with <th>. Although medial /θ/ is in a very few instances spelled with <d>, the same word usually recurs elsewhere written with <dh> or <th>. The only exceptions are the unique <magadi> 'virgin' and <thiuuidero> 'against that', which might be expected to

contain /θ/. Examples are: <thoh> /θoh/ 'though, <thiz> /θiȼ/ 'this', <thri> /θrii/ 'three', <andhremo> /anθremo/ 'other' (dat.), <gotcundhi> /godkunθi/ 'divine', <uuerdhe> /werθe/ 'may become', <erthu> /erθu/ 'earth' (dat.), <sculdhi> /sgulθi/ 'sins', <fridhu> /friθu/ 'peace', <quidhit> and <quithit> /kwiθid/ 'says', <unhreinitha> /unhreiniθa/ 'impurity'. This appears to indicate that /θ/ was still a fricative in all initial and medial environments. Unfortunately, no morpheme with final /θ/ appears in this corpus. The reflex of Germanic */θθ/ should occur in /eθθo/ 'or' which appears 3 times in this corpus peculiarly written <erdho>, elsewhere <edho>. Whether this is an attempt to render long /θθ/, [ð̞θ]?, or whether the <r> has a different origin, is unclear (Braune-M, §167, A 11). The occurrences without <r>, viz. <edho>, would appear to indicate that this word did not contain /r/. Otfrid's <odo> seemingly contained single /θ/.

As noted above, it is clear in all but two instances from within the corpus itself whether a given morpheme contains /d/ or /θ/. That is, if the orthography vacillates between <t> and <d>, we are dealing with /d/; if the vacillation is among <th>, <dh>, and <d>, it is a question of /θ/. The <th>- and <dh>-spellings outnumber the <d>-spellings by far.

This work, like Otfrid, does not distinguish /ȼ/ from /ß(ß)/. Although there are comparatively more <c>'s before

/i/ or /e/ indicating /ȼ/, this work (unlike Otfrid) also uses <c> for /k/. Examples are <cesuun> /ȼeswun/ 'right-hand', <zuuene> /ȼweene/ 'two', <ganza> /ganȼa/ 'entire', <cruci> /kruuȼi/ 'cross', but <sizzis> /si(d)ȼis/ 'sittest' vs. <ungimezzan> /ungimeßßan/ 'unmeasured', <thiz> /θiȼ/ 'this' vs. <thaz> /θa:/ 'that'. The two spellings <emezzigaz> vs. <emetzigaz> 'continuous, daily' make it unclear which phoneme this word actually contained (Kluge under emsig and Braune-M, §160, A2). It is thought that it contained /ßß/, however, which makes the <tz> spelling difficult to interpret (cf. <lietz> for /ließ/ 'allowed' in the Lay of Ludwig). /ȼ/ and /ß(ß)/ are, of course, always distinguished from /s(s)/.

(c) The labials. In as brief a text as the Weißenburg Catechism, it is not surprising that the reflexes of Germanic */p/, */pp/, */bb/, and non-initial */f/ (except in the cluster /fd/) should be rare or not attested at all. Initial /p/ does not occur except in the non-Germanic <pontisgen pilate> 'Pontius Pilate'. In medial postconsonantal position, there is one instance of <helphe> /helpe/ 'may help'. Here the <ph>, again somewhat inconclusively, supports the description of /p/ in this position as a voiceless aspirated bilabial stop or voiceless bilabial fricative (2.7c). There are no other occurrences of /p/ in the corpus. Intervocalic /ff/ from Germanic */p/ occurs several times in the same word

<ungiscaffan> /ungisgaffan/ 'uncreated', where the <ff> attests to its long fortis voiceless character. Final post-vocalic Germanic */p/ occurs once in <fiantscaf> /fiandsgaf/ 'enmity' and once in <uf> /uuf/ 'up'.

The reflex of Germanic */f/ occurs quite frequently in both prevocalic and preconsonantal initial position as well as in the cluster /fd/. Here it is always written <f>, e.g. <fona> /fona/ 'from', <fluochot> /fluohhood/ 'curses', <afteren> /afdereen/ 'following'. However, postconsonantal medial /f/ is not attested. Intervocalic /v/ from Germanic */f/ occurs in the one morpheme <auur> /avur/ 'but', in which the <u>-spelling again supports the transcription as /v/. Final /f/ from Germanic */f/ appears only in <bitharf> /biθarf/ 'need(s)'.

/b/ occurs frequently in all initial and medial positions spelled with <b>, e.g. <gi-boot> /gibood/ 'commandment', <broot> /brood/ 'bread'; <selbemo> /selbemo/ 'self' (dat.), <gihuuerbithu> /gihwerbiθu/ 'transformation, conversion' (dat.), <bigraban> /bigraban/ 'buried'. Final postvocalic /b/ is usually written with <b> also, in <gib> /gib/ 'give' or <liib> /liib/ 'body, life', but in its two occurrences in final postconsonantal position it is written with <p> in <selp> /selb/ 'self' and <lamp> /lamb/ 'lamb', reflecting the tendency to final fortisness that we have seen elsewhere and in the other series as well.

/w/ appears written as <uu> except before /u/, e.g.

<uuir> /wir/ 'we', <huuer> /hwer/ 'who', but contrast <cesuun> /zeswun/ 'right-hand'.

Happily enough, the corpus contains one instance of /pp/ in <scepphion> /sgeppion/ 'creator', in which the spelling supports the analysis of -/pp/- as a long fortis voiceless aspirated or affricated stop. /bb/ and /vv/ do not occur.

2.9. Summary of the putative allophones of Otfrid's phonemes.

(a) The stops.

	C-	$-\overset{R}{V}C-$	-VCV-	-CC	-C
/g/	g-	-Rg-	-g-	-gC-	-k'(?)[4]
/k/	k[k] [1]	-Rk[k] [1]	ø	(-VgC)[2]	
				-RgG[3]	-k[h](?)[4]
/kk/			-kk[h]-		
/gg/			-k'g-		
/θ/	d-	-Cd-	-d-		-t'[5]
/ȼ/	ds-	-Rds-	-(t)ds-[6]		-ds[5]
/dd/			-t'd-		
/b/	b-	-Rb-	-b-		-p'
/p/	p[h]-	-Rφ-(?)[7]	ø		-Vp[f] [8]
					-Rφ(?)[7]
/pp/			-pp[f]-		
/bb/					

[Footnotes to Chart (a)]

[1]Otfrid offers the most direct evidence for syllable initial /k/ being an aspirate or affricate, cf. 2.5b.

[2]The reflex of */kk/, rare. [3]Appears to have merged with the reflex of *-/Vkk/ and then both coalesce with /g/ in this position, cf. 2.5c. [4]Otfrid apparently did attempt to distinguish absolute final /k/ from /g/. It is impossible to determine whether this was a purely orthographic distinction from internal forms or had a phonetic basis in fact, cf. 2.5c. Absolute final postvocalic /k/ from */kk/ occurs only once in the entire corpus, viz. in <quek> /kweK/ 'alive'. [5]The graphic representation of /d/ and /ȼ/ shows no variation between medial syllable final versus absolute final positions as the spellings of the velars do nor is there an orthographic variation between intervocalic and final positions as there is with the labials. [6]There is no certain orthographic indication of a distinction between /dȼ/ and /ȼ/ as there appears to be in Isidor. Otfrid consistently writes <sezz>- 'set' and <sizz>- 'sit' vs. <luzil>- 'little', which might be construed as /sIdȼ/- vs. /luuȼil/. However, the length of the vowel of <luzil> is uncertain in Otfrid's language. [7]The MSS appear to attempt to distinguish these reflexes of Germanic */p/ from those of */f/. [8]The reflex of */pp/, very rare.

(b) The fricatives.

	C-	$-^{R}_{V}C-$	-VCV-	$-^{R}_{V}C$
/h/	h-	(Ø)[1]	-h-	-VX (-RØ)[1]
/hh/			-XX-	
/θ/	θ-[2]	$-R\underset{o}{ð}-$	$-\underset{o}{ð}-$	-θ

	C-	$-\overset{R}{V}C-$	-VCV-	$-\overset{R}{V}C$
/θθ/			-θθ-	
/s/	s-[4]	-Cs-	-s-	-s[3]
/ss/			-ss-	
/ß(ß)/			-s(s)-[4]	-Vs -CØ
/v/	vV-(?)[5]	-Rv-(?)[5]	-v-	
/f(f)/	fC-[6]		-f(f)-	-f[7]

[Footnotes to Chart (b)]

[1]As noted above, a prothetic vowel has developed before postconsonantal /h/. [2]/θ/ does not appear, even at this early date, to pattern with the other fricatives. /s/ is the dental fricative which now parallels /f/ and /h/ as later developments show. [3]Otfrid's orthography does not show any allophonic variation in /s/. [4]Again I use Joss' transcription for a dorsal [s] and apical [ṣ] sibilant. [5]Very sporadic. [6]From Germanic */f/. [7]From Germanic */f/ and, after vowels, */p/.

FOOTNOTES TO CHAPTER II

[1]The relative stasis of the South Rhine Franconian area for well over a thousand years appears to speak against any sort of 'spread' of the High German consonant shift.

[2]Kelle I, p. 9. The Latin texts are:

'est propter literarum aut congeriem aut incognitam sonoritatem difficilis. Nam interdum tria u u u, ut puto, quaerit in sono, priores duo consonantes, ut mihi videtur, tertium vocali sono manente'; and

'K et Z sepius haec lingua extra usum latinitatis utitur, quae grammatici inter litteras dicunt esse superfluas. Ob stridorem autem interdum dentium, ut puto, in hac lingua z utuntur, k autem ob fautium sonoritatem'.

[3]I am unable to determine whether present-day Weißenburg has also followed the general Rhenish development of further merging /ç/ with /s̆/. Straßburg, far to the south in Alemannic territory, is apparently in the process of adopting [is̆] for older [iç] (Keller, p. 133, §§14.6 iii and 14.7).

[4]The first 96 lines of the Book of Gospels are rhymed couplets arranged in pairs of 4 half lines each, so as to form an acrostic. The first letters of the first words in the first half lines and the last letters of the last words in the fourth half lines both spell out the dedication:

LVDOVVICO ORIENTALIUM REGNORUM REGI SIT SALUS AETERNA, 'to Ludwig, king of the eastern realms, be eternal salvation'.

[5]This form <firliche> has been explained as the reflex of the South Germanic w-gemination of */h/ (Braune-M., §154, A 7); cf. Go. leihvan. As a matter of fact, <firliche> had been written in 3 other instances, but was corrected later to <firlihe>. One further instance of <ch> in this same morpheme occurs in MS F (Kelle II, p. 528, §7). However, there are two other morphemes that contain reflexes of Germanic */hw/, viz. /sEh/- 'see' (Go. saihvan) and /nEh/- 'near, approach' (Go. nehv-). Neither of these show signs of gemination despite many separate occurrences, although both /lIIIh/- and /sEh/- show the morphophonemic alternation caused by Verner's Law whereby */hw/ > /h/ alternates with */gw/ > /w/, e.g. <sehan> /sehan/ 'to see' but -<giseuuan> /gisewan/ 'seen'. In addition, /(gi)hooh/- 'exalt', containing the reflex of Germanic */hj/, also shows no gemination. Hence, I have treated the one uncorrected instance of <firliche> as a scribal error. If it does indeed mirror /hh/ from South Germanic */hh/, however, then it would simply belong to Otfrid's /hh/.

[6]By my own count. Kelle, perhaps because of the great number of occurrences, gives in his glossary only the line references and the noun modified by <mihil>, not the shape of <mihil> itself.

[7]It may well have been to avoid ambiguity between forms

such as <sprahhus> [sbraaXhuus] 'judgment hall' as against <sprachun> [sbraaXXun] 'they spoke' that the digraph <hh> was abandoned in favor of <ch>.

[8]Kelle himself appears to be somewhat confused here as well. He neglects to mention the occurrence of <thruhtin> but lists <thrati> and <thrato>, as if initial <th> were not regular. On the other hand, he alphabetizes <thrat>- regularly under <th> in the glossary where also, for no apparent reason, he includes '<thruhtin>' as if this word contained initial /θ/ and not /d/.

[9]These five arguments are: (1) The parallel situation in the labial and velar series shows both a fricative and an affricate. (2) Isidor consistently distinguishes orthographically between <z>, <tz> for /ȼ/ and <zss>, <zs> for /ß(ß)/. (3) Elsewhere, <c> may be written before <i> or <e> for the affricate, never for the fricative; though <s>, <sz>, or <zs> sporadically occur for the fricative, never for the affricate. (4) The Old Slovene Freising documents also use <z> indiscriminately for both Slavic /s/ and /ts/. (5) Middle High German poetry never rhymes the affricate with the fricative; e.g. <schaz> 'treasure' never rhymes with <daz> 'that'.

[10]As against the pf-dialects father south.

[11]This word derives from Latin operare, not from offerre, the latter form being the source of Isidor's <offerunc>.

[12]These statistics are by my own count, hence no reference.

[13]Contrary to Kelle, the controverisal <dufar> 'villain' and <dufarlichun> 'inept, unsuitable', probably contains the intervocalic reflex of Germanic */p/, not */f/ (Kelle II, p. 480, §II.1).

[14]Eight of the morphemes which Kelle lists here contain either Germanic */f/ or an intrustive /f/ between /n/ and /d/. The former are <after>, <gift>, <giscaft>, <haft>, <kraft>, <luft>, and <ofto>; the latter are <kunft> and <sunft>.

[15]I assume syllabic /r/ to preserve the long consonant in intervocalic position.

III

East Franconian and the OHG Tatian

3.1. The texts. The primary text to be discussed here is the Old High German translation of the Latin text, of a gospel harmony by Tatian, a second century Syrian, hereafter designated as Tatian (Sievers, pp. 13-292). Of the four known MSS of the Tatian, only one, (G), i.e. St. Gall, was still extant in 1872 when Sievers published his first edition (Sievers, pp. XV-XVIII). In addition, Sievers includes the fragments from the Tatian which appear in the MS of the Paris Conversations, i.e., (P) (Sievers, pp. 290-292).

MS G is contained on 171 well preserved leaves from the second half of the ninth century. Each page contains the Latin original in the left-hand column; the German translation is on the right (Sievers, p. XI, § 1.1). It appears to be a copy of the original translation which apparently was made circa 830 A.D. in Fulda, probably by more than one unknown translator (Sievers, pp. XXII-XXIII, §4, pp. LXX-I, §§118 and 120). The German text of MS G itself represents the work of 6 different copyists, traditionally labelled α -ζ of the Greek alphabet. Of these, α , ϐ and δ each copied two different sections of the MS (Sievers, p. XII). The second sections by each of these copyists are labelled α′ , ϐ′ , and δ′ respectively. The total number of pages which each copyist wrote is as follows: α , 27 pp.; α′ , 19 1/2 pp., i.e. 46 1/2 pp.; ϐ , 72 pp., ϐ′ , 22 lines,

i.e. 72 3/4 pp.; γ, 41 pp.; δ, 30 pp., δ', 22pp., i.e. 52 pp.; ε, 4 1/2 pp.; and ζ, 99 pp. (Moulton, §1.4). In addition, scribe ζ then went through the whole work and made corrections. The sequence in which the various hands appear throughout the MS is as follows: α, δ, γ, δ, α', ε, δ', ζ, and δ'.

Other East Franconian texts will be discussed in 3.7.

3.2. The language of the Tatian. Although both the original translation of the Tatian, and the transcription of MS G appear to have taken place in presently Rhine Franconian Fulda, the language of the Tatian is East Franconian (Sievers, p. XXII, §4; Braune-M, §6). The fact that the language of the Tatian and of the other early Fulda documents does not agree with that of the surrounding countryside has been explained as having been caused by the imported make-up of the early monastery personnel (Braune-M, §3, A1). The monastery at Fulda was founded in 744 by St. Boniface, an Anglo-Saxon. Its first and fourth abbots, Sturm (744-779) and Eigil (817-822), were Bavarians. Its third abbot, Ratgar (803-817), was an East Frank. Hrabanus Maurus became a teacher in Fulda's school, then its head in 818, and finally served as abbot from 822-842. He was a Rhine Frank and former student of Alcuin, the Anglo-Saxon head of Charles the Great's monastery school at Tours. It was apparently during Hraban's incumbency that the translation of the Tatian took place

(Moulton, §§ 1.1, 1.3, and 1.4). In addition, Otfrid of Weißenburg and the Aleman, Walahfrid Strabo, future abbot of the Reichenau monastery, were both present as students in Fulda during the second quarter of the ninth century (De Boor, pp. 44-45). It is as yet unclear and also unimportant to the purpose of this paper whether East Franconian was chosen as the language of the Tatian and the other early Fulda documents because of a preponderance of East Franconian speakers in Fulda at the time or because East Franconian represented the best compromise between north and south for a literary language.

3.3 Orthographic and other difficulties. As stated in 3.1 above, MS G is the product of 6 different scribes who were copying a MS of the original translation which, in its turn, was probably the work of several different translators.[1] There appears to be as many as 7 noticeably different discontinuities in style, vocabulary, and syntax in the text which do not coincide with the changes of copyist, but which apparently agree well with the pagination of the original MS (Sievers, pp. LXX-LXXV, §§121-125). When a document of this length is both translated and copied by many different men who, in cosmopolitan Fulda, were probably of different linguistic backgrounds, it is apparent that many errors, dialectal peculiarities, and reflexes of varying orthographic traditions might appear. As will be seen, this is exactly the case. Of the three major works

considered in this dissertation, the Tatian is by far the least consistent in its orthography and hence the most difficult to analyze. Since to date no certain conclusions have been reached concerning even the number of different translators involved, not to speak of their linguistic backgrounds, it must suffice here merely to point out the possibility that some orthographic inconsistencies might have been copied directly from the original. Of the 6 copyists themselves, scribe ϒ appears to deviate most from the putative norm. It was in his section of the MS that the corrector found the most errors to correct. Scribe ϒ's orthographic deviations have led to his being designated an Upper German or more specifically an Aleman. Some scholars have even attempted to identify him or the translator of his section of the MS with Walahfrid Strabo (Braune-M, §§6, A6 and 6d). Moulton, on the other hand, attempts to show that scribe ϒ was following an older East Franconian tradition from Fulda (Moulton, §§1.5 ff.). However that may be, the corrections which ζ has made in ϒ's and others' work will be instructive. Some orthographic deviations can safely be ignored where they are demonstrably errors or are at variance with the intended norm. Others may shed light on phonetic realities in certain instances.

3.4. The velars. (a) Syllable initial /g/, whether in absolute initial, postconsonantal medial, or

intervocalic positions, is always written with <g>, e.g. <gangan in iro gigarauue> /gangan in iro gigarawe/ 'to go in their garments', <gluoti> /gluodi/ 'glowing coals' (dat. sg.), <grab> /graB/ 'tomb, grave'; <berge> /berge/ 'hill' (dat.sg.), <folgen> /folgeen/ 'to follow'; <fugala> /fugala/ 'birds', <bagen> /baageen/ 'to contend, struggle'. As with Otfrid (2.5a), Latin <c> in intervocalic position is rendered with <g> consistently in <fig>- /fiig/- 'fig' and <predig>- /predig/- 'preach, sermon' from Latin ficus 'fig' and praedicare 'preach' in a total of 33 occurrences.

Of the 15 instances of /gg/, <gg> occurs 14 times, e.g. <luggi> /luggi/ 'lying, false', <giuuiggin> /giwiggin/ 'crossroads' (dat. pl.), and <cg> (reminiscent of Isidor) only once: <mucgan> /muggan/ 'gnats' (Sievers, p. XXXV, §27).

The renderings of Latin <c> with <g> and the one spelling <cg> may indicate that /g/ was voiceless even in this very voiced environment, i.e. in intervocalic position. Otherwise, the text gives no clues to the phonetic features of /g/ in the positions mentioned.

As in Otfrid, /j/ is written with <g> in the morpheme /jeh/- 'to confess or profess'. This is always done when its root vowel is /i/ or /e/, never when it is /a/, e.g. <bigihu> /bijihu/ vs. <biiah> /bijah/ 'I confess(ed)'. Possibly in order to distinguish the adverb /ju(u)/ 'now, then' from the pronoun /iu/ 'to you-all', the MS begins by writing the adverb as <giu>. This spelling continues

consistently through scribes α , θ and α ´. Scribe Υ's first /ju/ is written <giu> and then, almost as if there had been an official directive on the subject, he begins to write <iu>. This second spelling is then just as consistently carried through the rest of the MS (Sievers, p. XXIII, §5). These spellings are apparently intended to avoid orthographic awkwardness or ambiguity and shed no light on the phonetic make-up of /g/. The Tatian appears to be a possible source of Otfrid's similar usage.

<g> is also used to represent intervocalic /j/ in 7 instances: 3 times in /friij/- or /frijj/-(?) 'free'; 3 times in /hiiw/- or /hiiww/-(?) 'to marry, marriage, family'; and once in <herige> /her(i)je/ 'army' (dat.sg.). All these morphemes appear elsewhere and more often without the <g> (Sievers, p. XXIII, §6 and p. XLVIII, §2). Again, these sporadic spellings allow no conclusions as to the characteristics of /g/. However, it is interesting to note that the first two morphemes cited contain possible reflexes of Germanic */i(i)/ plus (long) semi-vowel.

/g/ in syllable final position is discussed with /k/ below.

(b) /k/ in all syllable-initial positions except in the cluster /sK/ is always orthographically distinguished from /g/. The overall orthographic intent appears to have been to write <k> before /i/ and /e/ and to write <c> elsewhere in order to avoid the usual Romanic [ts] value for

these combinations. Instances of the opposite distribution, while not numerous, do occur (Sievers, pp. XLI-XLII, §§45 and 46). /kw/ is written <qu> except for one occurrence of <quu>, e.g. <kelih> /kelih/ 'chalice', <kind> /kinθ/ 'child', <trinkit> /drinkid/ 'drinks', <uuirkit> /wirkid/ 'works, does', <folkes> /folkes/ 'of the people' (gen. sg.); but <calb> /kalB/ 'calf', <clopfo> /klopfoo/ 'may he knock', <incnahu> /inkna(h)u/ 'I know', <cuning> /kuninG/ 'king', <trincan> /drinkan/ 'to drink', <marca> /marka/ 'boundary', <folco> /folko/ 'of the peoples'(gen.pl.); <queman> /kweman/ 'to come', <quena> /kwena/ 'woman'.

Aside from the two words with Latin spellings, <chor> 'chorus' and <christ> 'Christ', /k/ in syllable-initial position is also written <ch> in 4 instances, 3 of which occur in scribe Y's work (Sievers, p. XLII, §47). As has been noted, scribe Y is very often at variance with the other scribes in his orthography. At any rate, neither the regular spellings of /k/ nor its occasional spellings offer any evidence for a more precise description of /k/ in syllable-initial position other than that it was a voiceless velar stop.

Long /kk/ appears written with a confusing multiplicity of graphs, none of which appears to have been preferred by any given scribe. Even the preponderance in the use of digraphs over single graphs is only slight (Sievers, p. XLII, § 48). By my own count, I find 7 instances of <kk>, 33 of

<cc>, and 8 of <ck>, i.e., a total of 48 occurrences of digraphs; and 35 instances of single <k> and 9 of single <c>, i.e. a total of 44 occurrences of single graphs. The only apparent pattern in spelling appears again to be <k> before /i/ or /e/, <c> elsewhere. As mentioned above with Otfrid, the assumption of length in /kk/ appears to be supported by the very frequent use of digraphs. However, the scribal practice of writing it with single graphs also appears justified because all intervocalic /k/'s are, at least historically, /kk/'s. Scribe Y also has one instance of <cch>, again reminiscent of Isidor, in <uuecchit> /wekkid/ 'wakes'. Examples of the spellings of /kk/ are <aruuekkan>, <aruueccu>, <uuekit>, various forms containing the morpheme /wekk/- 'to wake' ; <bithecket> /biθekket/ 'cover!', and <acar>- /akkar/ 'field'. These morphemes occur elsewhere spelled variously as shown above with /wekk/-. Other morphemes containing /kk/ which occur in Tatian are /ekkoroθo/ 'so much, only', /brokk/- 'fragment', /sekkil/ 'sack, purse', /θrukk/- 'to press', /blekk/- 'to flash, appear, /lekk/- 'to lick', /arrekk/- 'to explain', /nakkot/ 'naked', and /kwekk/- 'alive'. Each varies in spelling in its various occurrences.

(c) In syllable-final position, /g/ occurs unrestrictedly following resonants and vowels. As a rule, final /k/ occurs only after resonants. All instances of syllable-final /k/ following vowels are to be interpreted as reflexes of original

-/kk/ that have been shortened in final position. As noted above, these are comparatively rare. The overall orthographic intent appears to have been to write /g/ with <g> and /k/ with <c> as in the other environments (Sievers, p. XXXVI, §28 for /g/ and p.XLI, §46 for /k/). In the whole MS, one finds final /k/ written only once with <g> (a probable scribal error by scribe ϒ), 4 times with <k>, and elsewhere always with <c>. In the work of all the scribes except scribe ζ , final /g/ appears written once with <k>, 7 times with <c>, and otherwise always with <g>. In view of the fact that /k/ and /g/ as well as /kk/ and /gg/ are never confused orthographically in other positions, the confusion here ... rare though it is ... may indicate a position of no contrast between syllable final /k/ and /g/. In addition, the work of scribe ζ , the corrector of the MS, shows no less than 33 instances of final /g/ written with <c>. Although these spellings account for less than one quarter of all the occurrences of final /g/ in the work of scribe ζ , they appear to offer more evidence for a lack of contrast for syllable final /k/ and /g/, at least in the language of scribe ζ .

In the orthographic representation of the cluster /sK/, one finds a confusing multiplicity of usages varying both by scribe and by position in the word (Sievers, pp. XLII-XLIII, §§50-52). At least two orthographic traditions appear to be represented. Some of the scribes adhere consistently to one spelling or the other, while other scribes apparently change

their usage depending on the position of /sK/ within the word. Scribe δ appears to follow one tradition during his first stretch and then to switch to another when he writes again as δ′. The distribution is as follows: with very few exceptions, scribes α and θ render /sK/ exactly as they write /k/ in other environments, viz. with <sk> before /i/ and /e/ and with <sc> elsewhere. In the work of scribe α, there are only 3 instances of <sch> for (-)/sK/(-). Scribe θ shows two instances of <skr>- for usual <scr>. Scribe δ′ also appears to follow this usage when /sK/ occurs in initial position (with only one exception <sci>-). Pointing to the other tradition described below, however, scribes α and θ also show 6 instances of medial /sK/ written with <sg>.

Scribes γ, δ, and ζ, on the other hand, write initial /sK/ with <sc> everywhere, regardless of what follows. Scribes γ, δ, ζ, and δ′ render medial /sK/ with <sg>, a device reminiscent of Otfrid. In this group of scribes, the work of scribe γ shows only two occurrences of <sc> in medial position; scribe δ shows one. As noted in 2.5c above, this use of <sg> to represent /sK/ may indicate an attempt to show the lenis unaspirated allophone of /k/ in this environment. This is also a position of no contrast between /k/ and /g/. At any rate, it is another bit of evidence for the graph <g> as a spelling for a voiceless sound.

To spell /sK/ in final position, all scribes except γ

and δ ′ join scribes α and ϐ in writing <sc> in all occurrences. Scribes γ and δ′, however, continue to write final /sK/ with <sg>. Scribe γ has only one instance of final <sc>. The following chart will serve to illustrate more graphically these spellings of /sK/ and their distribution:

/sK/-	α , ϐ , δ ′	<ski,e>, <sc> elsewhere
	γ , δ , ζ	<sc> everywhere
-/sK/-	α , ϐ	<ski,e> <sc> elsewhere (6 instances of <sg>)
	γ , δ , ζ , δ′ ,	<sg> everywhere
-/sK/	α , ϐ , ε , ζ ,	<sc> everywhere
	γ , δ′ ,	<sg> everywhere

In addition to what has been said about the digraph <sg>, it may be noted that ... in the MS as a whole ... <k> represents /k/ much more rarely in the cluster /sK/ than it does in other environments, e.g. <scaf>/sKaaf/ 'sheep', <skef>/sKef/ 'ship', <uuasgan>/wasKan/ 'to wash', <vvuosc>/wuosK/ 'washed', <fleiskes> and <fleisges> /fleisKes/ 'of flesh'. <fleisc> and <fleisg>/fleisK/'flesh'.

Although scanty, whatever orthographic evidence there is appears to support the phonetic interpretations presented in Chapters I and II. Certainly, nothing is to be found which might contradict them.

(d) Syllable-initial /h/, derived from Germanic */X/, is written with <h>. There are several instances, notably in the work of scribe γ, where a spurious <h> has been

written incorrectly. There are also other, fewer instances in which an <h> does not appear where one would expect it. There is also one instance of intervocalic /h/ being written with <ch>. These have mostly been corrected either by the scribe or by the corrector and are so few that they may be considered mere scribal errors (Sievers, pp. XXXIV-XXXV, §§24 and 25.1 and 2). It may be pointed out that the task of these scribes was more difficult than in the other documents considered here because they were copying both the Latin and the German columns simultaneously. Hence, the possibility of bilingual confusion may have been greater in the case of the Tatian than in other texts.

Syllable-final /h/, from both Germanic */X/ and */k/, is written in the vast majority of instances with <h>. There are two instances of spellings with <ch>. Aside from the morphemes /mist/ 'manure' and /θeism/- 'ferment', in which the /h/ was already lost, there are only two instances of an <h> having been left out. In addition, there is one instance of -/hs/- spelled <x> (Sievers, p. XXXV, §25.1,3, and 5, and p. XLIII, §53). These 5 variants, when contrasted with hundreds of instances of normal <h>, are obviously lapsus plumae.

Sievers notes that intervocalic /hh/, when derived either from South Germanic *-/XX/- or from *-/X/+/X/-, appears to be distinguished orthographically from /hh/ derived from Germanic *-/k/- or *-/k/+/X/- in that the

former is never written with <ch> while the latter often is (Sievers, p. XXXV, §25.4 and p. XLIV, §54). However, both are written with <hh> and <h>. When one notes that there are only 15 occurrences of morphemes containing original */χχ/ as against 728 occurrences of morphemes containing original */k/ or */k/+/χ/, the distribution could well be accidental. I have therefore not distinguished the various derivations in the distribution counts below.

Intervocalic /hh/, then, is spelled <hh>, <ch>, and <h>, with each scribe again apparently showing a preference. The following chart is modified from Sievers, p. XLIII, §53 and all instances of /hh/ have been added regardless of their derivation:

<hh>		<ch>		<h>	
200	ϐ + ϐ′	11	ϐ	10	ϐ
18	ε	--	ε	--	ε
41	α′	1	α′	5	α′
63	ζ	46	ζ	97	ζ
23	α	25	α	5	α
1	γ	82	γ	3	γ
3	δ + δ′	98	δ + δ′	5	δ

It would appear that scribes ϐ , ε , (and finally) α′ , who seems to have overcome his earlier vacillation, prefer <hh> by far. Scribes γ and δ , on the other hand, obviously prefer <ch>. Scribe α , in his first writing, employs <hh> and <ch> almost equally often. Whereas scribe ζ also vacillates between <hh> and <ch> in approximately

half the instances, he is the only scribe who writes <h> any significant number of times, i.e. 97 out of 206 occurrences. In the case of the other scribes, the <h>-spellings might be ascribed to laxity. Scribe ζ actually appears to confuse intervocalic /h/ and /hh/. There is no apparent linguistic reason for ζ 's choice of a symbol in any given instance. Sievers discerns 9 different sections of ζ 's work where one or the other spelling appears to preponderate, apparently by whim (Sievers, p. XLIV, §53). Any phonetic interpretation of ζ 's spellings would be difficult and would apply only to ζ 's language. The other scribes all distinguish between intervocalic /h/ and /hh/. However, no more exact clues to the phonetic nature of /h/ and /hh/ can be gained, except that the use of the digraphs to represent /hh/ probably mirrors its length.

Examples of /h/ and /hh/ are <hahu>/haahu/ 'I hang, crucify', <hah>/haah/ 'crucify!', <ahto>/ahdo/ 'eight', <nah>/naah/ 'nigh, near'; <lahhet>/lahhe(e)d/ 'ye laugh', <lahan>, <lahhan> and <lachan>/lahhan/ 'cloth, rag', <lihamo>, <lichamo> and <lihhamo>- /liihhamo/ 'body, corpse', <nihein> and <nihhein> /nihhein/ 'no, none'; <gilih>/giliih/ 'like, similar'.

3.5. The dentals. The overall orthographic intent of the Tatian is clear, and the proportion of exceptional spellings of dental phonemes is small. However, in terms of absolute numbers, these deviations amount to many

hundreds. Closer investigation reveals that an instance-by-instance renumeration and discussion of them would be fruitless and actually ungermane to the purposes of this paper. Accordingly, only those specific features, instances, and statistics that appear to be important will be discussed in detail.

(a) /θ/ and /d/ are kept orthographically distinct in the vast majority of instances. The intention appears to be to write /d/ in all environments with <t> and to represent /θ/ in initial position with <th>, elsewhere with <d>. In other words, /θ/ is to be <th-d-d> and /d/ <t-t-t>. Word-initial <d> then becomes a superfluous symbol. Although confusing, this system is not quite so prone to error as Otfrid's in which /θ/ is written <th-d-d> and /d/ <d-t-t>. Indeed, there are no instances of medial /θ/ being written with <t>. Those few instances of supposed final /θ/ which are written with <t> all occur in morphemes that are subject to the effects of Verner's Law, viz. one occurrence in /snIIθ-d/ 'cut', one in /wErθ-d/ 'become' and several in various forms of /fInθ-d/ 'find'. Hence it may well be a question of /d/ rather than /θ/ (Sievers, p. XXXIV, §23 and p. XLV, §55). Of those 5 instances of medial /d/ written with <d> instead of <t> which are in morphemes not subject to Verner's Law, all occur in the past tense suffix of weak verbs and with one exception are confined to the work of scribe **5** (Sievers, p. XXXVII, §31). Their

significance is obscure. There are no instances of final /d/ being written with <d>.[2]

In certain compounds and close-knit phrases containing forms of /θer/ 'the, that' and /θer θar/ 'that there, which, who', scribes γ, δ , and ζ appear to have interpreted the environment as medial and write <bidiu> /biθiu/ 'because of that', <mit diu> or <mittiu> /mit θiu/ 'when, while', and <ther dar> /θer θar/ 'which, who'. On the other hand, scribes α , ϑ , and ε just as regularly write <bithiu>, <mit thiu> and <ther thar>. Whether this signifies a dialect difference or simply a difference of application of spelling rules must remain moot (Sievers, p. XXXIII, §20).

Aside from a possible tendency to write unstressed adverbs and pronouns containing initial /θ/ with <d>, no reason, phonetic or otherwise, is to be discerned in the sporadic spellings of both initial /θ/ and /d/ with the letter <d> (Sievers, pp. XXXII-XXXIV, §19-21 and p. XXXVI-XXXVII, §§29-31). It is perhaps to be explained most simply as an intrusion of a different orthographic system. Let it be noted again that word-initial <d> is a superfluous letter in this system of orthography.

Of much greater interest here are those occasional spellings that appear to shed some light on phonetic realities. Most important of these are the 8 instances in which /θ/ is rendered with the Anglo-Saxon eth-symbol

<ð>. They all occur in the early work of scribe α in chapters 5, 6, and 7. Seven of the 8 occurrences of <ð> appear on opposite sides of the same MS leaf (MS pp. 35 and 36). The 8th appears on the back of the succeeding leaf (MS p. 38). Six of these 8 instances occur in the masculine or neuter dative singular and plural of the demonstrative /θer/, viz. <ðemo>/θemo/ and <ðêm>/θeem/ 'the, that'. Oddly enough, all 6 forms follow the preposition /fon/ 'from, of'. Another occurrence of <ð> appears in <thiu ðar> /θiu θar/ 'that there, which'. Perhaps the most significant instance of <ð> occurs in <vvurðun>/wurθun/ 'they became, were' in postconsonantal position (for exact line references cf. Sievers, p. XXXII, §18). In addition, there are 5 and possibly 6 instances of medial /θ/ spelled with <th> instead of expected <d> in <heithin>/heiθin/ 'heathen, gentile' in scribe Υ's work; <anthere>/anθere/ 'others', <elthiron>/elθiron/ 'elders, parents', twice <quathun>/kwaaθun/ 'they quoth, said' in the work of scribe ζ, and <erhtbibunga> probably for <erthbibunga>/erθbibunga/ 'earthquake' from scribe δ′. Together, the spellings with <ð> and with medial <th> appear to indicate fricative articulation for /θ/ even in medial postresonant position. It is to be noted that positions following /l/, /n/, and /r/ are attested. Although one would expect /d/, not /θ/, in the preterite plural of /kweθan/ 'to speak' and /werθan/ 'to become', the consonant of the singular had apparently already been generalized to

the plural. The form <vvurðun> appears to support this unambiguously, if <quathun> does not (Braune-M, §337, A 2). The past participles of these two verbs have apparently retained the /d/ (for line references and other data cf. Sievers, p. XXXIV, §23 and p. XLV, §55).

The language of the Tatian (or, at least, that of some of its scribes) has evidently retained an old morphophonemic variation caused by Verner's Law in the morpheme /Alθ-d/- 'old'. /elθiron/ 'elders, parents' appears always to contain /θ/. The adjective <alt> /ald/ 'old' in all its forms always shows /d/. However, /werald/ 'world' and /aldar/ 'age, span of time', usually spelled <uueralt>- and <altar>- respectively, also occur spelled with <d> (Sievers, p. XXXVII, §31). These might be interpreted as being actual variants with /θ/.

Initial /dr/ from Germanic */tr/ is not distinguished orthographically from the reflex of Germanic */dr/. Both appear spelled with <tr> with only 6 exceptions. Five of these occur in the work of scribe Y in verses 3 and 4 of chapter 88 in the word <dragabetti>/dragabeddi/ 'portable bed, pallet'. There is also some instance of <drinkent> in scribe δ 's work, elsewhere <trinkent>/drinkend/ 'they drink'. The fact that these 6 <dr>-spellings are confined to reflexes of Germanic */dr/ appears to be accidental.

Examples of /θ/ and /d/ in the various environments are: <thiuba>/θiuba/ 'theft', <tiufi>/diufi/ 'depths'; <thrato>

/θraado/ 'very, exceedingly', <trado>-/draaθo/- 'fringe, hem'; <elthiron> and <eldiron>/elθiron/ 'elders, parents', <altare>/aldare/ 'altar' (dat.sg.); <anthere> and <andere> /anθere/ 'others', <unter>/under/ 'under'; <vvurðun> and <vvurdun>/wurθun/ 'they became', <antvvurti>/andwurdi/ 'answer' and <uuorton>/wordon/ 'words' (dat.pl.); <gold> /golθ/ 'gold', <gilt>/gild/ 'yield, give back!'; <uuard> /warθ/ 'he became', <duriuuart>/duriward/ 'door guard, gate keeper'; <kind>/kinθ/ 'child', <cund>/kunθ/ 'known', <lant>/land/ 'land', <uuint>/wind/ 'wind'.

There are no <sd>-spellings of the cluster /sT/ to parallel those with <sg> for /sK/.

(b) As extensive as the Tatian MS is, it contains none of the morphemes in which one might expect to find reflexes of Germanic */θθ/. The prefix <edo>- or <odo>- 'some' always appears with single <d> as does the conjunction <odo> /oθo/ 'or'.

Intervocalic /dd/, on the other hand, is frequent. Whether it derives from pre-Old High German */dd/ or */tt/ plus /r/, it appears very consistently as <tt> after short vowels, e.g. <betti>/beddi/ 'bed', <mitti>/middi/ 'mid, middle', <bittaro>/biddaro/ 'bitterly', etc. It also occurs after a supposedly long vowel in two occurrences of <luttar>-/luuddar/- 'simple, pure'. Otherwise it appears to have been shortened to /d/ after long vowels and diphthongs, e.g. in the many occurrences of the

morphemes <leit>-/leid/- 'lead' and <uuat>-/waat/- 'to clothe, garment'. This is the normal Old High German development. It is interesting to note the orthographic consistency in rendering /dd/ and /gg/ when compared with /kk/ (q.v.), in that /dd/ and /gg/ contrast with intervocalic /d/ and /g/ respectively, whereas intervocalic simple /k/ does not exist. The verb <bittan> /bidden/ 'bid, ask' regularly shows morphophonemic variation between /dd/ and /d/ in its various forms, viz. /d/ in the imperative singular, the second and third persons singular of the present indicative, the whole past system, and the past participle; /dd/ in the remaining persons and numbers of the imperative and present indicative, the whole present subjunctive, the infinitive, and the present participle, e.g. <ih bittu>, <ir bittet> 'I, ye ask' vs. <thu bitis>, <her bitit> 'thou askest, he asks'. It is not surprising, therefore, that one finds analogical orthographic (or real phonological?) irregularities within this paradigm. Aside from /bidden/ and one instance in a related verb of <bettoti> for <betoti> 'he might pray', I can find only 4 uncorrected instances of <t> for <tt> and only one uncorrected instance of <tt> for <t> out of many hundreds of occurrences in the MS. Several others have been corrected either by the scribe in question or by the corrector. They appear in the once-occurring word <mitilodi>/middilooθi/ 'means', elsewhere always <mittil>-, <thritun> /θriddun/ 'third' (dat.),

elsewhere <thritt>-, and <tetta> /deda/ 'he did', elsewhere always <teta> (Sievers, p. XLI, §43 and pp. XLV-XLVI, §§56-59). Sievers' count is not always complete in the grammar section. Therefore one must refer to his glossary under the words in question. I have not taken into consideration those weak verbs with roots ending in a /d/ which has been brought into juxtaposition with the /d/ of the past suffix through loss of the stem vowel. In intervocalic position, the resulting long /dd/ appears to have been preserved in the great majority of occurrences. However, it has apparently been shortened in postconsonantal position in most instances, as one would expect. Examples are *<leiten>:<leitta> 'to lead, he led', *<spreiten>:<spreitta> 'to scatter, I scattered' vs. <senten>:<santa> 'to send, I sent', *<uuenten>:<uuanta> 'to turn, he turned' (Sievers. p. XLVI, §58).

(c) Orthographically, the reflexes of pre-Old High German */s/ and */ss/ are kept strictly distinct from those of shifted */t/ and */tt/. They are written with <s> and <ss> (Sievers, p. XXXII, §17). However, except when written with <c> before <i> or <e>, /ȼ/ and /dȼ/ are not distinguished orthographically from /ß/ and /ßß/. In other words, where /ȼ/ is not in syllable-initial position or written with <c>, it is orthographically indistinguishable from /ß/. Whether a given form contains /ȼ/ or /ß/ must then be determined from comparative or modern evidence. /ȼ dȼ ß ßß/ all are written with <z> and <zz>. One notes only a tendency

to write <z> following long vowels and diphthongs and any unstressed vowels, but <zz> following stressed short vowels. There are, however, many exceptions by word, position, and scribe. Scribes α , Υ, δ , and ε appear to follow the above usage most closely. Scribe θ apparently prefers to write <z> everywhere. Scribe ζ perversely tends to reverse the rule and write <z> after short vowels, but <zz> after long vowels and diphthongs. This deviation from the MS norm is reminiscent of his treatment of /hh/ (q.v. and Sievers, pp. XXXIX-XLI, §§36-42).

Of some interest here are the approximately 14 instances in which scribe Υ appears to have originally written /ß(ß)/ with symbols other than <z> or <zz>. All appear in various forms and occurrences of the 3 words /waßßar/ 'water', /gisaaßnessi/ 'tradition', and /sambaßdag/ 'sabbath, Saturday' in chapters 84, 87, and 88 (Sievers, pp. XL-XLI, §42). All have been corrected either by scribe Υ himself or the corrector. As far as can be deciphered through the corrections, scribe Υ apparently first wrote <sz> in syllable final position and variously <szz>, <ssz>, and <sz> in intervocalic position. These are the only instances in the entire MS which appear to indicate a fricative value for /ß/ in contrast to the affricate /ȼ/. Of course, no more precise phonetic value can be deduced from this evidence, especially in view of the fact that scribe Υ apparently also originally writes<ss> for /ßß/ in one instance and <s> for /ß/ in one

other instance.

Examples of the dental fricatives and affricates in initial, postconsonantal medial and postconsonantal final positions are <sehan>/sehan/ 'to see', <zehen>/ȼehen/ 'ten'; <sele>/sele/ 'he may render, give over, sell', <zele>/ȼele/ 'he may count, tell'; <uuirsiro> /wirsiro/ 'worse', <vvurzo> /wurȼo/ and <uurci> /wurȼi/ '(of) herbs, spices'; <uuirs> /wirs/ 'worse', <suarz> /swarȼ/ 'black'; <unser> /unser/ 'our', <unzan> /unȼan/ 'until, up to'; <uns> /uns/ 'us', <unz> /unȼ/ 'until'; *<halse>/halse/ 'to a neck' (not attested in Tatian), <halze> or <halce> /halȼe/ 'the halt, lame'; <hals> /hals/ 'neck', <salz> /salȼ/ 'salt'. Examples in intervocalic and postvocalic final positions are <uueison> /weison/ 'orphans', <uuesan> /wesan/ 'to be', <giuuesso> /giwesso/ 'certainly', -<nessi> /nessi/ '-ness' (noun-formant suffix), <uueiz(z)i> /weiȼi/ 'wheat', <nezzi> /nedȼi/ 'net', <uuizzan> /wißßan/ 'to wit, know', <uuizu> /wiiß(ß)u/ 'white' (pl. neut.); <uuas> /was/ 'was', <uuis> /wiis/ 'wise', <uuaz> /waß/ 'what', <uuiz> /wiiß/ 'white'; <scaz> /sgaȼ/ 'treasure, money', <thiz> /θiȼ/ 'this' (neut.).

3.6. The labials. (a) Although /w/ and /v/ as well as /u/ are all written with variations of the same symbol, <u>, there is surprisingly little orthographic confusion among the 3 phonemes. The only source of confusion arises when /w/ or /v/ occurs in juxtaposition with /u/. /w/ and /v/ never occur juxtaposed. The orthographic intent is

clear. /w/ is to be written <uu> in absolute initial and intervocalic positions except before or after /u/, e.g. <uue> /wee/ 'woe', <euua> /eewa/ 'law'. In syllable-initial position following obstruents ... an environment in which /v/ does not occur ... /w/ is written with single <u> after <k> in the device <qu> and, according to the scribe, with either <u> or <uu> following /s/, /θ/, /d/, and /ȼ/, e.g. <queman> /kweman/ 'to come', <suert> and <suuert> /swert/ 'sword', -<thuahan> and <thuuahan> /θwahan/ 'wash, baptize', <duala> and <tuuuala>! /dwaala/ 'delay', <zuene> and <zuuene> /ȼweene/ 'twain, two'. (Sievers, p. XXV, §8, 1-3). The Tatian employs an orthographic device to indicate /wu/ or /uwu/, a procedure that is unique among the MSS considered in this paper. In addition to <uu> (or more often <uuu>), one finds <uu^{v}>, i.e. two <u>'s followed by a raised smaller <v>. Following Sievers and Schmeller before him, I transcribe this device as <vvu> (Sievers, p. XXV, §9,1). This device is to be found sporadically in other environments also along with <u^{v}>, i.e. single <u> followed by a small raised <v>, transcribed <uv> (Sievers p. XXV, §8,1). Examples are: <uurdun> /wurθun/ 'became, were', <uuurm> /wurm/ 'worm', <vvurdun> /wurθun/ 'became, were', <vvolent> /wollent/ 'they want', <uvort> /word/ 'word'. There are no examples of /w/ written with <b>. Syllable-final /w/ does not exist, having been vocalized to /o/. Following a resonant, a

prothetic vowel has developed before /w/ which therefore does not contrast with the reflexes of Germanic */f/ or */p/ in this position. In positions not involving /u/ where confusion with /v/ could occur, /w/ is written, very commendably, only twice with single <u> in the entire MS. /v/ is spelled with double <uu> also only twice (cf. Sievers, pp. XXV-XXVII, §§8-9 for /w/; pp. XXXI-XXXII, §§14-16 for /f/ and /v/ from Germanic */f/). These spellings of /w/ appear to be attempts to indicate its phonetic nature as a (bilabial) semivowel in contrast to the usual Romanic value for consonantal <u> (and of OHG /v/) as a labiodental fricative.

The reflexes of Germanic */f/ in word- and morpheme-initial position (a position where they do not contrast with the reflexes of Germanic */p/) are written with <f> always before consonants and usually before vowels. However, in prevocalic initial position there are 182 instances of initial <u> out of nearly 1,000 with <f>. 118 of these occur in the work of scribe Y. Whether these spellings indicate a tendency toward lenition in initial pre-vocalic position as they appear to do in medial position, must remain moot. It is to be noted that initial consonantal <u> except before /u/ is essentially a superfluous letter and that scribe Y often writes the reflex of Germanic initial */p/ with <f>. Examples are: <far> and <uar> /far/ 'fare, go!', <flah> /flah/ 'flat', <frage>

/frage/ 'ask!'. (for the reflexes of Germanic */f/ in other positions, cf. 3.6b and c).

(b) Medial syllable-initial /v/, whether in intervocalic or postresonant position, is written with <u> in the vast majority of instances. Aside from the morpheme /hev(v)/- 'heave, heavy, lift' and /θArv/- 'need', medial /v/ is written with <f> in only 3 instances, all in the work of scribe ζ. The 3 words <diufale>, <zuelifin>, and <grafo> appear elsewhere and much more often, even in the work of ζ, as <diuual> /diuval/ 'devil', <zueliui> /ƀwelivi/ 'twelve', and <grauo> /gravo/ 'defender, count (aristocratic title)'. In <erhefanne>, <ufhefet>, <hefige>, etc., we may be dealing with the reflex of pre-OHG */ff/, which then might merit orthography different from the reflex of simple */f/. However, this morpheme also occurs elsewhere even in scribe ζ 's work, and much more often spelled with <u>. Sievers explains the 4 instances of <(bi)thurfun/t> /(bi)θurvun/ or /biθurvud/ 'we, you, they need' as having been influenced by the more common forms of this morpheme where the /v/ was in final position, i.e. <bitharf> /biθarf/ 'he needs', <thurft> /θurfd/ 'need', and <thurftig> /θurfdig/- 'needy'. As will be shown, medial /v/ is kept orthographically quite distinct from medial /pf/ and /f(f)/. The reflexes of Germanic */f/ in syllable-final position are always written with <f> and hence, in postvocalic final position, are indistinguishable from the reflexes of Germanic */p/ (Sievers, p. XXXII, §16).

The reflex of Germanic */p/, viz. /f(f)/, occurs only in intervocalic and postvocalic final position. In the latter position, it does not contrast, orthographically at least, with the reflex of Germanic */f/, e.g. from */f/, <hof> /hof/ '(court) yard', -<ref> /ref/ 'wallet, womb' <einlif> /einlif/ 'eleven'; from */p/, <scaf> /sKaaf/ 'sheep', <skef> /sKef/ 'ship', <bisgof> and <biscof> /bisKof/ 'bishop'.

In intervocalic position, original /ff/ from */p/ appears written with <f> after diphthongs and long vowels and often even after short vowels, especially in more weakly stressed syllables. Only scribe Y shows instances of <ff> following diphthongs and then only 4. Following stressed short vowels, one finds <ff> usually, although there are also instances of single <f> even here (Sievers, p. XXXVIII, §35). That this orthography reflects a real (phonetic) shortening of /ff/ in certain positions is probable. However, as in the case of intervocalic /k(k)/ and /(p)pf/, there is no single /f/ with which it could contrast because the reflex of medial Germanic */f/ is written <u>. There are only 3 instances of aberrant orthography for -/f(f)/-, e.g.<scapho> /sKaaf(f)o/ 'of sheep', <scaph> /sKaaf/ 'sheep (pl.). and <ofphano> /offano/ 'openly'. <ph> is the usual symbol for /p^{f}/ in the Tatian. The significance of these 3 spellings, if any can be attached to them is that of fortisness or length,

rather than bilabiality (Braune-M, §137, A1). Examples of intervocalic /v/ and /f(f)/ are : <ouan> /ovan/ 'oven', hearth'; <offano>, <ofano>, and once <ofphano> /offano/ 'openly', <reue> /reve/ 'womb' (dat.); <skeffe> and <skefe> /sKeffe/ 'ship' (dat.), <tiuual> and <diuual> /diuval/ 'devil'; <tiufi> /diuf(f)i/ 'depths'.

(c) Unlike the documents so far considered, the Tatian's orthography shows that the reflexes of Germanic */p/ and */pp/ are shifted in all positions. The symbol <p> occurs alone, i.e. not in digraphs, only to represent /b/ sporadically in syllable-final position, in loans from Latin and Romanic where it probably also represents /b/ (cf. below), and in biblical names. /p^{f}/ appears in initial position in approximately 10 morphemes with a total of 34 occurrences. It is written with <ph> in 24 instances, with <pf> in 5 instances, by scribe ζ , and with single <f> also in 5 instances by scribes ϒ and δ . Scribes ϒ, δ , and ζ also employ <ph>. Hence one finds the following spellings for the word meaning 'penny, denarius' : <phenning>- and <phending>, <pfenning>-, and <fenning>- /pfen(n)(d)ing/ (Sievers, p. XXXVII, §32 and Glossary under <p>). Initial <ph> also appears in 3 biblical names and the word 'Pharisee', which last also appears spelled with initial <f>. It is interesting to note that the <f>-spellings of 'Pharisee' are confined to the work of scribes ϒ, δ , ζ , and δ ´, i.e. exactly those scribes who also

write <f> or <pf> for German /pf/ in initial position and elsewhere. The name <Ioseph> 'Joseph', which is invariably undeclined in the Latin original, always changes the final <ph> to <b> in the OHG as soon as endings are added in the oblique cases, thus 8 times nom. <Ioseph>, 4 times gen. <Iosebes>, 4 times dat. <Iosebe>, and twice acc. <Ioseben>. This appears to indicate that this name ended in the stop [p] rather than the fricative [f] (cf. modern Italian Giuseppe). In addition, scribe ζ writes <ph> twice for OHG /f(f)/ from Germanic intervocalic */p/ in <scaph>- /sKaaf/ 'sheep', elsewhere and much more often <scaf>-. Apparently then, the digraph <ph> can represent an affricate, a fricative, and even a stop. Other morphemes with initial /p͡f/ are : /p͡flanȼ/- 'plant', /p͡fluog/ 'plow', /p͡forda/ 'gate', /p͡forȼih/ 'porch', /p͡frasam/- 'interest, usury', /p͡fruonda/ '(dish of) food', /p͡fuliwi/ 'pillow', /p͡fund/ 'pound', and /p͡fudȼ/- 'puddle, pond'.

In intervocalic position, the reflexes of pre-OHG */pp/ show a similar orthography. Out of a total of 10 occurrences of morphemes containing /(p)p͡f/, one finds 4 instances of <ph>, two instances of <pf> from scribe ζ , one instance of <ff> from scribe Υ, and two instances of <f> from scribes Υ and δ (Sievers, p. XXXVII, §33). The 3 instances of <f> or <ff> appear respectively, however, in the verb /sKe(p)p͡fan/, /sKuof/, modern German schöpfen and schaffen, 'draw water' and 'create', and hence may contain /f(f)/. Aside from

the one spelling with <ff>, the only indication of length is the hapax legomenon <obphar> /oppfar/ 'sacrifice, offering' from scribe α . As with /k/, however, the only intervocalic /pf/'s would be /ppf/'s. If <obphar> is not a mere scribal error, it also indicates that <b> can represent a voiceless sound. The other morphemes in question are /klopf/- 'to clap, knock' and /dropfo/ 'a drop' (of water). There are no examples of final postvocalic /pf/.

For the reflexes of Germanic */p/ in postconsonantal medial and final positions, one finds a multitude of occurrences and unfortunately also the same variations in orthography. Following /l m n r/, there are 61 instances of <ph>, 23 instances of <pf> ... all but one from scribe ζ ..., and 40 instances of <f>, 32 of which are from scribes ϒ and δ . They all appear in various forms and compounds of 8 morphemes: /hElpf/- 'help', /kempfo/ 'soldier', /lImpf/- 'to be seemly, fitting, proper', /sKimpf/- 'to mock, ridicule', /θEmpf/ 'to damp, stifle, choke', /θorpf/ 'thorpe, village' /welpf/ 'whelp, puppy', and /wErpf/- 'to throw'. Examples of postresonant medial and final /v/, /f/ and /pf/ are <uuolua> /wolva/ 'wolves' and <uuolf> /wolf/ 'wolf'; <hulphin> /hulpfin/ 'they might help' and <hilf> /hilpf/(?) 'help!' ; <fimui> /fimvi/ 'five', <fimf> and <uinf> /fimf/ or /finf/(?) 'five'; <gilimphit>, <gilinpfit>, and <gilinfit> /gilimpfid/ or /gilinpfid/? 'it is fitting, seemly', <gilampf>, <gilamf>,

and <gilanf> /gilampf/ or /gilampf/ 'it was fitting, seemly'; <thurfun> /θurvun/ 'we need', <bitharf> /biθarf/ 'he needs': <vvurphun>, <uurfun>, and -<vvurpfun> /wurpfun/ 'they threw', <uuirph> and <uuirf> /wirpf/ 'throw!' It is to be noted that /n/ and /m/ are confused in both /lIm~npf/- 'to be fitting' and /fim~nf/ 'five'. Therefore they give no closer evidence of bilabial vs. labio-dental articulation.

3.7. Other East Franconian texts. Unfortunately most other East Franconian texts of the Old High German period are too brief, too badly written, too badly preserved, or too late in time to be of much use to this analysis. However, there are a few bits of orthographic evidence which are worthy of note.

In the Confession of Würzburg (Steinmeyer, § XLIV, pp. 316-317) dating from the early 10th century, one finds two spellings of -/ßß/- with <sz>. Both appear in the two occurrences of the word <hasze> /haßße/ 'hate'(dat.). These are the only occurrences of this word in the MS. However, in other instances, /ß/ and /ȥ/ are written with <z(z)>, e.g. <ubaraze> /ubaraaßße/ 'overeating', <gislizzen>- /gislißßen/- 'torn', <uuizent>- /wißßend/- 'knowing', and <unnuzan> /unnuȥan/ 'useless'.

The Confession of Fulda (Steinmeyer, § XLVIII, pp. 327-328) dating from the middle of the 9th century, still shows /θ/ written with <th> predominantly including one instance following /n/, viz. <kinthisgi> /kinθisgi/

'childish'.

Most important are the fragments of the Salic Law Code (Steinmeyer, § X, pp. 55-57). The MS dates from the early 9th century, but the language is probably older. /h/ before /w/ and /r/ is preserved as in <hwer> /hwer/ 'who' and <hros> /hros/ 'horse/. /θ/ is written with the Anglo-Saxon eth-symbol <ð> including in postresonant position, e.g. <ðer> /θer/ 'he who', <anðr>- /anθr/- 'other', <wirðit> /wirθid/ 'becomes', <felðe> /felθe/ 'field (dat.), <erðo> /eθθo/ or /erθo/(?) 'or'. This certainly appears to indicate fricative articulation of /θ/ everywhere. In addition, /w/ is spelled with the Anglo-Saxon wain-symbol <ƿ>, an almost unique occurrence in Old High German.

3.8. Summary. A chart of the allophones of the obstruents of Tatian would show essentially the same distribution as those of Isidor (1.11) and Otfrid (2.9). One need only point out two differences. Firstly, the greater use of the symbol <t> for /d/ may indicate, as is so often stated, that /d/ was more fortis in East Franconian than in the western dialects (Braune-M, §163). Secondly, /p/ appears to be [p^f] even in initial position.

FOOTNOTES TO CHAPTER III

[1]For more on the Tatian translators cf. Moulton and Baesecke, G. B. Die überlieferung des ahd. Tatians. Hallische Monographien, no. 4, Halle, 1948.

[2]It is to be noted that /d/ could well be transcribed /t/ for Tatian and East Franconian in general. However, I have decided to retain the d-spelling to parallel the western dialects and to avoid reminding the reader of the modern aspirated value of <t>.

IV

Summary and Conclusions

4.1. A thorough examination of the orthography of the texts, together with comparative and modern evidence, has made possible the assembly of a more or less complete constellation of the positional variants of the obstruents of shifted Franconian in the OHG period. These findings will again be summarized in chart form. Here the arrangement will be different in order to point up certain aspects. Very high and very low frequency of occurrence is noted, as well as non-occurrence. In addition, the new labial and velar fricatives are kept visually separate from the old fricatives in a not strictly phonemic manner. They have arbitrarily been assigned the symbols φ and ç.

(a) The voiceless stops.

	C-	-CC-	-VCV-	-VC	-CC
ȼ	ds V- / w-	-Rds-	-VVds-[1]	-ds rare	-Rds
	Ør-	-FØ-			-FØ
dȼ			-Vtds-		
p	p^h[2] or b^φ[3]	-Rp^h[4] or -Rb^φ[5] or -R^φ[5]	Ø	-p^h or b^φ very rare	-Rp^h[4] or -Rb^φ[5] or -R^φ[5]
pp			-pp^h or -pb^φ-		
k	k^h	-Rk^h	Ø	-k^h quite rare	-Rk'(?)
kk			-kk^h -		

[Footnotes to chart (a)]

[1]Shortened from /dȼ/ following long syllabics. [2]Isidor and Otfrid. [3]Tatian. [4]Isidor. [5]Otfrid and Tatian.

It is to be noted that the system of voiceless stops is assymmetrical both in distribution and in membership. There occur either two fortis aspirated stops and an affricate or two affricates and a stop. No member of the series occurs intervocalically except when doubled or in the case of /ȼ/ where it has been shortened following long syllabics. One notes that in final postvocalic position these sounds are rare.

/ȼ/, unlike the other two members, does not occur before /r/. It also does not occur before /l/ or /n/ but neither does /d/, its contrasting lenis counterpart.

/p/, as an affricate, I represent phonetically as [t͡sᵠ] because it parallels [t͡s] and is in accord with phonetic fact. That is, when a fortis aspirated stop becomes an affricate, some of energy of articulation is transferred to the fricative release and the stop element becomes comparatively lenis. This is reminiscent of the spelling <obphar> /oppar/ or /oppfar/ 'sacrifice' from the Tatian. I have used the symbol ᵠ for the release...not because the orthographies indicate any distinction in place of articulation between this sound and old */f/...but to aid the reader in distinguishing the two sources of /f/. On the other hand, it is quite probable, if not directly

demonstrable, that the sound passed through a bilabial stage before merging with /f/. In postresonant position except after /m/, Germanic */p/ has evolved farther than the other two members, having merged completely with /f/, while /ȥ/ and /k/ remained distinct from /s/ and /h/. It would appear that this merger was just taking place at the time of our texts. Franconian speakers of Old High German as late as Otfrid evidently still felt a difference in postresonant reflexes of */p/ and */f/. Isidor's two <p>-spellings may also reflect such a difference even in postvocalic position.

From the viewpoint of dialectology, the final sound in the Monsee Fragments' -<demp>- and Tatian's <themph>- or <thamf>- is clearly the same 'diaphone', yet may be the allophone of a different phoneme in each dialect, i.e. of /p/ in Isidor but of /f/ in Tatian. As mentioned above, those modern speakers who still say dorp 'village' also say op 'up, on' and wat 'what'. As soon as this tentative [φ] merged with /f/, then /p/ no longer occurred in this position. /p/ is the rarest High German obstruent. This reflects a rarity both of Germanic */p/ and of Indo-European */b/, especially in initial position.

/k/ apparently never became an affricate [gχ] in Franconian dialects to parallel those in the other series and so to resemble the non-Franconian dialects farther to the south. Thus one has the curious assymmetry of always

having a dental affricate [d͡s], sometimes a labial one [b͡φ], and never a velar [g͡χ], which is still present in Modern Standard German.

All the texts show an orthographic confusion of /k/ and /g/ in final position to the point where in some cases one appears to be dealing with a position of no contrast. That the velars appear to be more prone to confusion than the other orders, is probably to be explained by the fact that they are phonetically more alike than the other orders. In the dentals, with /θ/ still a fricative and /ȸ/ already an affricate, we have only one pure stop /d/. In the labials, there also may be a confusion between final /p/ and /b/ in those dialects which do not shift /p/. However, the paucity of forms containing final /p/ and the great many spellings of final /b/ with <b> make this uncertain.

(b) The fricatives without /θ/.

	C-	-CC-	-VCV-	-VC	-CC	C + stop
s	s-	-Cs-	-s-	-s	-Cs	sd, sb, sg
ss			-ss-			
ß	ø	ø	ø	-s	ø	ø
ßß			-ss-			
v	f- or v-	-Rf or -Rv	-v-	-f	-Rf	-fd
vv			-ff-(?)	frequent[1]		
φ	ø	ø[2]	-VVf[3]	-f	ø[2]	ø
φφ			-Vff			
h	h-	?[4]	-h-	-χ	?	χd

	C-	-CC-	-VCV-	-VC	-CC	C + stop
hh			-XX-	frequent[1]		
ç	ø	ø	ø	-X	ø	ø
çç			-XX-			

[Footnotes to chart (b)]

[1]Medial and final /f/ and /h/ have a high frequency of occurrence. [2]As soon as the shift from /p/ to /f/ is completed, /p/ will no longer occur here and /φ/ will. [3]Shortened from /ff/ following long syllabics. [4]/h/ no longer occurs postconsonantly.

It is to be noted that, of the two sets of fricatives, only /s/ and /ß/ are entirely distinct in all environments. /v/ and /φ/ as well as /h/ and /ç/ have merged in syllable-final position, as have intervocalic /hh/ and /çç/. Isidor's <pf>-spellings in <hepf>- may indicate an attempt to distinguish old /vv/ from new /φφ/. However, to all intents /v/ contrasts with /ff/ and secondary /f/ only intervocalically. The same is true of /h/ and /hh/.

/s/ shows none of the lenition in syllable-initial position which is to be seen with /v/ and /h/. However, modern evidence would lead one to suspect that it too was present. In intervocalic position, /v/ is consistently written with <u> to distinguish it from /φ/. However, in initial and postresonant medial positions where /φ/ does not occur, it is only sporadically spelled <u>. On the other hand syllable initial /h/ is always written <h>.

One is struck by the great frequency of these fricatives in medial and final position, especially of /f/ and /h/, since /s/ and /ß/ are distinct, and one is reminded of the rarity or nonoccurrence of the voiceless stops in these same environments.

Only the reflexes of the old fricatives occur before /d/ and only /s/ occurs before /b/ and /g/.

(c) /θ/ and the lenis stops.

	C-	-CC-	-VCV-	-VC	-CC
θ	ð- or θ-	-Rð	-ð-	-θ	-Rθ
θθ			-θð-		
d	d- dr-	-Rd- -Fd-	-d-	-t'	-Ct'
dd			-td-		
b	b-	-Rb-	-b-	-p'	-Cp'
bb			-pb-		
g	g-	-Rg-	-g-	-k'	-Ck'

As noted before, /θ/ does not pattern with the other fricatives. There is no indication of the syllable-initial lenition which /v/ and /h/ demonstrate in the orthographies of our texts and which /s/, as shown by modern evidence, also developed. If anything, the <th-d-d>-spellings might even indicate fortisness in initial position. In addition, /θ/ does not form clusters with stops as do the others,

e.g. /sd fd hd/. This distribution is aberrant for a fricative and resembles more closely that of the lenis stops. It almost appears to anticipate /θ/'s later development into a stop. The progression from Proto-Indo-European to Modern Standard German is in some environments full circle and beyond: t' > t^h > t^θ > θ > $\underset{o}{ð}$ > $\underset{o}{d}$ > t' (in final position) and then in Standard German [$\underline{t}^h$], cf. Latin ventus, German Wind [vint^h] 'wind'.

The assymmetry in representation among the stops in intervocalic position is to be noted. Here one has a frequent simple lenis stop contrasting with a rarer geminate of itself and with a fortis geminate which is also rare, but no simple fortis stop. Using the velars as an example, intervocalically we find /g/ : /gg/ and /kk/, but no /k/.

The assumption of a certain amount of syllable final fortisness appears to be justified. As mentioned in 4.1a, there is some evidence of a merger between final /g/ and the remnants of final /k/, possibly also of /b/ with unshifted /p/ in the same position.

/d/ occurs before /r/ as /ȼ/ does not.

It is to be noted that there are five dental obstruents, i.e. /ȼ d θ s ß/, whereas there are essentially only three each in the other two series plus one phoneme each with marginal contrast in each series, viz. /p b f/ plus /v/ and /k g h/ plus /hh/. In addition,

of the 4 resonants and two semivowels, 4 are dental or palatal, viz. /j l n r/ whereas only two are non-dental, i.e. /m/ and /w/. As can be seen the dental series is much more crowded than the others, with labials better represented than velars.

4.2. The assymmetry both in membership and in distribution of the obstruent system of shifted Franconian of approximately 780-860 A.D. has been shown. In addition, the attempt was made with some success to determine the phonetic nature of some of the allophones of these obstruents. The stage has now been set for several kinds of analyses and investigations to be undertaken were they not beyond the scope of this present dissertation. Some of the possibilities will merely be alluded to here.

First, one might attempt an internal reconstruction on the basis of these data. The phonological conditions in pre-Old High Franconian might be analyzed and the causes of the shift investigated (Braune-M, §§83-90). Secondly, we might follow phonological conditions forward in time as we did in part when evidence from the modern dialects was introduced.

Thirdly, since one is dealing with a dialect area which is more or less clearly defined from Old High German to modern times, a broader dialectological study might be undertaken. It is, of course, the Franconian dialect area that was split in two by the High German

consonant shift. However, Modern Low Franconian, i.e. Dutch and Flemish, resembles High German phonologically much less than does the modern descendent of Old Saxon, Low German, in that languages of the Low Countries possess fortis but unaspirated voiceless stops. This is, I believe, unique in a Germanic language.

BIBLIOGRAPHY

Bauer, Erika. 1957. Dialektgeographie im südlichen Odenwald und Ried. (Deutsche Dialektgeographie, 43.) Marburg: Elwert.

Bohnenberger, Karl. 1905. Die alemannisch-fränkische Sprachgrenze vom Donon bis zum Lech. Zeitschrift für hochdeutsche Mundarten, 6.

Braune, Wilhelm. 1959. Althochdeutsche Grammatik. 9th ed. (Sammlung kurzer Grammatiken germanischer Dialekte, A. Series No. 5), ed. by Walter Mitzka. Tübingen: Niemeyer.

De Boor, Helmut. 1955. Die deutsche Literatur von Karl dem Großen bis zum Beginn der höfischen Dichtung. 2nd ed. (Geschichte der deutschen Literatur von den Anfängen bis zur Gegenwart, vol. 1) Munich: Beck.

Dukus Horant. 1964. Ed. by P.F. Ganz, F. Norman and W. Schwarz. Tübingen: Niemeyer.

Franck, J. 1909. Altfränkische Grammatik. (Grammatiken der althochdeutschen Dialekte, 2.) Göttingen: Vandenboeck und Ruprecht.

Frings, Theodor. 1957. Grundlegung einer Geschichte der deutschen Sprache. 3rd ed. Halle: Niemeyer.

Hench, George A. 1890. The Monsee Fragments. Straßburg: Trübner.

Hench, George A. 1893. Der althochdeutsche Isidor. Quellen und Forschungen zur Sprach- und Culturgeschichte der germanischen Völker, 72.

Jakobson, Roman and Morris Halle. 1956. Fundamentals of language. (Janua Linguarum, 1.) The Hague: Mouton.

Joos, Martin. 1952. The medieval sibilants. Language , 28. 222-231.

Keller, R.E. 1961. German dialects. Manchester University Press.

Kelle, Johann. 1856. Otfrids von Weißenburg Evangelienbuch. Aalen: Otto Zeller.

Kluge, Friedrich. 1960. Etymologisches Wörterbuch der deutschen Sprache. 18th ed., ed. by Walter Mitzka. Berlin: De Gruyter.

Lessiak, Primus. 1933. Beiträge zur Geschichte des deutschen Konsonantismus. (Schriften der philosophischen Fakultät der deutschen Universität in Prag, 14.)

Lessiak, Primus. 1910. Lessiak über Francks altfränkische Grammatik. Anzeiger für deutsches Altertum, 34.193-222.

Martin, Bernhard. 1959. Die deutschen Mundarten. 2nd ed. Marburg: Elwert.

Martin, Lothar. 1957. Die Mundartlandschaft der mittleren Fulda (Kreis Rotenburg und Hersfeld). (Deutsche Dialektgeographie, 44). Marburg: Elwert.

Moulton, William G. 1944. Scribe Y of the Old High German Tatian Translation. Publications of the Modern Language Association , 59.307-34.

Paul, Hermann. Die westgermanische Konsonantendehnung. Beiträge zur Geschichte der deutschen Sprache und

Literatur, 7, pp. 105-35.

Penzl, Herbert. Konsonantenphoneme und Orthographie im althochdeutschen Isidor. Mélanges de linguistique et de philologie Fernand Mossé In Memoriam, pp. 354-61. Paris: Didier.

Schützeichel, Rudolf. Die Grundlagen des westlichen Mitteldeutschen. (Hermaea, neue Folge 10.)

Sievers, Eduard. 1892. Tatian. 2nd ed. (Bibliothek der ältesten deutschen Literaturdenkmäler, 5.) Paderborn: Schöningh.

Steinmeyer, Elias von, ed. 1916. Die kleineren althochdeutschen Sprachdenkmäler. Berlin: Weidmann.

Stoeckicht, Otto. 1942. Sprache, Landschaft und Geschichte des Elsass. (Deutsche Dialektgeographie, 42.) Marburg: Elwert.

Twaddell, Freeman. 1956. Pre-Old High German */t/. For Roman Jakobson. The Hague: Mouton.