ANALYSIS OF INTERPERSONAL RELATIONS IN A FORMAL ORGANIZATION

by
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This is a report of an investigation into the correlates of a person's attraction to his membership group in a complex formal organization. As a result of an exploratory study, the following hypotheses were formulated to guide the research:

1. In any group or organization, the greater an individual's attraction, the more he will be valued by other members.
2. The positive relationship hypothesized in (1) will increase with increased communication, and decrease with decreased communication.
3. The more highly an individual is valued by the members of his group, relative to how much he is valued elsewhere in the organization, the greater will be his attraction to his own group.
4. The positive relationship hypothesized in (3) will increase with increased communication, and decrease with decreased communication.

These four hypotheses were tested in a field study of the 72 staff members of a child welfare agency. The research utilized the following methods:

a) The subgroup structure of the organization was discovered by having subjects indicate which groups they belonged to, and checking the names of other members of these groups on an alphabetical list of all staff members.

b) Data were obtained about the frequency, nature and importance of contact among respondents by using a check-list of all staff members.

c) Coombs-type scales were developed to measure the subjects' attraction to other persons in their subgroups, and attraction arising from perceived benefits of group membership. These scales were administered in both subgroups and organizational contexts.

d) The respondents were asked to choose those persons who contributed most to the group and organization goals, and to predict who chose them on the sociometry.

The four original hypotheses were supported by the data at acceptable levels of statistical significance. This was demonstrated with Pearson product moment correlation. In addition, a non-parametric method of analysis was developed, and demonstrated with Hypothesis 2. Using Chi Square, the latter was supported at a high level of confidence.

Utilizing this non-parametric method, additional analysis of the data resulted in a number of significant relationships in the areas of group theory and communication theory. Hypotheses were formulated to explain these relationships. These hypotheses predict the strength of a person's attraction

to his membership group, relative to higher status reference groups in the organization, and relative to other parts of the organization. Eight ex post facto hypotheses also predict the direction and strength of forces to communicate acting on a person regarding his membership group, persons of higher and lower status, and persons who are valued or not valued members of the organization.

A deductive type theoretical statement is formulated to integrate all the findings of the study. Three basic assumptions are made explicit, concerning the individual's tendency to maximize need satisfaction in his social life, and an organization's tendency to integrate members' activities around its major purposes. From these assumptions, and 10 interrelated definitions of concepts, 20 hypotheses are derived, utilizing a small number of minor auxiliary assumptions. The relevant evidence in this report, which supports 14 of these hypotheses, is referred to. The other hypotheses are suggested by the data, but not conclusively tested by the study's findings.

PREFACE

This study has been conducted at the Research Center for Group Dynamics, University of Michigan, as part of a continuing program of research in the area of social communication, made possible by Office of Naval Research contract N6 onr 232. During its formative stages the investigation was under the supervision of the director of that program, Dr. Leon Festinger. With his departure in July, 1951, and until its completion, the study was supervised by Dr. Dorwin Cartwright.

It is a pleasure to be able to acknowledge my considerable indebtedness to all those colleagues in both the Institute for Social Research and the doctoral program in social psychology at the University of Michigan who have contributed, directly or indirectly, to this work. Many more than it will be possible to mention by name have given sympathetic attention and constructive comments.

During the analysis and writing stages of the study, the writer was fortunate in having within easy access the experience and skill of Dr. Dorwin Cartwright, who combined permissive supervision with a refusal to allow him to dodge theoretical issues. Dr. John R. P. French, Jr. and Dr. Theodore M. Newcomb were also active in this latter respect. The two remaining members of the doctoral committee,

Dr. Angus Campbell and Dr. Clyde Coombs, although not called upon for as active participation, showed a sympathetic interest, and constituted a second line of defence which gave the investigator considerable security. To these committee members, individually and jointly, the writer is most grateful.

A debt is also gratefully acknowledged to Dr. Leon Festinger, who suggested the original hypothesis, and whose research acumen guided the investigation in its early period. During the stage of instrument construction and testing, "social reality" was provided the writer by Dr. Albert Pepitone, Dr. Harold Gerard, and Mr. Bert Raven, colleagues in the social communication program.

It is especially important to the writer to recognize the contribution made to the research by Ian Ross, who, it might be said, acted almost as an ex officio member of the doctoral committee. He was ever available for consultation and provided many positive suggestions. Without his punched card design, the analysis of the data would have been more difficult and costly.

Finally, tribute should be paid to the Superintendent and administrative staff of the "Midwest Social Agency" for demonstrating an unselfish faith in the ultimate contribution of theoretical social research. Without their interest, and the cooperation of the entire staff, whatever contributions made by this work would not have been achieved.

TABLE OF CONTENTS

	Page
CHAPTER I THE PROBLEM AND ITS ANTECEDENTS	1
Introduction	1
Problems in Conducting the Research	3
Theoretical Antecedents of the Problem	5
CHAPTER II STATEMENT OF THEORY AND HYPOTHESES	19
Introduction	19
Theory and Hypotheses	20
CHAPTER III RESEARCH DESIGN AND METHODOLOGY	36
Introduction	36
Description of the Population	38
The Research Plan	39
The Organization-Investigator Relationship	41
The Introductory Information Sheet	42
A Method for the Analysis of Subgroupings	47
Personal Contact Checklist	61
The Research Questionnaire	64
1. Sociometric selection of valued persons	65
2. The attraction scales	67

TABLE OF CONTENTS

	Page
CHAPTER IV RESULTS AND DISCUSSION: THE BASIC THEORY	75
The Method of Pair Analysis	96
CHAPTER V RESULTS AND DISCUSSION: GROUP THEORY	106
Introduction	106
Some Analysis Assumptions	107
The Unified Status Scale	109
Findings Pertinent to Group Theory	110
CHAPTER VI RESULTS AND DISCUSSION: COMMUNICATION THEORY	126
Introduction	126
Findings Pertinent to Communication Theory	127
Communication and Being Valued	136
CHAPTER VII SUMMARY AND CONCLUSIONS	144
A Revised and Expanded Theoretical Statement	144
The Contributions of This Study	163
1. Conceptual Contributions	163
2. Theoretical Contributions	164
3. Methodological Contributions	165
Implications for Further Research	167
APPENDIX	172
BIBLIOGRAPHY	188

LIST OF TABLES

Table		Page
1.	Consensus About Membership in Six Work Groups	57
2.	Consensus About Membership in Three Social Groups	59
3.	Scalability of Two Attraction Scales Used in Three Different Contexts For 63 Subjects	74
4.	Relationship Between Attraction and Being Valued in Both Total Organization and Subgroup Contexts	76
5.	Relationship Between Attraction and Being Valued for Professional and Non-Professional Workers	78
6.	Relationship Between Attraction and Being Valued for Individuals With High and Low Communication	80
7.	Relationship Between Attraction and Being Valued for Professional Workers With High and Low Communication	82
8.	Consistency of Findings Presented in Support of First Two Hypotheses	83
9.	Relationship Between Attraction to Work Group and Being Valued in Work Group Relative to Being Valued Elsewhere in the Organization	85
10.	Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Individuals with High and Low Communication	87
11.	Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Non-Supervisory Respondents with High and Low Communication	88

LIST OF TABLES

Table		Page
12.	Relationship Between Attraction to Work Group and Being Valued in Work Group Relative to Being Valued Elsewhere in the Organization, for Non-Supervisory Personnel	89
13.	Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Professional and Non-Professional Non-Supervisory Respondents	90
14.	Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Professional Non-Supervisory Respondents with High and Low Communication	91
15.	Attraction of Members Valued or Not Valued by Other Member of Pair When There Is Communication Between Them (Attraction-People Scale)	100
16.	Attraction of Members Valued or Not Valued by Other Member of Pair When There Is No Communication Between Them	101
17.	Attraction of Members Valued or Not Valued by Other Member of Pair When There Is Communication Between Them (Attraction-Benefit Scale)	102
18.	Attraction-Benefit of Members Valued or Not Valued by Other Member of Pair When There Is No Communication Between Them	103
19.	Relationship Between Status and Work Group Membership for Pairs of Persons of Equal and Unequal Status	111
20.	Designations of Work Group Membership by Pair-Members of Unequal Status in Communication With Each Other	112
21.	Designations of Work Group Membership by Pair-Members of Unequal Status Not in Communication With Each Other	113
22.	Designations of Social Group Membership by Pair-Members of Unequal Status in Communication With Each Other	114
23.	Designations of Social Group Membership by Pair-Members of Unequal Status Not in Communication With Each Other	115

LIST OF TABLES

Table		Page
24.	Relationship of Status to Being Valued in Total Organization	117
25.	Relationship of Status to Being Valued by Pair-Members of Unequal Status in Communication With Each Other	118
26.	Relationship of Status to Being Valued by Pair-Members of Unequal Status Not in Communication With Each Other	119
27.	Relationship Between Valuing and Work Group Membership for Equal Status Pair-Members Who Report Communication	121
28.	Relationship Between Valuing and Work Group Membership for Equal Status Pair-Members Who Report No Communication	122
29.	Relationship Between Group Membership and Communication for Pairs of Equal Status Persons	128
30.	Relationship Between Group Membership and Communication for Pairs of Unequal Status Persons	129
31.	Relationship Between Status and Reported Communication for Pair-Members of Unequal Status in the Same Work Group	130
32.	Relationship Between Status and Reported Communication for Pair-Members of Unequal Status in Different Work Groups	131
33.	Relationship Between Status and Communication for Pairs of Persons Not in the Same Work Group	133
34.	Relationship Between Status and Communication for Pairs of Persons in the Same Work Group	135
35.	Relationship Between Valuing and Reporting Communication for Pair-Members of Equal Status in the Same Work Group	137
36.	Relationship Between Valuing and Reporting Communication for Pair-Members of Equal Status Not in the Same Work Group	138
37.	Relationship of Valuing to Communication for Higher Status Member in Pair of Unequal Status Persons	139

LIST OF TABLES

Table		Page
38.	Relationship of Valuing to Communication for Lower Status Member in Pair of Unequal Status Persons	140
39.	Relationship Between Work Group Membership and Reported Communication for Pair-Members Who Value Other Pair-Member in Equal Status Pairs	141
40.	Relationship Between Work Group Membership and Reported Communication for Pair-Members Who Do Not Value Other Pair-Member in Equal Status Pairs	142

LIST OF FIGURES

Figure		Page
1.	Midwest Social Agency Formal Organization Chart	40
2.	Designations of Subgroup Membership by 72 Members of the Midwest Social Agency	50
3.	Mutual Designations of Work Group Membership by 72 Members of the Midwest Social Agency	52
4.	Mutual Designations of Social Group Membership by 34 Members of the Midwest Social Agency	53
5.	Mutual Designations of Work Group Membership With 67 Staff Members Ordered by Work Groups Using Criterion of Maximizing Group Membership Consensus	55
6.	Mutual Designations of Social Group Membership With 23 Staff Members Ordered by Social Groups Using Criterion of Maximizing Group Membership Consensus	58

CHAPTER ONE

THE PROBLEM AND ITS ANTECEDENTS

Introduction

This is a report of research conducted in an area of human behavior which has been of long-standing concern to social scientists and social philosophers. That social groups are important to an understanding of the individual, that social interaction is a primary determinant of his behavior, has for many years been a major thesis of sociological thought. This proposition has within recent years been confirmed by a great variety of carefully controlled empirical and experimental investigations, so that it appears beyond dispute (49, chs. 2, 9, 11, 14; 69, Part 4).

There is also abundant evidence that one of the primary processes in social interaction is the exertion of influence on members of a group to conform with its norms. The rewards and satisfactions available to individuals by participation in social life tend to be reserved by the group for those who act in compliance with its accepted standards, and who contribute to its determined purposes. Deviation is often punished by the denial of these rewards, rejection from the group, or by psychological exclusion.

In a developing program of research on social communication,

Festinger and his colleagues have demonstrated some of the dynamics of this process of social control (3, 12, 13, 14, 15, 29, 58, 70). One of the major findings of this program is that pressures towards uniformity of opinion, on matters which are relevant to the functioning of a group, are directly related to the attractiveness of the group for the members. Those individuals who are strongly attracted to a group are more susceptible to the influence of the other members, than those who are less attracted. The power of a group to direct the behavior and affect the feelings of its members appears to arise from the fact that the members perceive the group as a source of need satisfaction.

The germinal problem of this study was an investigation of the sources of an individual's attraction to a group. We were interested in finding answers to the question: why are some persons more attracted to a particular group than other persons? It seemed reasonable to postulate a socially derived "need" to be valued, as one of the motivational forces underlying social behavior. This assumes that if an individual sees the group as a source of need satisfaction, and if in order to gain this satisfaction he must modify his behavior to further the purposes of the group, it will be important to him to be seen by other members as making a positive contribution to the group goal.

From this assumption it was possible to derive the hypothesis that <u>the more highly valued a person perceives himself to be by the others in his group, the greater will be his attraction to that group</u>. This hypothesis was explored in a local high school, using a simple questionnaire with two groups of boys and two groups of girls

who had been together for several years.

The results, although too inconclusive to be reported here in any detail, did have an effect on the subsequent direction of the research. No relationship was found between a subject's perception of being valued and his attraction to the group. In one group, however, there was a significant relationship between actually being valued by the other members, and the degree of attraction to the group. Analysis of the distribution of value choices, and interviews with the teachers of these groups, suggested that the existence of highly valued cliques in some groups and consequent barriers to communication might be a factor responsible for our findings. Although members of cliques were highly valued, their attraction to the group as a whole was very low. In the presence of restraints against communication, the influence that members have on one another would decrease.

It was decided at this point to conduct another exploratory study in a more complex situation, where there would already exist well defined differences in status, subgroupings, and well established communication networks. What seemed to be required was an ongoing social organization. The opportunity arose to conduct research in such an organization, using the entire staff as our subjects. This report concerns the study which was conducted in what we shall name the Midwest Social Agency.

Problems in Conducting the Research

The problems which arise in attempting to test theoretically derived hypotheses in a formal social organization are very different from those encountered in laboratory research. There are, of course,

the obvious difficulties involved in collecting data from subjects without disrupting the ongoing activities of the organization. These difficulties were overcome with the aid of a representative Research Committee formed at the Midwest Social Agency. The committee helped to plan the mechanics of collecting data and was able to smooth the path of the investigator in several ways. The design of the study, methodology and analysis procedures will be discussed fully in Chapter III.

A more basic problem concerns the kind of methodological model the investigator is to employ. Faced with the complexities and richness of the real life situation, he is tempted to collect "complete" information about the organization and its members, with the danger of finding himself swamped by data for which he has no theoretical model. This path ends in the morass of interminable ex post facto analysis.

The alternative procedure is to collect just those data considered essential to test hypotheses formulated in advance. The risk involved in this method is proportionate to the inadequacy of the investigator's initial theory. If the theory omits important intervening variables, the investigator may find himself in the awkward position of having neglected to obtain certain vital items of data, making his findings inconclusive.

However, if the investigator has sufficient evidence in support of his theoretical formulation the latter procedure has some considerable advantages. It is relatively inexpensive, compared to the "dragnet" method of gathering data; it delimits and restricts both the work of data collection and analysis. It also encourages the

formulation of hypotheses in operational terms, so that research operations can be designed to measure along the dimensions involved in the hypotheses. This avoids to a considerable degree the necessity of constructing indices from many aspects of the data, as is so often done, and the resultant uncertainty about what particular operations may be measuring.

It was decided, therefore, to accept the risks of the more restricted procedure. The theoretical formulation of the problem, and the hypotheses derived from certain prior assumptions, will be presented and discussed in Chapter II. The three research instruments designed to obtain data to test these hypotheses are presented in Appendix 1, and the rationale employed in their construction and use will be discussed in Chapter III.

Theoretical Antecedents of the Problem

As the research planning progressed, it became more and more apparent that we would have to cope with some of the classical sociological problems. What are the forces which make people designate certain groups as their own? What are the sources, effects, and characteristic patterns of social interaction? What are the motives which attract persons to a group and make them identify with its purposes?

Any attempt to treat exhaustively the theoretical antecedents of these problems would require a large volume, for they have been central to theorizing in the social sciences. However, in order to demonstrate in larger perspective where this study fits into social scientific endeavor, some of the main currents of theory and

scientific investigation in this area will be outlined.

One way of looking at the vast literature in the area of group membership, group cohesion and social interaction involves shutting one's eyes to a host of conflicting cross-currents and counter eddies, and perceiving two main streams of approach to these problems. The basic difference between the two lies in their choice of a unit of analysis. One takes for its objects of study and analysis "social organisms" -- institutions, groups, organizations, or any total social system. The other focuses on communication or interaction patterns -- relations between individuals -- and is concerned with making generalizations about these relations. Simply for the purpose of identifying them in our discussion, the former can be termed holistic and the latter atomistic. The former begins with a conceptualization of the whole, and attempts to work toward an understanding of the parts; the latter reverses the direction.

These two theoretical approaches also differ in other ways, which are not unrelated to the basic distinction stated above. The atomistic approach has generated a greater volume of empirical research than the holistic. When research has been undertaken using a holistic approach, it has been more descriptive and less rigorous in defining operational concepts than research stimulated by the atomistic approach.

The differences between holistic and atomistic theorizing are sufficiently clear and consistent to warrant this dichotomy. Yet the syndromes do not always cluster in exactly the same way. For example, although a given approach to theorizing will usually lead to one kind of research rather than another, this is not always the case.

This makes categorization difficult. In the discussion that follows, our use of the term holistic will imply some or all of the following elements:

1) the unit of analysis is the social organism or total social system
2) concepts are descriptive rather than abstract
3) theory attempts to be exhaustive in describing the attributes of the phenomena
4) little systematic data collection and analysis.

Similarly, our use of the term atomistic will imply some or all of the following elements:

1) the unit of analysis is the relationship between interacting individuals
2) concepts are abstract, often being derived from psychological theory
3) there is no attempt to be exhaustive with respect to the attributes of the total system, nor even any recognition that a system exists
4) much systematic data collection and analysis.

The holistic approach is that of much of classical sociology. Comte and Spencer set the pattern when they conceived of society as an organism, and set forth the principles by which it maintains itself in integrated form and adapts to changing environmental conditions (7, chs. 3, 4). Although the differences between the systems of thought of men like Sumner, Gumplowicz, Durkheim and Weber are very great, they have this molarity of conception in common (7, chs. 6, 8, 13, 27;

53, chs. 9, 17). In current thinking, although the influence of classical sociology is widely diffused, it has received considerable focus in the theorizing of Parsons and a number of his disciples, who have applied a "structural-functional analysis" to stratification systems, industrial organization, and social systems in general (1, 11, 52, 53, 59). The essence of this point of view is the conception of the organized whole as the beginning-point for analysis. The function of social interaction is analyzed with respect to how it affects and is affected by the structure of the total system of relationships.

This same emphasis on the total system as the appropriate object of analysis has been apparent in the work of industrial sociologists like Barnard (6), Mayo (40), Gardner (19), Whyte (74), Moore (45) and others. Because perhaps of an ultimate concern with problems of production, morale, efficiency and stability of the industrial organization, they have attempted to conceptualize total institutions as ongoing systems. Their point of view is not dissimilar to the Parsons' school: a consideration of the function of each sub-part in terms of its contribution to a total system of activity.

In spite of the insightful wisdom and conceptual breadth of many holistic approaches, their basic shortcoming has been their failure to generate testable hypotheses and systematic empirical research. This deficiency derives essentially from the fact that "theories" have not been closed logical systems employing precisely defined concepts in operational form, but somewhat loosely phrased descriptive analyses.

This outcome seems to be inherent in any attempt to

construct full-blown an exhaustive theory to conceptualize all the attributes of a social organization. As Sorokin points out, in discussing the futility of so many attempts by sociologists to construct a finite classification system for "groups" (66), the categories employed in a system are not arbitrary, but should be related to the major functional dimensions of the phenomena being described. This is an important insight which has been overlooked by many system builders, and is worth considering a little further.

In any formal theory, the theoretical generalizations, called postulates, make statements about a set of entities, or characteristics of these entities, called definitions. It is not possible to state theoretical assumptions about how a phenomenon "behaves" without defining sub-parts which are doing the "behaving". But as there are an indefinite number of attributes of a phenomenon that may be conceptualized as sub-parts, it is obviously fruitful to create definitions for only those attributes which are involved in the major processes of the phenomenon.

Any decision as to which are the major structural dimensions of a social system involves assumptions about the functional dynamics of that system. Yet the knowledge which makes one set of assumptions preferable to another accumulates only gradually from systematic research. It follows that theory construction should be a circular process. Only by research does some knowledge of the functional dynamics of a social phenomenon become available. A concomitant process is the conceptualization of some structural dimensions which appear to be "involved" in the dynamic processes. A parsimonious system of concepts for describing any phenomenon develops

out of the cyclical procedure of alternating theory construction and testing in empirical research. The most general set of assumptions likewise becomes apparent by this same circular process.

If this line of thought be correct, then the kinds of full-blown, exhaustive "theories" fostered by the holistic approach are inherently incapable of becoming scientific theories in any real sense, or of generating empirical research which has a bearing on scientific social theory. In a discussion of this question, Merton has this to say:

> One must admit that a large part of what is now called sociological theory consists of general orientations toward data, suggesting types of variables which need somehow to be taken into account, rather than clear, verifiable statements of relationships between specified variables. We have many concepts but few confirmed theories; many points of view, but few theorems; many "approaches", but few arrivals. Perhaps a shift in emphasis would be all to the good (43, p. 9).

The shift in emphasis for which Merton calls, however, is not to what we have termed the atomistic approach, but to "theories of the middle range." These are holistic theories for limited areas of social phenomena. The test of whether or not this type of theory can be fruitful would be in whether or not it is possible to attend to a sufficiently small area in an exhaustive theoretical model, and yet be able to integrate the results into a larger theoretical framework.

What we have termed the atomistic approach to social scientific theory has been concerned mainly with providing a psychological explanation for the bonds which hold together social systems, and a description and classification of these bonds. Instead, therefore, of beginning with the organized whole and inquiring as to

the conditions of its maintenance and adaptation, it has formulated the problems of social science quite differently. Giddings, a very early representative of this approach, makes this explicit in the following passage.

> Accordingly, the sociologist has three main quests. First, he must try to discover the conditions that determine aggregation and concourse. Secondly he must try to discover the law that governs social choices, the law that is of the subjective process. Thirdly, he must try to discover also the law that governs the natural selection and the survival of choices, the law that is of the objective process (20).

The "psychological" sociologists like Cooley, Ellwood, Ross and Mead (7, chs. 42-44), although possessing broad and critical differences in thinking, all had Giddings' concern with the bonds by which individuals relate to one another.

This concern with relationships between persons, although widespread among the social psychologists within sociology, came into theoretical focus in psychology much later. The influence of F. H. Allport's stimulus-response social psychology had to be overcome first. Not until his thesis of the "institutional fallacy" (2) -- that groups and institutions are not respectable objects of scientific research -- had been rejected by writers as widely different as Lewin (32), Newcomb (50, ch. 13) and Moreno (35) did the atomistic approach to social organization, as we have defined it, become prominent within psychology[1]. In the forward to Moreno's

1. What we have called the atomistic approach to social organization should not be confused with the traditional atomism in psychology, as represented by the behavioristic school. It is interesting to note that the movement within psychology which we have been describing is called by Littman and Rosen (36) a move toward greater molarity! This is undoubtedly true from the point of view of psychologists. But it should be noted that at the same time a movement was also occurring within sociology toward greater molecularity. The atomistic approach represents one meeting place of these two movements.

classic volume, W. A. White called attention to the fact that it treated social groups "not as if they consisted of the sum of the individuals composing them" but as a sum of relations between individuals (35).

Sociometry was a brilliant invention with great promise for the investigation of the dynamics of social organization. It was assimilated, however, by sociologists whose theoretical orientations were static and structural. Among them were those who inherited Simmel's and von Wiese's interest in the analysis of inter-individual relationships in their formal, structural aspect (67, 72). Lundberg (38), Loomis (37) and others used sociometry assiduously in the investigation of group structure and interpersonal relations in a variety of situations.

The whole atomistic approach did not suffer from a lack of data collection. There were several factors responsible for this. Sociometric techniques were easy to apply, and Moreno's followers very zealous. In addition, the atomistic approach provided a meeting ground for social psychologists from the disciplines of sociology and psychology, and the more empirical traditions of the latter now came to bear.

In spite of the volume of empirical work undertaken within the atomistic approach, theoretical progress in the area of social organization has been relatively slight (59). There has been a concentration on methodological refinements and the minutiae of discrete relationships; there has been a lack of general theory from which testable hypotheses could be derived. The atomistic approach begins with the parts, but never does seem to arrive at a working model of

the whole.

Merton's statement concerning "two contrasting emphases" in sociological theory can well be used to summarize the dilemma of the holistic and atomistic approaches to the problems of this study:

> For the first group the identifying motto would at times seem to be: "We do not know whether what we say is true, but it is at least significant." And for the radical empiricist the motto may read: "This is demonstrably so, but we cannot indicate its significance" (43, p. 82).

If we again abstract from the complicated web of intellectual achievement in the social sciences, it is possible to discern a third approach emerging, one that points a way out of the dilemma. This <u>functional dimensions</u> approach, as we shall call it, has several characteristics in common with the two extremes discussed above, and yet can be distinguished from either of them.

Although it is holistic in that it realizes the wholeness of social groups and organizations, and treats them as organized systems rather than mosaics, it does not attempt to conceptualize these systems in any exhaustive way. Rather does it create an abstract "skeleton" model of the phenomenon, by utilizing conceptualizations of a limited number of its major attributes. These are seen to be among the primary functional dimensions of the system.

It is also atomistic in some respects, in that these dimensions are often seen to be relationships between members of a social system. But in focussing on relationships, a functional dimensions approach selects only those seen as directly related and of primary importance in the total functioning of the ongoing system. The consequence of this is to make any generalizations about relationships between subparts immediately relevant to the functioning of the total

social system.

The Hawthorne studies, reported in Roethlisberger and Dickson (57), and elsewhere (19), have become classics not so much because they contributed a body of systematic theory or confirmed hypotheses, but because they mark one beginning point of this new orientation. Originating in the study of production in an industrial organization, they arrived at some realization of the importance of inter- and intra-group relationships as they affect the larger goals and structure of the organization. But, as Shils notes: "As a result of the vagueness of the categories -- in its turn a function of vagueness or even unreflectiveness about the relations of the concrete hypotheses to a general theory -- the material gathered by costly and meticulous methods of observation and recording cannot be classified" (60, p. 45).

The early studies of Lewin and his associates were startling demonstrations to the world of social science of the possibilities of tackling the most complex problems by ingenious experimental methods (18, 35). Inherent in their approach was the holistic conception of groups as fields, and the necessity of investigating the internal relationships of the subparts as a function of the characteristics of the whole. But in spite of a tremendous advance in the ability to conceptualize and measure in this area, many of these studies were in the nature of demonstrations of the thesis. They have not contributed a body of generalizations which would constitute a systematic core theory to be added to and revised by subsequent research. Lewin suggests why this may be so:

> Field theory, therefore, can hardly be called correct or incorrect in the same way as a theory in the usual sense of the term. Field theory is probably best characterized as a method: namely, a method of analyzing causal relations and of building scientific constructs (33).

There are a number of other investigators whose work can be considered, to a greater or lesser degree, as representing a functional dimensions approach. The Lewinians had demonstrated that one way of reducing the proportions of the problem of investigating social organization is to focus on the small group as an object of research. Bales has wedded Dewey's conception of the problem-solving sequence to Parsons' structural-functional thinking and produced a standardized set of categories for observing and recording interaction in the face-to-face group (5). Interaction between individuals is seen by Bales as functional in nature, shifting back and forth between serving the needs of the group members, and the purposes of the group as a whole[1]. The conception is promising, although premature standardization of the categories may inhibit the development of systematic theory.

Essentially the same conception is used by Homans in analyzing ex post facto and a longe a series of case studies by other investigators (24). Using a small number of conceptual elements, he tries to demonstrate the generality of his scheme for the analysis of a wide range of social systems. In the absence of more precise coordinating definitions specifying how data may be mapped to his

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1. Bales sees his system as having wider application than small group research: "Both small groups and complete societies can be viewed as types of interaction systems, even though one is tremendously more inclusive than the other.....It may very well be that one of the main contributions of the study of small groups will be an expanding of the range of available empirical data in such a way as to force our theory of social systems to a more general and powerful level of abstraction" (4).

concepts, or without systematically collecting data and making empirical tests of his hypotheses, his system remains of doubtful value.

The program of research on informal social communication undertaken by Festinger and his colleagues at the Research Center for Group Dynamics has already been mentioned as an immediate antecedent of this study. In his theoretical integration of some results of this program (12, 13), Festinger sees communication serving the functions of providing individuals with support for group-acceptable opinions, permitting them to satisfy blocked desires for social locomotion on a level of fantasy, and providing them with emotional expression. As in the formulations of Bales and Homans, interaction is functional for both group and members: instrumental in the group's problem-solving and integrative activities, and in the members' satisfaction of ego needs.

There has been a recognition, too, that social interaction occurs in groups and organizations where people occupy positions of differential power and prestige. Two of the experiments in this program were designed to study communication processes under such hierarchical conditions, created in the laboratory (29, 70). To the degree that the major functional dimensions of real life social situations are reproduced in the laboratory, it appears likely that research of this type will provide concepts and hypotheses of value in the investigation of more complex social structures in the real world.

A wealth of resources is at present being devoted to the investigation of such complex social organizations under field con-

ditions. The Ohio State studies (21, pp. 119-145), and the Human Relations Program of the Survey Research Center (21, pp. 68-105), each planned as a ten year program, are studying many aspects of social interaction patterns as they relate to organizational structure and function. Neither has attempted a total conceptual model for a social system, but has concentrated on those subregions of organization which are most susceptible to empirical exploration, and which are able to yield quantifiable data. Yet each is attempting to expand its conceptions, is reaching out for what can be considered major functional dimensions of the total ongoing social organization. The research within these programs exemplifies, to a limited degree, the functional dimensions approach within which the study to be reported here has been conceived.

In spite of the conceptual and methodological progress apparent in so many different areas of social scientific investigation, some of the central problems remain relatively untouched. It is difficult to find previous research which presents findings directly relevant to our own investigation. In 1950 Cottrell called attention to "the neglected problem of how the individual manages an identification with a group symbol" and the "question of how separate individuals integrate their separate goals and actions into a collective unity" (10). He pointed out the "extensive area for research in methods and techniques of communication by which role-taking processes are facilitated and maximized in situations of secondary contact." "It might be noted," Cottrell continued, "that as yet little if any of the research in communication is formulated properly to explore this field" (10, p. 711). Little has been reported since

these observations to make them less true.

These are large problems, and this has been a small study. Originally planned as an exploratory investigation preliminary to the design of a small group laboratory experiment, its possible contribution is in making explicit and carrying into execution one functional dimensions approach to the interpersonal relationships in a formal organization, by means of which a number of relevant hypotheses in this area can be tested.

CHAPTER TWO

STATEMENT OF THEORY AND HYPOTHESES

Introduction

In recent years there has been a strong movement towards precise theory building in the social sciences. At times this has taken the form of presenting theory in all the trappings of a postulational system, complete with mathematical symbols, postulates, definitions and theorems (56, 61, 71). This is probably some indication of the growing maturity of the social sciences, as well as representing a revulsion and guilt feelings at so much vague theorizing in the past.

Yet there are many areas of social science where concepts and hypotheses are still relatively crude. To exclude everything which can not be expressed in symbolic logic would leave only the obvious and the barren to be set into precise theory. The kind of theory to be presented here will follow Festinger's dictum "that theory should run ahead, but not too far ahead, of the data so that the trap of premature precision can be avoided" (12). We shall attempt to make explicit our major assumptions, to define exactly the concepts employed, and to make available to the scrutiny of the reader the steps followed in deriving hypotheses.

This chapter presents the theorizing which had been formulated and written down before the data were collected. This includes the main hypotheses of the study, relating to its chief problem.

In addition, a number of further hypotheses took shape during the course of the research. Some of these had been tested by investigators in other situations; some occurred to this investigator after the data had been obtained but before they were analyzed; and some were formulated in explanation of relationships discovered in the data. It seems consistent with sound scientific procedure to categorize all these hypotheses as ex post facto, since none of them were derived from the original theoretical assumptions, nor influenced the data collection process. They will therefore be presented in a later chapter, along with the research findings to which they relate.

Theory and Hypotheses

If there is one generalization about which consensus exists among social scientists, it is that the individual's group-relevant behavior tends to be altered by the group to which he belongs in the direction of its prescribed patterns of behavior. A statement as general as this would, of course, by-pass most of the problems which currently occupy the attention of social research. What should be subsumed under behavior? Objective acts, perceptions, attitudes, feelings, thoughts, wishes? How is the group to be defined -- as the whole society, culture-area, membership group or reference group? How does one define the norms and goals of the group? By the modal opinion, observed activity, explicit statements or investigator's interpretation? When does this alteration take place, and what are

the processes? With respect, however, to the generalization in its broadest form, there is a substantial body of evidence obtained by investigators using the theoretical frameworks and techniques of various disciplines, in other societies and our own, in the laboratory and the field, all pointing to the same general conclusion. The group has power to shape the individual.

Much of the theoretical controversy in social science has revolved around different explanations of this central fact of the socialization of the individual. This is not surprising in view of the multiplicity of theories of motivation, learning and perception — as they have been separated traditionally within psychology — and the fact that these diverse theories have been applied, implicitly or explicitly, to social phenomena. There is no controversy, however, about the fact that by adulthood, in every organized group, the members have learned more or less to conform with the prevailing system of beliefs, attitudes and behavior patterns.

It is also clear that nearly every theory of socialization assumes, in one form or another, the law of effect. Individuals learn the group's attitudes and the pattern of behavior which is expected of them, because they are rewarded for so doing, and punished for deviation. The punishments range from death or banishment for the member who transgresses the tribal code in a preliterate society, to the chilly politeness which acknowledges a social error among the Upper-uppers in Yankee City. It can be assumed that the process of learning to conform in all social groups is intimately related to the expectation of reward in some form, or the fear of punishment.

The concepts of reward and punishment bear the implication

of the satisfaction or denial of the individual's needs. It will not be necessary for our purpose to spell out the genetic origin of the individual's motivational system. Rather than be encumbered by the unresolved problems of personality theory, we can accept the fact that in adulthood the individual has a pattern of motives which has been developed by social interaction. This follows Newcomb's formulation (49, pp. 74-146), and is also expressed by Parsons in his recent systematic statement:

> .....in their sociologically relevant form, "motivations" come to us as organized on the personality level. We deal, that is, with more concrete structures which are conceived as products of the interaction of genetically given need-components with social experience. It is the uniformities on this level which are empirically significant for sociological problems (54, p. 9).

Membership in a formal social organization can be very rewarding for the individual. In addition to providing money for his livelihood, and satisfaction for his various emotional needs, it can be instrumental in the pursuit of his personal goals. Loss of membership would therefore constitute a real deprivation, removing the opportunity to obtain these rewards.

Under what circumstances is a person permitted to retain membership in a group or organization? If a formal organization be thought of as having certain purposes or goals toward which its total activity is directed, then these would constitute one of the major sources of role expectations. "From one point of view", writes Newcomb, "societies and organized groups are structures of positions which are organized to reach certain goals" (49, p. 277). Accepting this point of view, we can see that each position in a social organization is surrounded by a set of expectations or demands on the part

of the other members. In order to maintain his membership, the individual must be minimally successful in meeting these demands upon his behavior and attitudes.

If we consider only those role expectations which derive from the goal-directed activity of the organization, a member who is successful in fulfilling the role expectations of his associates will be valued by them. They will see him as making a positive contribution to the goals of the organization. It is not necessary to assume perfect consensus among the members of an organization with respect to its purposes and goals. A person will be valued or not by others to the degree that he makes a contribution to the goals which they accept as the proper goals of the organization.

Nor is it necessary to assume that being valued in an organization is independent of a person's position. On the contrary, some positions, to a far greater degree than others, afford their occupants scope to affect the purposes and goals of the organization. Persons in powerful positions can not only make a greater positive contribution, but also a greater negative contribution if they misuse their power and fail to fulfil the role expectations which center on their positions. It is likely that a person in a less powerful position who fulfills all the role expectations of his associates will be more highly valued than one who does not fulfill adequately the demands made upon him in a more powerful position. This, however, is a question for empirical investigation.

We define being valued in a group or organization as

being perceived by the other members of the group or organization as making a positive contribution toward

its purposes and goals.

Membership in a social organization entails not only gratification of the individual's needs, but also some deprivation. It is not possible for a person to participate in social life and gratify his every desire: by definition, autism is inversely related to socialization. Even where there are no power differentials nor forces of constraint, as in most voluntary face-to-face groups, any coordination of activity necessitates compromise on the part of every member.

In a formal social organization, however, power differentials and constraints of many kinds do exist. In order that his behavior be integrated into the total ongoing activity, the individual member must relinquish the right to do what he pleases whenever the impulse occurs. Nor is he free to express attitudes and opinions alien to the prevailing norms and values, without incurring some punishment.

Just as the gratification which membership makes possible can be considered to induce a force on a person, attracting him towards the group, so the deprivations or constraints imposed by membership will act to drive him away from being a member. It is possible to think of the resultant of the forces acting on a single individual with respect to his group membership, and call this his attraction to the group. As long as the forces driving him toward the group are greater than those driving him away from it, he will remain a member. In that case we can say that his attraction to the group is greater than zero.

We define an individual's attraction to a group or organization as the positive resultant force acting on him

to remain in the group or organization[1].

There are a number of concepts recently reported in the literature which attempt to deal with this same social phenomenon, and yet which differ somewhat from the one defined above. Festinger has defined a concept, cohesiveness, as "the resultant of all the the forces acting on the members to remain in the group" (12). Cohesiveness defined thus is seen to be an attribute of a group, and differs from attraction, which refers to the forces acting on a single individual.

In a recent study by Back (13), the cohesiveness of groups was varied, using three different sources for the attractiveness of the group to its members: "attraction to the partner[2], mediation of other goals (task direction), and prestige of the group." Back deals primarily with cohesiveness, which he defines in the same way as Festinger. In one part of his article, however, he refers to the "effects of different types of attraction to the group" (13, p. 34). When he thus refers to the forces acting on an individual with respect to the group, his concept is identical to ours.

Newcomb has discussed the attitude of belongingness and defined positive belongingness as: "a predisposition to find motive satisfaction by taking a member's role, in confident anticipation that one's own understanding of the group norms is shared by other members" (49, p. 633). Although he is discussing the same area of

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1. Although it is theoretically possible to have a zero or negative resultant force, this would raise problems which we do not wish to consider at this time.
2. In this experiment Back used two-person groups.

phenomena that we are, his concept is not identical to the concept attraction, for he has given the former far more meaning than we wish to give the latter.

In a recent publication (30) Kelley and Volkart have defined the concept valuation as: "how strongly membership is desired by each person"; and elsewhere in the same report, as "totality of satisfactions" obtained by being a member of a group. Here again their concept is similar to attraction, but is not defined as precisely as would seem desirable.

We have stated previously that in order to retain his membership in a group or organization, with its potentialities for rewards of various kinds, the individual must to a certain degree fulfill the expectations of others with respect to his behavior and attitudes. The greater the individual's attraction to the group or organization, the more susceptible he should be, therefore, to demands made upon him by the other members. This hypothesis was tested by Back (3) in a laboratory experiment using two-person groups. His findings led him to conclude that the more attractive the group was for the individual, irrespective of the source of the attraction, the less resistant he was to being influenced by the other member.

If an individual's attraction to a group is high, then he will tend to fulfill the role expectations which converge upon his position. His behavior and attitudes will tend to conform to the norms of the group and contribute to the furthering of its purposes. If we assume some consensus with respect to the goals of the group, it follows that members whose attraction is high will be perceived by others as making a positive contribution. They will be highly valued

by the other members.

If, however, an individual's attraction to the group is low, he will be less susceptible to influence processes, and will tend to fulfill the expectations of others in a less satisfactory manner. The individuals who do not conform to the role expectations of others will be the less valued members of the group. This leads to the following hypothesis.

Hypothesis I. In any group or organization, the greater the degree of an individual's attraction, the more he will be valued by the other members.

This hypothesis has been stated in the form of a predicted positive relationship between two dimensions. The direction of causation has not been specified. Although it has been pointed out by Mead (42), Lewin (33) and Homans (24), among others, that social interaction processes tend to be circular, let us ask whether or not in this case causation can be considered to operate in either direction with equal likelihood.

In the theoretical development leading to the above hypothesis, the predicted relationship was treated as arising from the individual's attraction to the group, which leads to his fulfilling role expectations, which then "causes" him to be valued.

Let us now attempt to follow the process in the opposite direction. Will being highly valued in a group lead to a high degree of attraction? Current thinking in social psychology would suggest that it is insufficient for an individual to be valued by others, but that he would have to perceive that he is valued by them, before his

attraction to the group could be affected. This basic interpersonal process, which G. H. Mead called "taking the role of the other" (42), has been widely accepted among current social psychology and personality theorists. Yet, as Ichheiser points out (25), it tends to ignore the fact

> .....that social psychological misinterpretations of every description play an enormous role, and that the content of interpersonal relations is the result of a very complicated interplay of mutual understanding, non-understanding and misunderstanding.

Recently an attempt was made to formulate a personality theory based on this same phenomenological thesis that "it is the present feelings that determine the behavior" of a person (64, 65). This has evoked the protest from Smith (62) that "a psychology framed entirely in terms of conscious experience does violence to currently available knowledge." He calls attention to "functional entities that are either absent from the phenomenal field or inaccurately presented in it," and which may be determining the individual's feelings and behavior.

It will be recalled that the original hypothesis of this study (stated on p. 2) predicted a positive relationship between the degree of an individual's attraction, and how much he <u>perceived</u> himself to be valued by the others. However, as was mentioned previously, the exploratory study provided no support for the hypothesis in that form, and led to its being recast in its present form.

There are a number of other investigations, of a more elaborate design and execution, which appear to provide further support for this theoretical revision. Investigations of the process of perception by Bruner, Postman and others have made clear that it

involves a selectivity with respect to the environment, what has been called by them "perceptual sensitization" and "perceptual defence" (55). Rather than say, then, that the individual's behavior and feelings are determined by his perceptions, it would be just as accurate, or rather just as inaccurate, to say that his perceptions are determined by his feelings and behavior. Neither is a satisfactory formulation. What is apparent, however, is that the individual appears to be able to respond on occasions to his environment without having an awareness of the nature of the source of stimulation.

A recent experiment by Filer (16) provides further support for the framing of our hypothesis in terms of the objective fact of being valued, rather than in terms of the individual's expectations or perceptions of being valued. Evidence is presented for the conclusion that the attainment or nonattainment of a goal object tends to be accompanied by a corresponding increase or decrease, respectively, in its attractiveness. However, the expectation of attainment or nonattainment was not related to any change in the attractiveness of the goal object.

The question should be asked: how clearly does the individual's perceptual field have to be structured before its contents can affect him? It may be that in a social organization, individuals react to many of the effects of their being valued by others -- subtle interpersonal rewards available to them in face-to-face contact -- which are need satisfying and which induce forces of attraction. Yet the individual may have a very fuzzy conception of whether or not he is valued by the others. This would be especially so in the work situation where a tendency exists to attend to the content of inter-

personal communication rather than to other aspects of the interaction.

It can be concluded from the foregoing discussion that the causal process in Hypothesis I can be considered to operate in either direction. The following circular process seems to be involved: being attracted to the organization leads to the fulfillment of role expectations which leads to being valued which leads to many types of rewards, which lead to greater attraction, and so on. Yet at no point may the person have a clear awareness of how much he is valued in the organization.

Let us turn now to a closer examination of the circular process which we have assumed. One of the vital links in this causal chain is the fulfillment of role prescriptions and expectations. But to behave in accordance with the expectations of others, a person must have adequate information about those expectations. Although there are more formal sources, it can be assumed that in a social organization this information is obtained in large part by maintaining contact with other persons. To the degree that a person has adequate communication channels with the other members, he will have the opportunity to find out what is expected of him, and what the prevailing norms and standards of performance are.

A person who has little communication with others in an organization may have a high degree of attraction and be strongly motivated to fulfill the role expectations of others, but may have inadequate information about them. It is likely, then, that he would be relatively unsuccessful in satisfying the demands of others with respect to his opinions, attitudes or behavior. In spite of his high

attraction, he would not be more highly valued in the organization than others with a low degree of attraction. The relationship between attraction and being valued seems to depend on adequate information about role expectations in the organization.

Another link in the assumed circular process involves the various interpersonal rewards which are made available to persons who are highly valued. These may take the form of asking a person's opinion, involving him in decisions, listening to him in a certain way, agreeing with him, or even more subtle and ineffable "orientations" of one person to another. If, however, individuals who are highly valued in the organization have little contact with others, the opportunity for the communication of these interpersonal rewards is lacking. This would have the effect of diminishing the individual's attraction, or at least not enhancing it in accordance with the degree to which he is valued.

The same process, in reverse, would operate with respect to lowly valued persons who have little interpersonal contact. They would not be subjected to the pressures, slights, suggestions and innuendoes which would punish them at the interpersonal level, so that their attraction would not be diminished in accordance with how much they were valued by others.

Two vital links in the assumed circular process seem to require an adequate amount of communication. It is necessary that there be both <u>informative</u> communication and <u>control</u> communication; the former is required so that persons will know what others expect of them; the latter provides the means for the distribution of rewards and punishments at the interpersonal level. In the absence of either

of these two kinds of communication, the positive relationship between an individual's attraction and how much he is valued by others would either diminish or not exist.

We define communication as the interchange of symbolic behavior between persons whereby they exchange information and/or attempt to control each others' group-relevant behavior[1].

Hypothesis II. The positive relationship between the degree of an individual's attraction and the degree to which he is valued hypothesized in (I) will be higher when communication is high, and lower when communication is low.

In a complex social organization, it is customary to divide the total activity into specialized functions which are assigned to particular subgroups. Within each subgroup there exist positions, and sets of norms and expectations with respect to the occupant of each position. These norms and expectations involve the members of each subgroup in a network of interlocking role relationships.

In addition there is the necessity of integrating the various specialized functions in relation to the purposes of the total organization. As a result of this, individuals are required to interact not only with other members of their own subgroup, but with many other persons in the organization. There arises, therefore,

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1. This definition is not intended to include the entire range of phenomena which usually is subsumed under the rubric "communication", but only to provide a conceptual definition which is adequate for the purposes of this limited theory, and yet is differentiated from the operational definition used in the study.

reciprocal role expectations between persons who belong to different subgroups. The occupant of a particular position has not only the norms and expectations of his own subgroup to comply with, but also those of the persons with whom he interacts throughout the organization.

The same process by which an individual becomes valued within his subgroup will operate in his interaction with those outside his group. If he conforms to the norms and expectations of these individuals, it is likely that they will perceive him as making a positive contribution to the goals of the organization. It follows that an individual may be valued both by those within his particular subgroup, and by members of other subgroups in the organization.

It has been stated previously that if an individual is valued by others, they will make available to him many kinds of interpersonal rewards. It follows that not only can an individual receive need satisfaction within his own subgroup, but also in other parts of the organization. It is possible, therefore, to consider an individual's attraction in the direction of other parts of the organization, as well as to his own group.

The more valued an individual is by those outside his own group, the greater will be his attraction in that direction. Here, too, a circular process is involved: the greater an individual's attraction to other parts of the organization, the more susceptible he will be to the influence of those outside his own group, and the more valued he will be by them.

Newcomb has discussed in some detail (49, p. 549) the problems of multiple group membership and conflicting role prescrip-

tions. He points out that role conflict is not inevitable, and that relatively nonconflicting role prescriptions are not uncommon. It can be assumed, however, that in a formal social organization where individuals have different sets of role expectations made upon them, the situation where certain expectations are complied with only at the expense of others does occur. These may be conflicting, or just competing role expectations. An individual may become valued in other parts of the organization with the consequences of being less valued in his own group; or if he conforms too thoroughly with the norms and expectations of his own group members, he may be unable to comply with the demands made upon him elsewhere.

In a situation where the individual has these conflicting or competing demands made upon him from within and without his subgroup, it is likely that he will comply with the expectations from that part of the organization where he receives the greater amount of need satisfaction[1]. If his needs are satisfied more within his own group, his attraction to it should be greater than if they are satisfied more elsewhere in the organization. It follows that an individual's attraction to his group is related to how highly he is valued by its members, relative to how highly valued he is by other persons in the organization.

Hypothesis III. The more highly an individual is valued by the members of his group,

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1. Kelley and Volkart (30) present evidence supporting the conclusion that attitudes which are anchored in a group are resistant to change, and the more an individual values his membership in a group, the less susceptible he is to influence from elsewhere.

relative to how much he is valued elsewhere in an organization, the greater will be his attraction to his own group.

In deriving Hypothesis III we stated the existence of two circular causal processes, one with respect to a person's own group, and the other with respect to members of other groups in the organization. In each of these causal chains, communication is a vital link at two points: in the acquisition of information with respect to role expectations of others, and in the distribution of interpersonal rewards and punishments. By the same reasoning, therefore, by which Hypothesis II was derived, we propose a further hypothesis.

Hypothesis IV. The positive relationship between the relative degree to which an individual is valued and his attraction hypothesized in (III) will be higher when communication is high, and lower when communication is low.

The theory and hypotheses which have been presented above were formulated and written in their present form, although in not as much detail, before the construction of instruments and design of the study. They constitute the precise predictions which were made with respect to the data.

In the following chapter, the research design and methodology will be discussed, along with analysis procedures. In Chapter IV we shall report the findings which relate to the above theory and hypotheses.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

The research design used in this study followed directly from the theoretical considerations discussed in Chapter I, and the statement of theory and hypotheses in Chapter II. We referred earlier to three different approaches to theorizing about social phenomena. The holistic approach attempts to conceptualize a total social system and work from the whole toward the internal relations of the parts. The atomistic approach begins with the discrete relationship of parts, but makes no statement as to how they contribute to the functioning of the whole. The functional dimensions approach creates a skeleton model of a whole social system, using only certain dimensions which are chosen as being vital to the total functioning. The hope is, of course, that such a theory can grow and develop by the consideration of more and more attributes of the phenomena.

The method of this study was dictated largely by the theoretical model which we have called a functional dimensions approach. Although we used precise measurement instruments, rather than obtain as much data as we could, we collected as little as we dared. The study was carried out in an ongoing social organization,

but we were not interested in the particular organization as such, but in the testing of a number of precise hypotheses[1]. The Midwest Social Agency became our laboratory. And as in the laboratory, there was a certain minimum amount of information which we required to know about our subjects. Other than this, the only data obtained were in response to instruments designed to provide operational definitions of the concepts defined in our theory.

The risks of this method of proceeding have been acknowledged previously as in proportion to the inadequacy of the theory which guides the research. In addition to the advantages of economy and increased precision, there is the further consideration of the generalizability of results. It appears likely that the investigator who has a prior theoretical model, and stands at arms' length from the organization, reaching into it unobtrusively for data to be ordered to the dimensions of his theory, is far more likely to obtain results which can be generalized to a population of organizations, than the investigator who adopts the clinical or participant observer method. The latter is likely to incorporate into his conclusions many of the uniquenesses of the organization, as well as its generalities.

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1. It is recognized that this type of relationship between investigator and organization is often not possible, because of the obligations to a client the investigator incurs to provide solutions to practical problems, in exchange for financial support and entry into the organization. In our own case we were especially fortunate that the client had no "problems", that the initiative was ours, and that financial support was provided by an outside source. The Midwest Social Agency offered to cooperate and was willing to participate in this type of relationship.

Description of the Population

The Midwest Social Agency is located in a midwestern state, and has responsibility for many aspects of child welfare in that state. It operates under an agency of the state government to which it is directly responsible, so that its employees are civil servants. This staff of 64 women and 8 men were the subjects of the study.

Each person in this organization occupies a position which has a formal status designation under civil service regulations. These positions lie on two different status scales, one of five strata for professional workers, and one of seven strata for non-professionals. For each scale, there is a perfect rank difference correlation between a position's status rank and its level of remuneration. There are 46 professionals and 26 non-professionals in the population. The remuneration for almost all of the professional positions is greater than for the non-professional positions. The professionals are almost all social workers, with the exception of a psychiatrist, a psychologist, a nurse and a business executive. (The first two of these did not participate in the study.) The non-professionals have more varied occupations: there are stenographers, typists, bookkeepers, a secretary, housemothers, recreation workers, cooks, a stores clerk and a janitor.

The ages of these 72 persons range from 21 to 63, with the mean age approximately 40. In duration of employment with the Midwest Social Agency, they range from the person who has completed almost 25 years of service, to the one who has been there barely two months. The mean length of service is slightly over five years. About half of the subjects are married.

The Midwest Social Agency occupies a two story building, which houses its offices, a small boarding home for children, and the living quarters for a small number of the boarding home staff.

Because the agency's activities cover a wide area of the state, there is considerable variability in the amount of time the professional social workers are actually in the building. The frequency of their appearance in the agency's offices varies from those who call in daily, to those who come in only twice a month. The supervisors and non-professional workers, however, spend almost all their working time on the agency premises. There are monthly meetings attended by the entire professional staff, and in addition, periodic departmental meetings for work purposes.

In Figure 1 is seen the Organizational Chart obtained from the agency's files. The positions are organized into a number of departments and other subgroupings, with prescribed lines of authority. It should be noted, too, that there are some positions which do not clearly belong to any department.

The Research Plan

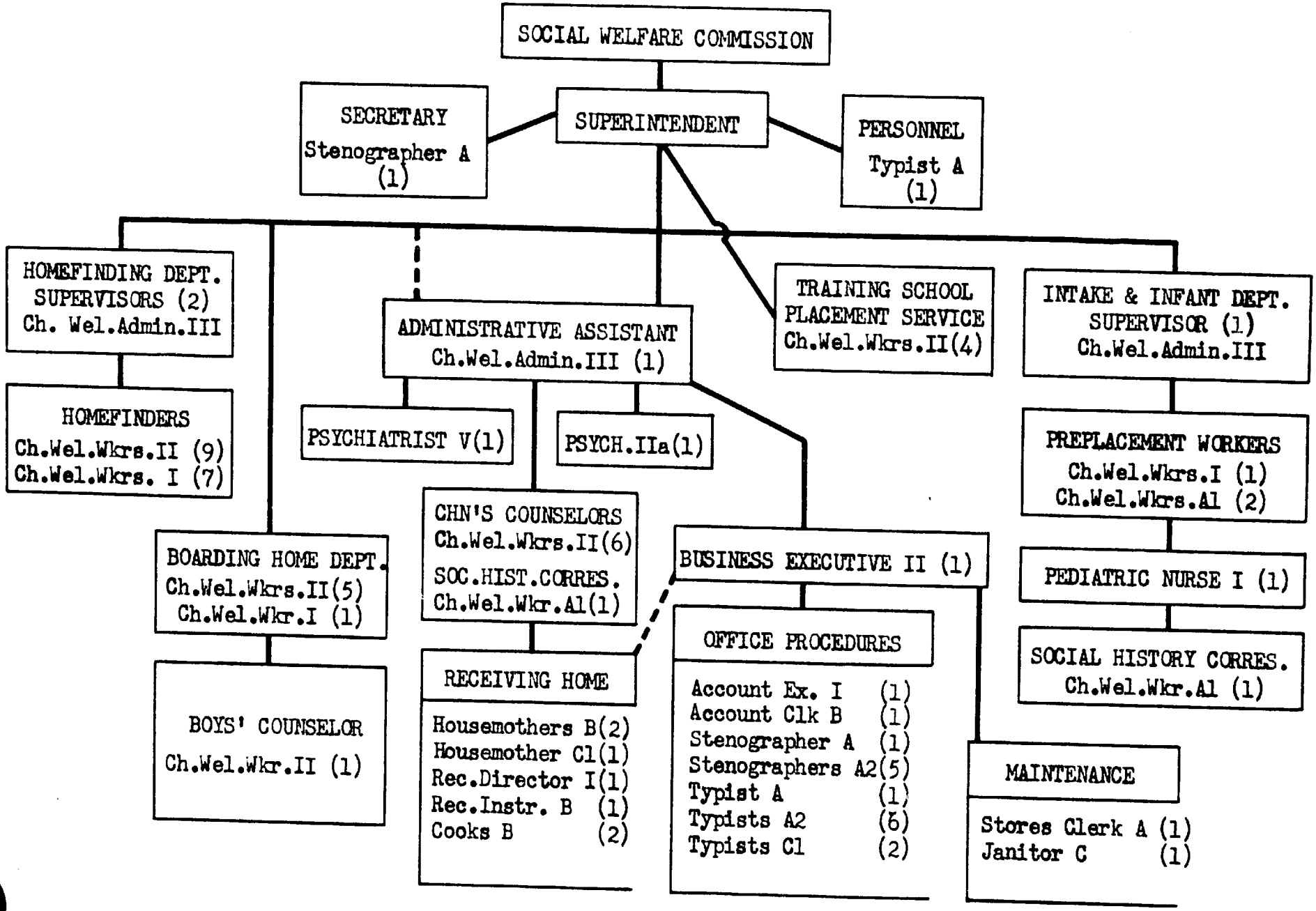
Before proceeding to a detailed discussion of the instruments, research situation and analysis procedures used in this research, it may be useful to the reader to have a summary of the entire research plan. The study was carried out in the following stages:

1. The initial contact and preliminary discussions with key persons in the organization.

2. Administration of the Introductory Information Sheet,

Figure 1

MIDWEST SOCIAL AGENCY FORMAL ORGANIZATION CHART



used to obtain data about subgroupings in the organization[1].

3. Formation of a Research Committee at the Agency, to act as liaison between the investigator and the organization[2].

4. Analysis of the data from the Introductory Information Sheet was completed.

5. Administration of the Personal Contact Checklist, one month after the administration of the initial questionnaire[3]. A copy of this instrument was mailed to the staff members at their home addresses, and mailed directly back to the investigator.

6. Administration of the Research Questionnaire[4], one month after the mailing of the Personal Contact Checklist. This final instrument used the subgroupings which resulted from analysis of the data from the first instrument. It was also mailed to the subjects' home addresses, and returned by them to the investigator.

The Organization-Investigator Relationship

Immediately preceding the initiation of this study, we were in the enviable position of having a theory to test, and financial support available from a governmental research agency. All that was required was the appropriate situation in which to conduct the research.

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1. Cf. Appendix 1.
2. This was composed of the Superintendent and representative members of each department, selected by the other members. Its purpose was to advise the investigator of any new developments which might affect the research, to make recommendations about scheduling the various stages of the research, and to act generally as a communication link between the subjects and the investigator, thus keeping the latter out of the situation.
3. Cf. Appendix 1.
4. Cf. Appendix 1.

The Midwest Social Agency was selected because of considerations of size, convenience, and because it appeared to have many of the characteristics of formal social organizations as conceptualized by social scientists. The initial contact with its Superintendent and his administrative staff indicated that they would be willing to cooperate in the research, provided that the normal activities of the organization were not interfered with.

Their willingness to be subjects for the study seemed to stem from their convictions about the value of social research, rather than from specific problems for which they sought solutions. This left the investigator free to design a study deriving completely from the theory, with no extraneous interests superimposed. The only provisions were the one mentioned, and in addition, a commitment to make available to the agency any information which would help it improve its operations. It was understood, however, that the confidence of the subjects would not be violated by providing information about particular individuals.

The Introductory Information Sheet

The theory reported in Chapter II required for its testing a research situation where individuals were members of subgroups as well as members of a total organization. Although the Agency made available to the investigator the Formal Organization Chart, seen in Figure 1, it was not at all clear what actual relationships or group identifications this represented. It has been recognized, since the Hawthorne study (57), that informal social structures exist in social organizations which are very important to their functioning, and yet

which do not appear on any chart. Even if the Formal Organization Chart were taken to represent the actual subgroupings in the Midwest Social Agency, there are positions on it whose occupants' group affiliations are not readily apparent. The first problem in the research, therefore, became that of identifying these subgroups. It was decided to obtain data from which this could be done.

The first question to be answered was: how does one define a group? The literature in social science is replete with the term group. It has been used in many different contexts with a variety of meanings. Yet little attempt has been made to give it a precise operational definition. Much of the recent work on small groups in the laboratory simply assumes that a number of individuals who assemble together for the purposes of the experiment thereby constitute themselves a group. But when the problem is that of seeking out the groups within a more complex social structure, some criterion for group membership must be selected.

There are at least three different aspects of the phenomenon that have been used, in various combinations, to define the term group. First is the observation that some individuals interact with each other more often than they do with other persons. A second is the observation that certain individuals have similarities with respect to behavior patterns, attitudes and feelings -- a common orientation toward certain aspects of their environment. Thirdly, there is the recognition that individuals have an awareness of belonging together with others, in certain situations and for certain purposes.

Newcomb has defined a group as "two or more persons who

share norms about certain things with one another and whose social roles are closely interlocking" (49, p. 492). Although this definition implies all three of the above characteristics, it is a difficult one to use in research, without becoming involved in the formidable task of describing all the norms and roles in the total organization. It also assumes by definition certain relationships in groups which might better be left to empirical investigation. Do members of the same group have more interaction with one another than with other persons in the organization? Do group members necessarily share the same norms? It has been pointed out recently that on occasion members of the same group refer their behavior to the norms of other groups (28, pp. 410-414). This reference group phenomenon, which will be discussed in Chapter V along with certain relevant findings, raises a question about the advisability of using shared norms as a basis for defining group membership.

In an attempt to narrow the criterion for group membership to one that is more operational, several writers have used the amount of interaction between individuals as the defining characteristic of group membership (14, 24, 26, 73). Those persons who customarily are in contact with one another more than with other persons are considered to be a group. In a complex social organization, however, the functional requirements of the organization create forces toward interaction between certain individuals, and barriers between interaction among others. It is not unlikely that some individuals, while considering themselves members of a particular group, and being accepted as members of that group by the others, occupy positions which restrict their interaction with their own group members. In

that case the questions can be asked: would these individuals continue to retain their group membership, and would they be as responsive to role expectations as the other members of the group?

Bales has incorporated in his definition of a small group the two aspects of interaction and awareness:

> A small group is defined as any number of persons engaged in interaction with each other in a single face-to-face meeting or a series of such meetings, in which each member receives some impression or perception of each other member distinct enough so that he can, either at the time or in later questioning, give some reaction to each of the others as an individual person, even though it be only to recall that the other was present (5, p. 33).

He points out further that persons who interact with each other on an impersonal basis, as in an industrial organization, would not fall within his definition, and that "only that nucleus of persons, each of whom recognizes or remembers each of the others, and is in turn recognized or remembered by each of the others, constitutes the small group" (5, p. 33). It appears, therefore, that the awareness criterion is his major one for defining group membership. In defining membership group, Newcomb uses a similar criterion: "A membership group is one in which a person is recognized by others as belonging[1]" (49, p. 225).

A similar criterion for group membership was adopted in this study. In the Introductory Information Sheet, a group is defined as: two or more persons who think of each other as belonging together, based on common association, interest, task or pleasure. The subjects are told in this instrument that the important criterion is that you

1. It is interesting to note that Giddings advanced this same point of view in 1896 (20, p. 17), maintaining that consciousness of kind""is the original and elementary subjective fact in society," the basic bond which held groups together.

think of yourself as belonging with a number of other persons.

The Introductory Information Sheet consists of a checklist of the names of the entire Midwest Social Agency staff in alphabetical order, and certain instructions about checking off names. After a suitable introduction, and the definitions presented above, the following instructions were presented:

> Below is a roster of all the employees at the Midwest Social Agency. Would you kindly do the following:
>
> 1. Think of a group to which you belong at the Midwest Social Agency. Call this Group A. Now go down the list of names, and check off each person who is a member of Group A.
>
> 2. Try to think of another group to which you belong at the Midwest Social Agency. If you can identify yourself in a second group, call this Group B. Check off each person, in the second column, who is a member of Group B.
>
> 3. If you think of yourself as belonging to yet another group in the Midwest Social Agency, call this group C. Go through the list once more, and check off all the persons who are members of Group C in the third column.

There follows a list of 72 names, with three columns headed Group A, Group B, and Group C respectively.

In order that the investigator would have a basis for categorizing the groups which resulted from this instrument, the following instructions were presented at the end of the check-list of names:

> The groups which you have outlined above may or may not have a name or regular meeting place. If they have, will you kindly insert them in the appropriate space below. If they have not, please supply some description or designation -- some common bond, interest, function, etc. -- by which we can identify this group as being distinct in nature from other groups.
>
> Group A .....
>
> Group B .....
>
> Group C .....

The Introductory Information Sheet was administered on January 22, 1951, to the professional staff in the morning, and to the non-professional staff in the afternoon. This questionnaire required about 20 minutes of the subjects' time. Three members of the professional staff and four members of the non-professional staff were absent from these meetings, and did not have the opportunity subsequently to respond to this instrument. The total number of respondents was 65.

It was necessary to analyze the data from the Introductory Information Sheet, and obtain the subgroupings within the organization, before the third instrument, the Research Questionnaire, was designed. The latter instrument used the subgroupings which derive from the former. The reader may understand better the description of the Research Questionnaire when it is presented in a subsequent section, if he has already been acquainted with the method for obtaining these subgroups. The analysis procedures used in arriving at them will be described, therefore, in the following section.

A Method For the Analysis of Subgroupings

It has been mentioned previously that the characteristic of groups that we have selected as a criterion of group membership was awareness of others as belonging together with one in a group. A group was defined as: two or more persons who think of each other as belonging together, based on common association, interest, task or pleasure. It will be necessary at this point, for expository purposes, to define a concept, to which can be ordered the data obtained from the measurement operations.

We define a designation as: a relationship between two persons in which one is aware of the other as belonging to a group in which the former also places himself.

The operational definition of designation is the act of checking an individual's name on the checklist of the Introductory Information Sheet.

We define a mutual designation as: a relationship between two persons where each person is aware of the other as belonging to a group in which each places himself.

The operational definition of mutual designation will be described in some detail, as it involves a number of analysis procedures and assumptions.

The first step in analyzing the data from the Introductory Information Sheet was to list all the various "groups" that had been indicated by the respondents as referents for their designations. Almost all of the 65 respondents provided designations for three "groups" each. The following descriptions of these "groups" were provided:

Boarding Home Department
Supervisory Group
Social Workers
Office Workers
Office-Social Workers Group
Adoption Department
Childrens' Counsellors
Home-Finding Department
Technical Discussion Groups
Training School Placement
Total Staff

In addition there were over 30 different descriptions of "groups" appearing to have a social basis, as contrasted with a work basis. The following are a few of these many descriptions:

Couples where other person also married
Rest period in the lounge
Infrequent social get-togethers
Women I know personally outside of work
Male boiler-room habitues.

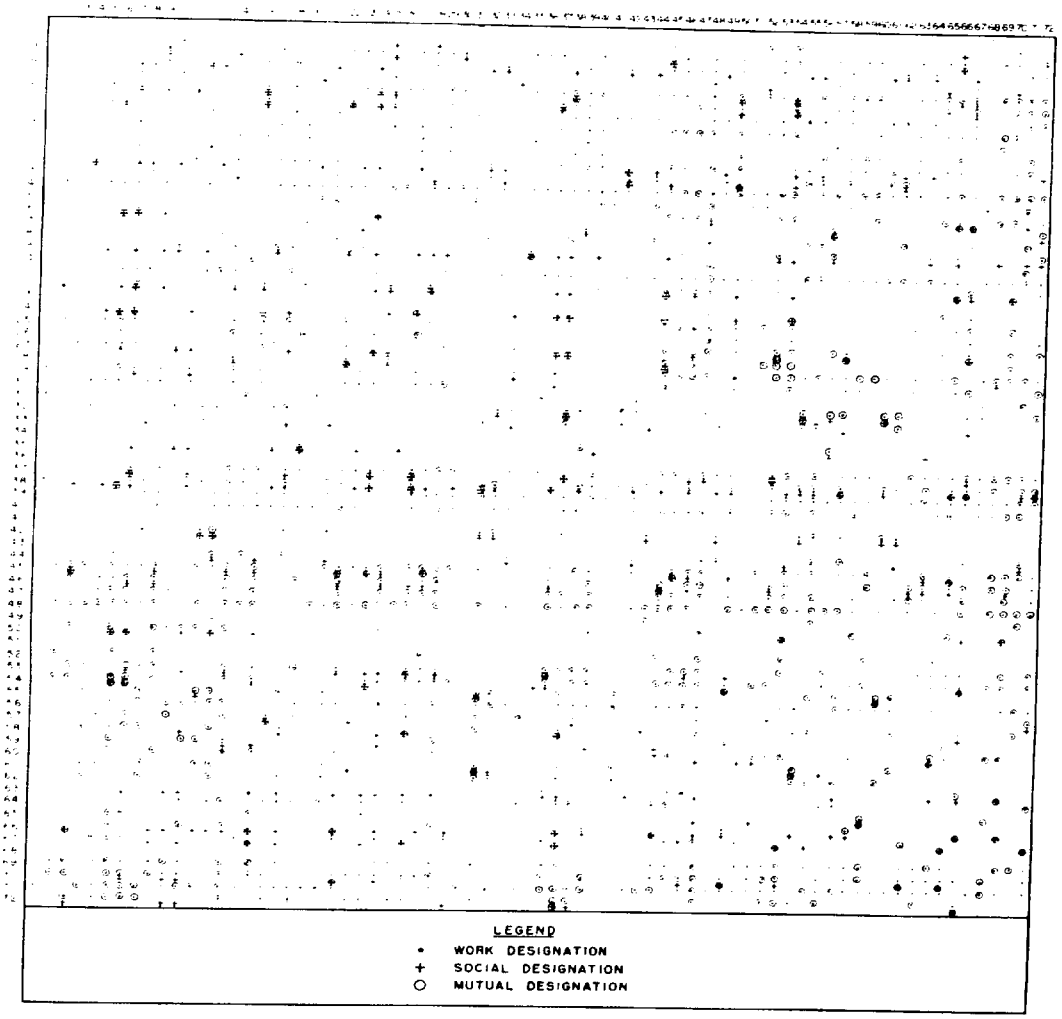
Because the theoretical definition of group, stated above, involves a symmetrical relationship between at least two persons, it was necessary to determine the mutual designations in our data. However, from the descriptions given by respondents themselves of their "groups" it was often not possible to determine directly whether or not designations were mutual. This was especially so in the descriptions of social "groups": if person A said that B was in her group, described as "couples where other person also married," and B said that A was in her group, described as "women I know personally outside of work," were they talking about the same group, and should this be called a mutual designation? Although the descriptions of work groups were far more precise, corresponding in most respects to the formal structure of the organization, yet even here it was not clear whether or not some designations should be considered mutual.

This problem was handled in the following way. If two individuals each designated[1] the other as a member of his "group," and the "groups" they described were both work "groups", or were both social "groups", the two individuals were considered to be in a relationship of mutual designation. This determined the next step in the

1. The verb designated is used to describe the measurement operation which results in the relationship of designation. Similarly, it may be necessary to use such expressions as: designating, designatee, etc. for the sake of clarity of exposition. The same procedure will be used with concepts like communication, and being valued, defined previously.

Figure 2

DESIGNATIONS OF SUBGROUP MEMBERSHIP
BY 72 MEMBERS OF THE MIDWEST SOCIAL AGENCY



analysis. All the designations were characterized as either work designations or social designations, and the mutual designations of either type were found. The results of this analysis are shown in Figure 2.

It will be noticed in Figure 2 that the rows and columns are numbered from 1 to 72. These represent the 72 members of the Midwest Social Agency staff. Following the usual convention when putting sociometric data into matrix form (17), the designators are represented by the row numbers, down the left hand side of the matrix, and the designatees by the column numbers, across the top of the matrix. An entry in a cell indicates that the individual in that row has designated the individual in that column. Both the work designations and the social designations are entered in this first matrix. The mutual designations of both types are circled.

In the next step in the subgroup analysis, two matrixes were constructed, one from the work mutual designations, seen in Figure 3, and one from the social mutual designations, seen in Figure 4. Each of the 65 respondents is in at least one work mutual designation, but only 34 of them are found in social mutual designations.

In Figures 3 and 4 the respondents are still in alphabetical order, and the matrixes in this form give no indication of subgroup formations. In order to discover the subgroupings which exist, it is necessary to reorder the rows and columns, so that the clusterings will appear down the diagonal of the matrix. In the ideal case, given a number of groups among which persons are distributed, and no overlapping mutual designations, the following pattern would appear.

Figure 3

MUTUAL DESIGNATIONS OF WORK GROUP MEMBERSHIP
BY 72 MEMBERS OF THE MIDWEST SOCIAL AGENCY

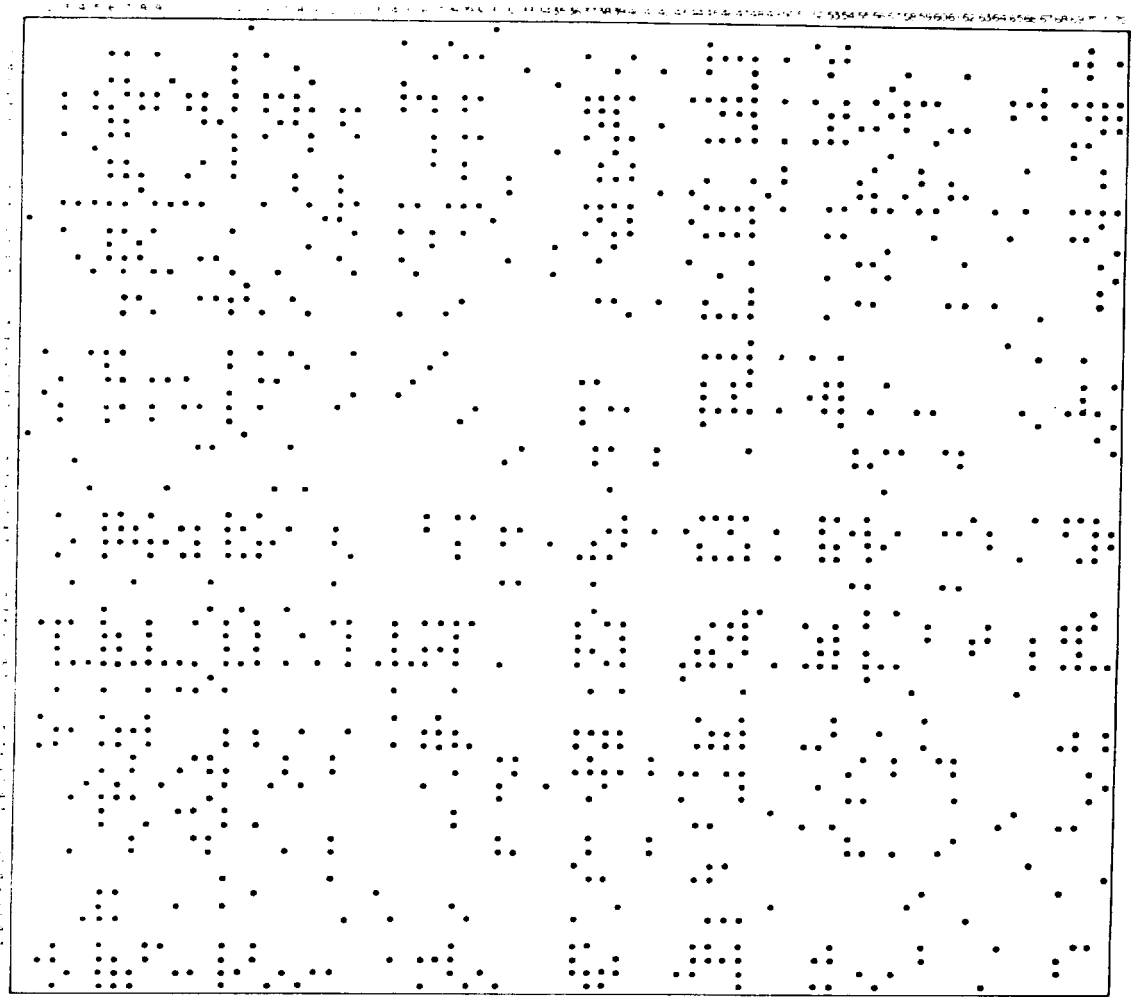
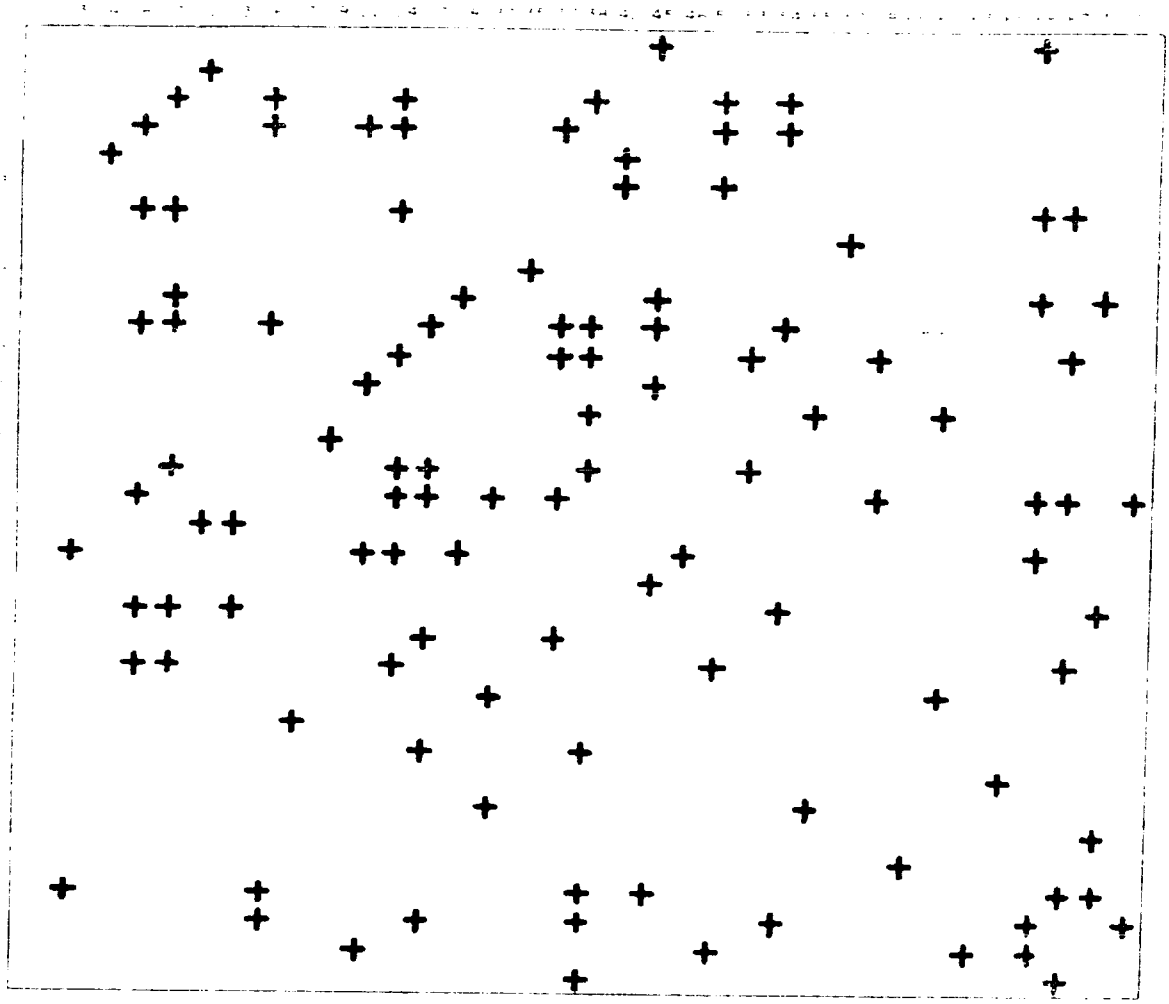
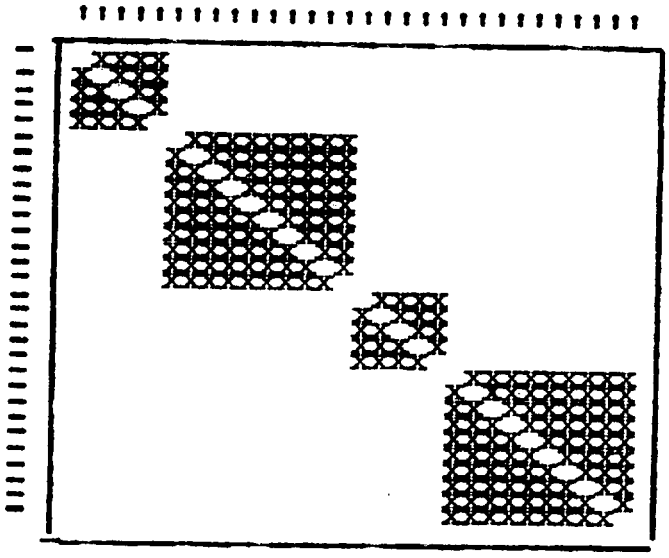


Figure 4

MUTUAL DESIGNATIONS OF SOCIAL GROUP MEMBERSHIP
BY 34 MEMBERS OF THE MIDWEST SOCIAL AGENCY



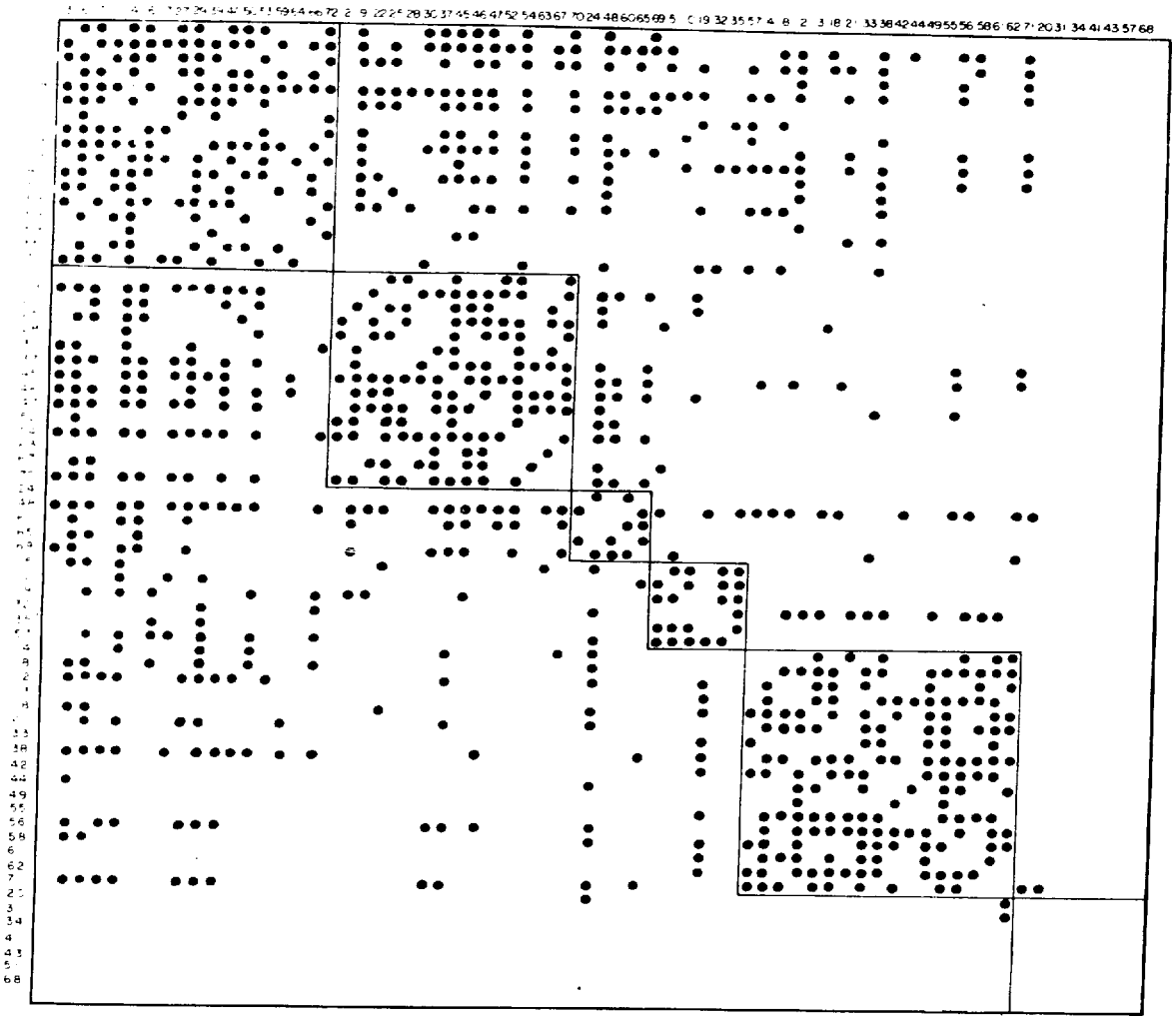


In the above illustration, there would be four subgroups, two of five persons each, and two of ten persons each. It is not to be expected, however, that the above ideal pattern will be demonstrated in our data, for a number of reasons to be discussed shortly. The problem was, however, to reorder the rows and columns to obtain the closest possible approximation to this pattern.

The descriptions of their work "groups" given by respondents indicated that they were being influenced strongly by the formal structure of the organization. As a first approximation, therefore, the rows and columns of the matrix in Figure 3 were reordered according to the groupings indicated in the Formal Organization Chart (Fig. 1). It was then possible, by a process of trial and error, to reorder the rows and columns still further to produce greater saturation along the diagonal of the matrix. The final result, and the work groups, enclosed by lines, are seen in Figure 5.

Figure 5

MUTUAL DESIGNATIONS OF WORK GROUP MEMBERSHIP
WITH 67 STAFF MEMBERS ORDERED BY WORK GROUPS
USING CRITERION OF MAXIMIZING GROUP MEMBERSHIP CONSENSUS



It is evident from this chart that many individuals in the organization whom we do not place in the same group with each other do have mutual designations. In some cases it may appear arbitrary whether an individual is placed in one group or the next. What was the criterion for placing an individual in a particular group? For most of the respondents this did not present any difficulty, as the preponderance of their mutual designations were in a particular group. There were a number of individuals, however, whose group affiliation was difficult to determine.

It was necessary at this point, in the interests of precision, to select a criterion for deciding marginal cases. An index of the degree of consensus which exists in a group as to its members' belonging or not was constructed. This is called Group Membership Consensus, and is defined as the proportion of possible mutual designations in a group which actually do occur. Group Membership Consensus is therefore the number of mutual designations in a group divided by the possible number of mutual designations. The latter is always equal to N(N-1). If all the cells in one of the enclosed squares in Figure 5, omitting those on the diagonal, are filled, the Group Membership Consensus would be 1.00. If they were all empty, it would be .00.

The criterion employed for deciding marginal cases was the maximization of the Group Membership Consensus indices. If there was a choice between placing an individual in one group or another, he was placed where the greatest mean indices for all the groups would result[1].

1. It will be noticed that a group is indicated by an empty square at the lower right of Figure 5. The question of how low the Group Membership Consensus would have to be before a group ceases to exist is not treated here. Certainly, however, a zero index would

Although this was accomplished by trial and error procedures and is not a mathematical solution, the result is considered by the author to be a satisfactory approximation. The Group Membership Consensus indices for the six work groups which resulted from this analysis are presented in Table 1. They are seen to vary from .00 to .73.

Table 1

Consensus About Membership in Six Work Groups

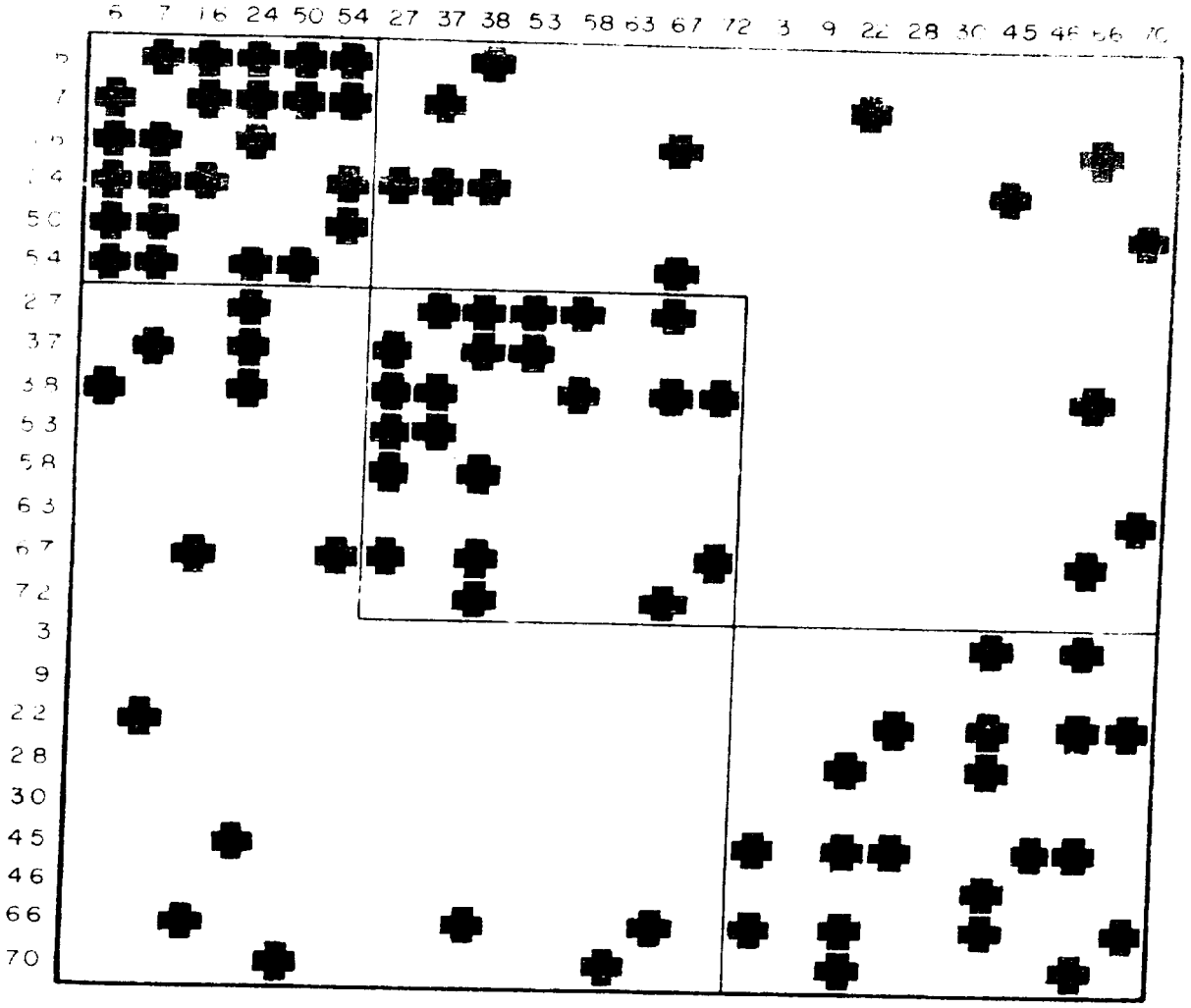
Work Group No.	Mutual Designations	n(n-1) cells	Group Membership Consensus
I	152	272	.56
II	124	210	.59
III	12	20	.60
IV	22	30	.73
V	162	272	.60
VI	0	56	.00

The problem of rearranging the rows and columns of the matrix of social mutual designations (Figure 4) was slightly different. Here we had no formal organizational structure to provide the first approximation. There is a method, however, of arriving at clique

indicate that no group exists. In the case of the group under discussion, however, it was included in the subsequent questionnaires for reasons of strategy. It was considered to be inadvisable to leave out a number of the staff members from the balance of the research.

Figure 6

MUTUAL DESIGNATIONS OF SOCIAL GROUP MEMBERSHIP
WITH 23 STAFF MEMBERS ORDERED BY SOCIAL GROUPS
USING CRITERION OF MAXIMIZING GROUP MEMBERSHIP CONSENSUS



structures in a mass of sociometric choice data, which Festinger has described (14, ch. 8). This method, using matrix multiplication, was employed to provide the nuclei of the social groupings and the initial arrangement of the rows and columns in the new matrix. Then, using the same trial and error reordering as with the work group matrix, and the same criterion of maximizing Group Membership Consensus indices, the social groups indicated in Figure 6 were developed[1].

The Group Membership Consensus indices for three social groups, seen in Table 2, range from .28 to .80[2].

Table 2

Consensus About Membership in Three Social Groups

Social Group No.	Mutual Designations	n(n-1) cells	Group Membership Consensus
I	24	30	.80
II	22	56	.39
III	20	72	.28

The method for determining subgroups in a social organization described above contains certain theoretical implications which

1. The analysis resulted in four social groups, but only three are indicated in Figure 6. This is because one of them was a clique of three persons, which could not be used in the research for practical reasons.
2. Unfortunately, several errors were made during the analysis of the social groups, so that the groups which resulted did not represent the best use of the method. In Figure 6 it can be seen that Person 63 is placed in the wrong group, and that Persons 9 and 30 should not have been included.

will be discussed briefly. Although the index called Group Membership Consensus has been used merely as a tool for determining group membership, it also seems likely that it has theoretical properties which, if sufficiently clarified, will make it a useful concept for describing a dimension of groups.

There is also the implication in the above treatment that membership in a group is not an absolute matter, but one of degree. A person may be a member of a group to a greater or lesser degree, depending upon how much consensus exists among the other members about his membership, and how much he accepts all the other persons in the group as members. This then has the idea of a person being more central or more peripheral in a group, with certain consequences to be hypothesized about his susceptibility to influence, and his willingness to influence others.

In addition there is the problem of those individuals who are not members of the same group, and yet who are in the relationship of mutual designation. When these relationships are work relationships, it appears that they represent inter-group role relationships in the organization. When they have a social basis, they seem to represent friendship pairings where a couple is relatively isolated from other friends in the organization.

Finally, there is the question: what is the significance of those designations which were not mutual designations, and were not used, therefore, in the derivation of subgroup structure? It appears that an analysis of these non-reciprocated designations offers some promising implications for the problem of reference group membership, and this will be discussed in Chapter V.

Personal Contact Checklist[1]

The theory of this study presented in Chapter II leans heavily on communication as an instrumental process which makes other relationships more or less likely to occur. It was necessary, therefore, to obtain data which could be ordered to the theoretical concept communication. In Chapter II the latter was defined as the interchange of symbolic behavior between persons whereby they exchange information and/or attempt to control each others' group-relevant behavior. The assumption was made in the research that whenever individuals have contact, that is, spend some time together, that a certain amount of this interchange occurs. We therefore decided to obtain data about frequency of interpersonal contact in the organization, and from this to construct an operational definition of communication.

A sociometric-type questionnaire, the Personal Contact Checklist, was used for this purpose. This instrument was adapted from one used by Jacobson and his colleagues in the Human Relations Program (26). It is also similar to procedures reported by Stogdill (68) and is a development of ideas originally suggested by Moreno, Jennings and Sargent (47).

The Personal Contact Checklist is an alphabetical list of the entire staff of the Midwest Social Agency. Opposite the name of each individual on the list, the respondent must indicate the frequency, nature and importance to him of his contacts with that individual. The following instructions and definitions were given to the subjects:

> In the pages that follow, you are asked to check the names of those persons with whom you have contacts (that you communicate with) either during

1. Cf. Appendix 1.

or outside of working hours. Would you kindly state the frequency, nature and importance to you of your contacts. On the following page you will find clear definitions of what we mean by frequency, nature and importance of contact, and detailed instructions.

FREQUENCY OF CONTACT

This means how often you spend some time with a particular person. If you do spend some time with a person, place a check mark under the category which indicates approximately how often this takes place.

The first five columns opposite the list of names in the questionnaire were headed as follows:

Several Times Daily	Daily	2 or 3 Times Weekly	Several Times Monthly	Several Times Yearly

In the next three columns, provision was made for checking the nature of the contact. The following definitions and instructions were used:

NATURE OF CONTACT

1. Social and Personal: There are many ways of classifying the contacts that people have with each other. Some of these are not "business" contacts at all, but for the purpose of personal enjoyment. These are called here Social and Personal. Sometimes we mix business and pleasure — in fact, few contacts are strictly business. If a contact is just as much business as social, check both the social and a business category.

2. Regular Business: These contacts consist of meetings with people which occur at regular times, periodically, and are arranged in advance.

3. Unscheduled Business: These contacts are impromptu, without previous scheduling, to discuss whatever problems arise in the course of the day's work.

The three columns were headed up:

Regular Business	Unscheduled Business	Social and Personal
_____	_____	_____
_____	_____	_____

If the respondent had checked one of the Frequency of Contact categories to indicate that he had some contact with the individual in question, he also had to indicate the nature and importance to him of the contact. This was done by inserting into one or more of the above three columns a number from 1 to 3, using the following scale:

Very Important to Me — 1

Some Importance to Me — 2

Little Importance to Me — 3

The following definition and instructions were provided the subject:

IMPORTANCE OF CONTACT

> This means how important this contact is to you. How much would you miss this contact if it did not take place? To what degree does it facilitate your work? How much pleasure do you get from it? Any of these may affect your judgment. Select a number to represent the degree of importance to you: 1 for Very Important; 2 for Some (or Average) Importance; 3 for Little Importance. Place this number in one of the three spaces at the right of the information sheet, under Nature and Importance of Contact.

The following instructions were given finally, to summarize the respondent's task:

SUMMARY

Kindly read through the list of names and check opposite each:

(a) one check under Frequency of Contact
(b) a number (1, 2 or 3) in a category under Nature and Importance of Contact (If more than one category is used, there will be a number in each category selected).

If no contact is had with a person, nothing will be checked opposite that person's name. Please work fairly rapidly, and be as objective as possible.

The Personal Contact Checklist was mailed on February 22nd, 1951, to the home address of each member of the staff. This method of administration was decided upon when it was learned that there would be no opportunity to bring the professional staff all together for another month. The investigator discussed the procedure with the Research Committee. The members of this committee, after sounding out the staff members, were reassuring that responses to mailing would be prompt and relatively complete. They also undertook to influence, mildly, any tardy respondents. The questionnaire was mailed to 68 persons, 64 of whom filled it out and returned it promptly to the investigator.

The Research Questionnaire[1]

The final instrument used in this study was designed to obtain data to be ordered to the two main concepts in the theory: being valued by the members of the group, and attraction to the group. We wished to obtain measures of these for each person in the popula-

1. Cf. Appendix 1.

tion, both in the context of his organizational membership, and also in the context of his subgroup membership. In addition, the attempt was made to secure measures of each person's expectation of being valued by the other members of his subgroups, and by the members of the whole organization.

This Research Questionnaire consisted of four basic parts:

1) Sociometric selection of the most valued persons in the group
2) A scale measuring the subject's attraction to the people in the group
3) A scale measuring the subject's attraction to the group induced by the benefit he receives there
4) Prediction by each respondent of those who chose him in (1) as one of the most valued persons in the group.

These four parts were presented in the above order, first using the total staff as the group to which the questions referred. Then the same four parts were presented again, this time using each individual's own work group as the frame of reference for responding. Finally, for those individuals who were members of social groups, the same parts, with the exception of (3), which did not appear meaningful in the social context, were presented again, referring this time to the respondent's social group membership.

1. Sociometric selection of valued persons

This part of the Research Questionnaire consisted of a list of persons from whom the selection was to be made, and instructions presenting the criterion of choice. The following are the instruc-

tions for the total organization sociometry:

> When answering the following questions, please think of the staff of the entire Agency, not just your own department.
>
> In the Midwest Social Agency, it is likely that some people make a greater contribution than others to what you think of as the organization's goals. These people may or may not be the ones with the highest positions. If, however, you think that they make the greatest contribution to the organization's goals, they are the ones whose absence would be felt most. In this sense, they are the most valuable.
>
> From the list of persons that follows, would you select the ten people who you yourself think are the most valuable to the Midwest Social Agency. Place an X beside the name of each. (Please do not name yourself).

There followed a list of the entire staff of the agency.

After the respondent had answered the above question, and the two attraction scales which followed it, he was then asked to predict who chose him on the above sociometry. The following were the instructions for this question:

> When answering the following question, please think of the staff of the entire Agency, not just your own department.
>
> In Question 1 you were asked to select the ten most valuable people in the Midwest Social Agency. Please turn back and re-read the instructions for that question. This is being answered, of course, by every person at the Agency.
>
> From the list of persons that follows, place an X beside the name of each person who you think will select you in Question 1. (It is important that you answer objectively; please try to be neither modest nor defensive.)

This was followed by the list of the names of the entire staff, as in Question 1.

The procedure was repeated when the frame of reference was the respondent's subgroup membership instead of his organizational membership, with the following differences:

1) It requested that the respondent think of his own group, as listed, in responding to the question. It also explained how this group was arrived at
2) Only the names of the respondent's subgroup were listed after the instructions
3) The number of persons to be chosen varied with the size of the subgroup[1]
4) Six sets of forms were used, for the six work groups, and three sets for the three social groups, so that each subject would be choosing from his own groups.

2. The attraction scales

Previous research by Back (3), and Schachter (58), in which attraction to the group, or a similar concept, was an experimental variable was conducted in the laboratory with small groups. The independent variable was created by experimental instructions to the subjects. Whether or not the investigator was successful in creating conditions of high or low attraction to the group was inferred from the subsequent behavior of the subjects.

The problem of measuring attraction in a field situation is somewhat different. In the Midwest Social Agency, the staff members

---

1. The number of persons to be chosen was the closest whole number to 30% of the N of the group. In the analysis, the different probabilities of being chosen were taken into consideration.

belonged to subgroups within the organization, as well as to the organization itself. It could be assumed that at the time of the investigation, there already existed a distribution of degrees of attraction among the members of the organization. It was decided to measure the attraction, using two scales: one to measure attraction to the people in the group; and the other to measure the amount of benefit the respondents felt they were receiving by belonging to the group. These two scales were called Attraction-People and Attraction-Benefit. They correspond to the two "sources" of attraction which Back used: "Personal Attraction" and "Task Direction" (3).

The attraction scales were developed in a series of pretests using members of the staff of the Institute for Social Research, both professional and non-professional workers, as subjects. The method used is a modification of the Method of Paired Comparisons (22, pp. 217-243), which Coombs, in his theory of data, categorizes as "Order 3, Task B" (9). He calls it "Order 3" because the respondent is required to indicate the order, from most positive to most negative, of three items. "Task B" refers to all those methods of collecting data where subjects are asked to evaluate stimuli with respect to an attribute. The steps in the construction of the Attraction-People scale will be described briefly.

1) A number of statements were constructed, expressing varying degrees of attraction to the people in the organization. For example: If I think of all the people who work for the Institute for Social Research as one big group,

a) working with them is not attractive to me.

b) I look forward eagerly to any opportunity of working actively with them.

c) I cannot imagine that there is anywhere a better group of people to work with.

d) I find working with them quite disagreeable to me.

2) In the pretest, ten such statements were used, and the following instructions given to the subjects:

> On each of the pages which follow you will find three statements. Please mark the most positive statement (✓). Please mark the most negative statement (-).

3) The pretest was conducted with 20 subjects. When the data had been analyzed, those statements which did not fit the scale were discarded or revised, and new statements were included. The criterion for a statement fitting the scale was perfect consistency: given 10 statements a, b, c, ..., j, perfect consistency exists if all responses are consistent with the statement,

$$a \checkmark b \checkmark c \checkmark d \checkmark e \checkmark f \checkmark g \checkmark h \checkmark i \checkmark j,$$

where the symbol ✓ stands for the relationship, is more positive than.

4) Another 10 subjects were given the revised scale, the data were analyzed, and further revisions made. This process was repeated several times, until the final 10 subjects provided responses to seven items which were perfectly consistent. The responses fell into the following pattern:

	a	b	c	d	e	f	g
a		≠	≠	≠	≠	≠	≠
b			≠	≠	≠	≠	≠
c				≠	≠	≠	≠
d					≠	≠	≠
e						≠	≠
f							≠
g							

The seven items which provided this pattern of responses, and were used in the Attraction-People scale are reproduced below.

If I think of all the people who work for the Institute for Social Research[1] as one big group,

a. I look forward with enthusiasm to the pleasure of working with them.

b. I very much enjoy working with them.

c. I enjoy the time I spend working with them.

d. I enjoy working with them a little.

e. All in all, working with them is slightly unattractive.

f. Working with them is not attractive to me.

g. I find working with them quite disagreeable to me.

The same procedure was used to construct the Attraction-Benefit scale, and the following six items resulted:

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1. In the actual research, the Midwest Social Agency was, of course, substituted for the above wording.

When I think of working for the Institute for Social Research,

a. I feel I am receiving a tremendous amount of benefit by working there.

b. I feel I am receiving a great deal of benefit by working there.

c. I feel I am receiving some benefit by working there.

d. I feel I am receiving little benefit by working there.

e. I feel I am receiving almost no benefit by working there.

f. I feel that I am not receiving any benefit at all by working there.

The investigator was in a dilemma when constructing these attraction scales. By this time in the study he was sufficiently familiar with the feelings of the people in the Midwest Social Agency to expect them to be high on any attraction scale. For most of the staff members, the Agency appeared to be an attractive place to work. The problem was to prevent their attraction measures all piling up on the high end of a scale, or at least of obtaining sufficient variability. But there was a limit to the number of positive-sounding statements which could be included, and still be discriminable steps on a scale.

This problem was faced by using a method of presenting the scales in the Research Questionnaire which Coombs classifies as "Order 2, Task A" (9). The subject is asked to order two statements with respect to their closeness to his "ideal" position on the scale. The following instructions were used for the Attraction-People scale:

> From the statements which follow, please select the one which best represents how you feel about the people in your work group. Place a (1) in the brackets inside this statement. Then

select the statement which next best represents how you feel. Place a (2) beside this statement.

By using the method of "Order 2", as long as the data, by falling into a certain pattern, support the assumption that an underlying latent attribute exists, the number of score categories is increased from n, if the subjects had been asked to indicate the one statement with which they agreed most, to 2(n-1), where n equals the number of statements on the scale. This can be seen by referring to Figure 7.

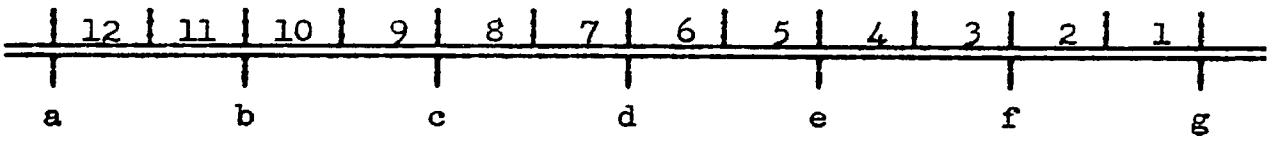


Figure 7

The seven statements of the Attraction-People scale are represented in Figure 7 by the points on the scale: a, b, c,....., g. If the statements had been presented as a Likert scale, with instructions to select the most favored statement (34), there would have been seven score categories, one for each statement. Using Coomb's method of "Order 2", however, provides a potential of 2(n-1), or 12 score categories, as indicated in Figure 7. This is because the spaces between stimuli are used for score categories, and these are dichotomized at the midpoint between each two items.

For example, suppose that a subject's response pattern is ab, indicating that statement a is his first choice, and statement b his second. If he prefers a to b, then his ideal position on the

scale is closer to a than to b, that is to say, is in score category 12. The fact that b is his second choice indicates that his response is consistent with the assumption that the above continuum is the one to which he is responding. If he had responded ba, however, by the same reasoning as above, his score would be 11. The following are the required response patterns for each score category:

ab	12	de	6
ba	11	ed	5
bc	10	ef	4
cb	9	fe	3
cd	8	fg	2
dc	7	gf	1

There is also the possibility, however, that other response patterns will occur, for example: ac, be, dg. It will be noticed from Figure 7 that if these patterns occur, they cannot be scored, for they do not belong on this ordinal scale, which is assumed to exist for our subjects. The method of "Order 2", therefore, in addition to increasing the number of score categories, is also a relatively rigorous test of the assumption that the scale presented to the subjects actually does represent a continuum for them (9)[1].

The Research Questionnaire was mailed to the subjects at their home addresses one month after the mailing of the Personal Contact Checklist. The investigator had been advised by the Research

1. In his theory of data, Coombs demonstrates that the method of "Order 2" is a more rigorous method of testing for unidimensionality than Guttman scale analysis, which has been used widely for this purpose.

Committee at the Agency that staff members were in favor of this method of administration, because of its convenience and privacy. The questionnaires were filled out and returned promptly, 63 out of 68 responding.

It was stated above that the method of "Order 2", used in obtaining measures of attraction, provides for a relatively rigorous test of the assumption that the scale presented to the subjects does constitute a continuum for them. Analysis of the data from the attraction scales supported the assumption that a dimension exists. In Table 3 the results of this analysis indicate that for five presentations of the scales to 63 subjects, there was a total of only four non-scale responses.

Table 3

Scalability of Two Attraction Scales
Used in Three Different Contexts
For 63 Subjects

Scale	Context	Scale Response Patterns	Non-scale Response Patterns
Attraction-People	Total Organization	62	1
Attraction-People	Work Groups	61	2
Attraction-People	Social Groups	62	1
Attraction-Benefit	Total Organization	63	0
Attraction-Benefit	Work Groups	63	0
		311	4

CHAPTER FOUR

RESULTS AND DISCUSSION: THE BASIC THEORY

This study has been described previously as one whose primary purpose was the testing of a number of logically derived and precisely formulated hypotheses. Four major hypotheses, and the theoretical considerations which led to them, were presented in Chapter II. The findings from this research that bear directly upon these hypotheses will be presented and discussed now. In addition, we shall consider how these findings imply revisions of the original theorizing.

It may prove useful to the reader to restate the hypotheses in their original form along with the relevant research results.

Hypothesis I. <u>In any group or organization, the greater the degree of an individual's attraction, the more he will be valued by the other members</u>.

The results which relate to this hypothesis are reported in Table 4. Two sets of correlations are presented, those between <u>Attraction-People</u> and <u>Being Valued</u>, and those between <u>Attraction-Benefit</u> and <u>Being Valued</u>. The description of these two attraction

Table 4

Relationship Between Attraction and Being Valued in Both Total Organization and Subgroup Contexts

Variables and Context	r	p[1]	N
Attraction-People and Being Valued			
Total Organization	.16	.21	63
Work Groups	.16	.21	63
Attraction-Benefit and Being Valued			
Total Organization	.28	.02	63
Work Groups	.31	.01	63

scales was included in the previous chapter on methodology. It will be recalled that they were administered using a number of different group contexts: the total organization, work group, and social group. The value sociometry, which yielded the Being Valued measures, was also administered in these different group contexts. In every case when a correlation was computed, the appropriate scale scores and

1. The probability levels reported in this study are based on the two-tail test of significance. Recently there has been some controversy about the conditions under which one-tail or two-tail tests of significance may be used properly (23, 27, 39). Although in this chapter we had made directional hypotheses prior to the collection of data, we still hold, with Hick (23), that: "It is far better to carry out the statistical work in the ordinary way, without tampering with the critical region, and let prior probability (or any other relevant consideration) determine what level of significance you will regard as decisive."

sociometric scores were used, corrected when necessary for the probability of being chosen[1].

It appears from Table 4 that Hypothesis I is supported only when the Attraction-Benefit scale is used to measure attraction. When the Attraction-People dimension is used, the correlations with Being Valued are quite low. There may, however, be a slight positive correlation between these two variables in both the total organization and work groups context, although the findings are not statistically significant.[2]

Are these results consistent with the original theory? We have stated that a high degree of attraction leads to the fulfillment of role expectations, which leads to being valued, and at the same time to many types of interpersonal rewards. These rewards tend in turn to increase the recipient's attraction to the group. What is the nature of these rewards? It appears, from Table 4, that they consist to a considerable degree of tangible or intangible benefits that members feel they are receiving because of their membership in the group or organization. Although no prediction was made regarding which dimension of attraction would be related to being valued, nor indeed whether or not they would behave differently, the lack of relationship for the Attraction-People scale does not seem damaging to the

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1. The measure used for Being Valued in a work group context, or in a social group context, was the number of choices the person received in that particular subgroup sociometry, divided by the number he would have received by chance, if all choices made had been equally distributed among members of the subgroup.
2. In the previous section, it was pointed out that analysis errors made us less confident of the validity of the resultant social groups. The correlation between Attraction-People and Being Valued in a social group context is -.21, with a significance level of .33. It is not possible to say whether this represents a true lack of relationship, or invalid groupings.

theory. This is because the theory did not attempt to specify the kinds of rewards made available to valued persons in the organization.

What a member of the Midwest Social Agency might perceive as a benefit may vary a great deal, ranging from an individual's salary, to his perceived professional development in that organization or a subgroup. Presumably it would differ for persons, depending upon their characteristic motivations or life-goals. It is likely that they would differ considerably for professional and non-professional workers. In Table 5 the correlations between attraction and being valued are presented separately for the 45 professional workers and the 18 non-professionals. It is clear from these results that a

Table 5

Relationship Between Attraction and Being Valued For Professional and Non-Professional Workers

Variables and Context	Professionals (N = 45)		Non-Professionals (N = 18)	
	r	p	r	p
Attraction-People and Being Valued				
Total Organization	.18	.24	.08	.74
Work Groups	.19	.21	.04	.87
Attraction-Benefit and Being Valued				
Total Organization	.30	.04	.16	.53
Work Groups	.37	.01	.11	.67

relationship between attraction and being valued exists for professional workers only. The relationships for non-professionals, on either dimension of attraction, and in both total organization and work group context, are not statistically significant.

These results support Hypothesis I, with the qualification that it applies to professional workers only. Attraction to the group, when related to being valued, seems to have its source primarily in the benefits which are available there, rather than just the enjoyment of working with people.

In view of the differences in findings for professionals and non-professional workers, it seems likely that the benefits which are perceived to be available are accessible only to those with professional standing, or at least have valence only for professionals. These might include participation in policy decisions, consultation on cases, career advancement, increased professional knowledge, and other types of opportunities. These are rewards which, if not available, could constitute a deprivation sufficient to turn the professional worker towards some other group or organization.

Are there any such rewards available to the non-professional worker who is valued by the other members? It does not seem so, for the non-professionals who are more valued, in both the total organization and their own work groups, are not more attracted than those who are less valued. It may be that for non-professionals, the benefits available to them do not vary in accordance with the degree to which they fulfill role expectations, but are bestowed as long as they remain members of the organization.

The second hypothesis stated in the theory introduced the

concept communication, and concerned its effect on the relationship between attraction and being valued.

Hypothesis II. The positive relationship between the degree of an individual's attraction and the degree to which he is valued hypothesized in (I) will be higher when communication is high, and lower when communication is low.

In Table 6, the correlations between each dimension of attraction, and the being valued measures, are presented for those

Table 6

Relationship Between Attraction and Being Valued For Individuals With High and Low Communication

Variables and Context	Communication Frequency Received			
	High (N = 31)		Low (N = 32)	
	r	p	r	p
Attraction-People and Being Valued				
Total Organization	.25	.18	.06	.74
Work Groups	.37	.04	.04	.83
Attraction-Benefit and Being Valued				
Total Organization	.43	.02	.02	.90
Work Groups	.50	.004	.17	.35

persons having high and low communication.[1] The hypothesis is clearly supported by these relationships: for those with high communication, three of the four correlations are significant at the .04 level or smaller; for those with low communication, none of the correlations reach an acceptable significance level.

The differences between correlations for those with high and low communication, using the Attraction-Benefit dimension, are significant at the .10 and .15 levels of probability. When it is considered that these differences were predicted in advance by the theory, and that the population used is relatively small, these results provide acceptable evidence in support of Hypothesis II.[2]

In Table 6 it will also be noted that, in a work group context, there is a significant relationship for those with high communication, between Attraction-People and Being Valued, but not for those with low communication. In the total organization context, the findings, although not significant, are in the same direction.

Although it appears from these results that the Attraction-People dimension also bears a relationship to Being Valued, which had been obscured in the previous tables because we had not controlled for frequency of communication, it is probably not very useful to attempt to explain this relationship. The Attraction-Benefit and Attraction-

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1. The respondents were rank ordered according to the total frequency of communication which other members reported <u>having with them</u>. This was considered to be a more reliable measure than the amount of communication an individual reports <u>having with others</u>, as it is based on a large number of individual reports. The following code was used to obtain frequency of communication:
   Several Times Daily = 100; Daily = 50; 2 or 3 Times Weekly = 25; Several Times Monthly = 5; Several Times Yearly = 1.
2. See footnote (1), p. 76.

People scales are independent. In the total organization context, the correlation between them is .47, and in the work group context, .61. It seems preferable, therefore, to speak about attraction without attempting to differentiate separate dimensions in this study.

Table 7

Relationship Between Attraction and Being Valued For Professional Workers with High and Low Communication

Variables and Context	Communication Frequency Received: High (N = 22) r	p	Low (N = 23) r	p
Attraction-People and Being Valued				
Total Organization	.29	.19	.01	.97
Work Groups	.43	.04	-.09	.69
Attraction-Benefit and Being Valued				
Total Organization	.55	.006	.15	.49
Work Groups	.66	.001	.15	.49

In Table 7, the correlations between attraction and being valued are presented for professional workers with high and low communication. For those with high communication, the correlations are all greater than those in Table 6. It is clear that Hypothesis II is supported for professional workers only. The inclusion of non-professionals in the population decreases the relationship, for both dimensions of attraction, and in both contexts.

The significance of the differences between correlations for

the high and low communication groups was evaluated, using Fisher's r to z transformation as described by McNemar (41, p. 124). The difference for the Attraction-People scale in the total organization context was not significant. In the work groups context, the difference between correlations for this scale was significant at the .10 level. Considering the same two contexts using the Attraction-Benefit scale, the differences between correlations were significant at the .10 and .05 levels, respectively.

Table 8

Consistency of Findings
Presented in Support of First Two Hypotheses

Variables	Context	Correlations With Being Valued			
		Total Population (N=63)	Professionals Only (N=45)	High Communication (N=31)	Profess. High Commun. (N=22)
Attraction-People	Total Organization	.16	.18	.25	.29
Attraction-People	Work Groups	.16	.19	.37	.43
Attraction-Benefit	Total Organization	.28	.30	.43	.55
Attraction-Benefit	Work Groups	.31	.37	.50	.66

It must be concluded, from the magnitude of the relationships reported in Tables 6 and 7, that the null hypothesis can be rejected, and that the evidence supports Hypothesis II. This hypothesis is essentially a refinement of Hypothesis I. It predicts that high commun-

ication will be associated with a higher relationship between attraction and being valued, and low communication with a lower relationship.

It also appears to follow from the findings that the theoretical processes postulated, of fulfilling role expectations and being rewarded, are stronger within a work group context than in the organization at large. In Table 8 the striking consistency of the magnitude of the correlations already presented supports this conclusion.

In seven out of eight comparisons, the relationship between attraction and being valued is higher in a work groups context than in the total organization; in the eighth case they are the same. When the context is held constant, in all eight cases the relationship is higher for the Attraction-Benefit scale than for the Attraction-People. Although it is not possible to evaluate the exact statistical significance of this pattern of consistency, because of the lack of independence of the subpopulations used, it certainly adds to the confidence with which we can reject the null hypothesis when considering our first two hypotheses.

The third hypothesis derived in Chapter II concerned the effect of competing or conflicting role expectations from within and without an individual's subgroup.

Hypothesis III. <u>The more highly an individual is valued by the members of his group, relative to how much he is valued elsewhere in an organization, the greater will be his attraction to his own group</u>.

Table 9

Relationship Between Attraction to Work Group and Being Valued in Work Group Relative to Being Valued Elsewhere in the Organization

Variables	Context	r	p	N
Attraction-People and Being Valued*	Work Groups			
	Work Groups (relative to rest of organization)	.22	.08	63
Attraction-Benefit and Being Valued*	Work Groups			
	Work Groups (relative to rest of organization)	.20	.12	63

*The operational definition here was the proportion of choices made by his own work group which an individual received minus the proportion of choices made by all the rest of the organization members which he received, plus 100 to make all the scores positive.

In Table 9 the correlations relevant to this hypothesis are reported. Although they do not quite reach an acceptable level of significance, there are positive relationships between attraction and being valued in the work group relative to how much a person is valued elsewhere in the organization, for both attraction scales. Rather than be dismayed that these relationships are so low, it seems surprising indeed to the author that they are this high, considering the essential crudity of the measurement operation used for the relative degree of being valued in the work group.

The operational definition of the relative degree of being valued makes an assumption which is undoubtedly incorrect, and yet is probably the only one we are justified in making at this stage of theoretical development. It assumes that the force of attraction induced by being valued in the work group is equal per unit of being valued to the force induced by being valued outside the work group. The scores from without the work group were simply subtracted from the within-group scores. It is probable, however, that the relative weighting of these two scores by each individual should not be a simple equivalence. It is likely that this weighting would vary in response to other factors, from individual to individual.

In addition, it is likely that the heterogeneity of the population is obscuring some of the relationship which actually does exist, just as was found to be the case with the first two hypotheses. let us proceed, then, to Hypothesis IV, which is a refinement of Hypothesis III, introducing the effect of high and low communication.

Hypothesis IV. The positive relationship between the relative degree to which an individual is valued and his attraction hypothesized in (III) will be higher when communication is high, and lower when communication is low.

Table 10 presents the correlations between attraction and the relative degree to which an individual is valued in his work group, for those with high and low communication. The entire population was ordered on frequency of communication from high to low, as previously described, and split into top and bottom halves. The relationship between Attraction-People and the relative degree of being valued in

Table 10

Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Individuals with High and Low Communication

Variables	Context	Communication Frequency Received High (N = 31)		Low (N = 32)	
		r	p	r	p
Attraction-People and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.29	.11	.00	1.00
Attraction-Benefit and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.17	.36	.17	.36

*The operational definition here was the proportion of choices made by his own work group which an individual received, minus the proportion of choices made by all the rest of the organization which he received, plus 100 to make all the scores positive.

the work group tends to support Hypothesis IV, although the difference between correlations for those with high and low communication is not significant.

When the Attraction-Benefit scale is used, however, the correlations are the same for those with either high or low communication, .17 in each. This is certainly not in support of the hypothesis. These findings suggest that an uncontrolled factor is obscuring the relationships, for up to this point in the analysis, the results have

supported the original theory so fully. That this is the case seems apparent from Table 11, where the seven persons in the population who occupy supervisory positions have been omitted from the analysis.

Table 11

Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Non-Supervisory Respondents with High and Low Communication

Variables	Context	Communication Frequency Received High (N = 24)		Low (N = 32)	
		r	p	r	p
Attraction-People and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.38	.07	.00	1.00
Attraction-Benefit and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.45	.03	.17	.36

*The operational definition here was the proportion of choices made by his own work group which an individual received, minus the proportion of choices made by all the rest of the organization which he received, plus 100 to make all the scores positive.

These seven supervisors are all in the high communication category, so that their omission reduces its number to 24. The correlation between Attraction-Benefit and relative degree of being valued is now significant at the .03 level. The Attraction-People relationship for the high communication category is now significant at the .07

level. These findings are in support of Hypothesis IV, but provide the additional information that it does not hold for persons in supervisory positions.

Before discussing the implications of these findings, let us first re-examine Hypothesis III. Up to this point we have tested Hypothesis III with the supervisors included in the population, and Hypothesis IV with them excluded, without any theoretical grounds for doing so. In order to be consistent, we must now examine Hypothesis III, excluding the supervisors from our population.

Table 12

Relationship Between Attraction to Work Group and Being Valued in Work Group Relative to Being Valued Elsewhere in the Organization, for Non-Supervisory Personnel[1]

Variables	Context	r	p	N
Attraction-People and Being Valued*	Work Groups			
	Work Groups (relative to rest of organization)	.24	.07	56
Attraction-Benefit and Being Valued*	Work Groups			
	Work Groups (relative to rest of organization)	.36	.006	56

*The operational definition here was the proportion of choices made by his own work group which an individual received, minus the proportion of choices made by all the rest of the organization which he received, plus 100 to make all the scores positive.

1. Cf. Table 9.

Table 12 reports the correlations between each attraction scale and the relative degree of being valued in the work group, for non-supervisory personnel only. If these correlations be compared to those in Table 9, where the supervisors were included in the population, it will be noted that they increase slightly using the Attraction-People scale, and very markedly with the Attraction-Benefit scale. It is apparent, therefore, that Hypothesis III is supported by the data, and the qualification that it does not apply to supervisory personnel is applicable here as well as to Hypothesis IV.

Table 13

Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization For Professional and Non-Professional Non-Supervisory Respondents

Variables	Context	Professionals (N=38)		Non-Professionals (N=18)	
		r	p	r	p
Attraction-People and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.30	.07	.07	.78
Attraction-Benefit and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.35	.03	.32	.19

*The operational definition here was the proportion of choices made by his own work group which an individual received, minus the proportion of choices made by all the rest of the organization which he received, plus 100 to make all the scores positive.

Correlations between the same pairs of variables are reported in Table 13 separately for professional and non-professional workers. Again it is clear that the relationship between attraction and being valued relatively in the work group exists for professional workers only. For the non-professional workers, the correlations are not statistically significant.

When correlations between the same variables are computed for professional non-supervisory workers only, dividing them into those with high and those with low communication, the relationships are those in Table 14. For the Attraction-People and Attraction-

Table 14

Relationship Between Attraction, and Being Valued in Work Group Relative to Being Valued Elsewhere in Organization for Professional Non-Supervisory Respondents with High and Low Communication

Variables	Context	Communication Frequency Received High (N=15)		Low (N=23)	
		r	p	r	p
Attraction-People and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.61	.01	-.16	.48
Attraction-Benefit and Being Valued*	Work Groups				
	Work Groups (relative to rest of organization)	.51	.05	.16	.48

*The operational definition here was the proportion of choices made by his own work group which an individual received, minus the proportion of choices made by all the rest of the organization which he received, plus 100 to make all the scores positive.

Benefit variables, the correlations are significant at the .01 and .05 levels. There is no significant correlation for those with low communication.

The difference between correlations for the Attraction-People dimension is significant at less than the .01 level of confidence. Although on the Attraction Benefit dimension the difference does not quite reach an acceptable level of significance, in view of the size of the groups involved, it merits rejecting the null hypothesis that there is no difference between the two correlations.

These findings provide considerable evidence in support of Hypothesis IV, with the qualifications that it holds only for non-supervisory persons who are professional workers.

Let us now consider why Hypotheses III and IV do not appear to hold true for supervisory personnel. These hypotheses were derived from the assumption that competing or even conflicting role expectations exist within an organization. It was postulated that in certain situations, an individual would not be able to fulfill the expectations of both the members of his own subgroup, and those with whom he had role relations elsewhere in the organization. To the degree that a person fulfills the demands made upon him, he becomes a valued member, and is the recipient of rewards. If he is more valued within his own group than outside it, he will be more rewarded in his own group, and his resultant degree of attraction to it will be high. If he is more rewarded outside his own group, his resultant degree of attraction to it will be lower. This we have found to be true for non-supervisory professional workers. It is likely that a professional worker who continues to receive more benefits elsewhere in the organization than

in his own work group will want to change his position, and leave his present work group.

For supervisory personnel, however, the situation may be quite different. If a supervisor is highly valued throughout the rest of the organization, as is quite likely because of his participation in committees whose functions involve decision-making and integrating activity for the total organization, how does he perceive this? Do these attendant benefits received outside his work group induce a force on him to leave his present group and move to a different position in the organization? On the contrary, it is likely that the supervisor perceives the benefits he receives outside his work group as directly related to his supervisory position in his subgroup. In that case, the more valued a supervisor is outside his own group, the higher will be his attraction to this group.

It would be predicted from this line of reasoning that inclusion of the supervisors in the population would tend to decrease the relationship between attraction and the relative degree of being valued in the work group. A comparison of Tables 9 and 12 shows this to be so, especially for the Attraction-Benefit variable. The correlation is decreased from .36 to .20, which changes the significance level from .006 to .12. This is also true for the correlations in Tables 10 and 11, for those with high communication. When the supervisors are included, the Attraction-Benefit correlation decreases from .45 to .17, a change in significance level from .03 to .36.

It must be concluded from the foregoing discussion that the results of this study are in accordance with the predictions made by the four major hypotheses, with the qualifications:

a) that they apply to professional workers only

b) that attraction to the group has its source predominantly in benefits received there

c) that for supervisory personnel, benefits received elsewhere in the organization do not decrease attraction to the subgroup.

These qualifications do not alter the theoretical development presented in Chapter II in any major way, but constitute leads for the refinement and expansion of the theory. This will be attempted in the final chapter, where a restatement of the theory in more precise form will be presented, taking account of all the results of this study.[1]

In the following chapters, some further results of the research will be reported, in the areas of communication theory and group theory. Because these results were not predicted in advance by the theorizing in Chapter II, they have been kept separate from those reported in the preceding part of this chapter. It will be seen, however, that in addition to their relevance for some salient areas in social science today, they present a challenge to include them in the

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1. An analysis was also undertaken that was parallel to the one reported in this chapter. Instead of using measures of Being Valued, the degree to which individuals are actually valued by others, the respondents' Expectations of Being Valued were used. Correlations were computed between the latter measures (corrected for probability of occurrence) and the attraction measures, in both situational contexts, for high and low communication groups, for professionals and non-professionals, and so on. The results of this entire analysis did not even approach statistical significance. These findings are entirely in accord with our theoretical statement in Chapter II, that a person's awareness of how much he is valued is not necessarily the functional dimension involved in the interpersonal processes we are investigating.

theory, thus making it apply to more dimensions of the total social system.

Before proceeding to these findings, however, a final section of this chapter will be devoted to a quite different method of analyzing our data, and to presenting the results of this analysis with respect to Hypothesis II. Although the correlational evidence already reported amply supports this hypothesis, there are several reasons for doing this here.

First, it is difficult with a small population to fulfill all the assumptions which underly the Pearson product moment correlation coefficient, although its use as reported here is considered justifiable. A demonstration that a different method of analysis which makes less stringent assumptions, when applied to the same data, yields substantially the same results, should forestall any criticism on this ground.

Secondly, the method of Pair Analysis to be discussed in the next section will be used in the following chapters to demonstrate some additional relationships in the data. To use one method of analysis in one part of a report, and a different one in another, on the same body of data, is likely to be somewhat confusing to the reader. A demonstration that this method of analysis is equally applicable to our major hypotheses should serve to prevent confusion, and also to integrate the several parts of this report.

Finally, Pair Analysis is a more refined technique, in that it is capable of representing more completely in its findings the "meaning" of the data. This appears to be because the assumptions implicit in its operations are theoretically more acceptable than those

of more conventional methods of analysis.

The Method of Pair Analysis

The theory of this study concerns interpersonal relations in an institutional setting. It assumes that interaction occurs between persons in such a setting, and that as a result of this interaction, certain relationships develop among these persons. Relationships become the focal data of the research. Particular dimensions of relationship have been defined previously which are central to the theory: one person having communication with another, one person being valued by another. In addition, in defining the relationships of designation, and mutual designation, we have distinguished between a one-way relationship and a two-way relationship; or to use conventional mathematical terminology, between an asymmetrical and a symmetrical relationship.

For example, if we take two persons, A and B, we can have the following asymmetrical relationships:

1) A reports having communication with B, but B reports no communication with A
2) B reports having communication with A, but A reports no communication with B.

We can also have two symmetrical relationships between these two persons on this one dimension:

1) A reports having communication with B, and B reports having communication with A
2) A reports having no communication with B, and B reports having no communication with A.

Using this one dimension, it is possible to categorize the pair-members in any particular pair as either reporting communication or not reporting communication to the other pair-member. This provides us with two categories of pair-members.

If we consider two dimensions at a time, it is possible to divide a population of pair-members into four different categories, if each dimension is dichotomized. For example, let us consider the dimensions communication and being valued. If we take a number of pairs of persons, we can categorize the pair-members as follows:

1) pair-members who report communication and are valued
2) pair-members who report no communication and are not valued
3) pair-members who report communication and are not valued
4) pair-members who report no communication and are valued.

It should be emphasized that in the above classification, reporting communication, or being valued, is always with respect to the other member of the pair. A relationship between the two members of a pair constitutes the unit of analysis in Pair Analysis.

Let us take an hypothetical example for illustrative purposes. Suppose that we have measurements on the above two dimensions for six persons. The number of pairs, when each person is paired with every other person, is $n(n-1)/2$, or 15 pairs. The 30 pair-members could be distributed as follows:

		Reports Communication	
		No	Yes
Is Valued	Yes	6	10
	No	9	5

It would now be possible to test the independence of reporting communication and being valued, using the Chi Square test -- that is, if we had sufficiently large theoretical frequencies.

This is the basic paradigm for Pair Analysis, although many variations are possible, some of which will be demonstrated in the results to be reported. It is also possible to use dimensions which, instead of being dichotomized as in the example given, have more than two categories. The assumption involved is that of a continuous distribution.

In the tables which follow, attraction is such a dimension. As it has been measured on an ordinal scale, it meets the above condition. Let us therefore examine our data with regard to Hypothesis II, using the Pair Analysis technique.

Hypothesis II. The positive relationship between the degree of an individual's attraction and the degree to which he is valued hypothesized in (I) will be higher when communication is high, and lower when communication is low.

The first step in the analysis is to find the total number of pairs in the population. Each person is paired with every other person, which provides 2,556 pairs; this is $n(n-1)/2$ where $n = 72$. These pairs

are categorized as those where communication takes place between the pair-members, and those where there is no communication between them.

Our communication data consists of reported communication: when one pair-member reports communication to the other, but the relationship is not a symmetrical one, does communication exist between them or not? There is no way of knowing from our data. This problem is resolved by making certain assumptions:

1) that symmetrical relationships between pair-members represent the objective situation
2) that asymmetrical relationships may or may not represent the objective situation.[1]

To test the above hypothesis, only those pairs are used, therefore, which have a symmetrical relationship on the communication dimension. Either both pair-members reported communication, in which case communication is assumed to exist between them; or neither pair-member reported communication, in which case communication is assumed not to exist between them.[2] It is then possible to categorize these pairs as having nor not having communication.[3]

On the dimension of being valued, there are only two conditions which can exist for any pair-member: either he is valued by the other pair-member, or he is not valued by him.

The pair-members are also categorized according to their

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1. From a strictly logical viewpoint, this statement does not say anything, and is therefore not an assumption. However, in the next chapter, the conditions will be specified for both parts of the statement.
2. When a person reported communication with the other at least Several Times Monthly, this is considered a report of communication. The Several Times Yearly category is grouped with reports of no contact.
3. The analysis assumptions reported above were made before the analysis had begun; they were not ex post facto.

degree of attraction, that is, according to the scale category in which they fall.

Table 15

Attraction of Members Valued or Not Valued
By Other Member of Pair When There Is Communication
Between Them

	Attraction-People (Total Organization) Scale Categories				
(Low)	1	2	3	4	5 (High)
Valued Member of Pair*	2 (10.0)	27 (64.4)	191 (175.5)	5 (8.5)	119 (85.6)
Not Valued Member of Pair	38 (30.0)	231 (193.6)	512 (527.5)	29 (25.5)	224 (257.4)

*Theoretical values in parentheses
Chi Square = 58.58; $p = < .001$

Table 15 reports the results of this analysis for the 689 pairs of persons in which communication is reported to exist by both pair-members, and for whom we have data on these dimensions. The attraction scale used is Attraction-People, in the total organization context. The Chi Square for this table is 58.58, which is significant at much less than the .001 level.

Because the theoretical values in two of the cells are quite small, however, it was feared that this Chi Square might be spuriously high. It was computed, therefore, combining categories 1 and 2, and

categories 4 and 5. With these three categories of attraction, the smallest theoretical frequency becomes 74.4. The Chi Square for this new table is 51.41, significant at a level much below .001.

Table 16

Attraction of Members Valued or Not Valued By Other Member of Pair When There Is No Communication Between Them

	Attraction-People (Total Organization) Scale Categories					
	(Low) 1	2	3	4	5	(High)
Valued Member of Pair*	1 (3.5)	5 (6.7)	31 (26.7)	0 (2.0)	13 (11.2)	
Not Valued Member of Pair	64 (61.5)	121 (119.3)	468 (472.3)	37 (35.0)	196 (197.8)	

*Theoretical values in parentheses
Chi Square = 6.52; p = .16 (approx.)

In Table 16 the results are reported for the 468 pairs of persons for which we have data on these dimensions, where neither pair-member reports having communication with the other. There is little relationship between being valued by the other pair-member, and having a high degree of attraction.

Again the categories were combined as in the previous table because of small theoretical frequencies. In the revised table, the smallest theoretical frequency is 10.2. The Chi Square is 2.57, which

is not statistically significant. These findings are in accord with the correlational evidence in Tables 6 and 7, and are predicted by Hypothesis II.

Table 17

Attraction of Members Valued or Not Valued by Other Member of Pair When There Is Communication Between Them

	Attraction-Benefit (Total Organization) Scale Categories					
	(Low) 1	2	3	4	5	(High)
Valued Member of Pair*	0 (7.5)	25 (32.7)	95 (137.1)	18 (28.7)	206 (138.0)	
Not Valued Member of Pair	30 (22.5)	106 (98.3)	454 (411.9)	97 (86.3)	347 (415.0)	

*Theoretical values in parentheses
Chi Square = 79.61; $p = < .001$

Table 17 presents similar evidence when the Attraction-Benefit variable is used. The Chi Square here is 79.61, which is significant at far less than the .001 level. When the categories are combined in the same way as in the previous tables, the smallest theoretical frequency is now 40.2. The Chi Square for the new table is still significant at a level less than .001. It is clear that when there is communication between two pair-members, a positive relationship exists between being valued and a person's attraction to the total organization.

Table 18

Attraction-Benefit of Members Valued or Not Valued By Other Member of Pair When There Is No Communication Between Them

	Attraction-Benefit (Total Organization) Scale Categories					
(Low)	1	2	3	4	5	(High)
Valued Member of Pair*	0 (.1)	4 (5.4)	9 (16.8)	10 (7.5)	27 (20.2)	
Not Valued Member of Pair	1 (.9)	97 (97.5)	306 (298.2)	131 (133.5)	351 (357.8)	

*Theoretical values in parentheses
Chi Square = 7.61; p not calculated because of low theoretical values

Finally, in Table 18 the results for pairs which have no communication indicate a lack of relationship between being valued and attraction, using the Attraction-Benefit scale. The Chi Square for this table is 7.61, and when categories are combined, becomes 7.50. This is significant at the .02 level. The smallest theoretical frequency is 5.4. Although this is smaller than is desirable, the other cells have much larger theoretical frequencies, and the cell in question contributes little to the total Chi Square.

The effect of the small theoretical frequency in one cell is to inflate the value of Chi Square. However, it is likely that a small

amount of relationship does exist between the Attraction-Benefit dimension and being valued, even where there is no communication between pair-members. This is not inconsistent with the findings in Table 7, where a correlation of .15 was reported for professionals with low communication. If we compare the Chi Squares, however, and the significance levels for pairs with and without communication, it must be concluded that the relationship between attraction and being valued is much higher when communication is present.

It may be asked, in conclusion, why the method of Pair Analysis yields significance levels for the same data which are so much smaller than when conventional methods of analysis are used? There appear to be several reasons for this. Using a population of pair-members, or relationships between pair-members, rather than a population of persons, greatly increases the size of the population. At the same time the measurement assumptions involved appear to be consistent with the conception of the interactional character of social relations which is current in social psychology today (49).

In addition, Pair Analysis searches out whatever relationships exist in the data more thoroughly than the correlation technique, by using all the data obtained. Under certain circumstances, the correlation technique could obscure the existing relationships.

For example, let us take an individual with whom few other persons report having communication. He will be placed by the investigator in the lower half of the population on the communication dimension. Our theory would predict that even if this individual is valued by other members of his group or organization, this will not tend to affect his attraction, because of the lack of communication. We would

predict no relationship between how much he is valued and his degree of attraction.

It may be, however, that although few persons report having communication with him, these are the very persons who value him. And this should influence his attraction. By simply summing the number of persons who report communication with him, and summing the number of persons who value him, the correlation method is far less precise and searching than the method of Pair Analysis. The latter uses the data as they were collected: a population of relationships between pairs of individuals along various dimensions. When a relationship does exist, therefore, it should be expected to be more clearly demonstrated by this method.

CHAPTER FIVE

RESULTS AND DISCUSSION: GROUP THEORY

Introduction

In this chapter we shall present some further research findings which were not predicted from the initial theory, although they appear to be relevant to it. They involve relationships among some of the chief variables of the study: designation of group membership, communication, being valued and status. Although these relationships reach, in most cases, a level of statistical significance which makes their existence difficult to dispute, they must be considered the results of ex post facto analysis and evaluated accordingly.

The distinction between predicting to data from previously formulated theory, and constructing theory to explain research results, has seemed a desirable one to make. It does not imply that little weight should be given to ex post facto findings or hypotheses. It serves, however, to draw attention to the fact that theory is being constructed, rather than tested. This is a difference in emphasis. It also warns the reader that because of the possibilities of capitalizing on chance variability, the levels of significance presented will not represent exactly the risk involved in rejecting or not rejecting the null hypothesis. This is probably not very important, when the statis-

tical significance is very great; but when levels of significance hover on the borderline of conventional acceptibility, the distinction becomes necessary.

There is also the hazard involved in constructing theory from ex post facto findings obtained by studying one organization which is obviously not randomly chosen from a population of all possible organizations. The method of this study minimizes this risk, in that it entails obtaining a limited amount of data, orderable to theoretical dimensions conceived in advance. Another way of reducing this danger is by attempting to integrate all of the research findings, predicted and ex post facto, into a unified theory. This will be done in Chapter VII. The best safeguard in this matter is, of course, the traditional scientific procedure of replication of research results.

In this chapter the results and discussion in the area of membership group and reference group theory will be presented. The next chapter will report findings pertinent to communication theory.

Some Analysis Assumptions

A number of analysis assumptions are made in the balance of this chapter. First, there are the assumptions made in Pair Analysis, discussed in the preceding chapter. These are that:

1) symmetrical relationships between pair-members represent information about the objective situation or event
2) asymmetrical relationships between pair-members may or may not represent information about the objective situation or event.

These assumptions were used when it was assumed, for example, that

communication actually does occur when each pair-member reports communication to the other, but when only one pair-member reports communication, it may or may not have occurred.

In the analysis of asymmetrical relationships between pair-members, it is desirable to inquire whether the lack of agreement between them is due to error, or to the operation of some force in a systematic direction. Because communication is inherently a symmetrical relationship between persons, when only one pair-member reports this occurrence it may be that one or the other is in error in his report. It may be, however, that there are forces operating in the relationship, either driving one pair-member to report an event which did not occur, or restraining one pair-member from reporting an event which did occur, or both. This leads to the further assumptions that:

3) asymmetrical relationships between pair-members when the direction of the relationship is systematic with respect to another variable represent information about the forces in the relationship

4) asymmetrical relationships between pair-members when the direction of the relationship is random with respect to another variable do not represent information about the forces in the relationship.

For example, when considering two pair-members of unequal status, there may be a force operating on the lower status person to report communication which did not occur, or a force operating on the higher status person against reporting communication which did occur, or both. Either case would lead to an asymmetrical relationship. By considering a population of pair-members of unequal status, it is

possible to determine whether the direction of the relationship is systematic or random with respect to status.

The Unified Status Scale

In describing the population (Chapter III) it was pointed out that there were 46 professional workers and 26 non-professionals. The positions occupied by these individuals were represented as being on two status scales, one of five strata for professionals, and one of seven strata for non-professionals. In order to use the entire population of pairs in the Pair Analysis, it was desirable to collapse these two status scales into one unified scale. This was achieved by making certain assumptions about authority relationships, using the information provided by the chart of formal organization (Figure 1), and by information about the salaries attached to these positions.

The following are the equivalence relations between positions on the new and old scales:

Unified Scale	Professional Scale	Non-Professional Scale
Position 7 (highest)	= Position 5	
" 6	= " 4	
" 5	= " 3	
" 4	= " 2	= Positions 7 and 6
" 3	= " 1	= " 5, 4 and 3
" 2		= Position 2
" 1		= " 1

By ordering each person in the population to one of the seven positions on the above unified scale of status, it was possible to use the entire population in a Pair Analysis, and to describe the resultant pairs as "Equal Status" pairs or "Unequal Status" pairs. That this provided useful information will be demonstrated in the results that follow.

Findings Pertinent to Group Theory

In the preceding chapter, evidence was presented in support of a number of hypotheses concerning an individual's attraction to his group. These hypotheses were derived from a theory which held that in a social organization, circular causal processes exist which tend to strengthen or weaken the bonds which tie individuals to their groups.

If the forces represented by individuals' attraction to their own groups were the only ones existing in an organization, the subgroup formation would portray the resultant attractions of all the members, after they had distributed themselves according to these forces. There are, however, restraining forces which derive from the organization itself. Persons in the organization are not free to belong to any group they wish. A social organization has a set of functions which must be performed in the achievement of its purposes, which impose constraints on the subgroup formation. These functions are translated into required role relationships and group memberships for the members of the organization. The subgroup formation must be seen, then, as a resultant of the restraining forces imposed by the organization, and the resultant forces of attraction of the members.

In Table 19 it can be seen that there is a greater tendency for persons of equal status to designate each other as members of the same work group, than for those of unequal status. This would appear to demonstrate an aspect of the functional requiredness of the organization, for it is typical of formal organizations that groups of peers work together. Another explanation of this relationship, however, would postulate restraining forces against persons of unequal status

Table 19

Relationship Between Status and Work Group Membership for Pairs of Persons of Equal and Unequal Status

	Equal Status Pairs	Unequal Status Pairs
Each Member Designates the Other	110 (77.8)	234 (266.2)
Neither Member Designates the Other	59 (91.2)	344 (311.8)

Chi Square = 31.86
p = <.001

perceiving each other as belonging to the same group. As we have not obtained data about the actual work requirements in the organization, it is not possible to state whether the above finding represents the former or the latter state of affairs. It can only be said that proportionately more equal status persons than those of unequal status perceive each other as belonging to the same work group.

These two explanationships of the relationship in Table 19 differ fundamentally in one respect. The former represents an interpretation in terms of the "objective situation" -- the actual work structure of the organization. The latter explanation is a statement about the nature of the forces which exist between persons of unequal status. If we now recall the analysis assumptions formulated earlier in this chapter, we should be able to use them to make further predic-

tions to the data.

Assumption 1 states that information about the objective situation is represented by symmetrical relationships. Assumption 3 states that information about the forces in the relationship is represented by a tendency for the direction of the asymmetrical relationships to be related to another variable. Assumption 4 states that when the direction of the asymmetrical relationships is random with respect to another variable, no information is represented about the forces in the relationship.

By examining, therefore, both the symmetrical and asymmetrical designation relationships between persons of unequal status, we are able to choose between the alternative explanations of Table 19.

Table 20

Designations of Work Group Membership by Pair-Members of Unequal Status in Communication with Each Other

	Designates Other Pair-Member	Does Not Designate Other
Higher Status Pair-Member	293 (299.5)	229 (222.5)
Lower Status Pair-Member	306 (299.5)	216 (222.5)

Chi Square = 0.66
p = <.50

It is also necessary to hold communication constant in this analysis, because communication is related to both designation and status, the two variables whose relationship we wish to examine. By utilizing only pair-members who report communication to each other in Table 20, and only pair-members who do not report communication in Table 21, communication is held constant within each table. In neither case is there a statistically significant relationship between designating and relative status in the pair.

Table 21

Designations of Work Group Membership by Pair-Members of Unequal Status Not in Communication with Each Other

	Designates Other Pair-Member	Does Not Designate Other
Higher Status Pair-Member	87 (88.5)	277 (275.5)
Lower Status Pair-Member	90 (88.5)	274 (275.5)

Chi Square = 0.07
$p = < .80$

It is clear from these results that the direction of the asymmetrical designation relationships between those of unequal status is random with respect to relative status in the pair. They therefore provide no information about the forces which exist between those of unequal status. Since Tables 20 and 21 present both symmetrical and

asymmetrical designation relationships, and the latter provide no information, the only information available is contained in the former. These represent information about the objective situation; and we have seen in Table 19 that this information is to the effect that those of unequal status tend not to designate each other as members of the same work group.

These results seem to deny that systematic forces exist between persons of unequal status which tend to prevent their perceiving each other as members of the same work group. They support the conclusion that the functional requirements of the organization itself are responsible for the groupings seen in Table 19.

It may be, however, that both kinds of forces exist, but that those originating in the work demands of the organization are so

Table 22

Designations of Social Group Membership by Pair-Members of Unequal Status in Communication with Each Other

	Designates Other Pair-Member	Does Not Designate Other
Higher Status Pair-Member	69 (83)	453 (439)
Lower Status Pair-Member	97 (83)	425 (439)

Chi Square = 5.62
$p = < .02$

much more powerful than the status generated forces, that the latter are not evinced in the data. We are dealing here with the idea that the "objective situation" induces very demanding forces towards veridical perception and reporting: when persons have role relationships in the organization which require that they work together, they find this fact difficult to ignore or distort.

It is possible to rule out the forces originating in the functional demands of the organization, by finding a situation where they can be considered not to exist. Social group designations meet this requirement. They represent feelings of belonging together by individuals for reasons other than work. In Tables 22 and 23 are shown the social designations, both symmetrical and asymmetrical, by pair-members of unequal status. As in the previous two tables, commun-

Table 23

Designations of Social Group Membership by Pair-Members of Unequal Status Not in Communication with Each Other

	Designates Other Pair-Member	Does Not Designate Other
Higher Status Pair-Member	4 (8.5)	360 (355.5)
Lower Status Pair-Member	13 (8.5)	351 (355.5)

Chi Square = 4.88
$p = < .05$

ication is held constant within each table. We find that, whether or not communication exists between them, that the lower status pair-member tends to designate the higher as a member of his social group significantly more often than the higher designates the lower. When these two tables are combined, the Chi Square is 8.34, which is significant at less than the .01 level.

These findings may be interpreted as indicating a force on lower status persons to affiliate with higher status persons in the organization, or a restraining force on higher status persons against accepting lower status persons in their groups, or both. It seems reasonable to assume that these forces do not exist just with respect to non-work relationships, but would be present at all times. Because status is a way of describing work positions, it is likely that these forces have their origin in the work relationships of the members of the organization. They are not evinced in the data when respondents are asked about their work relationships, because the latter constitute a "reality" which demands veridical reporting. When, however, respondents report relationships which have no formalized basis in the functional demands of the work situation, these status generated forces are demonstrated in the data.

One way of looking at these forces is to say that the higher status persons' groups constitute reference groups for the lower status persons. This usage corresponds to Kelley's definition of a normative reference group: "a group in which the individual is motivated to gain or maintain acceptance" (28).

> A group can assume this function of norm-setting and norm-enforcement whenever it is in a position to deliver rewards or punishments for conformity or non-conformity. A group functions as a normative reference group for a person to the extent that its evaluations of him are based upon the degree of his conformity to certain standards of behavior or attitude and to the extent that the delivery of rewards or punishments is conditional upon these evaluations (28).

In a formal organization, it is likely that higher status persons are in positions which enable them to reward or punish for conformity or non-conformity to the standards which they set. This in itself would provide forces on lower status persons, motivating them to gain acceptance in higher status groups. In addition, the prerogatives of higher status positions would induce forces of attraction on lower status persons.

Table 24

Relationship of Status to Being Valued in Total Organization

Status Scale	r	p	N
Professional Status	.68	.001	46
Non-Professional Status	.42	.06	20
Unified Status	.54	.001	66

In Table 24 it is seen that a significant relationship exists between status and being valued in the Midwest Social Agency, for both professional and non-professional workers. This would indicate that the prerogatives of higher status involve receiving more of the benefits

available in the organization, for we have previously theorized that the most valued members of the organization are those who are most rewarded.

Table 25

Relationship of Status to Being Valued by Pair-Members of Unequal Status in Communication with Each Other

	Values Other Member	Does Not Value Other Member
Higher Status Pair-Member	73 (136.5)	449 (385.5)
Lower Status Pair-Member	200 (136.5)	322 (385.5)

Chi Square = 80.00
$p = < .001$

When a Pair Analysis is done, using the population of unequal status pairs in the organization, this relationship between status and being valued is seen to exist at a highly significant level (Tables 25 and 26). Whether or not the pair-members are in communication with each other, the lower status pair-member values the higher more than the latter values the former.

It is clear from these findings that being valued in the organization is highly related to relative status. It follows, assuming as we have that the relevant benefits are bestowed on the valued persons in the organization, that forces exist which induce

Table 26

Relationship of Status to Being Valued by Pair-Members of Unequal Status Not in Communication with Each Other

	Values Other Member	Does Not Value Other Member
Higher Status Pair-Member	3 (15.5)	361 (348.5)
Lower Status Pair-Member	28 (15.5)	336 (348.5)

Chi Square = 21.06
$p = < .001$

attraction in lower status persons to groups of higher status persons.

How do these findings bear upon the theory presented in the preceding chapters? One of our major conclusions was that for non-supervisory professional workers, the more highly they are valued in their group, relative to how much they are valued elsewhere in the organization (and given a high level of communication), the greater is their attraction to their own group. An individual's attraction to his group is thus seen as a resultant of forces toward his own group, and forces attracting him toward other parts of the organization.

It now seems possible to specify at least one of the forces which attract individuals toward other parts of the organization. There is a force on persons to gain acceptance by higher status persons. It is likely that there are two different sources for this force.

First, there is the fact that higher status persons customarily have the function of setting and enforcing norms. This gives them considerable power to reward conformity and punish non-conformity. Secondly, it appears that higher status positions provide their occupants greater opportunities for receiving relevant benefits. They would thus constitute a region of high "potential" for lower status persons, inducing a force of attraction on them toward these positions.

It follows that whenever the role expectations of a person's own group members are in competition or conflict with those of higher status persons elsewhere in the organization, he would have a force of attraction toward his own group, and another force of attraction toward higher status groups. His attraction toward his own group would be a resultant of these two forces.

If an individual is highly valued by higher status persons outside his own group, this would constitute a potent source of reward. Where role expectations are conflicting, he would be less responsive to role pressures from within his own group. This would not be the case, however, for persons who could not be promoted to higher status, or could not utilize the various kinds of benefits which motivate professional persons. And we have seen that our hypothesis did not hold for non-professional persons.

The data also provide further evidence that there are forces originating in a person's own group. The relationship between valuing and work group membership for pair-members of equal status who report communication is seen, in Table 27, to be significant at less than the .10 level. When they do not report communication, this relationship, reported in Table 28, has a probability of less than .02. When these

Table 27

Relationship Between Valuing and Work Group Membership for Equal Status Pair-Members Who Report Communication

	Each Member Designates the Other	Neither Member Designates the Other
Values Other Member	51 (45.2)	13 (18.8)
Does Not Value Other Member	168 (173.8)	78 (72.2)

Chi Square = 3.18
p = < .10

two tables are combined, the Chi Square is 11.32, significant at less than the .001 level.

It is clear from this finding that there is a greater tendency for one person to value another if they are members of the same group, than if they are members of different groups, when the factor of differential status is controlled. This would indicate that the fulfillment of role expectations by a member of one's own group is more important than by a non-member. It provides evidence that there is a force acting on members of a work group originating in the benefits which are available in return for fulfillment of role expectations within the group. Although it may be supposed that wherever in the organization there are role relationships and role expectations, the processes of reward and punishment are at work, it seems evident that within a

Table 28

Relationship Between Valuing and Work Group Membership For Equal Status Pair-Members Who Report No Communication

	Each Member Designates the Other	Neither Member Designates the Other
Values Other Member	18 (12.3)	6 (11.7)
Does Not Value Other Member	97 (102.7)	103 (97.3)

Chi Square = 6.03
p = .02 (approx.)

person's own work group, these processes are intensified.

The evidence presented in the preceding pages suggests a reformulation of the problem of membership groups and reference groups. A membership group has been defined previously as two or more persons who think of each other as belonging together. This implies that each person has a positive attraction toward the group. When, however, one of the persons is not accepted by the other group members, and he has a positive attraction toward the group, it would constitute a reference group for him. This is the situation when lower status persons are attracted to higher status groups, but are not recognized as belonging by higher status persons.

The distinction between a membership group and a reference group according to this formulation is one of acceptance: the presence or absence of barriers to the entry of attracted persons. If a lower status person is attracted to a higher status group, sees himself as a member, and is accepted by the other members, then the rights and duties of membership are conferred upon him, and it is a membership group for him. If, however, even though his attraction to the group leads him to conform to its standards, he is not accepted by the members, it is a reference group for him.[1]

The desirability of defining membership group and reference group in this way as non-overlapping concepts stems from the observation that they apply to two distinct phenomena. The forces on a person which have their source in his membership group are quite different from those acting on him with respect to his reference group. In the former case the forces are induced: other members have expectations towards him, and reward or punish him for compliance or non-compliance. They attempt to influence him. But in the latter case the forces arise from the individual's own perception of benefits, actual or potential, which are available in the reference group. They are own forces. As long as the individual is outside the reference group, unrecognized by

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1. This discussion omits consideration of negative reference groups and negative membership groups, although concepts such as these are probably required for certain aspects of social behavior. The theoretical formulation presented here can be expanded to accommodate such concepts, by defining an individual's attraction as away from the group rather than towards it. This would make a negative reference group one in which the individual does not wish to gain acceptance, or is afraid of being accepted; and a negative membership group one in which the individual, although accepted, prefers not to be. A thorough theoretical treatment of the latter concept would have to deal with the problem of restraining forces which keep an individual in a group for which he has a dislike.

its members, they have no expectations relating to his behavior, nor do they attempt to influence it in accordance with their norms.

The above formulation renders unnecessary the question: under what circumstances is an individual's membership group his reference group?[1] By defining a group as either membership group or reference group, it separates these two concepts and provides a criterion for ordering data to them. It also stresses the point that as long as a person is acceptable to a group to which he wants to belong, it is capable of exerting influence over his behavior in some degree. A person's behavior is thus seen to be subject to forces originating both in his membership groups, and in his reference groups. His attraction to a membership group is a resultant of all these forces.[2]

The findings in this chapter lead to the following conclusions:

1) The functional requirements of the organization involve

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1. This question arises, in any case, from faulty theoretical premises. To state that there are two types of membership group, 1) that which is not a reference group for a person, and 2) that which is a reference group for him, is to state that in this first type, the group has no influence over his behavior or attitudes, for the area under consideration. In that event, for this particular area, the person does not have psychological membership in the group. It may be an objective fact that this person's name appears on the membership list of this group, but it is not a psychological event. Only the second of these two types of membership group, therefore, represents a psychological event, and warrants inclusion in a social psychological theory. This assumes that Krech and Crutchfield's warning against "attempting to answer a psychological question by reference to an institutional law" is worthy of observance.
2. The findings of Bentz (8) support this position. He found that faculty members whose "reference group" is their professional group rather than the university in which they have their appointment are less attracted to their department than when the opposite is the case.

persons in role relationships which are capable of exert- a force affecting their behavior.

2) The force of attraction induced by fulfilling role expectations in a person's membership group is greater than that induced by fulfilling role expectations of equal status persons elsewhere in the organization.

3) Persons of higher status in the organization constitute reference groups for those of lower status.

4) There is a force of attraction on lower status persons in the direction of these higher status reference groups.

5) An individual's attraction to his membership group is a resultant of that induced by being rewarded in that group, and the reward, actual or potential, available in higher status reference groups in the organization.

CHAPTER SIX

RESULTS AND DISCUSSION: COMMUNICATION THEORY

Introduction

This study was conceived as part of a program of research on informal social communication (13). In Chapter II the concept communication was defined as: the interchange of symbolic behavior between persons whereby they exchange information and/or attempt to control each others' group-relevant behavior. Hypotheses II and IV utilize communication as a key concept, and make differential predictions when conditions of high or low communication obtain. In Chapter IV evidence was presented supporting these hypotheses, demonstrating that communication plays an instrumental function in interpersonal relationships.

This chapter will present the results of the analysis of communication data. Although the findings to be discussed have been categorized as ex post facto, they are so in varying degrees. A body of hypotheses and evidence in this theoretical area already existed in the literature prior to the initiation of this study (12, 13). One of the study's secondary aims, therefore, was to duplicate these findings wherever possible, and to bring them to greater conceptual refinement. During the analysis of the data, additional hypotheses were formulated,

some of these in explanation of relationships between our variables.

The measurement assumptions are those of Pair Analysis, discussed in the preceding chapter.

Findings Pertinent to Communication Theory

In the preceding chapter, it was concluded that an individual's membership group is a potent source of forces exerted upon his behavior. There is a greater tendency for one individual to see another as contributing to the goals of the organization if they are members of the same work group, rather than of different groups. This was interpreted as arising out of the fact that members of the same group usually have functional relationships which give rise to role expectations. The process of reward or punishment in response to fulfillment or non-fulfillment of these expectations is thus intensified within the work group.

Evidence was presented in Chapter IV that communication is instrumental to the operation of this process of reward and punishment. It is to be expected, therefore, that there is a greater force on members of the same group to have communication among themselves than with other members of the organization. A corollary statement would be that there is a restraining force on members of a group against having communication with members of the organization outside their own group.

Festinger has formulated a hypothesis which is very similar to these:

> The force to communicate about item x to a particular person will decrease to the extent that he is perceived as not a member of the group or to the extent that he is not wanted as a member of the group (13).

Table 29

Relationship Between Group Membership and Communication for Pairs of Equal Status Persons

	Neither Member Communicates to Other	Each Member Communicates to Other
Each Designates Other as Member of Work Group	29 (41)	81 (69)
Neither Designates Other as Member of Work Group	34 (22)	25 (37)

Chi Square = 16.03
$p = < .001$

He cites small group laboratory studies by Schachter (58) and Festinger and Thibaut (15) which support this statement.

Tables 29 and 30 indicate that there is a positive relationship between communication and group membership. A significant relationship exists between designating or not designating each other as a member of the same work group, and having or not having communication. Although this is true for both equal and unequal status pairs, the Chi Square for the latter is much larger than for the former. When the two tables are utilized in a 2 x 2 x 2 analysis, using a formula in Snedecor (63, pp. 202 ff.), the Chi Square for the second order interaction is 8.51, significant at less than the .01 level.

It appears from these findings that the force on members of

Table 30

Relationship Between Group Membership and Communication for Pairs of Unequal Status Persons

	Neither Member Communicates to Other	Each Member Communicates to Other
Each Designates Other as Member of Work Group	28 (98)	206 (136
Neither Designates Other as Member of Work Group	215 (145)	129 (199)

Chi Square = 157.80
$p = < .001$

the same work group to have communication, or the restraining force against having communication with non-members, is greater for those members of unequal status. It must be asked, then: what is the source of this additional force on persons of unequal status to have communication? One possible explanation is that it arises out of the requirements of the work situation itself. It may be that in the Midwest Social Agency, role relationships necessitate more communication between superior and subordinate, than among peers.

Another interpretation of these results seems equally reasonable. The increased force on work group members of unequal status to have communication may arise from the fact of their differential status itself. It may represent, for example, the higher status members'

conveying information or approval, the lower status members' seeking of them, or both.

By including in the analysis both symmetrical and asymmetrical communication relationships, it is possible to determine whether there is a greater force on the higher status member to communicate to the lower, or on the lower to communicate to the higher. Table 31 presents

Table 31

Relationship Between Status and Reported Communication for Pair-Members of Unequal Status in the Same Work Group

	Reports No Communication	Reports Some Communication
Higher Status Pair-Member	62 (62.5)	241 (240.5)
Lower Status Pair-Member	63 (62.5)	240 (240.5)

Chi Square = approximately .00

the results of this analysis. Within pairs of unequal status work group members, reporting communication is seen to be independent of relative status in the pair. It may be concluded that within the same work group, the force on unequal status members to have communication is not significantly different for higher or lower status persons.

When, however, the symmetrical and asymmetrical communication relationships are examined for pairs of unequal status persons who are not members of the same work group, a significant relationship is found

to exist between reporting communication and relative status. The results of this analysis are presented in Table 32. Lower status persons report communication to higher status persons, proportionate to their numbers, significantly more often than the latter report communication to the former.

Table 32

Relationship Between Status and Reported Communication For Pair-Members of Unequal Status in Different Work Groups

	Reports No Communication	Reports Some Communication
Higher Status Pair-Member	348 (313.5)	193 (227.5)
Lower Status Pair-Member	279 (313.5)	262 (227.5)

Chi Square = 18.06
$p = < .001$

Let us recall Assumption 3 of Pair Analysis, stated in the preceding chapter: asymmetrical relationships between pair-members when the direction of the relationship is systematic with respect to another variable represent information about the forces in the relationship. The findings just presented indicate that in asymmetrical communication relationships between persons of unequal status who do not belong to the same work group, the direction of the relationship is

systematic with respect to status. They may be interpreted, therefore, as information about the forces in these relationships.

The relationship in Table 32 appears to lead to either one or both of the following hypothetical statements:

1) There is a force on lower status members of the organization to have communication with higher status members of the organization

2) There is a restraining force on higher status members of the organization against having communication with lower status members of the organization.

If the first of these two hypotheses is true, but not the second, we would expect persons of unequal status to have more communication, in proportion to their numbers, than those of equal status. If the second were true, but not the first, we would expect persons of unequal status to have less communication, in proportion to their numbers, than those of equal status. If, however, both of these hypotheses were true, then the force on lower status persons would tend to be opposed by the restraining force on higher status persons, and we would predict no difference, proportionate to their numbers, in the occurrence of communication among those of equal or unequal status.[1]

In order to determine which of these three conditions obtains, we can examine the symmetrical communication relationships for both equal and unequal status persons. This is done in Table 33 for pairs of persons who are not members of the same work group. It must be

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1. This makes the assumption of equivalence in size of the driving and restraining forces, which in the absence of information to the contrary, is as acceptable as any other assumption.

Table 33

Relationship Between Status and Communication for Pairs of Persons Not in the Same Work Group

	Equal Status Pairs	Unequal Status Pairs
Each Member Communicates to Other	25 (23)	129 (131)
Neither Member Communicates to Other	34 (36)	215 (213)

Chi Square = 0.33
p = .60 (approx.)

concluded from these data that whether or not communication occurs between persons not in the same work group is independent of their status equality or inequality.

It also follows that both hypotheses above are necessary to explain the data. There is a force on lower status members to have communication with higher, and also a restraining force on higher status members against having communication with lower, when they are not members of the same work group. Because these forces are in opposite directions, they do not increase the incidence of communication between persons of unequal status, as we have seen in Table 33. When, however, asymmetrical communication relationships are included in the analysis, as in Table 32, we find these forces represented by a systematic tendency for lower status persons to report communication to higher

status persons more often than the latter report communication to the former.

This systematic tendency appears to exist, however, only when persons of unequal status are not members of the same work group. We have seen, in Table 31, that when they belong to the same work group, lower status members tend to report no more communication to higher than higher status members tend to report to lower. In order, therefore, to be consistent with the entire pattern of relationships in the data, the following additional hypothesis is required:

3) When a lower status person is a member of the higher status person's work group, the restraining force on the latter against having communication with the former is replaced by a driving force to have communication with the lower status person.

From the above hypothesis and the previous two, we should expect to find a driving force on lower status persons to have communication with higher status members of the same work group, and an equivalent driving force on higher status members to have communication with lower. No systematic tendency for differential reporting communication in one direction or the other should be found when they are members of the same work group. These three hypotheses therefore predict the findings reported in Table 31.

It will be recalled that a comparison of Tables 29 and 30 yielded a significant second order interaction between status and the relationship between group membership and communication. This was interpreted to mean that the force on members of the same work group to have communication is greater for those of unequal status than for

Table 34

Relationship Between Status and Communication for Pairs of Persons in the Same Work Group

	Equal Status Pairs	Unequal Status Pairs
Each Member Communicates to Other	81 (92)	206 (195)
Neither Member Communicates to Other	29 (18)	28 (39)

Chi Square = 11.77
p = <.001

those of equal status. The above-mentioned relationship is demonstrated more clearly in Table 34, which like Table 33, is derived from Tables 29 and 30. When only those persons are considered who designate each other as members of the same work group, unequal status persons have a significantly greater tendency to have communication than those of equal status.

These findings, together with all those presented in this chapter thus far, would be predicted by the five hypotheses we have developed in explanation. These are summarized below.

1) <u>There is a greater force on members of the same group to have communication among themselves than with other members of the organization</u>.

2) There is a restraining force on members of a group against having communication with members of the organization outside their own group.

3) There is a force on lower status members of the organization to have communication with higher status members of the organization.

4) There is a restraining force on higher status members of the organization against having communication with lower status members of the organization.

5) The restraining force in (4) is replaced by a driving force on higher status members to have communication with lower status members, when the latter are members of the formers' work group.

These hypotheses will be examined subsequently in relation to the assumptions of the original theory of this study, and the findings presented in the previous chapters. First, however, we shall present some additional findings resulting from the analysis of relationships between communication and another major variable in the study, being valued.

Communication and Being Valued

Being valued in a group or organization was defined in Chapter II as being perceived by the other members of the group or organization as making a positive contribution toward its purposes and goals. This concept is central to the theory of this study, and is seen to be one of the major dimensions of group functioning. Since communication is instrumental to this functioning, the relationship

between being valued and communication is of theoretical concern.

Table 35

Relationship Between Valuing and Reporting Communication for Pair-Members of Equal Status in the Same Work Group

	Reports No Communication	Reports Some Communication
Values Other Member	18 (24.7)	51 (45.3)
Does Not Value Other Member	97 (90.3)	168 (173.7)

Chi Square = 3.57
p = .06 (approx.)

We have already seen, in Table 24, that a significant relationship exists between being valued in the Midwest Social Agency, and a person's formal status in the organizational hierarchy. It would appear necessary, therefore, in exploring the relationship between being valued and communication, to control for status. This has been done in Table 35, which reports the symmetrical and asymmetrical communication and valuation relationships for pair-members of equal status in the same work group. The null hypothesis that reporting communication to a person is independent of valuing or not valuing him can be rejected at the .06 level of significance.

Table 36 presents the same relationships for pair-members of

Table 36

Relationship Between Valuing and Reporting Communication for Pair-Members of Equal Status Not in the Same Work Group

	Reports No Communication	Reports Some Communication
Values Other Member	6 (10.4)	13 (8.6)
Does Not Value Other Member	103 (98.6)	78 (82.4)

Chi Square = 4.54
p = .04 (approx.)

equal status who are not members of the same work group. The significance level of the Chi Square is about the same as in the preceding table. When these two tables are combined, the Chi Square is 9.30, significant at less than the .003 level. It can be concluded that a relationship exists between reporting communication to a person and valuing him, irrespective of whether or not the persons are members of the same group.

These results may be summarized by the following hypotheses, either or both of which are consistent with the data:

6) <u>There is a force on members of the organization to have communication with those whom they value</u>.

7) <u>There is a restraining force on members of the organization against having communication with those whom they do not value</u>.

These statements are not meant to imply a direction of the causal process, but only functional relationship between the two variables. It would be equally meaningful to say that there is a force on members to value those with whom they have communication. This is not, of course, the first time this problem has arisen in the study. In the absence of controlled experimentation, the direction of causation can not be specified. It is likely, however, that the kinds of interpersonal relationships which we are investigating are manifestations of circular causal processes. If this is so, a statement of

Table 37

Relationship of Valuing to Communication for Higher Status Member in Pair of Unequal Status Persons

	Neither Communicates to Other	Each Communicates to Other
Values Other Member	3 (31.2)	73 (44.8)
Does Not Value Other Member	361 (332.8)	449 (477.2)

Chi Square = 47.30
$p = < .001$

functional relationship does not misrepresent the phenomena.

Tables 35 and 36 have presented findings which support the above two hypotheses, but for persons of equal status only. The same relationship is examined in Tables 37 and 38 for those of unequal status. It can be concluded from these results that whether we are considering a higher status person's valuing of a lower status person, or the latter's valuing the former, valuing bears a positive relationship to having communication. There is a greater tendency for one person to value another if communication exists between them, than if it does not.

Table 38

Relationship of Valuing to Communication for Lower Status Member in Pair of Unequal Status Persons

	Neither Communicates to Other	Each Communicates to Other
Values Other Member	28 (93.7)	200 (134.3)
Does Not Value Other Member	336 (270.3)	322 (387.7)

Chi Square = 105.31
$p = < .001$

There is a further implication in the findings reported in Tables 35 and 36. It was concluded from these that whether or not persons of equal status were members of the same work group, a relationship existed between valuing and reporting communication. In the results reported in a previous section, work group membership was found to be significantly related to the communication process. Hypotheses 1, 2 and 5 in this chapter would predict that communication between members of the same work group would be different from that between non-members. It is necessary, therefore, to examine this implication a little further.

Table 39 is derived from Tables 35 and 36, and utilizes only those pair-members who value the other member of an equal status pair.

Table 39

Relationship Between Work Group Membership and Reported Communication for Pair-Members Who Value Other Pair-Member in Equal Status Pairs

	Reports No Communication	Reports Some Communication
Each Designates Other as Member of Work Group	18 (18.8)	51 (50.2)
Neither Designates Other as Member of Work Group	6 (5.2)	13 (13.8)

Chi Square = 0.23
p = <.70

We find that there is no relationship between persons' designating each other as members of the same work group, and reporting communication to each other. When, however, the pair-members who do not value the other member of an equal status pair are utilized in the analysis, a highly significant relationship is found. These results are presented in Table 40, also derived from Tables 35 and 36. There is a

Table 40

Relationship Between Work Group Membership and Reported Communication for Pair-Members Who Do Not Value Other Pair-Member in Equal Status Pairs

	Reports No Communication	Reports Some Communication
Each Designates Other as Member of Work Group	97 (118.8)	168 (146.2)
Neither Designates Other as Member of Work Group	103 (81.2)	78 (99.8)

Chi Square = 17.91
$p = < .001$

greater tendency to report communication to a person if he belongs to the same work group rather than to a different work group, and if he is not valued.

It must be concluded that the restraining force on members of a work group against having communication with members of different work groups in the organization is overcome when the members of other

groups are valued by them. This can be expressed by the following hypothetical statement:

8) The restraining force against having communication with members of the organization outside one's own group is decreased if the members are persons whom one values.

This completes the presentation of the findings of this study. It has been possible to summarize the results reported in this chapter by formulating eight empirical hypotheses concerning the forces affecting the direction of communication in a social organization. The preceding chapter led to five conclusions about group membership. Little attempt has been made, however, to relate these ex post facto findings to the original theory.

In the concluding chapter, an attempt will be made to integrate these findings with the major theoretical assumptions of the study, and to make whatever revisions or additional assumptions necessary to present a coherent theoretical statement, consistent with all the results of this research.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

A Revised and Expanded Theoretical Statement

The method to be employed in the integration of our findings will be a deductive one: we shall state a number of theoretical assumptions, and then attempt to derive all the results of the study from these generalizations. The derivation of hypotheses will be as rigorously logical as is possible. Where auxiliary assumptions or other explanations are necessary in the derivation, they will be presented. The reader will be referred to relevant tables where the study provides support for particular hypotheses.

The central problem of this study has been stated previously as "the question of how separate individuals integrate their separate goals and actions into a collective unity" (see p. 17). Inherent in this statement of the problem are the assumptions that individuals do have goals, and that a "collective unity" is a possible achievement. These are incorporated into the first two assumptions in our theory.

Assumption I. The individual has certain psychological needs for which he strives to obtain satisfaction, directly or indirectly, in his participation in organized social life.

Assumption II. A group or organization has one or more major purposes or goals around which are organized its essential activities by means of the reciprocal role expectations of its members.

It is also necessary to postulate a principle by means of which individual needs become related to group goals. This is one that has been accepted, implicitly or explicitly, in most psychological theories of learning and socialization.

Assumption III. In his participation in organized social life, the individual strives to maximize need satisfaction, and to minimize need deprivation.

Using these three assumptions, and a number of definitions of theoretical concepts, we shall derive the results of this study, both those relating to the chief hypotheses, and the ex post facto results. Included among the definitions which follow, the reader will notice not only those which were included in Chapter II, but also others which have been introduced into this report previously without having been formally defined.

Definition 1. Being Valued

Being valued in a group or organization is being perceived by one or more other members of the group or organization as making a positive contribution toward its purposes and goals.

Definition 2. Force[1]

A force is a tendency for a person to behave in a given direction.

Definition 3. Induced Force

An induced force is a force acting on a person which has its source in the person's environment.

Definition 4. Own Force

An own force is a force acting on a person which has its source in the person's motivational system.

Definition 5. Role Expectation

A role expectation is an induced force acting on one member of a group which tends to make him approve or disapprove another member's group-relevant behavior.

Definition 6. Acceptance

When a person has acceptance in a group or organization, there exists one or more members of that group or organization who have role expectations with respect to that person.

Definition 7. Attraction

An individual's attraction to a group or organization is the positive resultant force acting on

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1. In this definition we have Lewin's concept, defined substantially the same as in his system as "tendency to locomotion" (33, p. 39).

him to remain in or gain acceptance into the group or organization.

Definition 8. Communication

Communication is the interchange of symbolic behavior between persons whereby they exchange information and/or attempt to control each others' group-relevant behavior.

Definition 9. Membership Group

A membership group is constituted by two or more individuals, each of whom has acceptance by the others, and whose attraction is greater than zero.

Definition 10. Reference Group

When an individual's attraction to a group is greater than zero, but he is not accepted by its members, that group is a reference group for him.

Hypothesis I. In any membership group, a member's group-relevant behavior will be influenced in the direction of the resultant force on him induced by the approval and/or disapproval of the other members.

This hypothesis follows from Assumptions I and III. The only theoretical point to be noted is that approval and disapproval are assumed to provide need satisfaction and need deprivation, respectively. This involves a specific interpretation of the psychological needs mentioned in Assumption I. However, this same derivation would result

from considering approval and disapproval as mediating other rewards and punishments.

This hypothesis was not tested in this study. There is, however, a considerable literature attesting to its accuracy, reporting a variety of studies, both experimental and empirical (12, 13, 14, 49, 69).

Hypothesis II. In any membership group, the greater a member's attraction to the group, the greater will be the influence on a member's group-relevant behavior hypothesized in (I).

The above hypothesis is derived from Hypothesis I and the definition of attraction. An increase in attraction stems from an increase in actual or potential need satisfaction (relative to deprivation) available in the group. If we assume, as in the derivation of Hypothesis I, that approval and disapproval mediate reward and punishment, it follows that by increasing the "stakes", the individual will be more susceptible to this influence process.

Hypothesis II was not tested directly by the data in this study, although it provides the basis for subsequent derivations. Evidence in its support, however, can be found in Festinger, Schachter and Back (14), Schachter (58), and Back (3). An unpublished small group experiment by Gerard also reports evidence corroborating the latter's results.

Hypothesis III. In any membership group, the greater a member's attraction to the group, the more he will be valued by the other members.

This is the first hypothesis of the original theory developed in Chapter II. It involves Hypothesis II, Assumption II, and Definition 1. Hypothesis II predicts that with an increase in attraction, the individual will be more susceptible to the influence processes in the group. Assumption II tells us what these influence processes are: they consist of approval or disapproval for behavior depending on whether or not it conforms to role expectations. These role expectations are induced (in some way unspecified by the assumption) by the group's major purpose or goal. When behavior is approved because it conforms to role expectations, the behaving individual, according to Definition 1, will be valued by those having role expectations.

It is also possible to derive this hypothesis by beginning with the definition of <u>being valued</u>, and following the causal chain through to <u>attraction</u>, utilizing the same assumption and hypothesis.

The evidence relating to the above hypothesis is reported in Tables 4 and 5. The predicted relationship was found to exist at a statistically significant level for the professional workers only, when the Attraction-Benefit scale was used. This is consistent with the theoretical assumptions from which the hypothesis was derived, but points to the unsolved problem that different populations have different psychological needs, to which different benefits are relevant.

<u>Hypothesis IV</u>. <u>The positive relationship between a member's attraction and how much he is valued hypothesized in (III) will be higher when communication is high, and lower when communication is low</u>.

This hypothesis is essentially a refinement of Hypothesis III, being derived from it, and from a consideration of the definition of communication. Although Hypothesis III is true, it is so only because it does not consider communication, but takes it for granted. The present hypothesis makes a more precise prediction for two states of communication. The derivation is fairly obvious from the comments after Hypothesis III. In order to conform to role expectations in a group, an individual must have informative communication about them; in order to be affected by approval or disapproval of others, he must have control communication with them. In the absence of these, no relationship between attraction and being valued should exist.

Evidence in support of Hypothesis IV is presented in Tables 6, 7, 15, 16, 17 and 18. It is confirmed at a high level of statistical significance.

Hypothesis V. In any organization where the satisfactions relevant to a member's needs are available both within his membership group and elsewhere in the organization, the more a member is valued in his membership group, relative to how much he is valued elsewhere in the organization, the greater will be his attraction to his membership group.

This hypothesis is derived from Hypothesis III and Assumptions II and III. Assumption II is stated for both groups and organizations. There are organization goals as well as group goals, and we must assume an authority structure by means of which the latter are

integrated with the former. Every subgroup member is also a member of the total organization. We are dealing, in one sense, with one group which is part of another. Hypothesis III was supported by the data both in a work groups context and an organization context. It follows that the circular causal process postulated in deriving Hypothesis III is repeated in an organizational context, and that the attraction to the subgroup is a resultant force, after subtracting the attraction to other parts of the organization. This makes the additional assumption that, in spite of forces toward integration, there exists at least some role competition or role conflict engendered by divergent subgroup and organization goals or means.

Tables 9, 12 and 13 contain the findings relevant to the above hypothesis. The data support this hypothesis, for professional non-supervisory workers, at a high level of statistical significance. An additional theoretical problem is raised when the supervisors are considered. They constitute a higher status group within the organization, yet each supervisor is also a member of another subgroup in which he holds his higher status position. We have explained the failure of Hypothesis V to hold for this population of supervisors in terms of this additional complicating factor. It has been hypothesized that supervisors have role expectations with respect to each other, which pertain to the behavior of supervisors in their own subgroup. To be valued within their supervisory membership group therefore makes their position within their other membership group more attractive. This can be formulated in the following form.

Hypothesis VI. In any organization where higher status individuals have supervisory positions in membership

groups, as well as belonging to groups of their peers, the more a supervisor is valued by his "peer" membership group, the greater will be his attraction to his "authority" membership group.

Although the data do not adequately test this hypothesis, they suggest that it is correct.

Hypothesis VII. The positive relationship between an individual's attraction and the relative degree to which he is valued hypothesized in (V) will be higher when communication is high, and lower when communication is low.

The derivation of this hypothesis follows from Hypothesis V and the definition of communication, and is identical to that of Hypothesis IV.

The findings relevant to Hypothesis VII are reported in Tables 10, 11, and 14. The prediction is an accurate one for non-supervisory professional workers, the relationships reaching an acceptable level of statistical significance. These results give rise, therefore, to the following hypothesis.

Hypothesis VIII. The positive relationship hypothesized in (VI) will be higher when communication is high, and lower when communication is low.

This prediction is consistent with the theoretical assumptions and other hypotheses of the theory. Although suggested as an explanation of the data, its confirmation or denial will have to await

further research.

Hypothesis IX. Persons of higher status in the organization constitute one or more reference groups for those of lower status in the organization.

This hypothesis is derived from Assumptions I and III, and the definition of reference group — Definition 10. The derivation also makes some further minor assumptions: 1) it defines high and low status in such a way as to imply that the former position offers its incumbent greater potentialities for reward than the latter[1]; 2) it assumes that higher and lower status persons belong to different groups in the organization, that is, higher status persons belong to a peer group from which lower status persons are excluded.

The support for this hypothesis is contained in Tables 19-23, and specifically in Tables 22 and 23 which present findings concerning social group membership. However, the attendant interpretation of these findings involves all the above tables.

Hypothesis X. In any membership group, the greater a member's attraction to that group, relative to his attraction (own force) to his reference group(s), the more he will be valued by the other members.

Hypothesis XI. The positive relationship hypothesized in (X) will be higher when communication is high, and lower when communication is low.

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1. Evidence presented in Tables 24-26 make this less of an assumption.

Hypothesix X is derived from Hypotheses V and IX, and Assumption III. It involves the same argument which was utilized to derive Hypothesis V, that of considering attraction as a resultant of forces in different directions. However, in Hypothesis V, the forces were each induced by members of a membership group, whereas Hypothesis X involves the attraction resulting from an induced force and an own force in different directions. Hypothesis IX provides the statement that reference groups exist in the organization. By considering the definitions of reference group, acceptance, and role expectation, it can be concluded that the force of attraction to a reference group is an own force. By utilizing Assumption III, it is possible to derive Hypothesis X, which is in a general form, rather than being specific to organizational membership.

The derivation of Hypothesis XI is the same as that of Hypotheses IV, VII, and VIII, with the exception that no control communication is necessary between a person and his reference group. It is, however, necessary to this argument that there be informative communication, except in the case of what may be termed an ideal reference group, which exists only in the individual's imagination, hopes or fears.

No evidence is provided by this study in support of the above two hypotheses, although they have been suggested by its findings, and are derivable from its theoretical assumptions. Hypothesis X, however, is no stranger to the psychological literature, although it has appeared in somewhat different form (13, p. 11; 48, 30); and fragmentary evidence seems to indicate its essential correctness.

Hypothesis XII. In any organization where the satisfactions relevant to a member's needs are available both within his membership group and elsewhere in the organization, his attraction to his membership group induced by being valued there will be greater than that induced in the direction of other parts of the organization (but not reference groups) by being valued there.

This hypothesis is a refinement of Hypothesis V, which is based on an assumption of equivalent unit forces of attraction induced by being valued in the work group and elsewhere in the organization. An assumption which is preferable is utilized in deriving the above hypothesis, that the rewards available within an individual's membership group for contributing to the group goal are relatively more need satisfying than those to be obtained in the organization as a whole. This follows from Assumption II, and the definition of membership group, Definition 9. The statement of Hypothesis XII, considering this definition, implies a situation in an organization where the individual has multiple group membership. In this event, the functional requirements of the organization make one membership group the membership group for the individual, so that its demands take priority over his other groups in the organization.

This hypothesis is supported by the findings reported in Tables 27 and 28, which when combined, yield a statistically significant relationship. From these results it was concluded that the fulfillment of role expectations by a member of one's own group is more important than by a non-member.

Hypothesis XIII. In any organization there is a greater force on members of the same membership group to have communication with each other than with other individuals in the organization.

The derivation of this hypothesis is based on Hypothesis XII, and the definition of communication as an informative and control process (Definition 8). Utilizing Assumption III, it follows that where the rewards to be gained or lost are greatest, the processes of information exchange, and rewarding or punishing members' group-relevant behavior will be most intensive. The latter statement is essentially the same as Hypothesis II, and can be derived from it.

Hypothesis XIII is supported at a high level of statistical significance in Tables 29 and 30.

Hypothesis XIV. In any organization there is a restraining force on members of a membership group against having communication with other individuals in the organization.

This follows directly from Hypothesis XIII. It makes the additional assumption that, in the event of competing demands on an individual's time and/or energy, the driving force hypothesized in (XIII) to have communication with members of his membership group will result in a restraining force against having communication with non-members.

The only evidence which this study provides to support Hypothesis XIV is the same as that cited in support of Hypothesis XIII, reported in Tables 29 and 30. The findings do not differentiate between these two hypotheses, but may be taken as confirmation of either or

both of them.

Hypothesis XV. In any organization there is a force on lower status members to have communication with higher status members of the organization.

This hypothesis involves Hypothesis IX, and the definitions of force and communication (Definitions 2 and 8). Hypothesis IX tells us that lower status persons have a force acting on them to gain acceptance by higher status persons, stemming from actual or potential need satisfaction to be gained by becoming a member of their group. Utilizing Assumption I, it follows that the individual will tend to behave in the direction of higher status persons. What sort of behavior may be expected from these lower status persons? In line with our assumption, they will be seeking approval and information relevant to their gaining acceptance by their reference group. This behavior falls within our definition of communication.[1]

It is also possible to derive, from the same sources, an hypothesis concerning the behavior of higher status persons in this situation.

Hypothesis XVI. In any organization there is a restraining force on higher status members against having communication with lower status members of the organization.

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1. This derivation is identical to Festinger's argument about "substitute upward locomotion" (13), although he places the force on a level of fancy, or irreality, whereas we see it as leading to instrumental behavior.

The definition of reference group (Definition 10), tells us that higher status members do not accept lower status members into their peer group. It follows that one consequence of the driving force[1] predicted in Hypothesis XV is a barrier erected by higher status members against the efforts of lower status persons. The efforts of the latter to gain approval and information can not be successful at all times, for according to our definition of acceptance (Definition 6), and of role expectation (Definition 5), there is no induced force on a higher status person to approve or disapprove the lower status person's behavior, unless the latter is a member of the former's group. It also follows that there would be no force on the former to communicate information to the latter; the higher status person would resist the lower status person's efforts to obtain such information. An additional reason for this may be found in Hypothesis VI, which tells us that supervisors have reciprocal role expectations about their behavior in the membership groups where they hold their authority positions. It follows from this that these expectations would include a definition of the "proper" channels of communication, and that the conveying of information from a higher status person to a lower will be subject to the disapproval or approval of the former's peers.

From this line of argument a further hypothesis can be derived.

Hypothesis XVII. The restraining force predicted by Hypothesis XVI, against having communication with lower status

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1. Lewin's concepts "driving force" and "restraining force" are used with substantially the same definition as he has provided (33, p. 259).

members of the organization is replaced by a driving force on higher status persons to have communication with lower, when the latter are members of the formers' "authority" membership groups.

This follows directly from Hypotheses XV and XVI, and the preceding argument. Definition 5 tells us that supervisors will tend to approve or disapprove the group-relevant behavior of other supervisors. If we make the further assumption that, utilizing Assumption II, the achievement of the goals of the supervisory group imposes a pattern of informative and control communication on the organization, it follows that supervisors will expect each other to adhere to this ideal pattern. From Hypothesis VI we have that supervisors who fulfill their functions in their authority positions become valued by members of their peer group. One such function, which will be approved by their peers, is conveying information to and controlling the group-relevant behavior of subordinates. Within the same membership group, therefore, a higher status member has an induced force acting on him to have communication with lower status members. The evidence in support of Hypotheses XV, XVI and XVII is reported in Tables 31, 32, 33 and 34. The second-order interaction obtained by utilizing both Tables 29 and 30, reported on p. 128, is also in support of these three hypotheses. The entire set of findings presented in these tables is consistent, and confirms these hypotheses at a high level of statistical significance.

Hypothesis XVIII. In any organization there is a force on its members to have communication with those whom

they value.

This hypothesis is derived from Assumptions I, II and III, and Definitions 1, 2 and 8. Given that the individual is striving to maximize need satisfaction by conforming to role expectations which converge upon his position, we can ask the question: who will be preferred by him as targets for his communicative behavior? In order that he be enabled to conform, the individual must have accurate information about the expectations and standards which prevail in the organization. It follows that he will seek this information from his own group members (Hypothesis XIII), from higher status persons (Hypothesis XV), and from valued members of the organization (Hypothesis XVIII). This makes the additional assumption that if one individual values another, the former will tend to think that the latter is also valued by other members of the organization. Valued members will be considered suitable sources of information, as they obviously are able to fulfill role expectations themselves.

An additional force to communicate to valued persons is implied by the definition of role expectation (Definition 5). A member has a force on him to approve or disapprove the behavior of other members. This approval is conveyed to valued persons by control communication.

From this it is possible to derive a further hypothesis.

Hypothesis XIX. In any organization there is a restraining force on its members against having communication with those whom they do not value.

The derivation of this hypothesis is the same as that for Hypothesis XVIII. It involves Assumptions I, II and III, and Definitions 1, 2, 5 and 8. Just as it was argued that valued persons, because they themselves are able to make a positive contribution to the organization, will be considered suitable sources of information, it follows that those who are not valued will not be considered suitable sources.

An apparent inconsistency in the derivation of this hypothesis lies in Definition 5. This implies that there is a force acting on a member of a group to disapprove a member's group-relevant behavior. In that event, whether or not a member is valued, there would be a force to communicate to him; in the former case to approve, in the latter to disapprove. If, however, we make the assumption that disapproval is indicated by cutting off communication, rather than by overt punitive communication, this difficulty is overcome.

The evidence to support Hypotheses XVIII and XIX is reported in Tables 35 and 36. When these tables are combined, the findings support these hypotheses at an acceptable level of statistical significance. Tables 37 and 38 provide further support for these same two hypotheses. However, the data are not able to differentiate between them, so that the results may be interpreted as supporting either or both hypotheses.

Hypothesis XX. The restraining force on members of a membership group against having communication with non-members in the organization, hypothesized in (XIV), is decreased when the non-members are valued by the members of the group.

This hypothesis can be derived from Hypotheses XII and XVIII. The former hypothesis states that the attraction induced by being valued within a membership group will be greater for an individual than that induced by being valued elsewhere in the organization, but not in reference groups. In deriving this hypothesis, it was concluded that being valued in the membership group would provide greater reward than being valued outside it. Another way of formulating this is to state that in order to be valued outside his membership group, an individual has to make a greater positive contribution to the organization goal than he does to be valued within his membership group. Hypothesis XVIII tells us that there is a force to have communication with valued persons. If we assume that this force is proportionately greater when those valued persons are outside the membership group, because of the proportionately greater contribution, then this additional force will tend to cancel out the restraining force hypothesized in (XIV).

In Tables 39 and 40 will be found the results which support Hypothesis XX. They are seen to be in accordance with its prediction, permitting the null hypothesis to be rejected at a high level of confidence.

This completes the summary theoretical statement by which we have attempted to integrate the ex post facto results of this study with the predicted findings. It will be clear to the reader that the derivation of these hypotheses was accomplished with varying degrees of logical precision, and necessitated varying numbers of auxiliary assumptions. A more formal theory would have to make all these assumptions explicitly part of the original postulates and definitions. As previously remarked, however, it is felt that the level of precision

attempted here is consistent with our theoretical progress at this time.

The Contributions of This Study

The author of a work is often among the least capable of evaluating its contribution. In view of the length of this report, however, and the variety of topics treated, a brief summary of what are considered to be its chief contributions may be acceptable to the reader. These will be categorized as being conceptual, theoretical or methodological.

1. Conceptual Contributions

In the preceding section, a summary statement of theory was made which involved the definition of 10 theoretical concepts. The following factors are perhaps noteworthy in our use of these concepts in this study.

a) The distinction between these theoretical concepts, and their operational definitions, what Northrop has called "operational concepts" (51), has been maintained throughout the study. Theoretical definitions have been provided for the theoretical concepts. This gives the theory greater generality, and will permit the hypotheses to be tested in a different situation with different operational definitions of the concepts.

b) The new concepts, being valued and acceptance have been introduced and defined. These are considered to conceptualize two relationships which exist between individuals in a social context, for which other concepts are lacking. It has been possible to utilize these concepts in the theory within the limits of the meaning assigned to them, and they have provided vital links in the total theoretical

structure.

c) The concepts role expectation, attraction, communication, membership group and reference group, all of which have been current in the literature of social science, with varying degrees of definition or lack of it, have been provided with theoretical definitions of some precision, which permitted them to be related readily to the other concepts in the theoretical structure. This has been achieved in part by utilizing three Lewinian constructs in the definition of other concepts, and also by defining some concepts in terms of others.

d) The concepts membership group and reference group have been reformulated in the light of a theoretical argument which points to certain inconsistencies or inutilities in previous definitions.

2. Theoretical Contributions

Although in one sense conceptual contributions are theoretical contributions, the latter term is used here in a more specialized sense to include orientations toward theory construction, and the actual structure of relationships between concepts, resting on general theoretical assumptions, which can be called a theory. Within this meaning of theoretical contribution, it appears that the following has been achieved:

a) On the basis of an analysis of the literature in the problem areas of this research, three general approaches to theorizing in social science have been delineated. These have been named the holistic, atomistic and functional dimensions approaches. Arguments have been advanced in favor of the latter approach.

b) Following previous work in this area, and after preliminary investigation, a modest functional dimensions approach to theory

construction was attempted, based on limited assumptions, resulting in four hypotheses in the area of group integration. These hypotheses were found to predict accurately to the data collected in this study.

c) An ex post facto analysis of the data resulted in five more hypotheses in the area of group membership, and eight which made predictions about the forces to have communication in a multiple group social organization.

d) In the final chapter a somewhat formal theory in deductive form was constructed to integrate all the findings of the study. This included three general assumptions, 10 definitions, and derived from these in as rigorous fashion as possible, 20 hypotheses about relationships among the theoretical concepts. The fact that the majority of these hypotheses are supported by relationships in the data at an acceptable level of confidence lends weight to the entire theoretical structure, as does the fact that several of the hypotheses have received previous confirmation in the work of other investigators.

No attempt has been made to derive all the hypotheses possible from this theory; a great many more can be derived, in a form in which they can be tested by data. The addition of one more general assumption which involved the definitions would, of course, result in a powerful theory from which a large number of additional hypotheses could be generated.

3. Methodological Contributions

The methods used in this research are considered to constitute a methodological model which is quite different from that commonly used to study organizations. The following methodological devices in this research are either completely or partially new:

a) The technique of being a "non-participant observer" is the opposite of the anthropological approach: it maximizes the investigator's dependence on prior theory, and minimizes his being misled by the uniquenesses of the situation. It approximates using an ongoing social organization as a social laboratory.

b) The design of the study in stages, with different kinds of data obtained at each stage, and the instruments in the later stages dependent on the information yielded by an analysis of data obtained in an earlier stage, provides greater flexibility and control. It also substitutes information for assumptions about the nature of the organization. The time lapse between stages, although insufficient for major changes in the organization under normal circumstances, is a safeguard against spurious relationships in the data because of factors in the measurement situation or halo effects.

c) A method of data collection and analysis has been provided to obtain the subgroup structure, both work and social (leisure time) in a formal organization. This involves the formulation of a number of operational definitions, one of which, group membership consensus, provides a quantitative index by which groups can be compared with respect to the degree of acceptance of members by other members.

d) A method of obtaining and analyzing data about frequency, nature and importance of communication, developed elsewhere (26), has been adapted to precise statistical usage in testing hypotheses.

e) Two scales have been developed to measure an individual's attraction to a group or organization on different dimensions, using a theory of measurement and a method recently formulated by Coombs (9). These have demonstrated a high degree of scalability using rigorous

criteria.

f) An operational definition of *being valued* has been developed, using a sociometric instrument, and also an operational measure of *expectation of being valued*. The statistical problems involved in creating comparable indices for these concepts, when subgroups are of different size, were successfully handled.

g) A technique was used for obtaining sociometric data which refer to different situational contexts, thus providing information about relationships between subgroups in a total organizational structure.

h) A new method of analysis, called Pair Analysis, was introduced. This utilizes sociometric-type data in a non-parametric analysis. The relationship *between* persons, and the *person-in-a-relationship*, becomes the unit of analysis, thus utilizing much more of the collected data than do conventional analysis techniques. The four analysis assumptions involved, which in a formal theory would be coordinating definitions, are presented.

Implications For Further Research

There are a great many possible directions that further research can take, using the findings and theory of this study as a basis. Some of these have already been made explicit in our selection of a *functional dimensions* approach, and the reasons presented to justify it. The major argument in favor of this approach to theory in this area is that it fosters continuity in theory construction, so that research results of many investigators in the field tend to be cumulative rather than discrete findings.

A few of the many implications which the study suggests for next steps in research are summarized below.

a) Because the findings of this study are statements of functional relationship without specifying the direction of the "causation", a very necessary next step is the experimental verification of our results. Even though we have assumed circular causal processes which could operate in either direction, this assumption should be tested. There is a warning to the prospective experimenter in this: it will be necessary to design experiments so that the direction of causation can be tested either way. For example, if an hypothesis predicts a relationship between attraction and being valued, it will not be enough to demonstrate that attraction "causes" being valued.

b) A problem which emerges from the research involves the different psychological needs which individuals in different occupations or different social strata may have. It will be recalled that our results showed marked differences between professional and non-professional workers, and also in places between those of higher and lower status. This may or may not be a problem in personality theory; it may be that the recruitment process selects different personality "types". But there is also another approach to this problem, discussed by Merton (44, pp. 361-371), and expressed in Dewey's "occupational psychosis" and Veblen's "trained incapacity". This views the functional requirements of particular social structures as shaping the behavior and needs of the individuals who hold positions within these structures.

c) Another problem is suggested by our definition of role

expectation in terms of an induced force, and again, in Assumption II, which states that a group or organization has a goal which utilizes role expectations to organize the relevant activities of its members. How does the group goal induce a force in group members to approve or disapprove relevant activities of other members? The question of power and authority in the organization seems to be involved here. There is also the related question of conflicting goals, or power struggles, which invites exploration.

d) Although our theory has utilized a number of Lewinian constructs, such as force, own force, induced force in a more formal sense, including them among the definitions of the theory, it has also borrowed constructs like driving force and restraining force, without paying adequate attention to theoretical distinctions and implications which Lewin's system contains. A further refinement of the theory would make more adequate use of these concepts, and this would undoubtedly unearth theoretical points and issues of some importance.

e) One of the processes to which we have often referred in this theory is that whereby one person approves or disapproves another person's behavior. We have suggested in one place in this report that disapproval is often conveyed more by omission than by overt act. There are certain cultural restraints against overt punitive behavior with respect to another person; or even, to a lesser degree, against overt rewarding behavior. Yet it is apparent that individuals have found many subtle mechanisms of conveying approval or disapproval to another in face-to-face contact. An intensive systematic exploration of these mechanisms, and the effect they have on others' feelings, would be one of the most difficult and at the same time one of the most

rewarding of problems to pursue.

The above are perhaps sufficient to indicate how fruitful a systematic approach to theory construction can be, when assumptions are made explicit, and concepts provided with both theoretical and operational definitions. The reader who is interested will discover, the author hopes, that this study satisfies the most important criterion of a scientific investigation, namely, that it raises far more problems than it has been able to solve.

APPENDIX AND BIBLIOGRAPHY

APPENDIX 1

INTRODUCTORY INFORMATION SHEET

Name .....

Introductory Information Sheet

The problems associated with conducting social scientific research in a "real life" situation are complex. The research person must be certain that his activities do not interfere with the important business of his host organization. Yet without a high degree of involvement and participation in the research by all the people concerned, it is unlikely that any reliable and useful facts will be discovered. Recent studies have lent emphasis to this point. It has been found that the most valuable data are obtained where the degree of participation was the highest.

The reason for this is not hard to discover. The research person is not familiar with the rich, ongoing life of a complex organization. There exists a whole body of relationships among people and fairly "private" definitions of which, coming from the outside, he is unaware. If he makes assumptions based on his previous experience, they may not apply to the present situation, and the research may suffer thereby. The way to guard against errors of this kind is to ask those who really are familiar with the situation -- the people in the organization themselves -- for their fullest cooperation in sharing their knowledge with the researcher.

We are asking for your cooperation in filling out the information sheets which follow. It is important that you perform this task frankly and carefully, if we are to have the minimum information on which the proposed research can be based. This will greatly increase the potential usefulness of the research, both for your own purposes and ours. Needless to say, information provided by any individual will be treated with strictest confidence.

RESEARCH CENTER FOR GROUP DYNAMICS

I. In our previous studies in the field we have found that all people belong to groups, formal or informal, large or small. We wish to know which group or groups of people in the Midwest Social Agency you feel you belong to. By a group we mean two or more persons who think of each other as belonging together, based on common association, interest, task or pleasure. This group may be identified on your formal organization chart: for example, Homefinding Department; Office Staff. Or it may be based on as informal an interest as chatting in the Smoking Room. The important criterion is that you think of yourself as belonging with a number of other persons.

Below is a roster of all the employees of the Midwest Social Agency. Would you kindly do the following:

1. Think of a group to which you belong at the Midwest Social Agency. Call this Group A. Now go down the list of names, and check off each person who is a member of Group A.

2. Try to think of another group to which you belong at the Midwest Social Agency. If you can identify yourself in a second group, call this Group B. Check off each person, in the second column, who is a member of Group B.

3. If you think of yourself as belonging to yet another group in the Midwest Social Agency, call this Group C. Go through the list once more, and check off all the persons who are members of Group C in the third column.

NAME	GROUP A	GROUP B	GROUP C
Doe, Jane	.....	.....	.....
Doe, John	.....	.....	.....
etc.	.....	.....	.....
(72 names	.....	.....	.....
in alpha-	.....	.....	.....
betical	.....	.....	.....
order)	.....	.....	.....

II. The groups which you have outlined above may or may not have a name or regular meeting place. If they have, will you kindly insert them in the appropriate space below. If they have not, please supply some description or designation -- some common bond, interest, function, etc. -- by which we can identify this group as being distinct in nature from other groups.

GROUP A .....

.....

GROUP B .....

.....

GROUP C .....

.....

PERSONAL CONTACT CHECKLIST

Name .....

Introductory Information Sheet -- Part II

Personal Contact Checklist

The purpose of this questionnaire is to provide information about the Midwest Social Agency for research purposes. We are interested, not in the responses of any individual as such, but in the over-all pattern of contacts, both business and social, which exists among the members of the Agency.

In the pages that follow, you are asked to check the names of those persons with whom you have contacts (that you communicate with) either during or outside of working hours. Would you kindly state the frequency, nature and importance to you of your contacts. On the following page you will find clear definitions of what we mean by frequency, nature and importance of contact, and detailed instructions.

Personal Contact Checklist

INSTRUCTIONS

I. FREQUENCY OF CONTACT

This means how often you spend some time with a particular person. If you do spend some time with a person, place a check mark under the category which indicates approximately how often this takes place: i.e. Several Times Daily; or Daily; or 2 or 3 Times Weekly; etc.

II. IMPORTANCE OF CONTACT

This means how important this contact is to you. How much would you miss this contact if it did not take place? To what degree does it facilitate your work? How much pleasure do you get from it? Any of these may affect your judgment. Select a number to represent the degree of importance to you: 1 for Very Important; 2 for Some (or Average) Importance; 3 for Little Importance. Place this number in one of the three spaces at the right of the information sheet, under Nature and Importance of Contact.

III. NATURE OF CONTACT

Social and Personal: There are many ways of classifying the contacts that people have with each other. Some of these are not "business" contacts at all, but for the purpose of personal enjoyment. These are called here Social and Personal. Sometimes we mix business and pleasure — in fact, few contacts are strictly business. If a contact is just as much business as social, check both the social and a business category.
Regular Business: These contacts consist of meetings with people which occur at regular times, periodically, and are arranged in advance.
Unscheduled Business: These contacts are impromptu, without previous scheduling, to discuss whatever problems arise in the course of the day's work.

IV. TO SUMMARIZE:

Kindly read through the list of names and check opposite each:

(a) one check under Frequency of Contact
(b) a number (1, 2, or 3) in a category under Nature and Importance of Contact. (If more than one category is used, there will be a number in each category selected).

If no contact is had with a person, nothing will be checked opposite that person's name. Please work fairly rapidly, and be as objective as possible.

PERSONAL CONTACT CHECKLIST

NAMES	FREQUENCY OF CONTACT					NATURE AND IMPORTANCE OF CONTACT (Please Use This Code:) Very Important To Me -- 1 Some Importance To Me -- 2 Little Importance To Me -- 3		
	Several Times Daily	Daily	2 or 3 Times Weekly	Several Times Monthly	Several Times Yearly	Regular Business	Unscheduled Business	Social and Personal
Doe, Jane	____	____	____	____	____	____	____	____
Doe, John	____	____	____	____	____	____	____	____
etc.	____	____	____	____	____	____	____	____
(72 names	____	____	____	____	____	____	____	____
in alpha-	____	____	____	____	____	____	____	____
betical	____	____	____	____	____	____	____	____
order)	____	____	____	____	____	____	____	____

RESEARCH QUESTIONNAIRE

Name .....

Midwest Social Agency

Research Questionnaire

The purpose of this questionnaire is to provide information about the Midwest Social Agency for research purposes. We are not interested in the responses of any individual as such, but only in group patterns which we can then compare with those in other organizations. This is part of a long-term program of research into certain aspects of interpersonal relations. The success or failure of this research depends on your interest and cooperation.

In the pages that follow, you are asked a number of questions about the people and the work at the Midwest Social Agency. Please read the instructions to each question carefully before answering it. Follow the instructions exactly. Answer the questions in their numerical order, and do not turn back to a previous question unless instructed to do so. Please work fairly rapidly, and when finished, enclose in the stamped addressed envelope and mail to us as soon as convenient.

Needless to say, information provided by any individual will be treated with strictest confidence.

RESEARCH CENTER FOR GROUP DYNAMICS

PART I. MIDWEST SOCIAL AGENCY: TOTAL STAFF

Note: When answering the following questions, please think of the staff of the entire Agency, not just your own department.

1. In the Midwest Social Agency, it is likely that some people make a greater contribution than others to what you think of as the organization's goals. These people may or may not be the ones with the highest positions. If, however, you think that they make the greatest contribution to the organization's goals, they are the ones whose absence would be felt most. In this sense, they are the most valuable.

   From the list of persons that follows, would you select the ten people whom you yourself think are the most valuable to the Midwest Social Agency. Place an X beside the name of each. (Please do not name yourself).

Doe, John	
etc.	
(72 names	
in alpha-	
betical	
order)	

Note: When answering the following questions, please think of the staff of the entire Agency, not just your own department.

2. One of the things which makes an organization a good or a bad place to work is the people in it. Whether a person likes to work with the people in her (his) place of employment sometimes makes all the difference between wanting to leave and wanting to remain there. Since at work one encounters, at one time or another almost everyone in the organization, the question that follows refers to the total staff of the Midwest Social Agency.

   From the statements which follow, please select the one which best represents how you feel about the whole M.S.A. staff. Place a (1) in the brackets beside this statement. Then select the statement which next best represents how you feel. Place a (2) beside this statement.

IF I THINK OF ALL THE PEOPLE WHO WORK FOR THE MIDWEST SOCIAL AGENCY AS ONE BIG GROUP,

( ) I LOOK FORWARD WITH ENTHUSIASM TO THE PLEASURE OF WORKING WITH THEM.

( ) I VERY MUCH ENJOY WORKING WITH THEM.

( ) I ENJOY THE TIME I SPEND WORKING WITH THEM.

( ) I ENJOY WORKING WITH THEM A LITTLE.

( ) ALL IN ALL, WORKING WITH THEM IS SLIGHTLY UNATTRACTIVE.

( ) WORKING WITH THEM IS NOT ATTRACTIVE TO ME.

( ) I FIND WORKING WITH THEM QUITE DISAGREEABLE TO ME.

- -

Note: When answering the following questions, please think of the staff of the entire Agency, not just your own department.

3. In the previous question we asked you about how much you liked to work with the other people in the Agency. In this question we are interested in a different aspect of your working at the M.S.A. There are a great many different ways that a person can benefit from working for an organization: one makes a living, advances in one's profession, obtains intellectual stimulation, etc. A person's personal goals may be economic, professional, intellectual, etc. Please try to answer the following question by summing up for yourself the advantages and disadvantages of working for the Midwest Social Agency (apart from the aspect discussed in Question 2).

From the statements which follow, please select the one which best represents how well you are achieving your personal goals, whatever they may be. Place a (1) in the brackets beside this statement. Then select the statement which is next closest to how you feel, and place a (2) beside this statement.

WHEN I THINK OF WORKING FOR THE MIDWEST SOCIAL AGENCY,

( ) I FEEL I AM RECEIVING A TREMENDOUS AMOUNT OF BENEFIT BY WORKING THERE.

( ) I FEEL I AM RECEIVING A GREAT DEAL OF BENEFIT BY WORKING THERE.

( ) I FEEL I AM RECEIVING SOME BENEFIT BY WORKING THERE.

( ) I FEEL I AM RECEIVING LITTLE BENEFIT BY WORKING THERE.

( ) I FEEL I AM RECEIVING ALMOST NO BENEFIT BY WORKING THERE.

( ) I FEEL THAT I AM NOT RECEIVING ANY BENEFIT AT ALL BY WORKING THERE.

Note: When answering the following question, please think of the staff of the entire Agency, not just your own department.

4. In Question 1 you were asked to select the ten most valuable people in the Midwest Social Agency. Please turn back and re-read the instructions for that question. This is being answered, of course, by every person at the Agency.

From the list of persons that follows, place an X beside the name of each person whom you think will select you in Question 1. (It is important that you answer objectively; please try to be neither modest nor defensive).

Doe, John	
etc.	
(72 names	
in alpha-	
betical	
order	

PART II. MIDWEST SOCIAL AGENCY: DEPARTMENTAL STAFF

Note: When answering the following questions, please think of just your own group, as listed below. This list of persons may not contain all those whom you would include in your departmental staff; on the other hand there may be some people on it that you would not include in your work group. However, it is based on the answers to our first Introductory Information Sheet, when we asked people who belonged to their group, and represents the general agreement about group membership.

5. A In the Homefinding Department, it is likely that some people make a greater contribution than others to what you think of as the department's goals. These people may or may not be the ones with the highest positions. If, however, you think that they make the greatest contribution to the department's goals, they are the ones whose absence would be felt most. In this sense, they are the most valuable.

From the list of persons that follows, would you select the five people whom you yourself think are the most valuable to the Homefinding Department. Place an X beside the name of each. (Please do not name yourself).

Doe, Jane
Doe, John
etc.
(17 names
in alpha-
betical
order)

- -

(NOTE: Forms 5B, 5C, 5D, 5E, and 5F, for five different subgroups, were the same as 5A above, except that each referred to a different department, had its own number of choices to be made, and its own list of members. The names of the departments and number of choices are as follows:

Form 5B Boarding Home Department and Children's Counselors - 4

" 5C Training School Placement Service - 2

Form 5D Intake and Infant Department - 2

" 5E Office - 5

" 5F Receiving Home and Maintenance - 2

Each member of the staff received a copy of the Research Questionnaire which included the forms for only his own group in the sub-group sociometry.)

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6. Note: When answering the following questions, please think of just your own group, as listed in Question 5.

One of the things which makes a group a good or a bad place to work is the people in it. Whether a person likes to work with the people in her (his) work group sometimes makes all the difference between wanting to leave and wanting to remain there. Although at work one encounters almost everyone in the organization, the people in one's work group are those one ordinarily has most contact with. The question that follows refers to just your work group, as listed in the previous question.

From the statements which follow, please select the one which best represents how you feel about the people in your work group. Place a (1) in the brackets beside this statement. Then select the statement which next best represents how you feel. Place a (2) beside this statement.

IF I THINK OF THE PEOPLE IN MY OWN WORK GROUP,

( ) I LOOK FORWARD WITH ENTHUSIASM TO THE PLEASURE OF WORKING WITH THEM

( ) I VERY MUCH ENJOY WORKING WITH THEM

( ) I ENJOY THE TIME I SPEND WORKING WITH THEM

( ) I ENJOY WORKING WITH THEM A LITTLE

( ) ALL IN ALL, WORKING WITH THEM IS SLIGHTLY UNATTRACTIVE

( ) WORKING WITH THEM IS NOT ATTRACTIVE TO ME

( ) I FIND WORKING WITH THEM QUITE DISAGREEABLE TO ME.

Note: When answering the following question, please think of just your own group, as listed in Question 5.

7. In the previous question we asked you about how much you liked to work with the people in your group. In this question we are interested in a different aspect of your working in your group. There are a great many different ways that a person can benefit from working in a particular group: one makes a living, advances in one's profession, obtains intellectual stimulation, etc. A person's personal goals may be economic, professional, intellectual, etc. Please try to answer the following question by summing up for yourself the advantages and disadvantages of working in your particular work group (apart from the aspect discussed in Question 6).

From the statements which follow, please select the one which best represents how well you are achieving your personal goals, whatever they may be, by participation in your work group. Place a (1) in the brackets beside this statement. Then select the statement which is next closest to how you feel, and place a (2) beside this statement.

WHEN I THINK OF WORKING IN MY PARTICULAR WORK GROUP,

( ) I FEEL I AM RECEIVING A TREMENDOUS AMOUNT OF BENEFIT BY WORKING IN IT

( ) I FEEL I AM RECEIVING A GREAT DEAL OF BENEFIT BY WORKING IN IT

( ) I FEEL I AM RECEIVING SOME BENEFIT BY WORKING IN IT

( ) I FEEL I AM RECEIVING LITTLE BENEFIT BY WORKING IN IT

( ) I FEEL I AM RECEIVING ALMOST NO BENEFIT BY WORKING IN IT

( ) I FEEL THAT I AM NOT RECEIVING ANY BENEFIT AT ALL BY WORKING IN IT

Note: When answering the following question, please think of just your own group, as listed in Question 5.

8A. In Question 5 you were asked to select the five most valuable people in the Homefinding Department. Please turn back and re-read the instructions for that question. This is being answered, of course, by every person in that group.

From the list of persons that follows, place an X beside the name of each person whom you think will select you in Question 5. (It is important that you answer objectively; please try to be neither modest nor defensive).

Doe, Jane
Doe, John
etc.
(17 names in alphabetical order)

(NOTE: Forms 8B, 8C, 8D, 8E and 8F were sent to the same five subgroups named on page 182. They were identical to the question above except for the name of the department, and the list of members.)

PART III. MIDWEST SOCIAL AGENCY: SOCIAL GROUPS

Note: When answering the following questions, please think of the people in your social group, as listed below. This list of persons may not contain all those whom you would include in your social group; on the other hand, there may be some people in it that you would not include. However, it has been constructed from the answers to our first Introductory Information Sheet, when we asked people who belonged to their group, and represents the general agreement about group membership. It is, of course, just one of many different social groupings which exist.

9. A In the social group listed below, it is likely that some people make a greater contribution than others <u>to what you think of</u> as the <u>group's</u> goals. These people may or may not be the ones with the highest positions. If, however, you think that they make the greatest contribution to the group's goals, they are the ones whose absence would be felt most. In this sense, they are the <u>most valuable</u>.

From the list of persons that follows, would you select the <u>two persons</u> whom you yourself think are the most valuable members of this social group. Place an X beside the name of each. (Please do not name yourself.)

<u>Doe, Jane</u>
<u>etc.</u>
<u>(6 names in alphabetical order)</u>

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(NOTE: Forms 9B and 9C were also made up for two other social groups, of nine and eight persons, respectively. They were identical to the question above, with the exception of the list of names.)

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Note: <u>When answering the following questions, please think of the people in your social group, as listed in Question 9.</u>

10. From the statements which follow, please select the one which <u>best</u> represents how you feel about the people in your social group. Place a (1) in the brackets beside this statement. Then select the statement which <u>next best</u> represents how you feel. Place a (2) beside this statement.

<u>IF I THINK OF THE PEOPLE IN MY SOCIAL GROUP,</u>

( ) I LOOK FORWARD WITH ENTHUSIASM TO THE PLEASURE OF SPENDING LEISURE TIME WITH THEM

( ) I VERY MUCH ENJOY SPENDING LEISURE TIME WITH THEM

( ) I ENJOY THE TIME I SPEND SOCIALLY WITH THEM

( ) I ENJOY SPENDING LEISURE TIME WITH THEM A LITTLE

( ) ALL IN ALL, SPENDING LEISURE TIME WITH THEM IS SLIGHTLY UNATTRACTIVE

( ) I DO NOT REALLY ENJOY THEIR COMPANY SOCIALLY

Note: When answering the following question, please think of the people in your social group, as listed in Question 9.

11. A In Question 9 you were asked to select the two most valuable persons in your social group. This question is being answered, of course, by every person in that group.

From the list of persons that follows, place an X beside the name of each person whom you think will select you in Question 9. (It is important that you answer objectively; please try to be neither modest nor defensive.)

Doe, Jane
etc.
(6 names in alphabetical order)

(NOTE: Forms 11B and 11C were also made up for two other social groups, of nine and eight persons, respectively. They were identical to the question above, with the exception of the list of names.)

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