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COMMUNICATION ROLES AS PREDICTORS OF MOTIVATION TOWARD PRODUCTIVITY UNDER THE CONDITIONS OF GROUPNESS AND ORGANIZATIONNESS

The University of Oklahoma PH.D. 1980

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MICHAEL L. LEWIS

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Communication Roles as Predictors of Motivation Toward Productivity Under The Conditions of Groupness and Organizationness

INTRODUCTION

Organizational communication emerged in 1950 as an identifiable entity in scholarly literature, largely borrowing its concepts and variables from social psychology, organizational psychology, sociology, administrative sciences, economics, political science and public speaking (Redding, 1979a). Perhaps, as a direct result of its diverse multidisciplinary roots, development of a coherent theoretic approach to the study of organizational communication is difficult. During the past quarter century the study of organizational communication has grown to attract increasing numbers of students, ink in journals and employment notices among professional placement services.

While research activity under the rubric of organizational communication flourishes, the usefulness of organizational communication research is often indicted as atheoretical (Richetto, 1977), lacking identity (Roberts, O'Reilly, Bretton and Porter, 1974), appearing as a series of disconnected variables (Porter and Roberts, 1976) and even providing unpatterned, disorganized "twaddle" (Luthans, 1973). The core issue of such critiques often identifies the difficulty in linking various pieces of research together devoid of some sort of comprehensive framework. Thus, the products of organizational communication research often appear as conceptual islands, an outcome of the preoccupation with investigating convenient variables separate

from a philosophical or ideological context (Redding, 1979b).

In response to this problem of "disconnectedness," several are calling for an approach which emphasizes the central linking properties of communication activities. W. Charles Redding (1979b) encourages the development of "integrative theories" which bring together various philosophical perspectives in organizational communication. Porter and Roberts (1976) echo Guetzkow's (1965) call for a "clarifying perspective" which allows various pieces of research to fall into a whole, rather than remaining "hidden." From such a position, creative theory construction would not only provide a framework for asking new questions, but it also generates summarizing propositions about previous inquiry, integrating the past and thus enhancing its usefulness to the theorist and the practitioner.

This inquiry seeks to use an integrative approach (explained in Chapter I) to examine communication in organizations. The purpose of this effort is to investigate the value of such an approach in predicting employee motivation toward job productivity. The rationale for this study focuses on an integrative framework for organizational communication centering on the symbolic exchange between people. The way people use symbols provides information about both psychological and social life examined under the umbrella of communication roles. The human use of symbols reflects ways organizations are patterned, managed, and influenced by their environments. Therefore, ways individuals and groups use symbols should provide useful insights into how they cognate their world,

achieve solutions to problems, and how internal-external conditions interrelate.

Investigation of these relationships is often examined under the general heading of motivation. Organizational theorists often assume a highly "motivated" worker is a productive worker. A worker, however, may be highly motivated toward a variety of goals (Katz and Kahn, 1978). The same level of motivation in one case may be expressed in quality of performance, in another case toward conflict with a managing superior, in a third case toward refusal of promotions.

The general research question of this study examines the possibility of communication activity predicting the goodness of fit between motivation and productivity in a variety of organizations. This general question is developed, investigated and discussed in five chapters of discourse.

Chapter I discusses the merit of examining communication activity through the properties of various communication roles and the properties of actors who occupy those roles. This position is derived from viewing communication as the intrinsic and extrinsic function of human symbol usage by individuals and groups.

Chapter II examines two key problems facing organizational theorists, productivity and motivating workers for productivity. The notion of groupness and organizationness is introduced as a vehicle to investigate the association of communication roles with an organization's emphasis on an external locus of control and/or internal locus of control for motivating workers to produce. Three variables are identified which should indicate the

viability of the groupness and organizationness distinction.

Chapter III discusses the specific expectations of this study, the samples in which data is gathered, and the data analysis this effort employs.

Chapter IV describes the results of this study in detail and discusses the data analysis in light of the underlying principles of the study.

Chapter V discusses the implication of this study's results and suggests future directions for further research.

CHAPTER I

AN INTEGRATIVE APPROACH TO COMMUNICATION

This study employs an integrative approach to the study of human communication developed by Cummings, Long and Lewis (in press). Their position grows out of the work of Dance and Larson (1972) and that of Thayer (1968), although major shifts in emphasis make their perspective sufficiently distinct to require detailed discussion.

Human Communication as Symbol Usage

Communication research, beginning with the framing of a research question to data interpretation and discussion, is often anchored in the researcher's conceptual position on the nature of communication (Lewis, Cummings and Long, 1979). Communication as an area of study embraces widely varying, even contradictory definitions of what should be the focus of communication as a discipline. Some define communication by its flow patterns (Luthans, 1973; Rogers and Rogers, 1976; Walford, Gerloff and Cummins, 1977; Farace, Monge and Russell, 1977; Goldhaber, 1979); others define communication by its effects (Lasswell, 1966; Ellis, 1976, Owen, Page and Zimmerman, 1976); still others define communication as carriers of meaning (Heron, 1942; Baird, 1977). Deciding what is communication seems fundamental as a guide to communication research. Budd (1977) implies recent research trends of narrow communication definitions contribute to the emergence of a more fragmented and uncoordinated pattern of study. He notes, "While we have

increased considerably the volume of output..., we have lost some of our global impact (p. 32)." Although a continuum of definitions ranging from the very narrow to the very broad are available, the writer asserts communication is best understood by focusing on that which is human about human communication (Dance and Larson, 1972; Dance, 1979; Dance, 1980).

That which distinguishes human from animal communication is the ability to use symbols as tools in ways which clearly indicate higher mental processes. Thus, human communication examines the symbolic interactions of people (Lindesmith, Strauss, and Denzin, 1977). Such a perspective is sufficiently broad to accommodate widely varying interests; yet, narrow enough to specify what behaviors are not communication. Dance (1979) would describe this position as oriented toward a "primitive theory" of human communication, since this approach is derivable fundamentally from within the conceptual structure of the discipline itself. Similarly, this position is contrary to a selected approach which is borrowed from ideological principles found outside of the communication discipline. From the standpoint of the communication discipline, it is imperative that organizational communication scholars first be communication scholars, message-centered in their approach when examining ways human communication functions in organizations or any other social setting of concern.

The Functions of Communication

The term function is selected to describe human symbol usage. The term is used in a variety of ways in social science

research (Isajiw, 1968). An example of such research is the work of Katz and Kahn (1978) who use the term function as part of their General Systems terminology to describe organizational process. While the writer uses the term differently, Katz and Kahn's distinction between intrinsic and extrinsic functions is a useful point of departure. Such an approach differs from that offered by Dance and Larson (1972), and to a lesser degree from Thayer (1968).

An intrinsic function of communication is the usage of symbols which are the inevitable result of interacting internal properties of living systems. Living systems are defined as ranging from a single individual to any social level (Ruben and Kim, 1975). Intrinsic functions are similar to what Dance and Larson (1972) describe as function. The concept is analogous to a living organism which processes food. It is a natural process based on the interaction of various biological subsystems. Similarly, the intrinsic functions of symbols is a natural process based on the interaction of various psycho-biological subsystems.

The extrinsic functions of the symbolic exchange recognize that living systems are open, not closed, living in a larger environment. It is concerned with the uses, or what Dance and Larson term "purpose," identified by the external goals of a system (individual, social group, or organization) as part of the adaptive process of that system to conditions in the environment. Different from General Systems theories, this approach is less concerned about beginning or ending states as a teleo-

logical explanation of the on going life functions of that system. For example, extrinsically an organism may seek the shade of an elm tree, or collaborate with other organisms in the hunt for food. Similarly, symbols function extrinsically for a single person to "collaborate" with other humans in that person's environment.

Communication may be viewed as functioning in at least four recurrent, overlapping, non-independent, yet discernable ways. Each usage of symbols holds intrinsic and extrinsic dimensions. Symbols function to: 1) represent and/or share experience (Mortensen and Sereno, 1970; Bormann, 1972; Delia, 1972; Berg, 1972; Mortensen and Arntson, 1974), 2) identify solutions and problems (Fisher, 1970; Stech, 1970; Burgoon, 1971; Wilder and Harvey, 1971; Gouran and Baird, 1972), 3) manage conflicts (Scott and Smith, 1969; Hawes and Smith, 1973; Buchi and Pearce, 1975; Ruben, 1978), and 4) regulate behaviors (Andrews, 1970; Simons, 1971; Rosenthal, 1971; Pearce and Brommel, 1972). While an argument could be made for additional or contrary taxonomy of functions of symbols, these represent an important beginning point for the integration of previous communication studies. Furthermore, these functions permit the application of some of the principles of concern to both structural theorists and General Systems Theorists. These functions will be briefly outlined on four levels; 1) intrinsic functions of symbols for a single individual, 2) extrinsic functions of symbols for a single individual, 3) intrinsic functions of symbols for the social group, and 4) extrinsic functions of symbols for the

social group. A social group is defined as a collective of humans, which has definable structures and purposes joined in coalition (collaborating) for its own maintenance and adaptation to the real or imagined world of experience. This discussion permits the application of a functional approach to such complex social groups as the organization.

Intrinsic Functions of Symbols for a Single Individual. First, symbols are a tool function for psychological and social life, representing a person's experience, real or imagined. They are arbitrary indicators of human experience which an individual may use to represent that which is rewarding or punishing, liked or disliked, existent or non-existent, in motion or static, located in time, and disposed or indicative (Cummings and Renshaw, 1979). Communication research traditions which center on information processing are related to this concern, and may be viewed as part of the study of intrapersonal "communication."

Second, symbols are a tool function to identify problems and solutions in one's experience, real or imagined (Guilford, 1967). The process is analogous to early steps in the "reflective thinking" emphasis of Dewey (1910). In abbreviated terms, Dewey suggests the reflective thinking process is sequenced such that a difficulty is felt, the problem is defined, criteria for solutions are considered, possible solutions are listed and evaluated, and a solution is accepted. Subsequent work in the psychology of problem solving either confirms or makes minor variations in Dewey's position (Wallas, 1926; Rossman, 1931; Miller, 1960;

Guilford, 1967). Intrinsically for a single individual, the problem/solution-seeking function occurs bio-psychologically and involves the simulation of solutions to problems through the use of symbols (Johnson, 1955; Johnson, 1962). Again, this is related to information processing, and intrapersonal "communication."

Third, symbols are a tool function to negotiate differences (internal cognitive conflicts) within one's experience, real or imagined (Mills, Aronson, and Robinson, 1959; Rosen, 1961; Adams, 1961; and Brock and Balloun, 1967). Discrepant information, including competing solutions to problems, requires "negotiation" of those differences. Whether the process is best understood in the theoretic framework of cognitive dissonance, or some other set of constructs, it is clear that humans do require some level of resolution of discrepant solutions to problems. Symbols function here to "simulate," or explore through trial-and-error those discrepancies (Johnson, 1962; Berlyne, 1967). Information processing and intrapersonal communication include these issues.

Finally, symbols are a tool function to regulate one's own behavior or experience, real or imagined. Such a function recognizes the extensive literature in communication, describing the process of self-persuasion (McGuire, 1969; Jones, 1966; Beisecker and Parson, 1962). The symbols individuals use have an effect, consciously or not, on the user of those symbols. Intrinsically, symbols serve to focus memory, even distorting and changing it (Widgery and Miller, 1972). Indeed, the self-persuasive properties of symbols are not unlike those psycho-

logical consequences outlined by Kelman (1958) as the process of socialization. Although Kelman's concepts were centered on interpersonal behavior, it is reasonable to speculate that people can use their symbols to produce self-induced compliance, identification, and internalization of ones own experience through the use of symbols. To the writer's knowledge, little research in communication views the intrinsic functions of symbols in this way, although it could be a source of many interesting hypotheses. Again, as before, these are topics which concern information processing and intrapersonal "communication," the validity of which must be determined. For the present, these topics lie outside the purpose of this study.

Taken together, these four intrinsic functions of symbols combine many areas of empirically-based traditions in communication research: information processing, cognitive principles in problem/solution identification, issues in conflict resolution such as the homeostatic theories of cognitive dissonance, and self-behavior modification as expressed in the self-persuasion literature. These intrinsic functions recognize the valuable contributions of these areas, yet this approach sorts these studies into those which are primarily psychological in nature and emphasize the significant question of how humans "handle" symbols. In summary, then, symbols function to 1) process information about our experience, 2) identify problems and solutions which exist in our cognitive experience, 2) resolve, or at least manage our internal conflicts, and 4) modify our own behavior and socio-psychological life. While it may be

said that this listing oversimplifies the body of research on these topics, it does provide--at a necessarily abstract level--a basis for integrating those principles into a larger schema of concerns. It incorporates into a larger perspective the numerous definitions of communication described earlier. At the same time, it begins to address the concerns of Redding (1979b), Porter and Roberts (1976), and Guetzkow's (1965) who urge the adoption of perspectives which allow various pieces of research to fall into a whole.

Extrinsic Functions of Symbols for a Single Individual. It is at this point the discussion turns to consider symbol-using in a communication context. The writer views communication as a social act of humans who collaborate through the use of symbols. The intrinsic function of symbols for a single individual is an act of information processing, but is inappropriately termed as intrapersonal "communication" (Scott, 1977).

First, symbols are a tool for a single individual to share information about one's experience, real or imagined, with others. This assertion is not new, for it has been studied in the public speaking (Hart, Friedrich, and Brooks, 1975), small group (Gibb, 1969), organizational (Cyert and MacCrimmon, 1969), and socio-political (Sears, Freedman, and O'Connor, 1964) arenas. Indeed, any setting where a single individual produces symbols for the consumption of others can be viewed extrinsically. Through the study of the extrinsic functions of symbols, relationships between people become meaningful (Lewis, 1948;

deLaguna, 1927). Through symbolic interaction, people give others their experiences through their own use of symbols, and perceive the experiences of others through their use of symbols.

Second, symbols are a tool for a single individual to identify problems and solutions, real or imagined, with others (Lorimer, 1929; Hiller, 1933; Kelley and Thibaut, 1969). Through symbolic interaction, individuals seek solutions to problems with other individuals. Numerous research traditions may be viewed as related to this proposition, e.g., game theory (Steinfatt, 1973). While the intrinsic function of problem/solution identification was viewed earlier as a psychological phenomena, here it is viewed as a social act.

Third, symbols are a tool of a single individual to resolve conflicts, real or imagined, with others (Zajonc, 1960; Rappoport, 1965; Powell, 1974). It is doubtful there is a single basic text in communication which does not address the problem of conflict resolution between two or more people. The assertion here is that symbols are a tool of a single individual to resolve those conflicts, a significant extrinsic function of a single individual as a social act. Earlier, the intrinsic function was discussed as a psychological intrapersonal activity, focusing on resolving conflicts associated with information discrepances. Here, it is a social, interpersonal act of collaboration through symbol usage.

Fourth, symbols are a tool of a single individual to change the behaviors, real or imagined, of others (Bettinghaus, 1973; Burke, 1962). This is a recognition of the function of symbols

as holding persuasive properties, in this case persuasive of those who audit symbol users. While the intrinsic function of symbols to change behaviors was viewed before as a self-persuasive, psychologically targeted activity, the extrinsic function of symbols centers on the persuasion of others, again a social, interpersonal activity.

Scott (1977) argued that communication, viewed as intentional and social, is necessary though not sufficient for the study of communication. He argued that "intrapersonal communication" tends to ignore the sociality of communication, while others who attempt to define intentionality as a "speaker's purpose" are equally defective. He concluded that "intention" must be grounded in some prior notion of "intentionality." One might view this functional approach to communication as a conceptual schema for the study of intentionality. It may be that "functions" are "intentional," although the tendency to associate psychological or social awareness of those who use symbols is not required (Kimmel, 1975). These functions may be viewed as intentional in that they "act" in discernable ways on both the psychological life of the symbol user (intrinsic), and upon the auditors of those symbols (extrinsic) as a social activity.

Each of these four extrinsic functions recognizes, though in an abstract way, at least four general areas of research which have guided communication study. The first recognizes the importance of information exchange in interpersonal communication; the second, the value of communication in identifying task or interpersonal problems with others; the third, the significance

of communication in resolving interpersonal conflict, and lastly, the rhetorical dimension of communication as a persuasive act.

When a single individual communicates, this perspective argues--as many before have--that symbols both process information for the symbol user, and share information with those who audit; that symbols are used to solve both cognitive problems of the symbol user, and interpersonal problems shared with auditors; that symbols negotiate both internal conflicts of the symbol user, and interpersonal conflicts between symbol users, and that symbols change the behaviors both of those who use them, and those who are their targets. Thus, analysis of symbols used by single individuals has the simultaneous properties of the intrinsic and extrinsic functions described above.

Intrinsic Functions of Symbols for a Social Group. A group may be defined as an interdependent collection of people (Lewis, 1963), an instrument for satisfying individual needs (Cattell, 1951), and/or those who share a common set of goals (Proshansky and Seidenberg, 1965). A group may be characterized by the interaction of its members and the mutual effect of that interaction on the group as a whole and members individually (Gibb, 1968). Analysis of the communication of the social group is hierarchical to analysis of the single individual. Symbols hold an intrinsic function for each member of the group, and an extrinsic function for those members as they communicate within that social group (Lewis, Cummings and Long, 1979a). The social group represents a hypothetical boundary for defining those who are members of the group, and those who are not. Symbols used extrinsically by

individuals become intrinsic functions for that group, providing a transitional construct for the understanding of the use of symbols extrinsic to the social group. In this way, the functions of symbols are seen hierarchically as a bridge from the psychologically-based intrinsic functions of individuals, to the socially-based intrinsic functions of individuals, to the socially-based extrinsic functions of individuals. And, in turn, it defines those functions which become definably intrinsic-extrinsic in increasing levels of social complexity.

First, symbols function as tools to share experiences of group members about their psychological and social life, real or imagined, with other members of the group. Through this symbolic exchange, or interaction, a social group collaborates to symbolize both internal and external experiences of that group. This is similar to Johnson's (1977) notion of "organizational intelligence," whereby symbols represent social experiences.

Second, symbols function as tools to identify problems and solutions for group members, real or imagined, with other members of the group. The ability of a group to identify problems and solutions with each other is directly related to the group's skill in the symbolic exchange (Fisher, 1974; Hare 1976; Shaw, 1976).

Third, symbols function as tools to negotiate differences of group members, real or imagined, with other members of the group. Perceptions of the task of a group, along with solutions advocated by members, require negotiation of differences if the group remains intact. Much of the research on group decision-making, emphasizing those properties where conflict results, is properly included in this area.

Finally, symbols function as tools of group members to regulate the behaviors, real or imagined, of other members of the group. Much of that research literature centered on the role of conformity within groups is illustrative of this principle, as is literature on cohesion, treatment of deviate behaviors, isolation, and coalition formation. All involve symbolic activity aimed at persuading other members of the group.

The intrinsic functions of symbols in the social group point to the value of studying within that context information exchange within the group, identifying group problems/solutions, management of conflict within the group, and methods of achieving conformity by which behaviors of members conform to each other within the group. Furthermore, this approach emphasizes throughout the symbolic acts that those functions extrinsic to the individual are hierarchically significant to their intrinsic function within the group itself.

Extrinsic Functions of Symbols for a Social Group. Intergroup relationships are important settings, basic to the understanding of the more socially complex organization (Allport, 1958; Lewis, 1963; Sherif, 1958, and Deutsch, 1961). It is clear that the organization is not just inter-person, but inter-group. Organizations are comprised of person-person, person-group, and group-group communication, whereby symbols are utilized intrinsically and extrinsically at each hierarchical level. Significant to this is the understanding of the extrinsic functions

of symbols for a social group whether that be inter-group or group-to-person communication.

First, symbols are a tool of social group's experiences about the psychological and social life, real or imagined, of that group with those individuals or groups external to the social group. Thus, one is able to examine how groups (and organizations) present themselves to the entities of their environment, and how others external to groups and organizations symbolize their experience.

Second, symbols are a tool of a social group to identify problems/solutions, real or imagined, of that group with those individuals or groups external to the social group.

Third, symbols are a tool of a social group to manage conflicts, i. e., negotiate differences, real or imagined, of that group with those individuals or groups external to the social group.

Fourth, symbols are a tool of a social group to regulate the behaviors, real or imagined, of those individuals or groups external to the social group.

The view that symbols have an intrinsic and extrinsic function, both for an individual and any collectivity at any level of complexity, distinguishes those constructs which are primarily psychological from those that are social. When symbols are viewed as having the functions of representing information, identification of solutions/problems, managing conflicts, and regulating behaviors, a symbolic function position fuses the intrinsic and extrinsic into identifiable communication proper-

ties which denote the simultaneous properties of psychological and social life. These functions serve to integrate both psychological and social constructs required for a comprehensive understanding of communication. At the same time, the symbolic base for the functions, i. e., these functions are about symbols, meets the "primitive" theory properties described by Dance (1979), and addresses the ideological problems which concerned Redding (1979).

Any understanding of organizational communication from this perspective requires that it be viewed as a symbol-using collective, where symbols have intrinsic functions for individuals and groups, and similarly, extrinsic functions for individuals and groups. It requires that communication, viewed as a social act, is the extrinsic function of symbols for individuals, and both intrinsic and extrinsic functions of symbols for groups. In addition, this widens the scope of organizational communication study to incorporate both those symbols which function intrinsic to the organization, and those which are extrinsic. Organizational communication is seen as the extrinsic function of symbols characteristic of interpersonal and inter-group communication, and as the intrinsic function of symbols characteristic of information processing and "intra"-group communication. All are intrinsic to the organization, similar but not delimited to Likert's (1967) defining of the importance of communication as an "intervening variable." However, the perspective described in this chapter also suggests that organizational communication study address

Questions concerning the extrinsic function of symbols whereby the organization uses symbols as a tool of that organization to: 1) share experiences about psychological and social life, real or imagined, of that organization with other individuals, groups, and organizations external to that organization, 2) identify problems/solutions, real or imagined, of that organization with those individuals, groups, or organizations external to that organization, 3) manage conflicts, real or imagined, of that organization with those individuals, groups, or organizations external to that organization, and 4) regulate behaviors, real or imagined, of those individuals, groups, or organizations external to that organization.

FROM SYMBOLIC FUNCTIONALISM TO ROLE THEORY

A significant concern requires attention: The functional perspective outlined here does not deal with distinctions between users of symbols and "consumers" of them. It does not deal with the content of the information, i.e., the problems or solutions to be identified, the conflicts to be negotiated, or the behaviors to be regulated. What is required is a theoretic system which permits integration of these functions into a schema which also accounts for users and auditors of the symbols. If possible, such a theoretic system ought to expand the concepts which permit addressing psychological and social dimensions of communication. The writer asserts that role theory offers a viable possibility to achieve this.

A Communication Role Taxonomy

The concepts of communication roles integrate two major kinds of questions: What are the properties of roles in communication which define social relationships; and, what are the psychological properties of actors when they occupy each of those communication roles?

For Thayer (1968), the property of communication roles to be abstracted was "rules," taking him to a concept currently popular in our field--that of communication competency. That is, communicators have roles which take the form of "recipes" or guidelines for evaluating "the appropriateness of one's own (communication) behavior in specific situations according to the role or roles one assumes he (or the other) is supposed to be playing-out in those situations (p. 80)."

This perspective views communication as normative, relative to a taxonomy of roles which represent social position or status, power or authority, etc. This concept of communication roles is overly narrow, requiring a fresh, critical examination (Sarbin and Allen, 1968). A communication role approach must respond to the need for integrating psychological and social concerns (Rommeveit, 1955), and must clarify past research (Guetzkow, 1965; Porter and Roberts, 1976). While communication is a social act, investigating the psychological properties of actors reflected in the prism of roles broadens explanation of the social dimension of communication. Conversely, a communication role approach requires an innovative construction of how to study roles.

Communication Roles

Occasionally a communication student in a graduate seminar will face a professor who asks: "What do we know for sure about communication?" With considerable hesitation and pessimism, one may respond with bits of knowledge about the properties of sources of communication, and the properties of receivers.. No one today seriously argues that the old "models" of source, message, channel, and receiver are adequate to explain communication process. Yet, it remains that these concepts hold an organizing capability as one summarizes the vast amounts of research in the area. Nearly any textbook or review of literature (McGuire, 1969) identifies these as points of departure.

One way to circumvent the problem of isomorphism between these old "models" and the communication process, and yet retain their theoretic content, is to reconstitute all or part of them in a different perspective. Thus, the concepts of source and receiver may be useful, particularly when utilized to identify "roles" important to communication. In this way, meta-theories such as systems, rules, or covering laws need not eschew the vast resource of knowledge about sources and receivers.

Researchers also found that the content of communication--whether about work, or personal psychological status--remains a meaningful construct, although the bases for conducting such research seems to have passed. The content of communication can be varied as the imagination will allow; however, the liter-

ature over nearly 30 years is quite clear that this task-person distinction is valuable (Goldhaber, Yates, Porter , and Lesniak, 1978).

Taken together, Cummings, et. al. (in press) suggest three dimensions (though not independent) of communication role categories, including symbol function, source/receiver, and task/personal, which represent a beginning point for understanding organizational communication. A role taxonomy, which identifies in some meaningful way who is behaving, does not require the eschewing of rules for role theory; it makes rules a separate, though not independent, concern.

Thayer (1968) was required to use a taxonomy of "behaviors" taken from other disciplines, e. g., sociology, and communication became a "rule-governed" behavior, rather than a behavior to be studied empirically. Most communication researchers have restricted themselves to role inventories identified by other disciplines. Economists, for example, identify what are called "producer" and "consumer" roles (Simon and Stedry, 1969). Educators identify "teacher," "administrator," and "student" roles (Getzels, 1969). In these cases, roles begin with the behavior, not the rules for behavior.

Katz and Kahn (1978) assert that Linton (1936) was probably the first to use the concept of role in the social sciences. They note that Newcomb (1951) transported the concept from anthropology to social psychology; Parsons (1951) and Merton (1957) utilized role to understand social action and structure.

Katz and Kahn gave the concept of roles a central place in their theory of organizational behavior. They viewed the organization as a system of roles, defined both formally and informally. They asserted such roles hold significance carrying theoretic content from organizational research, such as liaison, supervisor, subordinate, peer, etc. Other researchers in other areas have done similarly. Several communication scholars borrow these terms for roles, transporting them to communication activity (MacDonald, 1977).

Communication scholars cannot, however, ignore the important work of other disciplines in the understanding of human and social behaviors. A communication position is required which is capable of interfacing with Parson's theory of social roles (1965), or Kelman's (1958) psychology of socialization through role enactments. Therefore, precedence exists to search for a communication role taxonomy which identifies "behaviors," not necessarily those normative rules which characterized the work of Thayer.

A general difficulty in communication research, and with role theory particularly, is that identified by Redding (1979b), who observed that communication scholars tend to investigate variables separated from ideological contexts. They borrow role taxonomies which represent behavior constellations, the content of which is social psychological, sociological, etc. In reference to role theory, such usage of role theory in the communication discipline, whether through the application of

a "rules" orientation, or the identification of role "behaviors," which have sociological or psychological content, usually have little communication bases. Role taxonomies generated outside the communication field make difficult the pursuit for an interface between what communication theory says and what others say. Often communication scholars appear to be "opportunists" who tie their communication content to the theories constructed by others.

The taxonomy of communication roles described here provides that bridge, whereby one may ask what communication role behaviors characterize those who occupy "supervisor roles," or "subordinate roles." Thus, role concepts from one discipline interface with role concepts in others. Cummings, et. al. (in press) discuss three dimensions of communication role categories. They are as follows:

First, a source role occurs when an individual produces symbols, oral or written. A receiver role occurs when an individual "consumes" symbols, oral or written. This distinction is justified, not only because of its history, but because it remains viable, particularly in the recent communication competency research (Darnell, 1978; Allen and Brown, 1976; Basset, Whittington and Staton-Spicer, 1978; Larson, Backlund, Redmond and Barbour, 1978).

Second, a task role occurs when an individual is a source or receiver of symbols, the content of which is about work. A socio-emotional role occurs when an individual is a source or receiver of symbols, the content of which is about person-

related needs. These distinctions are not new, either in communication theory or organizational behavior (Hare, 1976). However, they are meaningful in the theoretic context outlined here.

Third, the dimension of roles concerns uses for which symbols are produced by humans. An information-giving role occurs when one makes "indicative" statements about his own experience. An information-asking role occurs when one asks questions about other people's experiences. A problem-identification role occurs when an individual uses symbols to define the nature and scope of a problem (Guilford, 1967). A solution-identification role occurs when one uses symbols to represent possible solutions to problems, a kind of "solution-fitting" activity. A negotiation role occurs when an individual communicates to select one or more solutions over others. More meaningful, perhaps, is the "style" of resolving conflicts (McGuire, 1969). A win-lose negotiating style occurs when one attempts to gain acceptance of a solution through exercise of power; a lose-lose negotiating style occurs when an individual attempts to gain acceptance of a solution through compromise, and a win-win negotiating style occurs when an individual attempts to gain acceptance of a solution which is best for all parties in the negotiation. Behavior change roles occur when an individual communicates to modify the behavior of another in at least one of three ways (Kelman, 1958). The use of symbols representing rewards and punishments characterizes a compliance role of behavior change; identification role of behavior change occurs when symbols are used to indicate liking-disliking

relationships between communicators, and an internalization role of behavior change occurs when symbols are used to persuade on the basis of logic and reason.

Generally, roles represent the basic unit of analysis for understanding social relationships (Parsons, 1965). However, it is generally the largest unit for describing psychological properties. Within the context of role theory, we emphasize these psychological-affective properties when we address the properties of actors. These are beyond the intrinsic functions of symbols for single individuals which emphasize psychological-cognitive properties of actors.

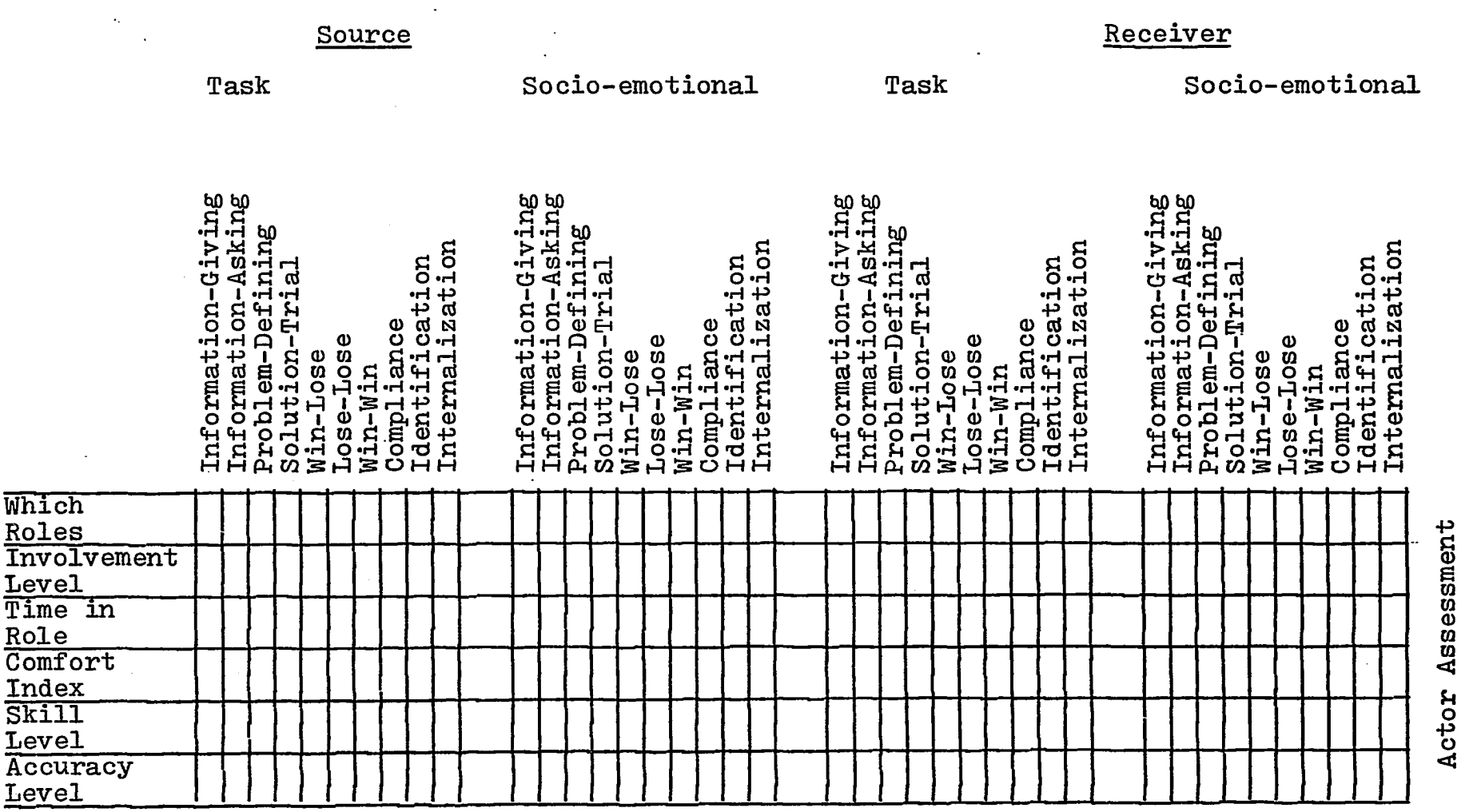
The Properties of Actors

Theorists may ask a variety of questions about individuals (actors) who occupy various communication roles. Sarbin and Allen (1969) describe traditional role theory as examining such variables as an actor's perception of his role enactments, expectations, location demands, congruence and skill. Similarly, Cummings, et. al. (in press) suggest examination of effective actor properties such as: 1) the number of different communication roles actors occupy (Goldhaber, et. al., 1978); 2) the level of involvement actor's perceive in each communication role (Berger, 1972, Bodaken, 1977; Long, 1979); 3) the amount of time actors spend in various communication roles (Goldhaber, Yates, Porter and Lesniak, 1978); 4) the level of comfort actors experience in various communication roles (Daly and McCroskey, 1975; Wheeless, 1975; Scott, McCroskey, Sheahan,

1978); 5) the amount of skill in various communication roles which actors perceive they hold (Richetto, 1969; Falcione, 1974); and 6) the degree to which communication roles are accurately understood by actors (Goldhaber, et. al., 1978). These questions are but a sampling (not all-inclusive) of the kind of concerns that can be raised about actors in communication roles (See Figure One).

The basic ingredients outlined in this chapter form the framework for what is termed a "communication roles perspective." This approach is still in its exploratory stages of development. In its initial applications the communication role categories of source, receiver, person, work, information exchange, solution seeking, conflict resolution and behavior change appear empirically identifiable (Long, 1979). How individuals enact various communication roles can predict job satisfaction (Long, 1979; Cummings, Lewis and Long, 1980) and indicate ones management preference (Long, 1979; Lewis, Cummings and Long, 1980). However, a central motivation for developing the communication role position was to seek a theoretic vocabulary which extends beyond the traditional communication settings which characterize the discipline. The writer believes this type of perspective would be useful in explaining and predicting central concerns of organizations (i. e., motivation and productivity). Thus, this chapter sets the stage to discuss certain key issues facing organizational theorists and how the notion of groupness and organizationness, growing out of a communication role perspective, may provide a useful means of investigating such issues.

FIGURE 1: Communication Role Matrix



CHAPTER II

MOTIVATION AND COMMUNICATION

This chapter discusses the outcomes of functioning organizations, how different approaches to motivation are anchored in these outcomes and how the notion of organizationness/groupness may be useful in associating communication with approaches to motivating workers toward productivity. The writer suggests different approaches to motivation hold communication value requiring a conceptual vehicle in order to locate issues requiring explication.

The Outcomes of Organization

When a human system is examined, two basic outcomes-one intrinsic, the other extrinsic- are usually of critical interest (Von Bertalanffy, 1968). In the course of an organization's operation some things occur with external consequences, some things occur with internal consequences. These occurrences are the extrinsic and intrinsic products of the organism. Productivity is an extrinsic outcome potentially measured at a variety of hierarchical levels. Gratification is an intrinsic outcome potentially measured at a variety of hierarchical levels.

Productivity at the individual level could be examined through measures such as absenteeism, turnover, piece-rates, number of complaints or subjective perceptions of value. On the group level, productivity can be calculated by a cost-per-unit ratio (comparing time expenditures to value of items produced) or by comparing one work group with others. Productivity may be assessed at

the organizational level by total profits, total sales, total membership, or total financial resources available as compared with previous periods of time (Sutermeister, 1963). Thus, productivity often is examined at a variety of levels all fitting into the broad area concerned with task achievement.

Gratification often is examined at the individual level by studying job satisfaction. At the group or organizational level, it is assessed through a study of interpersonal relationships. All of these issues could fit into a broad area concerned with socio-emotional achievement.

The exact relationship between gratification and performance is conceptually related to the traditional questions relating attitude to behavior. For the purposes of this study, "the answer" to such questions is not as important as noting the impact answers hold for organizational theory. For example, a classical style of management tends to de-emphasize worker gratification as a necessary condition of productivity. Instead, the emphasis is on environmental control, rules and procedures, formalized divisions of authority and clearly specified production standards in order to insure productivity (Taylor, 1923; Weber, 1947). At the other extreme, a human resources orientation to management describes the human factor in organizations as holding high importance. This management style suggests productivity will result when the ego and social needs of workers are satisfied by employee-oriented, group-centered, participative supervision (McGregor, 1960; Likert, 1967). Of course, the majority

of management styles suggests some sort of combination of concerns for both worker gratification and worker output. A management style is in many ways an organization's response to the question: What is the best way to motivate workers to be productive? Furthermore, which approaches foster motivation in light of the differing emphases on the intrinsic/extrinsic outcomes of organizations?

MOTIVATION

Frequently, industrial and organizational psychologists suggest performance is the product of ability and motivation (DuBrin, 1978). However, performance is not synonymous with effort, ability, or a combination of the two (Katz and Kahn, 1978). It may be more meaningful to view motivation as a series of individual choices to initiate effort and to persist in expending effort over time. Thus motivation has to do with a set of independent/dependent variable relationships that explain the direction, amplitude and persistence of an individual's behavior toward some goal(s) (Campbell and Pritchard, 1976).

Several major alternatives to motivation may be identified which permit a grouping of motivation theories for comparison and contrast. This section briefly discusses three general kinds of motivational theories: 1) The extreme mentalistic; 2) the extreme environmentalistic; and 3) middle theories. This general way to organize motivational theories highlights fundamental philosophical differences in motivating workers in organizations.

The Extreme Mentalistic Approach

The extreme mentalistic approach suggests motivation is determined by an individual's internal needs or drives. The historical roots of this position date back to the late 1800's and William James who describes the concepts of instincts and unconscious motivation. Later Sigmund Freud argued that existence of unconscious motivation implies one is not aware of all self desires, and that this motivational force is directly tied with instinct (Hilgard and Atkinson, 1967). McDougall (1908) described the term instinct as an innate disposition which predetermines the organism to perceive or to pay attention and act toward any object. In the early 1900's the term "drive," first coined by Woodworth (1918), replaced the concept of instinct in describing an organism's overall activity level.

Building upon the drive concept, Lewin (1951) postulated that individuals hold certain physiological and psychological needs. Two consequences were thought to flow from the existence of an individuals need structure. First, needs create a state of tension which (second) drive the individual to relieve the tension through appropriate action. Lewin viewed the force on an individual to be a combination of the push of need tensions and the pull of highly preferred outcomes. Thus, what an individual expected from certain actions is an important part of Lewin's position.

In this same general time period, Maslow (1943, 1954) suggested human motivational needs could be arranged in a

hierarchical manner from the simplest physiological needs to needs based on safety, affection, and self-actualization. In general, Maslow argued once a given level of need became satisfied, it no longer served to motivate the individual and activation of the next higher level of needs was necessary for motivation to occur. Maslow probably did not intend his need hierarchy to be directly applied to work motivation. In fact, it was not until 1965 when Maslow wrote specifically about the motivation of individuals in organizations. It was McGregor, Likert and others who popularized Maslow's perspective in management literature (McGregor, 1960; Likert, 1967; Luthans, 1973).

In the mentalistic approach to motivation, the emphasis is clearly on the internal states of individuals and that which "drives" or "forces" them to act. From this perspective emerged one of the most dominate motivation models in organizational psychology by Vroom (1964). Vroom argues there is a "force" within a person to choose a particular task or effort level as a function of two variables: The valence, or perceived value of outcomes, stems from the task and the expectancy that the behavior will result in attaining the desired outcomes. Thus in its simplest terms, force is the product of expectancy that effort will result in that which is desired and the value of the outcome(s). Although this is a very simplified explanation of Vroom's model, it will hopefully suffice to support its internal orientation as it emphasizes values, expectation and force (drive).

The dominant theme of the extreme mentalistic approach to motivation is its emphasis of the intrinsic bases for individual movement or locomotion. Whether the key terms are instinct, drive, needs, force, value, expectancy, attraction to an outcome, they all suggest motivation as an "internal locus of control." In contrast, consider the extreme environmentalistic orientation toward motivation.

The Extreme Environmentalistic Approach

The extreme environmentalistic approach suggests motivation is controlled by systems of rewards and punishments administered external to an individual. This perspective is typified by the work of B. F. Skinner (1948, 1971) to whom needs, drives, tensions or other internal states are unuseful predictors in understanding behavior. The Skinnerian position asserts human behavior is best understood and controlled by knowledge of the reinforcing contingencies to which an individual or class of individuals responds. The environmentalistic approach to motivation is traced from association type learning theories (DuBrin, 1978). The regulation of rewards and incentives administered in relation to individual effort and performance increases motivation levels toward learning and/or productivity (Campbell and Pritchard, 1976).

Within the organizational context, individual rewards could come in the form of piece-rate incentives, promotion for outstanding performance or any special recognition bestowed in acknowledgement of differential contributions to organiza-

tional functioning. Furthermore, organizations may provide "system rewards" like fringe benefits, recreational facilities, cost-of-living raises, pleasant working conditions, etc. (Katz and Kahn, 1978). All of these stimuli are potential tools for the reinforcement of desired behavior. They represent efforts to control the working environment in order to influence worker behavior.

This behavioral approach to motivation may be seen in terms of behavior modification, built upon the law of effect (Thorndike, 1933) and the concept of operant conditioning (Gibson, Ivancevich and Donnelly, 1976). The law of effect states that reinforcement increases the probability that a behavior will be repeated. The operant conditioning approach calls for positive reinforcement of desired behavior (Lazer, 1975).

In general, the environmentalistic approach views motivation as initiated and moderated from ecological conditions extrinsic to the individual. From this perspective motivation levels are defined in terms of productivity levels since motivation represents an individual's movement toward organizational goals. The extreme mentalistic and extreme environmentalistic approaches to motivation represent the contrasts between internal and external loci of control (Campbell and Pritchard, 1976). The mentalistic approach represents an intrinsic approach to motivation while the environmentalistic approach represents an extrinsic approach.

It is important to note there are problems with equating intrinsic and extrinsic motivation as dichotomous ends of a continuum. A decrease in intrinsic motivation does not cause an equal increase in extrinsic motivation (Mawhinney, 1979). House (1972) examined differences in intrinsically and extrinsically motivated people, developing a scale to distinguish those who rely on intrinsic versus extrinsic approaches. While this polar distinction was adequate for many of his subjects, a large part of his sample were either high in a preference for both intrinsic and extrinsic motivation or low in a preference for both intrinsic and extrinsic motivation. Krivonos (1975) used the House scale a few years later and found the same tendencies. It seems there is a middle ground in approaching motivation, and perhaps a rationale for an integrated, "middle" approach to motivation.

The Middle-Theories Approach

Middle-theories suggest that motivation evolves in some combination of psychological variables internal to an individual and the reward and/or punishment variable external to an individual. One of the earlier scholars suggesting this combination approach was Clark Hull.

Prior to 1937, Hull explained behavior primarily on associative or reinforcement grounds (Bolles, 1967). However, Hull eventually came to the position the S-R associations were not adequate explanations of how behavior is energized. He designed behavior models incorporating external reinforcement

and internal drives (Hull, 1952). Hull's approach suggested internal conditions raise and lower the "associative bonds" of a reinforcement.

Following this tradition, Herzberg developed his "Two-Factor Theory" of motivation describing two sets of variables, one called motivators and the second, hygienic factors (Herzberg, Mausner and Bloch, 1959). Hygiene factors describe environmental variables which potentially lower motivation levels, i.e., company policy and administration, supervision, salary, interpersonal relations, working conditions, etc. Herzberg's research was criticized on grounds of reliability and validity by Vroom, 1964; Dunnette, Campbell and Hakel, 1967; Lindsay, Marks and Gorlow, 1967. Criticisms noted that improving hygienic conditions would not necessarily raise motivation when assessed by a worker's perception of positive values for each hygiene variable. Herzberg countered that satisfaction/dissatisfaction was not seen as polar opposites on a continuum by suggesting a worker's negative perceptions about hygiene variables would lower motivation levels and thus he identifies these variables as dissatisfiers allied to the job context. The satisfiers were labeled motivators which included variables such as achievement, recognition, the work itself, responsibility, and the potential for advancement allied with individual job content. Herzberg's perspective was initially useful for managers to understand that worker motivation involves more than higher pay, fringe benefits and better work conditions. However, a substantial amount of research suggests there are job

content and context factors which lead to both satisfaction and dissatisfaction; thus, ambiguity surrounds the central focus of Herzberg's "theory" (Hulin and Smith, 1967; Schwab, DeVitt and Cummings, 1971).

Porter and Lawler (1968) approach work motivation by proposing a multivariable model to explain the suspected relationship between job attitudes and job performance. On balance the Porter and Lawler motivation model is weighted toward an individual's internal structuring of effort, perceived skill, expected intrinsic rewards and perceived rewards. In this sense the Porter and Lawler model is highly simplified compared to Vroom's expectancy concept. However, Porter and Lawler broaden the expectancy approach to also include extrinsic rewards for performance and the extrinsic sources of feedback that reinforce satisfaction after performance (Lawler, 1971). This attention to the reinforcing consequences of performance place Porter and Lawler's approach to motivation among the middle theories.

It is common for middle theories to approach motivation in terms of performing a task for the sake of the task itself and performing a task for the sake of incentives beyond the task itself. English and English (1958) defined intrinsic motivation as that which is obtained from the activity itself, while extrinsically motivated behavior was that which was moderated through the potential of rewards or punishment derived from the behavior itself. Koch (1956) defined intrinsic motivation as an individual's commitment to the task and extrin-

sic motivation as a task done in order to accomplish a "non-task" goal. House (1972) regards work as intrinsically motivating when goals are achieved in the process of the work itself, rather than as a result of the work itself (product). Thus, he defines work as extrinsically motivating when rewards from others are achieved as the result of work not inherent to the process of work. In summary, when individual rewards come from the process of doing the work itself, that work is intrinsically motivating. When individual rewards come as a result of doing the work assigned, that work is extrinsically motivating. Concern about methods of motivating workers became the foundation of much of the job design literature.

Hackman and Oldham (1976) suggest work redesign (or job enrichment) as a strategy for simultaneously improving a worker's productivity and gratification. They developed the Job Diagnostic Survey (JDS) (Hackman and Oldham, 1975) to measure the characteristics of jobs and the characteristic of people. The JDS is used to calculate the potential for a person's redesigned job to increase motivation and presumably productivity.

Hackman and Oldham predict the individual outcomes of high motivation, high work performance, high satisfaction with work and low absenteeism. For these outcomes to occur, an individual must experience the three psychological states of "meaningfulness of the task," "responsibility for outcomes of the task," and "knowledge of the actual results of the task activities." Furthermore, Hackman and Oldham argue five char-

acteristics of jobs foster the emergence of these psychological states. They are skill variety, task identity, task significance, autonomy, and feedback. Whether these job characteristics result in the desired outcomes is mediated by the strength of an employee's need for growth (Figure Two). The value of Hackman and Oldham's strategy in job design centers on the underlying principles of an intrinsic/extrinsic approach to motivation.

Hackman and Oldham describe motivation as "self-perpetuating cycle of positive work motivation powered by self-generating rewards...that continues until one or more of the three psychological states is no longer present, or until the individual no longer values the internal rewards (Hackman and Oldham, 1976, p. 256)." At first this appears highly mentalistic in approach. However, they continue to describe how job design occurs by manipulating the characteristics of a job so that these psychological states may be derived from good performance. The purpose of this manipulation is to positively reinforce the individual and provide incentives for continued effort (environmentalistic). Furthermore, note the relationship of work to the psychological states Hackman and Oldham identify. Skill variety, task identity and task significance are proported to foster experience and meaningfulness of the work. This "meaningfulness" is something that occurs in the process of doing the work itself (intrinsically motivating). Autonomy and feedback foster experienced responsibility for work outcomes and knowledge of actual results of work activities, respectively

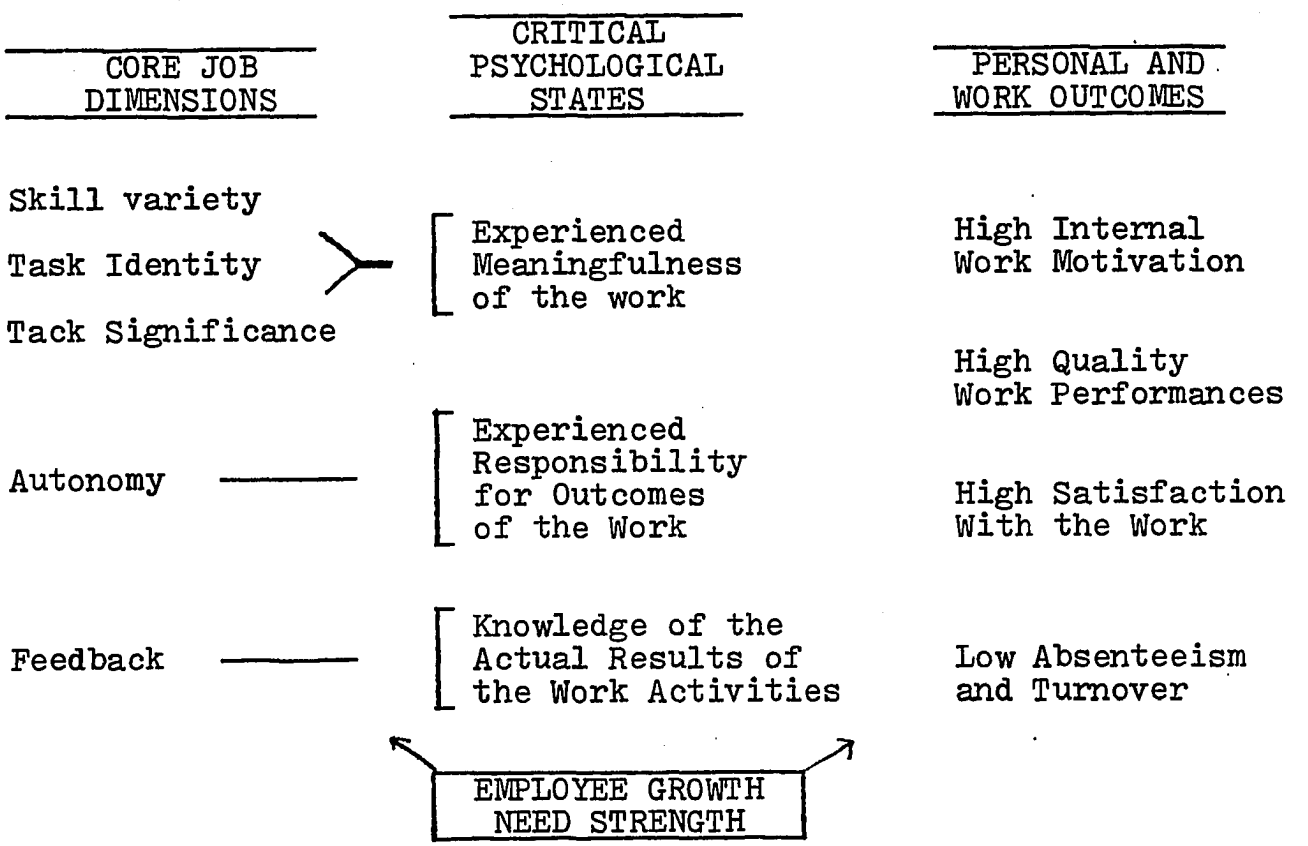


Figure 2. The job characteristics model of work motivation.

The key words describing these two psychological states are outcomes and results suggesting these psychological states emerge as a result of doing work (extrinsically motivating).

It is difficult to select a single "best" approach to motivation. The extreme mentalistic approach is a too narrowly based approach to motivation. At the same time, introspective experience requires us to consider needs as important to the understanding of motivation. The extreme environmentalist approach holds more to scientific criteria. Convincing arguments and research exist which support a reinforcement theory approach to motivation (Reiss and Suchinsk, 1975; Scott, 1976).

One need not choose between the two alternatives. While some argue the difficulty of scientifically evaluating that which is intrinsically rewarding and that which is extrinsically rewarding (Guzzo, 1979), classic laboratory studies by Berlyne (1969) do clearly identify some behaviors are motivated by the need to achieve something beyond the task (extrinsic), while other behaviors are engaged in purely for their own sake (intrinsic). Many who study environmental conditions base their work on properties intrinsic to the individual (Premack, 1972; Donahoe, 1977; Dunham, 1977). Conversely, many who study mental states incorporate the impact of environmental incentives to account for the strength of individual internal needs (Smith and Cranny, 1968; Luthans, 1973). In the writer's judgement, a study dealing with motivation requires a "middle" approach

which emphasizes both the intrinsic and extrinsic characteristics of motivation. However, it would be reasonable to assume from the literature that one can identify some people as more extrinsically motivated than others, while other people are more intrinsically motivated (House, 1972; Lepper and Greene, 1976). Thus, it is possible not only to identify who is highly motivated and who is not, but it is possible to specifically identify the bases of that motivation - intrinsic or extrinsic.

This sets the stage for some very basic questions: How is communication activity associated with those who are intrinsically motivated, extrinsically motivated, or both? The association between motivation and communication is only occasionally examined. Among the few studies conducted, Krivonos (1975) found intrinsically motivated individuals tend to view an organization's communication climate as being more "open" than extrinsically motivated individuals. Tahiff (1976) suggested the communication of empathy for others is an important indicator of motivated workers. Cummings and Bigelow (1976) argue job satisfaction, job involvement and intrinsic motivation are positively correlated. Hammer and Hammer (1976) found verbal feedback by supervisors to be an important ingredient in a worker's extrinsic motivation. While these findings will fit within the theoretic framework outlined in this study, it appears communication scholars could make additional contributions to motivating workers toward productivity if the proper conceptual vehicle could be developed. What remains

is to consider communication, particularly the role function approach taken in Chapter One, which may meaningfully link motivation theories to productivity. This next section presents an argument which will assist in that process.

GROUPNESS AND ORGANIZATIONNESS

Centuries ago it was "common sense" to view the earth as the epi-center of the universe, and everything else (moon, sun, planets and stars) was explained by layers of concentric circles rippling out from the focal point (our planet). Communication scholars often begin similarly with intrapersonal (self) communication as the center of their universe, followed by the interpersonal, small group, organizational, mass, and social levels.

While such a concentric circle approach is not "bad," it has encouraged the search for unique concepts, variables or methodologies at each level, often obscuring theoretic issues which bridge situations. The "groupness" versus "organizationness" concept is one example of viewing sets of qualities which could apply to any collection of people and groups, small or large.

Gibb (1968) distinguishes groups from organizations in an attempt to understand the concept of leadership. He discribes groups as "not needing a leader where all members share common values and satisfy needs through the interdependence of each other." "Organizations are where members are differentiated from each other as to their responsibilities for a

task (p. 208, 209)." Similarly, Stogdill (1950) argues an organization is where individuals have prescribed responsibilities and differentiated role expectations toward a common purpose. Shartle and Stogdill (1952) suggest a collective may vary in its group characteristics and its organizational characteristics over time.

In a similar vein, organizational theorists long have classified work environments along continuums of complexity, diversity, restrictiveness and turbulence, key to determining management styles and organizational designs (Khandwalla, 1977). At the simplest level, one could explain that some things are done more efficiently and satisfactorily by people working alone or independently, and some things are done more appropriately by people working together or interdependently (Moore, 1969). In some work environments the nature of the task is such that it requires individuals to specialize in coordinated yet independent behaviors. For example, in the construction of a large office building, individuals or groups tend to work independently (one mixes mortar, one rivets steel beams together, one operates a crane, one strings electrical wire, etc.) and there is little exchange of work roles. Yet these independent tasks are coordinated in an orderly fashion for the sake of efficiently completing the construction. Such a work environment emphasizes the interdependence of job role over the interdependence of actors.

In another example, individuals working for a local non-union freight trucking firm will require people to work together in a coordinated fashion, but actors exchange roles; a person does not occupy the same work role over a long period of time. Therefore, the non-union freight-trucking worker may drive a truck, drive a forklight, do paper work, or work as dispatcher all in the same work day. Such a work environment displays the interdependence of people over the interdependence of role. The same kinds of distributions are possible in the distribution of communication roles and actor properties across various work environments. In Gibb's terms, leadership is a specialized work role in an organization, but a shared role in groups.

Researchers studying the cohesiveness of small groups assert if one person dominates the group's interaction (occupies the communication role of source), the remaining group members are likely to become dissatisfied, perhaps even uncooperative in achieving the group's task (Hare, 1976). If the communication role of source is exchanged between all members of the group (a form of groupness), group satisfaction is likely to result in satisfaction with the task (Lashbrook, 1967). However, most of these assertions about the nature of communication role exchange are based on zero-history/groups with simple task requirements (Hare, 1976). Organizational researchers recognize that as the complexity of a task increases, it is desirable for "organizationness" to occur. In other words, as task complexity increases, the communication responsibilities of indi-

viduals and groups are more narrowly defined (Warwick, 1975). The result is a higher level of differentiation between the time individuals spend in various communication roles (source, receiver, work, person, information exchange, solution seeking, negotiation, behavior change) (Khandwalla, 1977). In short, some complex tasks are done best when actors specialize in work roles, relying on interdependence of roles which are coordinated to get the job done. Other less complex tasks are done best by working together interdependently in such a way that roles are exchanged by actors from time to time.

It is possible to combine the principles outlined here into the constructs of groupness and organizationness. "Groupness" occurs when workers or actors are interdependent in the "playing" of all necessary roles in task achievement. "Organizationness" occurs when members, or actors, specialize in certain roles contributing to the interdependence of roles, but not of the actors. "Groupness" is based upon role exchange, while "organizationness" emphasizes a division of role assignments across time. "Groupness" and "organizationness" represent ends of a continuum. They are extremes, rarely observed in the real world, but are meaningful as bases for comparing social groups. As "pure" homophily does not exist (Burgoon, 1975), neither is it likely the real world demonstrates "pure" groupness. However, the descriptive properties of groupness and organizationness permit a characterization of entire social groups or organizations in ways which permit understanding of how a single organization changes across time (diachronic description) as well as

how two or more organizations compare to each other at the time (synchronic description). Further, such a description of properties permits identification of potential communication problems in the organization through focusing on likely difficulties an organization may face when organizationness or groupness is more or less present. Indeed, it is possible to determine loci of problems in information exchange, problem solving, negotiation, and behavior regulation. It is possible to identify whether an organization is preoccupied with communication roles indicative of conflicts over bases of motivation, whether that conflict centers on expression of role problems regarding personal needs and goals, or work. Groupness and organizationness permit an assessment of any organization simultaneously analyzing communication properties of the entire organization, any work group, or any individual within that organization

In an important sense, the earlier discussion on bases of motivation (extreme mentalistic, extreme environmentalistic, middle theories) can be viewed as norms or rules which characterize different social groups and organizations in our experience. Rather than a theory of causation, they may be best viewed as descriptions of how one organization "motivates" as distinct from others. Indeed, these theories may be descriptive of management policies, not generalized explanations of how all humans behave in social groups.

Thus, any social group can be viewed as located at a place on the continuum at a given point in time. At a second point

in time that same social group may be relocated on the continuum (Cummings, et. al., in press). The notion of groupness and organizationness provides a vehicle to associate patterns of communication activities (in terms of the properties of roles and the properties of actors) with differing approaches to motivating workers to productivity. We then may ask: What point on the groupness/organizationness continuum is associated with an intrinsic, extrinsic or a middle theory policy or norm by motivation? Do organization's characterized by groupness view individuals who prefer organizationness as unproductive and/or difficult to motivate? Do organizations characterized by organizationness view individuals who prefer to be intrinsically motivated less productive than those who prefer to be extrinsically motivated? The writer suggests these are significant questions, worthy of investigation.

Thus far, this chapter suggests the basic outcome of functioning organizations involve intrinsic gratification and extrinsic productivity. Organizational theorists tend to differ in their approach to motivation by how they weigh the importance of internal and external conditions. As a result, some motivational theories emphasize the internal satisfaction of needs derived from the work itself. Others emphasize the external reward possible as a result of the work. Still other middle theories approach motivation as some combination of internal needs and external environment. An organizationness/groupness continuum may permit a metric bar tracing changes in normative

policies of an organization over time, or comparing several organizations at one time. The next section discusses ways to measure communication properties associated with groupness or organizationness.

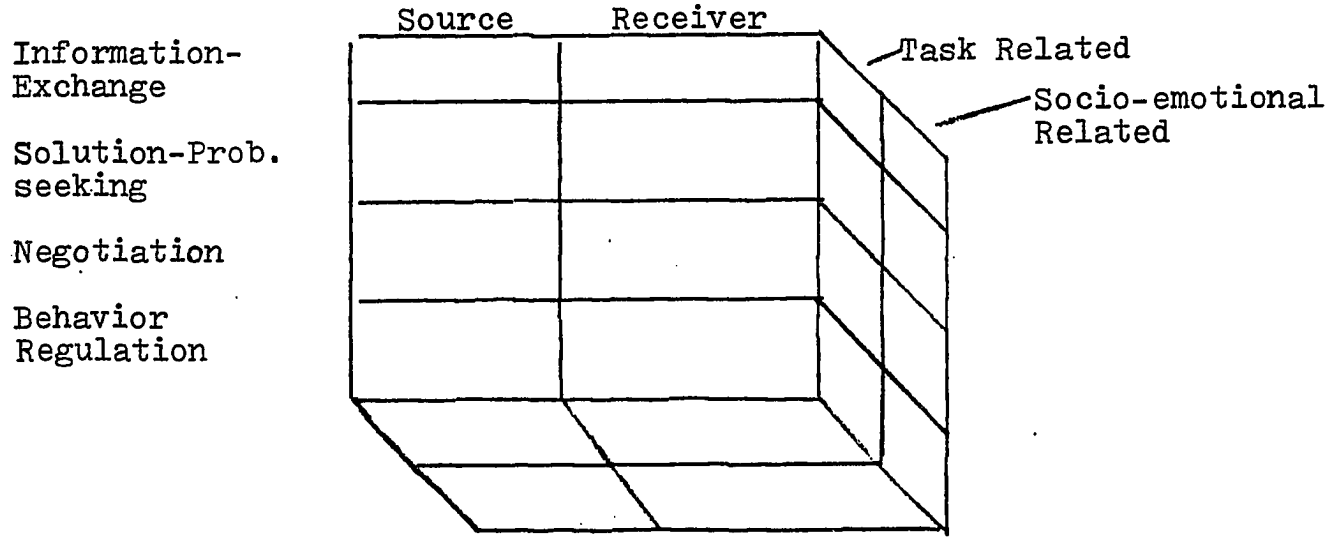
ASSESSING GROUPNESS AND ORGANIZATIONNESS

This section discusses variables of a communication role taxonomy presented in chapter one which may serve as indicators of the groupness/organizationness concept. The successful demonstration of these constructs provides the foundation for a more extensive research effort suggested by Cummings, et. al. (in press) (See figure three for a summary).

Groupness and organizationness suggests contrasts in the ways actors occupy various communication roles. The three variables selected to demonstrate the construct are: 1) The frequency with which actors use various communication roles; 2) the time actors spend in various communication roles; 3) the self-perceived skill an actor holds for various communication roles as indicators of groupness and organizationness. These variables are fundamental to demonstrations of the viability of the groupness/organizationness concept. They represent classic properties of role theory suggested by Sarbin and Allen (1969).

Role Usage. Perhaps the most obvious indicator of groupness and organizationness is the dispersion of role usage for each actor. Groupness requires an actor to occupy all communication roles related to source, receiver, information exchange, solution seeking, negotiating differences, behavior regulation of

FIGURE 3
COMMUNICATION ROLE TAXONOMY



work and person. Organizationness is said to occur when the number of communication roles used by an individual are few in number. The concept of organizationness suggests a greater division of labor; thus specialization in certain roles should occur demanding a high rate of usage for certain communication roles when compared to others. For example, the nature of one's task may require the frequent use of the role of information asking about a task but infrequently permit information giving about a task.

The notion of examining the distribution of role usage is not new in and of itself. Such an approach which counts the frequency of roles used is often the heart of the interactional small group research (Bales, 1950; Guetzkow, 1960). Group researchers often conclude a balance of participation is a useful characteristic of groups sharing their knowledge (Cartwright and Zander, 1968), and crucial for groups to make better decisions than individuals (Shaw, 1976). Meanwhile, role specialization is often cited as a useful design for accomplishing complex tasks or to exercise organizational control (Khandwalla, 1977). The unusual aspect of this approach is to join these two concepts along a continuum.

Calculating the dispersion of role usage is a relatively simple process of calculating the relative frequency of roles used, yielding a percentage which ranges from 0 to 1 as follows:

$$\frac{R+}{(R+) + (R-)} = 0 \geq P \geq 1$$

Where R+ = number of available communication roles used, and R- = number of available communication roles not used.

A simple example will illustrate, a measure of 30 roles are used and 0 roles are not used, role dispersion would be as follows:

$$\frac{30}{30 + 0} = \frac{30}{30} = 1$$

If 20 roles were reported used and 10 roles were reported unused, then the calculation would be:

$$\frac{20}{20 + 10} = \frac{2}{3} = .667$$

In these two examples, the first is a case of "pure" groupness, but the later example is more difficlut to identify. If .50 is consided the theoretic mid-point of the groupness/organizationness continuum, the second example could be said to be tending toward groupness. Although the exact cut off point between groupness and organizationness is theoretic, empirical data can determine the observed range of groupness/organizationness. This approach to groupness and organizationness allows organizations to be characterized (a measure of strength) by averaging the members usage of various communication roles.

Time in a role.

Goldhaber and his associates (Goldhaber, et. al., 1978) noted in their overview of organizational communication research that the time an individual spends in various communication roles is often used as an indicator of the distribution and type of communication activity in organizations. Some researchers investigated the distribution of time spent using

various channels, others the types of messages transmitted, and still others examined the time spent initiating and receiving messages (Burns, 1954; Hinrichs, 1976, Thorngren, 1970; Conrath, 1973; Sadler, 1974). A communication role taxonomy potentially can assess the time spent as a source or receiver in symbolic exchanges about information, solution seeking, negotiating differences, and behavior change whether centered on task or person communication.

Role exchange suggests a person spends an equal proportion of time in each communication role, while role specialization suggests an actor spends a disproportionate amount of time in various communication roles. Thus, it is possible through assessing the proportion of time an individual spends in various roles to draw some conclusions about the presence of groupness and organizationness.

The distribution of time spent in various communication roles conforms to a logarithmic equation for binary distributions as follows (Shannon and Weaver, 1949)*:

$$\log_2 N - (-\Sigma pi \log_2 pi)$$

This formula permits the assessment of differential probabilities of occurance of binary events. However, one should note that pi is not a probability value but pi is equal to the percentage of time an individual spends in each communication

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* Please note the intention here is to borrow a formula which describes the entropy. The purpose of this is not to bring the theoretic baggage of information theory with the formula to this study, but to utilize a mathematical equation believed to be empirically valuable.

role. The degree to which each individual's percentage of time spent in communication roles is unequal is the degree with which organizationness is present. If, and only if, $-\sum pi \log_2 pi = \log_2 N$ does "pure" groupness exist. The metric value of organizationness is any value greater than zero. A group or organization's degree of organizationness may be calculated by the averaging of individual scores.

Skill in a role. An underlying assumption of work environments suggests the more experience an individual has doing a certain activity, the more skilled that individual becomes in that activity. Barnard (1939) uses this basic premise as justification for division of labor and specialization. This also suggests perceived skill as another indicator of groupness and organizationness. Organizationness occurs when actors perceive themselves as "expert" in some communication roles and "inexpert" in other communication roles. Groupness is said to occur when actors perceive themselves as skilled in all communication roles. Traditionally, when communication scholars ask whether an actor has certain skills in enacting a role, they answer their questions in terms of the perceived "expertness" with which a person exhibits role skills (Miller and Steinberg, 1975).

Skill as an indicator of groupness and organizationness may be calculated by a least squares formula as follows:

$$\frac{\sum (\text{Expected score} - \text{Observed score})^2}{N}$$

The sum of each expected communication role score minus

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Skill as an indicator of groupness and organizationness may be calculated by a least squares formula as follows:

$$\frac{\Sigma (\text{Expected score} - \text{Observed score})^2}{N}$$

The sum of each expected communication role score minus

the observed score of each communication role squared, divided by the number of roles. For example, on a seven point scale assessing perceived skill in communication roles a high of seven would be the expected skill level. If five is the observed score in each of three communication roles the skill level calculation would follow:

$$\frac{(7-5)^2 + (7-5)^2 + (7-5)^2}{3} - \frac{4 + 4 + 4}{3} = 4$$

With this formula an answer of zero represents "pure" groupness. Thus, any answer larger than zero represents the degree to which skill is differentiated and theoretically organizationness is present.

The variables of role usage, time in roles and self-perceived role skill are three potential indicators of groupness and organizationness. These variables are probably <u>not</u> the only possible indicators of groupness and organizationness but do represent a starting point to explore the viability of the concept. Usage, time and skill provide potential points of association between communication and motivating workers toward productivity. The specific expectations and the mechanics of this study are the subjects of the next chapter.

CHAPTER III

EXPECTATIONS AND DATA ANALYSIS

The purpose of this chapter is to describe the expectations of this study, the kinds of organizations to be analyzed, the data gathering techniques and the data analysis this study employs. This chapter unfolds in five sections: communication and organizational orientations, communication and locus of control, communication and productivity, operationalizations and data gathering.

Communication and Organizational Orientation

There is often a subtle tension in organizational research between attempting to develop concepts so general they apply to every organization and developing concepts so specific they apply only to a single organizational case. The former kind of effort tends to produce general but often trivial knowledge while the latter kind of effort tends to construct concepts "ungeneralizable" beyond the single case investigated. Several suggest organizational typologies as the useful means of noting general differences among types of organizations while maintaining a breath of generalizability (Katz and Kahn, 1978).

Perhaps the most important and basic step in conducting any form of scientific inquiry involves an ordering, classification, or other grouping of objects (organizations) or phenomena under investigation (Carper and Snizek, 1980). In the study of human organizations it is useful to recognize that organizations fundamentally differ in their reasons for existence. In

the past, organizational typologies have been advanced on a variety of criterion, i.e., technology (Woodward, 1965, Perrow, 1967; Thompson, 1967), goals (Parsons, 1960, 1965), compliance relationships (Etzioni, 1961, 1975), benefits (Blau and Scott, 1962), environments (Emery and Trist, 1965), genotypic functions (Katz and Kahn, 1978), power distribution (Van Ripper, 1966), and the right of members to determine goals (Rice and Bisheprick, 1971). Each of these typologies provide the reseacher a means of comparing and contrasting organizations along a particular set of concerns. The rationale for this study generates from a belief that basic differences in organizations exist in their emphasis on person and work communication roles.

Chapter two opened with a discussion of how organizations differ in the goodness of fit between worker gratification and worker productivity. It would seem to be common sense to suspect that certain types of organizations lend themselves to a task orientation, or a person orientation, or an integrated orientation of task and person communication roles.

In keeping with this assumption, the writer asked several graduate students in a department of communication (N = 12) to select from a list of ten organizations (union, political party, military, hospital, library, small business firm, school, church, large auto manufacturer, government office) the one suspected to be the most person oriented, the one most task oriented, and the one integrated toward both task and person concerns. The respondents selected the military (N = 9) as the most task oriented, the church (N = 8) as the most person

oriented, and the small business firm (N = 6) as most likely to be integrated toward person and work communication. Of course, the validity of such a small sampling of opinion is tenuous, but these perceptions to suggest the distinction made here is not just speculation and that at least some people do make judgements about the general character of social organizations. It provides a point of departure for a comparative study of organizations and their location on a groupness/organizationness continuum. Thus, the samples for this study consists of three organizational sub-units of the military, a church and a small business firm from two Mid-western states. This study is a field survey of these three samples as to their degree of groupness, their locus of control, and their communication role activities as predictors of productivity.

A military unit. The first sample (N = 86) consisted of full time army military personnel. The sample was randomly selected from a pool of 300 soldiers ranging in age from approximately 18 to 35 years and ranging in rank from private first class to master sergeant.

A church group. The second sample (N = 77) consisted of members of a fundamentalist church which de-emphasizes formal organizational levels and distinctions between clergy and laity. The church subjects were randomly selected from a pool of 125 with assigned church related tasks (such as Sunday school teacher, fellowship group leader, bus driver, etc.) and range in approximate age from 18 to 75 years.

A small business firm. The third sample (N = 96) consisted of workers at a firm which designs and manufactures valves used in oil field equipment. All members of the organization below the first line management level (this excludes the president and four vice presidents) participated in this study. Ten years ago the valve company began as a small family operation with an initial $30,000 investment. Profit figures for 1969 totaled over 4.2 million dollars, according to company publications. This particular small business firm was selected because of its widely publicized emphasis on both work performance and personal satisfaction. Workers, after completing their initial year with the organization, take part in a profit sharing program which allows workers a small percentage of company ownership. While the performance standards are "tough" according to the company's president, the turnover rate is less than 5% yearly. The president attributes this to the organization's "family atmosphere."

The selection of these three samples, gathered in the spring, 1980, was based on the assumption these organizations represent different orientations in their concern for person and task communication. It was believed the small business firm would be more integrated in the emphasis it places on person and task variables. This leads to the first series of expectations of this study:*

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*One might treat these as hypotheses. However, the newness of the construct suggests a level of risk which may not be indicated when using the term "hypothesis." The term "expectation" denotes the author recognizes the high risk involved in these empirically based propositions.

E_{1a}: The integrated small business firm will be significantly greater in groupness as measured by communication role usage than the church organization.

E_{1b}: The integrated small business firm will be significantly greater in groupness as measured by proportion of time in communication roles than the church organization.

E_{1c}: The integrated small business organization will be significantly greater in groupness as measured by self-perceived communication role skill than the church organization.

E_{2a}: The integrated small business organization will be significantly greater in groupness as measured by communication role usage than the military organization.

E_{2b}: The integrated small business firm will be significantly greater in groupness as measured by proportion of time in communication roles than the military organization.

E_{2c}: The integrated small business firm will be significantly greater in groupness as measured by self-perceived communication role skill than the military organization.

Each expectation in this set may be analyzed by using the one tail t-test on each average score for an entire organization's usage, time and self-perceived skill in person and task communication roles. The .05 level of probability was used to evaluate the significance of relationships.

If this set of expectations hold, the small business firm could be described as tending more toward groupness than the church organization or the military organization. The assumptions of the groupness/organizationness continuum were further tested by the following expectations.

E_{3a}: There will be a significant positive correlation between person and task communication roles as measured by role usage in the small business firm.

E_{3b}: There will be a significant positive correlation between person and task communication roles as measured by proportion of time in roles in the small business firm.

E_{3c}: There will be a significant positive correlation between person and task communication roles as measured by self-perceived role skill in the small business firm.

E_{4a}: There will be a significant inverse relationship between person and task communication roles as measured by role usage in the military organization.

E_{4b}: There will be a significant inverse relationship between person and task communication roles as measured by proportion of time in role in the military organization.

E_{4c}: There will be a significant inverse relationship between person and task communication roles as measured by self-perceived role skill in the military organization.

E_{5a}: There will be a significant inverse relationship between person and task communication roles as measured by role usage in the church organization.

E_{5b}: There will be a significant inverse relationship between person and task communication roles as measured by proportion of time in role in the church organization.

E_{5c}: There will be a significant inverse relationship between person and task communication roles as measured by self-perceived role skill in the church organization.

Expectations one and two use the indicators of groupness and organizationness (role usage, proportion of time in role and role skill) as calculated in chapter two on the combined task and person roles. Expectations three, four and five require role usage, proportion of time in role and role skill be calculated separately for task roles and person roles for the small business firm, the church organization and the military organization. Then expectations three, four and five may be tested by using the Pearson product-moment correlation. If expectation three, four and five hold, there will be support

for describing the small business firm as "integrating" person and task communication concerns, while the church and military can be characterized as either person or task oriented. This sets the stage to investigate the association between motivation and the groupness/organizationness distinction.

Communication and Locus of Control in Motivation

The last chapter discussed three general approaches to motivation. They are an intrinsic approach, an extrinsic approach, and a combination of intrinsic and extrinsic concerns called "middle theories." Communication scholars rarely investigate the relative communication value of these approaches.

One recent communication study concluded intrinsically motivated individuals view the general communication climate of an organization as being more open than extrinsically motivated individuals (Krivonos, 1975). Patton (1969) suggested participative styles of management, which encourage open interaction by all members of a work group, is significantly related with a worker's intrinsic motivation. Authoritarian styles of management were found to be moderately related to extrinsic motivation. There may be a link here between being able to control one's environment (internal locus of control, intrinsic motivation) and preferring an open, unrestricted opportunity (which is the case under groupness) to participate in communication activity. There also may be a link between having one's environment controlled by others (external locus of con-

trol, extrinsic motivation) and preferring a more highly specified style of communication activity. These distinctions in alternatives to motivation suggest the following expectations:

E_{6a}: Intrinsic locus of control will be positively correlated with person communication roles but inversely related to task communication roles as measured by role usage.

E_{6b}: Intrinsic locus of control will be positively correlated with person communication roles but inversely related to task communication roles as measured by proportion of time in role.

E_{6c}: Intrinsic locus of control will be positively correlated with person communication roles but inversely related to task communication roles as measured by self-perceived role skill.

E_{7a}: Extrinsic locus of control will be positively correlated with task communication roles but inversely related to person communication roles as measured by role usage.

E_{7b}: Extrinsic locus of control will be positively correlated with task communication roles but inversely related to person communication roles as measured by proportion of time in role.

E_{7c}: Extrinsic locus of control will be positively correlated with task communication roles but inversely related to person communication roles as measured by self-perceived role skill.

Again, expectations six and seven require separate calculation of task and person communication roles with each indicator of the groupness/organizationness distinction on the entire sample population. These expectations may then be tested using the Pearson product-moment correlation.

Communication and Productivity

In the introduction to this document a basic problem which has plagued organizational theorists was identified;

that is, worker motivation is not always synonymous with worker productivity. Numerous approaches seek to explain moderating factors in motivation levels and productivity. For example, Hackman and Oldham (1975) suggest an employee's desire to have a job enriched moderates whether certain environmental conditions and individual attitudes will increase productivity.

The concept of groupness and organizationness also provides a vehicle to investigate the relationship between communication and productivity. Chapter Two described groupness and organizationness as certain patterns or normative communication behaviors of actors that can range along a continuum. Conceptually, any given organization may be located along that continuum as to their degree of groupness and organizationness. An organization's location is determined by the central tendency of communication activity of that organization's membership. This approach allows comparisons between those members of an organization that are closely located to the central tendency of an organization's communication tendencies versus those that are distantly located.

This approach is anchored in a basic organizational assumption that productive workers fit the norms of an organization (Gellerman, 1965; Graen, 1976). This is not unlike the notion of deviant behavior being counter productive to a group (Fisher, 1974). The same principle may be useful to apply to an organization's groupness and organizationness. Therefore, this study expects the following:

E_{8a}: Task communication roles as measured by role usage will be the only significant predictor of productivity in the military organization.

E_{8b}: Task communication roles as measured by proportion of time in role will be the only significant predictor of productivity in the military organization.

E_{8c}: Task communication roles as measured by self-perceived skill in role will be the only significant predictor of productivity in the military organization.

E_{9a}: Person communication roles as measured by role usage will be the only significant predictor of productivity in the church organization.

E_{9b}: Person communication roles as measured by proportion of time in role will be the only significant predictor of productivity in the church organization.

E_{9c}: Person communication roles as measured by self-perceived role skill will be the only significant predictor of productivity in the church organization.

E_{10a}: Task and person communication roles as measured by role usage will both be significant predictors in the integrated small business firm.

E_{10b}: Task and person communication roles as measured by proportion of time in role will both be significant predictors in the integrated small business firm.

E_{10c}: Task and person communication roles as measured by perceived role skill will both be significant predictors of productivity in the integrated small business firm.

In expectations eight, nine and ten (usage, proportion of time and self-perceived skill) the indicators of groupness and organizationness are the predictor variables with a productivity measure as the criterion variable. A step-wise multiple regression will be performed to determine the best predictors of productivity.

Operationalizations

In order to investigate the expectations of this study the variables of groupness, organizationness, intrinsic motivation, extrinsic motivation and productivity must be operationalized.

Groupness and organizationness (GO) is operationalized as the responses of subjects to a pencil and paper scale developed from the communication role perspective discussed in Chapter One (Appendix A). GO consists of three sections assessing respondent's description of time spent in various communication roles, number of communication roles used and the self-perceived skill in various communication roles. This assessment technique of communication roles was used by Long (1979).

The purpose of Long's study was not to focus on questions about groupness and organizationness, but first to investigate the reliability and validity of measuring communication roles. Secondly, the study explored communication roles as predictors of job satisfaction and management preference. Based upon Long's study, GO items factor analyzed into eight factors (.60, .40 purity index) named as follows: source of task communication (59.6% of variance), receiver of task communication (62.4% of variance), source of person communication (61.2% of variance), receiver of person communication (61.5% of variance), informational roles (52.8% of variance), problem identification and solution identification roles (64.7% of variance), conflict management roles (61.3% of variance) and behavior regulation

roles (65.2% of variance). The reliability of the factor structure ranged from .57 (informational roles) to .75 (receiver of task communication). The coefficients of validity for measuring the factor structure ranged from .84 (for information roles) to .91 (receiver of person communication). The relationship between communication roles and job satisfaction plus the relationship between communication roles and management preference were concerned with prediction. Thus, the multiple R values from each relationship is the validity coeffient for the predictor against the creterion variables. Long found the coefficient of validity for communication roles .59, task and person roles .55 and function roles (information, problem and solution identification, conflict management, behavior regulation) .49.

Motivation is operationalized as the responses of subjects to a pencil and paper scale (MOT) developed by House (1972) (Appendix B). The items describing intrinsic and extrinsic motivation yielded a two factor solution, based on a purity index of factor loadings measuring .50 or greater on one factor, and .30 or less on all other factors. House reports a test-retest reliability of .78 on the 29 item MOT scale measuring internal locus of control, and .65 on the dimension representing an external locus of control. Simply summing the scores on each dimension of MOT respondents may be scored for their level of intrinsic and/or extrinsic motivation.

A simple measure of productivity was calculated by supervisor ratings. Thirty-two workers (the ten per variable required for step-wise multiple regression) per sample were randomly drawn from each organization. Workers were independently rated by three supervisors on a nine-point verbally anchored scale ranging from (1) very unproductive to (9) very productive. Supervisors were asked to rate a worker's productivity based upon how that worker fulfills the organization's performance standards.

Data Gathering

The respondents in each sample administered the test booklet with each instrument randomly ordered. In each organization, subjects were gathered in one location for instruction and administration of the test booklet. All subjects were told the purpose of this study is to examine the association between communication and motivation. An effort was made to be certain respondents were aware their participation was voluntary. The subjects were asked to give their social security numbers in the test booklet so that later a randomly drawn pool of subjects could be rated for productivity and their rating could be matched with the scores on GO and MOT.

Summary

The purpose of this chapter has been to identify the expectations of this study, the rationale for selection of the samples, the operationalization of the key variables of this study, plus how the data was gathered and analyzed. This study is a field

survey investigation of communications' association with motivation and productivity. The remaining two chapters of the dissertation discuss the results, the implications of the results and future research directions.

CHAPTER IV

RESULTS AND DISCUSSION

The previous chapters described the theoretic rationale, the expectations and the method of this study. Ten sets of expectations were identified as points of focus for this investigation. These expectations cluster around the general topics of groupness/organizationness, communication and locus of control, and communication as a predictor of productivity. Chapter IV discusses the results of this study within its three topic areas. Chapter V attempts to place this study in the larger schema of a communication role perspective and assesses its future as a meaningful way to understand organizational activity.

GROUPNESS/ORGANIZATIONNESS

Fifteen expectations concerning groupness/organizationness were advanced for this investigation, only three were not supported (Figure 1). The five sets of expectations (three expectations per set) were designed to test the basic assumptions involving the organizations sampled in this study. The rationale of this investigation suggested it was useful to study communication's association with motivation and productivity through distinguishing levels of groupness and organizationness in organizations.* Before expectations about that association could be analyzed, it was primary to establish that the organizations in the research sample did differ along a groupness/organizationness continuum.

* To account for the overlapping nature of the communication role categories a multiplication rule was followed when calculating respondent scores in proportion of time. This brings independence to the time measurement scores.

FIGURE 1

EXPECTATIONS CONCERNING GROUPNESS/ORGANIZATIONNESS

E_{1a}: The integrated small business firm will be significantly greater in groupness as measured by communication role usage than the church organization.

$t = 8.01$, d.f. = 171, $p < .05$ Supported $r_{pb} = .35$

E_{1b}: The integrated small business firm will be significantly greater in groupness as measured by proportion of time in communication roles than the church organization.

$t = 7.94$, d.f. = 171, $p < .05$ Supported $r_{pb} = .25$

E_{1c}: The integrated small business organization will be significantly greater in groupness as measured by self-perceived communication role skill than the church organization.

$t = 4.75$, d.f. = 171, $p < .05$ Supported $r_{pb} = -.19$

E_{2a}: The integrated small business organization will be significantly greater in groupness as measured by communication role usage than the military organization.

$t = 6.77$, d.f. = 180, $p < .05$ Supported $r_{pb} = .33$

E_{2b}: The integrated small business firm will be significantly greater in groupness as measured by proportion of time in communication roles than the military organization.

$t = 9.72$, d.f. = 180, $p < .05$ Supported $r_{pb} = .43$

E_{2c}: The integrated small business firm will be significantly greater in groupness as measured by self-perceived communication role skill than the military organization.

$t = 3.29$, d.f. = 180, $p < .05$ Supported $r_{pb} = -.11$

E_{3a}: There will be a significant positive correlation between person and task communication roles as measured by role usage in the small business firm.

$r = .73$, $p < .05$ Supported

E_{3b}: There will be a significant positive correlation between person and task communication roles as measured by proportion of time in roles in the small business firm.

$r = .62$, $p < .05$ Supported

FIGURE 1

(Continued)

E_{3c}: There will be a significant positive correlation between person and task communication roles as measured by self-perceived role skill in the small business firm.

$r = .92, p < .05$ — Supported

E_{4a}: There will be a significant inverse relationship between person and task communication roles as measured by role usage in the military organization.

$r = -.36, p < .05$ — Supported

E_{4b}: There will be a significant inverse relationship between person and task communication roles as measured by proportion of time in role in the military organization.

$r = -.03, p > .05$ — Not Supported

E_{4c}: There will be a significant inverse relationship between person and task communication roles as measured by self-perceived role skill in the military organization.

$r = .41, p < .05$ — Not Supported

E_{5a}: There will be a significant inverse relationship between person and task communication roles as measured by role usage in the church organization.

$r = -.29, p < .05$ — Supported

E_{5b}: There will be a significant inverse relationship between person and task communication roles as measured by proportion of time in role in the church organization.

$r = -.17, p < .05$ — Supported

E_{5c}: There will be a significant inverse relationship between person and task communication roles as measured by self-perceived role skill in the church organization.

$r = .22, p < .05$ — Not Supported

See Appendix D, Tables 1 thru 12 for a more detailed breakdown of results.

The rationale for this study suggested groupness/organizationness was discernable and significant differences in an organizations total communication activity could be identifiable. Given the type of organizations selected for the research sample, the small business organization was expected to be significantly greater in groupness than the church organization as measured by total communication role usage (E_{1a}: $t = 8.01$, d.f. = 171, $p < .05$; Appendix D, Table 1), time spent in communication roles (E_{1b}: $t = 7.94$, d.f. = 171, $p < .05$; Appendix D, Table 2), and self-perceived skill in communication roles (E_{1c}: $t = 4.75$, d.f. = 171, $p < .05$; Appendix D, Table 3). These expectations were analyzed by calculating a role usage, time in role and self-perceived skill score for each organization with the formulas discussed in Chapter II. The difference between means were analyzed by the use of a one-tail t-test. All expectations predicting the small business organization to be significantly greater in groupness than the church organization were supported. Point biserial correlations (r_{pb}) ranged from .35 (relating role usage of small business to the church) to -.19 (relating self-perceived communication skill of small business to that of the church).

In a similar fashion, the small business organization was expected to be significantly greater in groupness than the military organization as measured by total communication role usage (E_{2a}: $t = 6.77$, d.f. = 180, $p < .05$; Appendix D, Table 4), time spent in communication roles (E_{2b}: $t = 9.72$, d.f. = 180, $p < .05$; Appendix D, Table 5), and self-perceived skill in com-

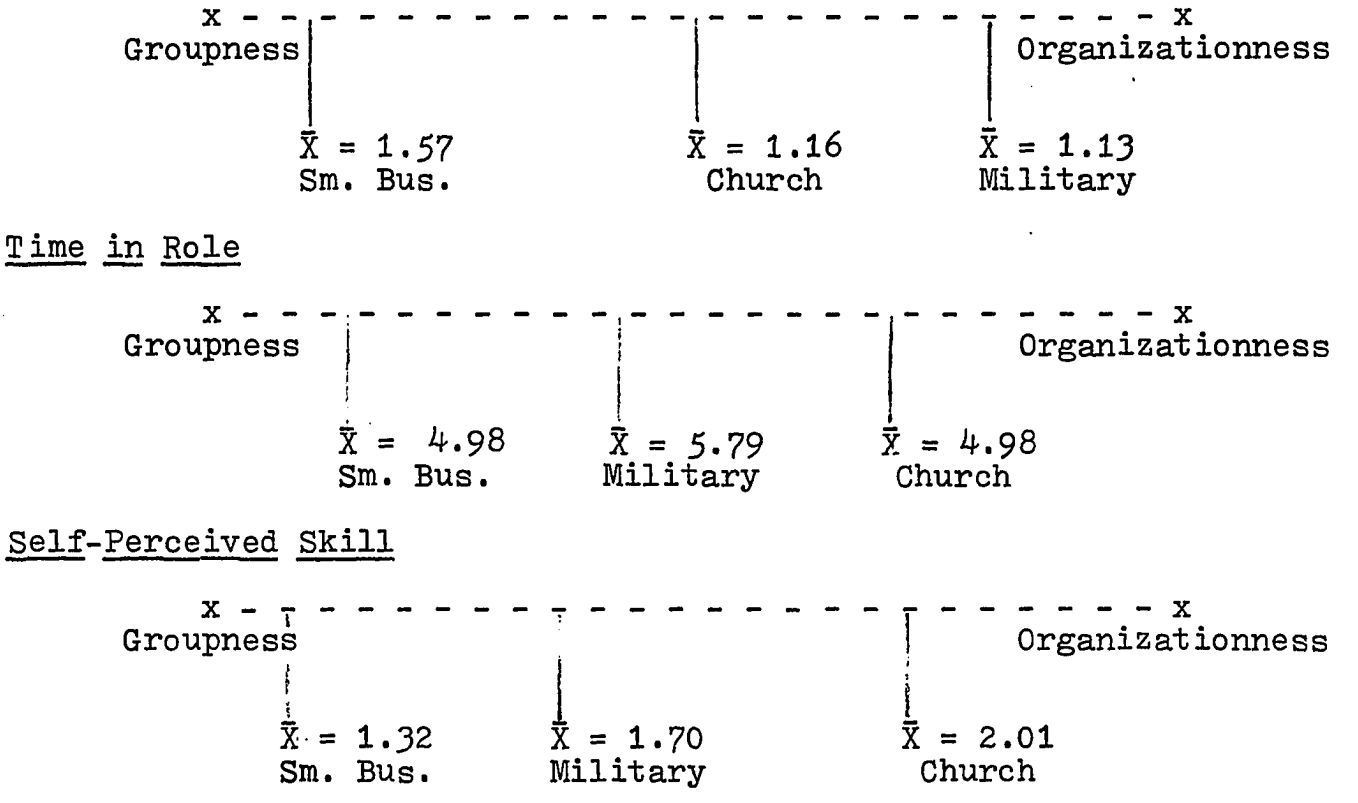
munication roles (E_{2c}: $t = 3.29$, d.f. = 180, $p < .05$, Appendix D, Table 6). Each expectation was supported with Point biserial correlations ranging from .43 (relating time spent in communication role of the small business to the military) to -.11 (relating self-perceived communication skill of the small business to the military). Results from the first two sets of expectations clearly suggested individuals in the small business firm used more communication roles, spent more time in different communication roles and have more self-perceived skill in communication activity than respondents in either the church organization or the military organization (Figure 2 depicts the distribution of means for the communication activity in the three organizations).

While data analysis clearly suggested the small business organization as discernably greater in groupness in its overall communication activity, the concept of groupness/organizationness (as described in Chapter II) also postulated that person and task communication will hold a significantly positive association under ideal groupness while holding a significantly inverse association under the conditions of ideal organizationness. Expectations sets three, four and five (see Figure 1) tested these assertions.

Data analysis strongly supports the expected relationship between task and person communication in the small business organization. Support for describing the small business firm used in the research sample as "integrative" was not only found in the over-all pattern of communication activity when compared with the other organizations sampled (expectation sets one and two), but further support existed in the significant

FIGURE 2

The Distribution of Means For
Combined Communication Roles



positive correlation between person and task role usage (E_{3a}: $r = .73$, $p < .05$), time spent in person and task communication roles (E_{3b}: $r = .62$, $p < .05$), and self-perceived communication skill in person and task roles (E_{3c}: $r = .92$, $p < .05$; Appendix D, Table 7).

If the military organization exhibited extreme organizationness, significant inverse relationships should have existed between task and person communication activities. Support for the expectations concerning the military organization were mixed.

A significant inverse relationship between person and task role usage did exist (E_{4a}: $r = -.36$, $p < .05$). An inverse relationship between time spent in person and task roles was found, but that association was not significant (E_{4b}: $r = -.09$, $p > .05$). More puzzling was the failure to find an inverse relationship in self-perceived skill. Self-perceived skill in person and task communication for military respondents resulted in a significant positive correlation (E_{4c}: $r = .58$, $p < .05$; Appendix D, Table 8). There are several possibilities to explain the unexpected results in this set of expectations.

The lack of a significant linear relationship between time spent in task and person communication roles may well be a by-product of the military environment. Remembering the military sample consisted of full-time career personnel, it may be more difficult for them to distinguish between time spent in task and person communication when they are on a military installation 24 hours a day. Living in a highly structured environment may foster randomness in perceiving time spent in person and task communication. On the other hand, the perception of an inverse association between task and person communication role usage did exist. This could suggest the role usage measure is more simplistic, since it only required identification of communication roles present and absent. This will be discussed further in a later section of this chapter when the merits of the three indicators selected to measure groupness/organizationness are considered.

Of course the possibility of scale weaknesses in the measurement of time spent in person and task communication must be considered. However, this possibility seems less likely since the measurement of time spent in communication roles did function as expected in every other instance under investigation in this study (E_{1b}, E_{2b}, E_{3b}, E_{5b}, E_{6b}, E_{7b}, E_{8b}, E_{9b}, E_{10b}).

Another possibility is that the military organization may not represent as much organizationness as expected. The mixed results, in terms of communication role usage and time spent in communication, may well represent an organization with moderate levels of organizationness. Under such conditions, the number of roles available to individuals in the organization may be restricted and clearly specified, but the time individuals spend in various communication roles may be largely unregulated or unspecified.

The possibility of Type-G error (measurement error between groups) also provides a potential explanation for the unexpected results in the military sample. The military sample was administered the test booklet by a different individual than the church and small business organizations. This occurred due to the distance between the military and the other organizations sampled. While careful precautions were taken to standardize the instructions the test administrators gave to all respondents, the use of two administrators increases the possibility of Type-G error. Type-G error could explain the slightly larger amounts of variance found in the military data (Appendix D, Table 10).

In the case of self-perceived skill in person and task communication there was a consistent problem running throughout the data analysis. Person and task self-perceived skill was not only unexpectedly positively correlated in the military organization (E_{4c}), but the same result was repeated in the church organization (E_{5c}: $r = .22$, $p < .05$). This is only the initial indication, with others to come as data analysis for the remaining expectations are discussed, that the measurement of self-perceived skill in communication is in need of modification. This is further discussed later in this chapter.

Despite the results of the self-perceived skill measure in person and task communication, there was support for the assertion that the church organization tended toward organizationness. In the church organization, person and task role usage was significantly inversely related (E_{5a}: $r = -.29$, $p < .05$) and there was a significant inverse association between time spent in person and task communication roles (E_{5b}: $r = -.17$, $p < .05$; Appendix D, Table 9).

Although there is some need for caution, on balance, the data analysis did support the assertion that groupness/organizationness was discernable. Based on the results of this study, it could be said the small business firm was integrated (in comparison to the others sampled) in its communication activity. This means respondents in the small business firm used a wider variety of time in a wide variety of communication roles and perceived themselves as more skilled in a variety of communication roles than respondents in the military and church. In comparison with other

organizations sampled, the small business clearly tended more toward groupness. The military and church organizations were significantly different in their communication patterns when compared to the small business firm, both tending more toward organizationness.

It was interesting to note the distribution of mean scores for task and person communication roles in each organization (Figure 3). While the expectations do not directly speak to this breakdown, it was further support that the small business firm was integrated in its communication role patterns. The church sample tended toward organizationness led by person communication roles while the military sample tended toward organizationness led by task communication roles (Figure 3 is based upon the descriptive statistics of the three research samples found in Appendix D, Table 10, 11 and 12).

The identification of discernable differences between the organizations in the research sample along a groupness/organizationness continuum was critical to this study. Support for that distinction cleared the way to investigate how locus of control and productivity could associate differently with organizations in the research sample dependent upon their tendency toward groupness/organizationness.

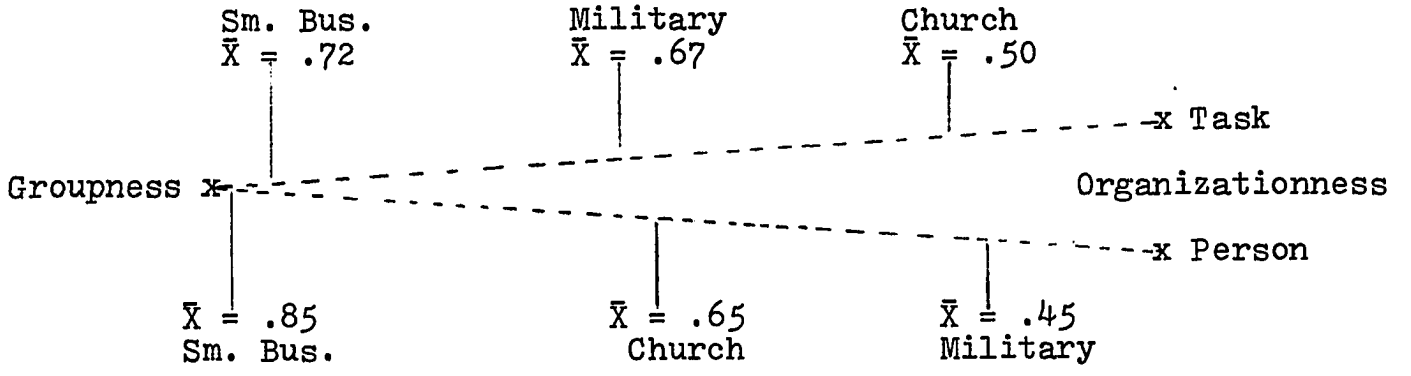
COMMUNICATION AND LOCUS OF CONTROL

One of the basic topic areas of this study concerned how communication activity is associated with individuals that are intrinsically and/or extrinsically motivated. Chapter II dis-

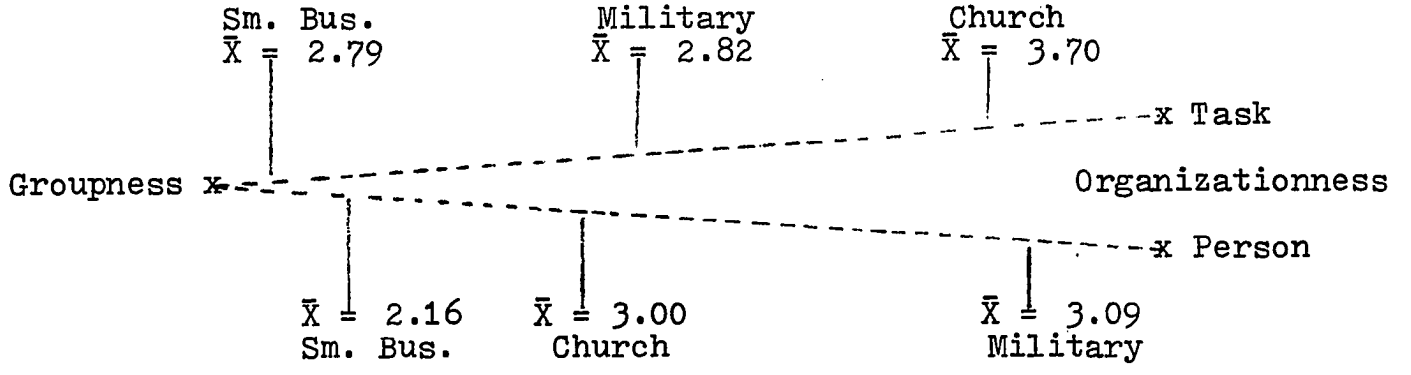
FIGURE 3

The Distribution of Means for Task
And Person Communication Roles

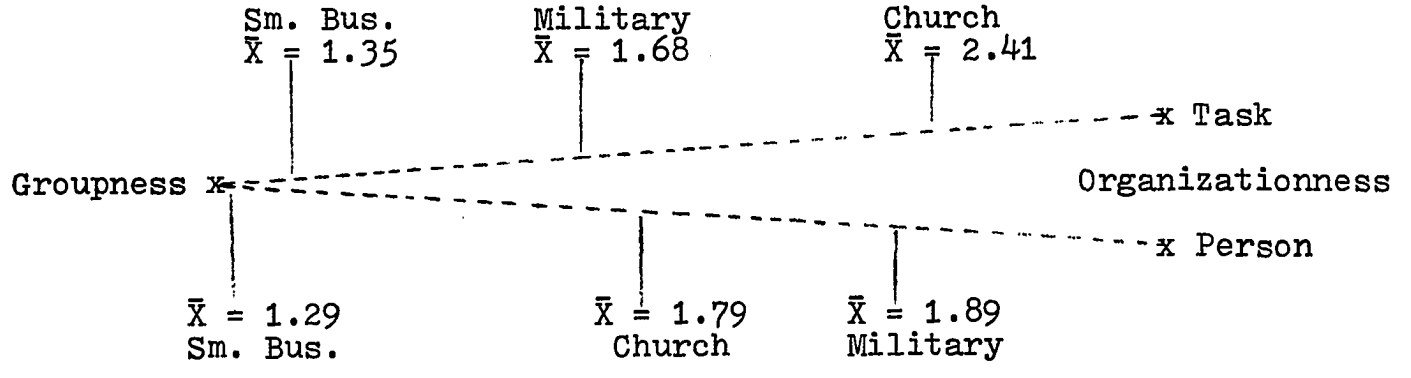
Role Usage



Time



Skill



tinguished between different types of approaches to motivation in terms of their appeal to differences in locus of control. This investigation expected a significant linear relationship to exist between locus of control and communication role usage, time in communication roles and self-perceived skill in communication roles. Two sets of expectations, based on this study's rationale, suggested intrinsic locus of control would have a significant positive relationship with person communication activity while having a significant inverse relationship with task communication activity. The reverse pattern was thought to exist for extrinsic locus of control; that is, it would be inversely associated with person communication activity, while positively related to task communication activity (Figure 4). Of the six specific expectations concerning locus of control, four were supported.

Scores for role usage, time in communication roles and self-perceived skill in communication roles were calculated for the entire sample based on the equations in Chapter II. Comparisons were made with the intrinsic and extrinsic dimensions of the motivation measure (MOT) after transformations were performed to counter for unacceptable levels of variance in the locus of control scores (Winer, 1971).

Expectations concerning the usage of communication roles and time spent in communication roles were supported by the results of this investigation. Intrinsic locus of control was positively associated with person role usage ($r = .41$, $p < .05$)

FIGURE 4

EXPECTATIONS CONCERNING LOCUS OF CONTROL

E_{6a}: Intrinsic locus of control will be positively correlated with person communication roles but inversely related to task communication roles as measured by role usage.

Person: $r = .41$, $p < .05$ Task: $r = -.22$, $p < .05$ Supported

E_{6b}: Intrinsic locus of control will be positively correlated with person communication roles but inversely related to task communication roles as measured by proportion of time in role.

Person: $r = .32$, $p < .05$ Task: $r = -.11$, $p < .05$ Supported

E_{6c}: Intrinsic locus of control will be positively correlated with person communication roles but inversely related to task communication roles as measured by self-perceived role skill.

Person: $r = .20$, $p < .05$ Task: $r = -.03$, $p > .05$ Not Supported

E_{7a}: Extrinsic locus of control will be positively correlated with task communication roles but inversely related to person communication roles as measured by role usage.

Person: $r = -.10$, $p < .05$ Task: $r = .47$, $p < .05$ Supported

E_{7b}: Extrinsic locus of control will be positively correlated with task communication roles but inversely related to person communication roles as measured by proportion of time in role.

Person: $r = -.13$, $p < .05$ Task: $r = .21$, $p < .05$ Supported

E_{7c}: Extrinsic locus of control will be positively correlated with task communication roles but inversely related to person communication roles as measured by self-perceived role skill.

Person: $r = -.06$, $p > .05$ Task: $r = .12$, $p < .05$ Not Supported

See Appendix E, Table 1 and 2 for a more detailed breakdown of the results of these expectations.

and time spent in person communication roles ($r = .32$, $p < .05$), while inversely associated with task role usage ($r = -.22$, $p < .05$) and time spent in task communication roles ($r = -.11$, $p < .05$; Appendix E, Table 1). Extrinsic locus of control was positively related with task role usage ($r = .47$, $p < .05$) and time spent in task communication roles ($r = .21$, $p < .05$), while inversely related to person role usage ($r = -10$, $p < .05$) and time spent in person roles ($r = -.13$, $p < .05$; Appendix E, Table 2).

Among expectations concerning communication and locus of control, two were not supported (E_{6c} and E_{7c}). As in the previous section, self-perceived skill did not yield the expected results as an indicator of groupness/organizationness. It was interesting to note that self-perceived skill in person communication roles (E_{6c}) did have the expected significant positive association with intrinsic locus of control ($r = .20$, $p < .05$) but the predicted inverse relationship was weak and not significant ($r = -.03$, $p > .05$). The same pattern was found in self-perceived skill in task communication roles relationship to extrinsic locus of control (E_{1c}). Self-perceived skill in task communication roles was positively related with extrinsic locus of control ($r = .12$, $p < .05$) but the inverse relationship of skill in person roles to extrinsic locus of control was not significant, although in the predicted direction ($r = -.06$, $p > .05$).

Even though the expectations concerning self-perceived skill in communication and locus of control were not supported, it would seem overly hasty to totally dismiss their value given

the exploratory nature of this investigation. It must be remembered that the predicted direction in the relationship of communication skill and locus of control was present in the study's results. Perhaps the lack of significance in the inverse relationships predicted in both skill expectations were further bits of evidence suggesting the self-perceived communications skill measure was imprecise. However, even if the results of self-perceived communication skill and locus of control were dismissed, the balance of this study's results still indicated support for the study's rationale.

The sets of expectations concerning locus of control were analysed with the Pearson product-moment correlation technique because they were primarily concerned with the direction of variable relationships. When the product of a Pearson correlation (the r value) is squared (r^2) a measure of strength between the two variables measured is obtained. A r^2 value is a measure of the proportion of variance in one variable "explained" by the other (Appendix E, Tables 1 and 2). The variance explained in the significant correlations between locus of control and communication roles ranged from a low of .32 (person communication role usage and extrinsic locus of control) to a high of .68 (task communication roles usage and extrinsic locus of control). Certainly, when 68% of the variance in extrinsic locus of control is explained by one's use of task communication roles, and 64% of the variance in intrinsic locus of control is explained by one's use of person communication roles, the role perspective as a valid indicator of locus of control appears as a promising course of study.

COMMUNICATION AND PRODUCTIVITY

Productivity is difficult to assess because it is difficult to concretely define productivity for all types of organizations. This study asked individuals in supervisory positions to rate selected subordinates on a scale of 1 to 9 (1 anchored with the term "very unproductive," 9 anchored with the term very productive,") (scale found in Appendix C). The inter-rater reliability for the three individuals rating the productivity of identical lists of subordinates in their organization was .98 in the small business firm, .86 in the military organization and .79 in the church organization. Beyond rating thirty subordinate's productivity, each rater was asked to list the factors taken into account in their rating in the hope of gaining some small insight about how productivity differed across the research sample. Figure Five is a complete listing of comments of the raters in each organization.

FIGURE 5

FACTORS TAKEN INTO ACCOUNT
BY RATERS OF PRODUCTIVITY

SMALL BUSINESS	CHURCH
Quarterly Efficiency Report	Ability to follow directions
	Willingness to work
	Finish that which is started
	Absenteeism
MILITARY	Personality
	Organization
	Service
Service record	Ability to work with others
Absenteeism	Ability to handle responsibility
Appearance	Trustworthiness
Leadership	Committment
Intelligence	Attitude

One probable reason the inter-rater reliability was higher for the small business firm raters was that they worked directly from the most recent quarterly efficiency report which assigns a rating to each employee on a scale from 1 to 10. Even though .79 is still an acceptable level of inter-rater reliability, it may be the church raters were the lowest in inter-rater reliability because their concept of productivity was slightly more abstract than raters in the other organizations.

One of the primary concerns of this study was the merit of predicting productivity by communication patterns. To investigate this concern three sets of expectations were proposed which outlined the ideal relationship of communication role usage, time spent and self-perceived skill in communication roles based on the rationale of this study (Figure 6). Nine specific expectations depicted these relationships, six were supported. The stepwise multiple regression technique was used to analyze each expectation.

The rationale of this investigation suggested task communication would be the significant predictor of productivity in organizations that tend toward organizationness lead by an emphasis on task roles (the military organization). Similarly, person communication activity would be the significant predictor of productivity in organizations that tend toward organizationness lead by an emphasis on person roles (the church organization). In an integrative organization, one tending toward groupness, both task and person communication activity would be significant predictors of productivity. In general, the results of this study supported this perspective.

FIGURE 6

EXPECTATIONS CONCERNING COMMUNICATION AND PRODUCTIVITY

E_{8a}: Task communication roles as measured by role usage will be the only significant predictor of productivity in the military organization.

Task: $R = .56$, $R^2 = .32$, $F = 14.43$, d.f. = 1, 30, $p < .05$
Person: $R = .60$, $R^2 = .36$, $F = 8.35$, d.f. = 2, 29, $p < .05$ Not Supported

E_{8b}: Task communication roles as measured by proportion of time in role will be the only significant predictor of productivity in the military organization.

Task: $R = .29$, $R^2 = .08$, $F = 4.84$, d.f. = 1, 30, $p < .05$ Supported

E_{8c}: Task communication roles as measured by self-perceived skill in role will be the only significant predictor of productivity in the military organization.

Task: $R = .23$, $R^2 = .05$, $F = 4.22$, d.f. = 1, 30, $p < .05$ Supported

E_{9a}: Person communication roles as measured by role usage will be the only significant predictor of productivity in the church organization.

Person: $R = .55$, $R^2 = .30$, $F = 12.92$, d.f. = 1, 30, $p < .05$
Task: $R = .58$, $R^2 = .33$, $F = 7.32$, d.f. = 2, 29, $p < .05$ Not Supported

E_{9b}: Person communication roles as measured by proportion of time in role will be the only significant predictor of productivity in the church organization.

Person: $R = .26$, $R^2 = .07$, $F = 4.39$, d.f. = 1, 30, $p < .05$ Supported

FIGURE 6

(continued)

E_{9c}: Person communication roles as measured by self-perceived role skill will be the only significant predictor of productivity in the church organization.

Person: $R = .21$, $R^2 = .04$, $F = 3.32$, d.f. = 1, 30, $p > .05$ Not Supported

E_{10a}: Task and person communication roles as measured by role usage will both be significant predictors in the integrated small business firm.

Person: $R = .40$, $R^2 = .16$, $F = 5.80$, d.f. = 1, 30, $p < .05$
Task: $R = .52$, $R^2 = .27$, $F = 5.55$, d.f. = 2, 29, $p < .05$ Supported

E_{10b}: Task and person communication roles as measured by proportion of time in role will both be significant predictors in the integrated small business firm.

Task: $R = .63$, $R^2 = .40$, $F = 20.65$, d.f. = 1, 30, $p < .05$
Person: $R = .64$, $R^2 = .41$, $F = 10.16$, d.f. = 2, 29, $p < .05$ Supported

E_{10c}: Task and person communication roles as measured by perceived role skill will both be significant predictors of productivity in the integrated small business firm.

Person: $R = .33$, $R^2 = .11$, $F = 5.87$, d.f. = 1, 30, $p < .05$
Task: $R = .35$, $R^2 = .12$, $F = 3.42$, d.f. = 2, 29, $p < .05$ Supported

See Appendix F, Tables 1 thru 3 for a more detailed breakdown of results.

At first glance the data indicated task and person role usage were both significant predictors of productivity for all three organizations in the research sample. This was predicted in the integrated small business firm (E_{10a}Person: R = .40, R^2change = .16, F = 5.80, d.f. = 1, 30, $p<.05$; Task: R = .52, R^2change = .11, F = 5.55, d.f. = 2, 29, $p<.05$). Both person and task usage were not expected to be significant predictors of productivity in the military and church organizations. A conservative interpretation of the data would clearly judge these expectations to be unsupported (E_{8a}, E_{9a}). However, there are some very important tendencies in the data that should receive attention. Task communication role usage was the primary predictor of productivity in the military organization (E_{8a}Task: R = .56, R^2change = .32, F = 14.43, d.f. = 1, 30, $p<.05$). Person role usage, while a significant predictor in the military (Person: R = .60, F = 8.35, d.f. = 2, 29, $p<.05$). added four percent to the predictive value of task role usage (R^2change = .04; Appendix F, Table 1). Person communication role usage was the primary predictor of productivity in the church organization (E_{9a}Person: R = .55, R^2change = .30, F = 12.92, d.f. = 1, 30, $p<.05$). Task role usage, while also a significant predictor (Task: R = .58, F = 7.32, d.f. = 2, 29, $p<.05$), added only three percent to the predictive value of person role usage (R^2change = .03; Appendix F, Table 2). The out of balance R^2change values for role usage in the military and church organizations are in contrast to the more in balance R^2change values in the small business firm (R^2change for Person = .16, for Task = .11). If an .05 creterion for significant variance had been set before the

data analysis all expectations concerning communication role usage and productivity would have been supported. Therefore, while a conservative interpretation of the data suggested the expectations concerning role usage and productivity were not supported in two organizations, the general results in all three sample organizations were in keeping with the study's rationale.

The expectations concerning time in communication roles and self-perceived communication skill were supported in all three organizations, with one exception. Time spent in task communication was the only significant predictor of productivity ($R = .29$, R^2change $= .08$, $F = 4.84$, d.f. $= 1, 30$, $p < .05$) and self-perceived skill in task communication was the only significant predictor of productivity in the military organization ($R = .23$, R^2change $= .05$, $F = 4.22$, d.f. $= 1,30$, $p < .05$; Appendix F, Table 1).

In the church organization, time spent in person communication roles was the only significant predictor of productivity ($R = .26$, R^2change $= .07$, $F = 4.39$, d.f. $= 1, 30$, $p < .05$). In the case of self-perceived skill, neither skill in person or task communication were significant predictors of productivity, but person skill did come close to being a significant predictor (Person: $R = .21$, R^2change $= .04$, $F = 3.32$, d.f. $= 1, 30$, $p > .05$; Appendix F, Table 2).

Each expectation concerning communication and productivity was supported. Both person and task role usage were significant predictors of productivity as discussed earlier. Time spent in task ($R = .63$, R^2change $= .40$, $F = 20.65$, d.f. $= 1, 30$, $p < .05$ and person ($R = .64$, R^2change $= .004$, $R = 10.16$, d.f. $= 2, 29$, $p < .05$ communication

roles were significant predictors of productivity. Finally, both self-perceived skill in person ($R = .33$, R^2change $= .11$, $F = 5.87$, d.f. = 1, 30, $p < .05$) and task ($R = .35$, R^2change $= .007$, $F = 3.42$, d.f. = 2, 29, $p < .05$) communication roles were significant predictors. Some caution needs to be taken in reference to the integrative implications of the small business results because of the weak values of the secondary predictors in the time and skill data results.

While clear support did not exist for all expectations, the basic concept advanced in this investigation concerning communication's value in predicting productivity was supported. The implications of these results will be discussed in Chapter V.

THE INDICATORS OF GROUPNESS/ORGANIZATIONNESS

This study introduces the concept of groupness/organizationness as a tool for describing the different patterns of communication activity in organizations. Three methods were suggested as trial techniques for the assessment of groupness/organizationness. Those three techniques explored in this study are the frequency with which actors use various communication roles, the time actors spend in various communication roles and the self-perceived skill actors hold for various communication roles. Initially, there was some uncertainty about the comparative value of these three measures of groupness/organizationness and their value as measurement techniques were part of the exploratory nature of this study. After the analysis

of results in this study, some preliminary impressions about the measurement of groupness/organizationness can be discussed.

Data analysis suggested there was a range of sensitivity among the three measures used in this study to indicate groupness/organizationness. The results of this study would suggest the most sensitive indicator (meaning the most discriminating measure) was communication role usage, followed by time spent in communication and communication skill as the least sensitive. The issue of sensitivity is raised not to argue the merits of different levels of discrimination, but to provide for a more meaningful interpretation of the data. The sensitivity of the communication role usage indicator could account for the larger r-values in the results of role usage and locus of control expectations when compared to the other indicators of groupness/organizationness. This also could account for why both task and person communication role usage was a significant predictor of productivity in each organization sampled. At the other extreme, self-perceived skill in task and person communication tended to be very conservative in its ability to discriminate differences. Only four items on the groupness/organizationness (GO) instrument were involved in assessing self-perceived skill in person and task communication. Perhaps more items are required to detect differences of perceptions in communication skill. The importance of actor skill in communication is well established in the communication research literature. However, the effort to tap the differences in self-perceived skill may have been inadequate.

If this is true, it would account for the consistent weakness of self-perceived skill to discriminate groupness/organizationness in the expected ways. In light of this discussion about the differences in the indicators of groupness/organizationness, it was interesting to note the reliability rating of GO.

Reliability. Reliability estimates of each indicator of groupness/organizationness from GO were made using Nunnally's formula (Nunnally, 1967). Nunnally's formula, which is $\bar{r}_{kk} = k\bar{r}_{jj} / (n-1)\,\bar{r}_{jj}$, is computed by multiplying the number of items in a measure by the average correlation among all the items, divided by one plus the number of items minus one, times the average correlation. Pearson product-moment correlations are transformed, via Fisher's Zr procedure, before summing the averaging step. The average Zr score is then transformed to the equivalent Pearson product-moment correlation before use in Nunnally's reliability formula. Reliability results for each indicator of groupness/organizationness is as follows: Task Communication Role Usage .76, Person Communication Role Usage .71, Task Communication Role Time .86, Person Communication Role Time .82, Task Communication Role Skill .53, Person Communication Role Skill .49.

The same procedure was repeated to calculate the reliability of the two dimensions of the motivation measure. The results were as follows: Intrinsic Locus of Control .81 and Extrinsic Locus of Control .74. The correlation between the two dimensions on the motivation measure was .27.*

* The MOT items which were used as the intrinsic dimension were 2, 3, 4, 6, 8, 9, 11, 12, 16, 19, 23. The items used in the extrinsic dimension were 1, 5, 7, 10, 13, 14, 15, 17, 18, 20, 21, 22.

SUMMARY

This chapter reviews the results for the ten expectations of this study. Analysis of the data suggests distinctions in groupness/organizationness were present in the three organizations used in this study. The data analysis also revealed strong association existed between communication activity and locus of control. Intrinsic locus of control was found to have a significant relationship with person communication activity while having a significant inverse relationship with task communication activity. Likewise, extrinsic locus of control was found to have a significant positive relationship with task communication activity while having a significant inverse relationship with person communication activity. Finally, task and/or person communication activity was found to significantly predict productivity dependent upon where an organization was located on the groupness/organizationness continuum. The implication for these results and suggestions for future research are the central themes for the final chapter.

CHAPTER V

THE IMPLICATIONS OF THIS STUDY AND FUTURE DIRECTIONS FOR STUDY

This project extends the work of Cummings, Long and Lewis (in press) by investigating the usefulness of locating organizations on a groupness/organizationness continuum. The concept of groupness and organizationness is based upon a communication role perspective to organizational communication. This perspective asserts communication roles provide a useful vehicle for clarifying and organizing past research while providing the framework to ask new questions. The rationale for this investigation pulls together concepts from communication theory, organizational theory and role theory, as a basis for asking questions about the value of identifying different arrays of communication patterns in terms of groupness and organizationness in organizational communication.

Long (1979) investigated the value of communication roles as predictors of job satisfaction and management preference. His primary purpose was to assess the validity and future potential of communication role research. Long concluded from his study that communication role activity can be measured reliably and validly. Furthermore, he suggested the study of communication roles is a promising line of research. This investigation is simply one more step in what should be a long line of research. This project was not designed to terminate upon the completion of the fifth chapter. This investigation breaks some new ground, asks some different kinds of questions about communication and

was designed from its inception to be the preliminary step in a course of research. Therefore, this chapter poses several important questions of assessment about this study and discusses the implications of this investigation in the context of future research priorities.

WHAT ARE THE IMPLICATIONS OF THIS INVESTIGATION FOR THE STUDY OF COMMUNICATION AND MOTIVATION?

This study provides support for the assertion there is a linear relationship between one's communication activity and one's locus of control. More specifically, it appears there is a positive relationship between person oriented communication activity and intrinsic locus of control, while simultaneously there is an inverse relationship between task oriented communication activity and intrinsic locus of control. This investigation also suggests a positive relationship exists between task oriented communication activity and extrinsic locus of control, while demonstrating the presence of an inverse relationship between person oriented communication activity and extrinsic locus of control. Understand, these statements are made within the limitations of the results discussed in Chapter IV. Even though the skill indicators did not discriminate in the expected fashion and many of the correlation coeffients were moderate to weak, most were significant.

This investigation provides preliminary support for the following positions: First, individuals who prefer task communication roles ("prefer" meaning these individuals use task roles

more often, spend more time in task roles and perceive themselves as more skilled in task roles when compared to person communication activity) tend to be associated with extrinsic locus of control. Second, individuals who prefer person communication roles tend to be associated with intrinsic locus of control. Third, it could be reasoned further that individuals who prefer a proportionate balance of task and person communication activity are associated with a combination of intrinsic and extrinsic control (essentially, a middle theory approach to motivation).

This position could be studied further by additional analysis of the data in this investigation. In exploring the association of communication activity with locus of control for this project, it was necessary to analyze the total sample in order to draw overall conclusions about the variables under study. However, the sample could be analyzed so as to recast the respondents into four locus of control groups (high in intrinsic but low in extrinsic, high in extrinsic but low in intrinsic, high in intrinsic and extrinsic, and low in intrinsic and extrinsic). Based on the rationale of this project, one would expect the military organization to be characterized by individuals who are high in extrinsic but low in intrinsic locus of control. The church organization would probably be characterized by individuals who are high in intrinsic locus of control but low in extrinsic locus of control. The integrative small business firm would be expected to be characterized by individuals high in both extrinsic and intrinsic locus of control.

The communication implication of this position might be further studied in organizations where managers have attempted to develop methods of motivating workers that are primarily extrinsic in strategy, or primarily intrinsic in strategy, or a balanced blend of the two approaches. The results of this study would suggest if managers believe primarily extrinsic motivational strategies are best for their particular organization, their organization should tend toward organizationness with an emphasis in task communication activity. If intrinsic strategies are primary then the organization should tend toward organizationness with an emphasis in person communication activity. An intrinsic, extrinsic combination approach would suggest the organization needs to tend toward groupness.

Some words of clarification seem appropriate at this point. Neither the results of this study, nor the subsequent discussion are meant to imply a cause-effect relationship in communication's association with locus of control. Nor is it the intention of this study to suggest groupness/organizationness is a state or trait of individuals in organizations that cannot be modified. These are all questions for further study. Critical, however, is the claim that this investigation does make a contribution in the study of communication and motivation; it does suggest several interesting directions for further study. Communication activity does not necessarily hold the key to understanding motivation for there are many other variables (such as employee growth need strength) that are significantly associated with

worker motivation. However, communication activity did account for a significant level of variance in a measure of motivation and this study suggests the absence of an on-going examination of communication in relation to motivation is a deficiency in need of correction.

WHAT ARE THE IMPLICATIONS OF THIS INVESTIGATION FOR THE STUDY OF COMMUNICATION AND PRODUCTIVITY?

One of the basic questions managers in organizations grapple with is, "What increases the probability workers will be productive?" In general, this investigation suggests communication activity can significantly predict productivity in organizations. More importantly, the results of this investigation suggests different kinds of communication activity predict productivity in different kinds of organizations (task communication in the military, person communication in the church and both in the small business). While this judgement is only preliminary and must be tempered by noting some inconsistencies in the results reviewed in the previous chapter, it is possible to suggest an approach to link the study of motivation, productivity and communication.

When a manager asks "What increases the probability that workers will be productive?", they are asking a question about motivation. In essence, the question is, "How can I or this organization motivate workers to be productive?" As Chapter II discusses, a highly motivated worker is not always highly productive. This research finding has caused several organizational theorists to search for mediating variables that could

explain why different levels of productivity could come from highly motivated workers (Hackman and Oldham, 1975, 1976). At least in a tenative way this investigation suggests communication activity may offer another alternative in explaining the relationship between motivation and productivity.

Generally, this study supports the assertions that, first, in identifying the most productive individuals in an organization which tends toward organizationness and which can be characterized by an emphasis in extrinsic motivation, task communication activity is of primary importance. Thus, implying person communication activity in such organizations is relatively unimportant in terms of that worker's productivity. Second, in identifying the most productive individuals in an organization which tends toward organizationness and which can be characterized by an emphasis in intrinsic motivation, person communication activity is of primary importance. Thus, implying task communication activity in such organizations is clearly secondary in terms of an individual's productivity. Third, in identifying the most productive individuals in an organization which tends toward groupness and which can be characterized (assumably) by a combination of intrinsic and extrinsic motivation strategies, both person and task communication activity are important. These tenative assertations provide a framework for research hypothesis and further study.

Consider the possibility of calculating the central tendencies of individuals in organizations for their communication activity and productivity. Using the organizations in the

research sample by way of example, one would expect individuals most distant from the military's central tendency in communication activity to be least productive. Meaning the military respondent that prefers person communication activity to task communication activity will most likely be less productive than the respondents who prefer task communication. Both respondents may be highly motivated (it is probable that the first respondent would prefer intrinsic motivational strategies and the second would prefer extrinsic strategies) but their level of productivity would probably be different. In the church organization, the respondents that prefer task communication activity over person communication will probably be less productive than that respondent where the reverse is true. In the small business firm individuals who prefer disproportionate activity in task or person communication most are likely to be least productive.

Of course, a case may be made for this same approach to predicting productivity through using central tendency scores in intrinsic motivation, extrinsic motivation or a combination of the two. However, the consideration of motivational strategies and productivity levels alone is really not a communication question. What is of interest are strategies for modifying productivity levels and motivational preferences through communication. If an organization is characterized by extrinsic motivational strategies, how is the employee who prefers intrinsic strategies encouraged to be more productive? Would it be possible for an individual's communication skill, time and role usage to be modified in such a way so as to raise her/his preference for extrinsic motivation?

Communication scholars have had very little to say about communication's association with productivity in the past. This is unfortunate because productivity is one of the central issues (if not "the issue") of concern to practitioners and theorists in organizations. This investigation suggests communication activity can significantly predict worker productivity and can accomplish this while accounting for organizational differences. The prospects for future research efforts in this area are promising.

IS THE CONCEPT OF GROUPNESS/ ORGANIZATIONNESS VALUABLE?

The constructs of groupness and organizationness are very important in this investigation. Groupness is a concept representing interdependent communication role exchange. In this study groupness is described as when individuals spend a balanced proportion of time in all possible communication roles, when individuals perceive themselves as skilled in all possible communication roles and when individuals use all possible communication roles. Organizationness is a concept representing independence in communication roles. This study operationalized organizationness as when individuals spend a disproportionate amount of time, when individuals perceive themselves as disproportionately skilled in and when individuals disproportionately use person and task communication roles. Through the calculation of the scores of these three indicators (usage, time and skill) of groupness/organizationness, organizations were characterized in terms of their communication role activities.

This investigation suggests the concept of groupness/organizationness can be reliably measured. The three indicators employed appeared to range in degree of discrimination. A reevaluation of the scale items used for the indicators is in order, particularly in the measurement of self-perceived communication skill. It is quite possible that communication skill in an organization is more accurately measured by individually rating others they work with. After all, the skill indicator of groupness/organizationness is anchored in the source creditibility research literature which suggests creditibility is receiver determined, usually measured by receivers rating sources.

Further research efforts should explore the use of additional indicators of groupness/organizationness. The communication role approach to studying human communication, discussed in Chapter I, implies a number of indicators of groupness/organizationness not used in this investigation, could be. For example, actor comfort and role definition are two other possible indicators of groupness/organizationness.

Actor comfort, often studied under the topic area of communication apprehension, provides a way to discriminate actor properties along a groupness/organizationness continuum. Under the condition of groupness, actors would be expected to be comfortable in all communication roles. Under the condition of organizationness actors would be expected to be comfortable in more specialized task or person communication roles. It would be interesting to investigate the association between actor com-

fort and productivity. It may well be, highly productive workers in an organization like the military sample used in this study are comfortable in task roles but not comfortable in person roles. Furthermore, future research may discover to desensitize such individuals (to help them become more comfortable in person communication activity) would lower their level of productivity.

The ways in which communication roles are defined may also serve as an indicator of groupness/organizationness. Under the condition of groupness, the communication roles an individual in the organization is expected to fill will be extensive as opposed to the condition of organizationness where communication role responsibilities would be narrowly defined. The degree with which ~~the~~ communication roles are played by all members of an organization is an indication of the extensiveness of any single role. This concept represents a kind of versatility of roles where role usage, used in this investigation, measured the versatility of actors. Future research using communication role definition as an indicator of groupness/organizationness could provide interesting opportunities to compare fluctuation in communication activity in an organization over time. What happens to a military organization's definition of communication roles in peace-time as opposed to war-time? How does communication role definition differ in a National Guard unit before, during and after being placed on alert? In a church organization, what patterns occur in communication role definition in a period of growth versus a period of membership decline? These kinds of questions could easily tie into

a study of motivational strategies and production levels association with varying communication patterns over time for a single organization. Such a longitudinal study could make a valuable contribution?

Actor comfort and role definition are but two of several possible indicators of groupness/organizationness not operationalized in this investigation. With each additional indicator comes numerous research possibilities. The concept of groupness and organizationness is of value because it is a rich concept, it is a concept which integrates previous research while suggesting a variety of new research directions.

IS COMMUNICATION ROLE RESEARCH VALID?

In many ways, the ultimate question in the assessment of this investigation is the question of validity. Whatever the answer, the question will always remain debatable.

Previous research with the communication role assessment instrument, used in this investigation for calculating groupness/organizationness, has demonstrated acceptable levels of construct validity (Chapter III). The variables the communication role approach examines have accounted for noteworthy levels of variance and thus, predictive validity for important organizational constructs as job satisfaction and managerial preference is provided by a past study (Long, 1979). In this investigation, the variance scores were consistently demonstrative of the value of communication roles to explain variance in locus of control and productivity.

Most importantly, the communication role perspective flows from a carefully constructed theoretic rationale. Thirty expectations based upon that rationale were advanced in this investigation, twenty-one were clearly supported, several others were in keeping with expected results but "near misses" in terms of significance. The final argument in terms of a study's validity must be a theoretic one. With minor reservations, this investigation strongly supports the communication role perspective and the rationale it is built upon. The communication role perspective appears to provide a useful framework for clarifying the constructs of organizational communication while generating valuable research questions.

A STRATEGY FOR FUTURE RESEARCH

The central questions of this investigation concerned the ability to measure groupness/organizationness, the value of assessing communication's association with locus of control and the predictive value of communication activity to indicate productivity. The answers to these questions were positive. That is; yes, levels of groupness/organizationness can be assessed and organizations can be differentiated on the basis of their communication role patterns. Yes, dependent upon an organization's characteristics of groupness/organizationness, communication activity is significantly associated with locus of control. Yes, levels of groupness/organizationness can account for what kinds of communication activity will predict productivity. Thus far, this chapter has discussed the implications of this investigation and some of the future research questions

this study suggests. Now the chapter concludes by briefly identifying three specific communication role research projects which should have priority in following this investigation.

I. Sub-unit Studies:

This investigation examines patterns of communication activity in three organizations, a church, a military unit and a small business firm. However, this investigation took very narrow glimpses of these organizations. The church sampled consisted of individuals with assigned tasks (such as bus drivers, teachers, etc.). Are there differences between the communication patterns of the church respondents in this investigation and church members that do not have assigned tasks? Are there differences in the communication activity between church goers that are regular attenders as opposed to those who are highly irregular in church attendance? What are the different motivational patterns and productivity levels corresponding to these different church sub-units?

The same type of questions can be raised about sub-units of the small business firm and the military organization. For example, how do communication role patterns differ between pilots, support personnel, information officers and other personnel groupings? Do the communication activities of individuals in their first year of military service differ substantially from those who are ten year (or more) veterans of military life? What are the different motivational patterns and productivity levels corresponding to these sub-units. In terms of

the small business firm, the difference between shop and office personnel could be studied.

A priority in subsequent research efforts is to gain a more complete description of how levels of groupness/organizationness differ within the organization. It would seem prudent to begin such an effort with the organizations used in this study so as to extend its usefulness. This purposed research project should provide valuable insights into the organizational variables which influence communication role patterns within organizations.

II. Comparative Studies:

The usefulness of this investigation will be enhanced if a series of comparative studies follow in the immediate future. The basic design of this study should be repeated using a variety of organizational types. What kinds of organizations would tend toward extreme groupness? Perhaps, the family owned and operated business? Perhaps, service organizations, like a university counselling center. What kinds of organizations would tend toward extreme organizationness? A prison, a large unionized manufacturing plant, a fraternity or perhaps a local PTA exhibits high levels of organizationness. Through a number of comparative studies a kind of typology of organizational communication role arrays could be constructed, each with its own variation in motivational patterns associated with productivity.

The majority of organizational communication research tends to occur in white-collar organizations such as public utilities, banks and governmental offices. Organizational communication research has concentrated on the impact of communication's activity on organizational variables to the extent they have largely ignored the impact of organizational diversity on communication activity (Redding, 1979). Yet, organizations do differ in purpose, in products, in environment, in size, in technology and in other ways. The proposed series of comparative studies would provide a useful beginning point in understanding how different types of organizations have different central tendencies in communication activity. Such a course of study allows for both, the study of organizational diversity's association with communication and communication's association with specific organizational variables (like motivation and productivity). Comparative studies would also allow experimenting with other indicators of groupness/organizationness, motivation and productivity with the organizations sampled in this investigation. Comparative studies should provide a more indepth understanding of the validity and reliability of communication role research.

III. Longitudinal Studies:

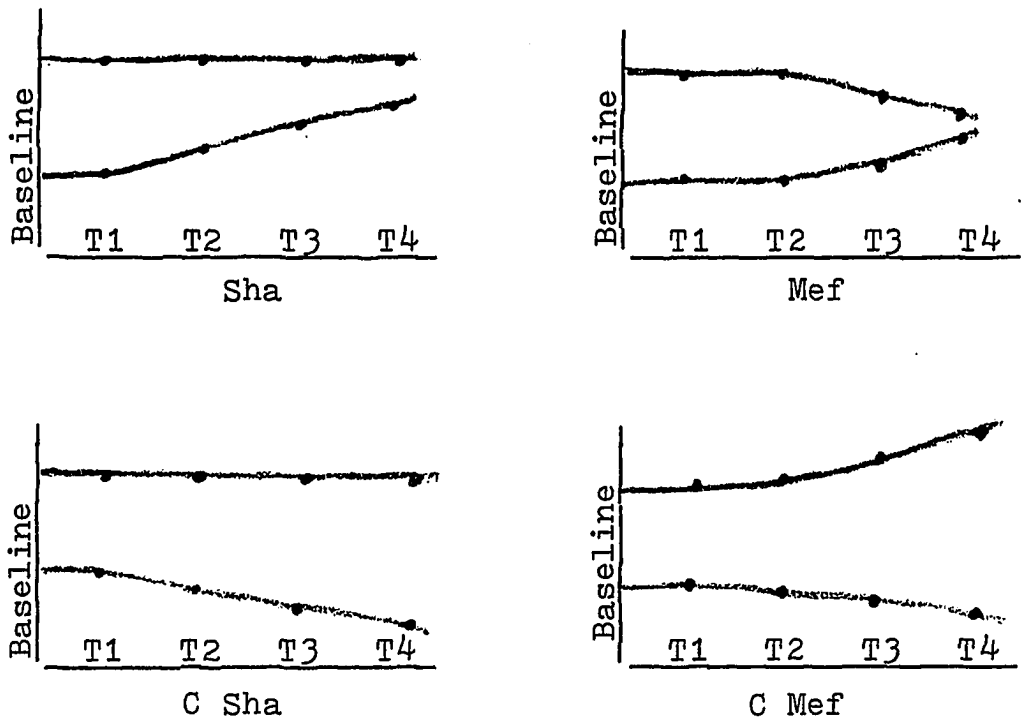
Another weakness often cited in organizational communication research is the lack of time-series analysis (Roberts and O'Reily, 1974; Richetto, 1977). Yet, the dynamic nature of communication activity demands more attention be spent in using dynamic measures (measures which plot changes in a living system over time).

The rationale of this investigation asserts groupness/organizationness is dynamic. An organization's level of groupness/organizationness should change over time. Most likely, different types of organizations will vary in groupness/organizationness at different rates. The key questions for further research center around discovering the organizational circumstances which tend to foster organizationness tendencies as opposed to the circumstances associated with movement toward groupness. It would be very useful to develop a research project which mapped the communication activity of those in managerial positions as opposed to those not in managerial positions within a single organization. Over time what kind of interaction will take place between the two group's pattern of communication activities? Will the employees' communication be shaped by the managers? Will the managers communication activity be shaped by the employees? Will both groups move toward similarity due to mutual effect?

In 1975, Steven Renshaw developed a set of mathematical equations and a computer program designed to plot the interaction of variables over time. He called the equations "The axiomatic system" which proceeds from a set of primitives to a series of definitions, axioms and theorems. Four basic relationships of ideal types emerge from the axiomatic system. They are: shaping toward similarity, mutual effect toward similarity, counter-shaping toward dissimilarity and counter-mutual-effect toward dissimilarity. These four relationships are graphically represented in Figure one.

FIGURE 7

IDEAL TYPES FROM AXIOMATIC SYSTEM



When the baseline data from two or more variables are plugged into the formula, along with the sample size and number of time periods used; the ideal relationships of the variables are plotted over the specified number of time periods by computer simulation.

After data has been gathered over at least four time periods correlations between actual and simulated data points are computed for goodness-of-fit so the relationship best describing the interaction of the variables can be determined.

This process has been used to demonstrate the mutual effect toward similarity that occurs in two individuals language behavior (Renshaw and Cummings, 1975). It has also been used to

demonstrate the effect of the linguistic environment on shaping possessive verb production in children (Gorcyca and Cummings, 1977). While past studies using the axiomatic system have examined language behavior it has been pointed out that this system of analysis would be useful in the examination of other variables (Renshaw, 1975).

Using the same three organizations sampled in this investigation, the communication activity of superiors and subordinates could be plotted bi-monthly over a two year period. This proposed research project would provide valuable preliminary information about how groupness/organizationness may be modified in individuals and organizations. Such an investigation could be the initial step in designing communication training programs for managers and new employees entering an organization.

CONCLUSION

The study of communication roles in organizations is useful for both the organizational theorists and practitioner. The communication role perspective integrates a wide variety of traditional content areas within the communication discipline. The communication role perspective provides a framework to examine the communication activity of individuals, groups, and active organizations.

The rationale of this study advocates communication role patterns (described theoretically by the concept of groupness/organizationness) may be distinguished in organizations. Further, the rationale advocates different communication role patterns

are associated with different kinds of motivational strategies and levels of productivity. This investigation provides clear support for its rationale. Patterns of groupness/organizationness can be identified in organizations. There are significant linear relationships between communication role activity and locus of control. There is a perspective to account for the kinds of communication role patterns which predict productivity in certain kinds of organizations.

This investigation began with some basic questions about communication, motivation and productivity. The final product of this study does not represent complete answers to the questions asked. This investigation is but the first step in what will hopefully be a long line of useful communication research. The results of this study have suggested a variety of other research questions for examination. Three types of research projects are specifically recommended for the immediate future. Hopefully, this investigation and future communication role research projects will be useful additions to an on-going goal of communication research; that is, clarifying and enhancing past research while creating new questions for future investigations.

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APPENDIX A

GROUPNESS/ORGANIZATIONNESS MEASURE (GO)

(Social Security Number _____)

This questionnaire gives you the opportunito to describe the kind of communication activities you engage in while working in your organization and what motivates you about your work. The questions are short, so it shouldn't take very long to complete this questionnaire.

The purpose of this study is to simply investigate communication's association with work motivation. Please provide your social security number in the upper right hand corner in order to make latter data analysis easier. However, you have my guarantee that your responses will be held in the strictest confidence. Your participation should be strictly voluntary. If you wish not to participate feel free not to do so.

With each question will be a series of possible responses. All you need to do is circle the response you agree with the most. Feel free to ask the questionnaire administrator if you should have any questions. Remember, there are no right and wrong answers. Your responses are the "right" ones for you.

Thank you.

Sincerely,

Michael L. Lewis
University of Oklahoma

Demographic Data

1. How many years have you been with this organization:_____

2. Age_____ Are you: Male of Female (circle one).

3. Education: _____(number of years completed).

TIME IN COMMUNICATION

During a typical 24 hour day in your organization, you will probably perform many types of communication activities with your subordinates, superiors, and peers. This portion of the questionnaire asks you to indicate which CATEGORIES OF COMMUNICATION take up the most to the least amount of time with all three groups.

Try to imagine an average day in the organization. Then rank the categories of communication from most to least based upon the following scale:

"1" - I spend most of my time doing this activity.

"2" - I spend the second greatest amount of time doing this activity.

"3" - I spend the third greatest amount of time doing this activity.

"4" - I spend the least amount of time doing this activity.

"0" - I never engage in this activity.

RANK	CATEGORIES OF COMMUNICATION	PER CENT
	(Job Related Activities: Job related activities are the things you do that are directly related to the tasks you perform and the organizational mission.)	
____	I initiate conversation about job-related activities.	____%
____	I receive information about job-related activities.	____%
	(Personal Needs and Goals: Personal needs and goals are things like professional and career development, family activities, social activities, etc.)	
____	I initiate conversation about personal needs and goals.	____%
____	I receive information about personal needs and goals	____%

Now that you have ranked the categories of communication from most to least (or perhaps never = "0"), go back and estimate the per cent of your time that is devoted to each of the CATEGORIES OF COMMUNICATION. The space to the "right" of each statement is provided for the percentage of time you spend in that category. Remember, you must distribute exactly 100% of your time. In other words, the total of the per cent column should be 100%.

Now that you have completed ranking and estimating the percentage of time you spend on each of the general CATEGORIES OF COMMUNICATION, you can proceed to the next pages of the questionnaire which ask more specific questions about each of the categories. The procedures are basically the same with the exception of ranking 10 categories instead of four.

One of the CATEGORIES OF COMMUNICATION was --

"I initiate conversation about job-related activities with superiors, subordinates, and peers."
(IF YOU SPEND "0" TIME IN THIS CATEGORY, LEAVE THIS PAGE BLANK)

Of the amount of time you spend engaging in this activity, rank the following items from "1" (most amount of time spent doing this activity) to "10" (least amount of time spent doing this activity). If you do not engage in the activity at all, place a "0" in the space provided.

After you rank order the activities, go back and estimate the percent of your time that is devoted to that activity. The space provided to the "right" is for the percentage estimate. Remember, you must distribute exactly 100% of the time. In other words, the total of the percent column should be 100%.

RANK	Job-Related Communication Activity	PER CENT
____	I ask for information.----------	____%
____	I give information.----------	____%
____	I initiate discussion aimed at defining problems.---	____%
____	I offer alternative solutions to problems.----------	____%
____	When controversy arises, I initiate a confrontation and pursue it until one party or the other emerges as a winner.----------	____%
____	When controversy arises, I initiate compromise, even though everyone loses a little.----------	____%
____	When controversy arises, I try to find a solution where everyone benefits and no one loses.----------	____%
____	I use reward and punishment to change the behavior of others.----------	____%
____	I use friendship to change the behavior of others.--	____%
____	I use logic and reason to change the behavior of others.----------	____%
		TOTAL = 100 %

One of the CATEGORIES OF COMMUNICATION was --

"I receive information about job-related activities from superiors, subordinates, and peers."

(IF YOU SPEND "0" TIME IN THIS CATEGORY, LEAVE THIS PAGE BLANK)

Of the amount of time you spend engaging in this activity, rank the following items from "1" (most amount of time spent doing this activity) to "10" (least amount of time spent doing this activity). If you do not engage in the activity at all, place a "0" in the space provided.

After you rank order the activities, go back and estimate the per cent of your time that is devoted to that activity. The space provided to the "right" is for the percentage estimate. Remember, you must distribute exactly 100% of your time. In other words, the total of the per cent column should be 100 %.

RANK	Job-Related Communication Activity	PER CENT
____	Others tend to ask me for information.--------	____%
____	Others tend to give me information.----------	____%
____	Others tend to initiate discussion with me aimed at defining problems. ----------	____%
____	Others tend to initiate discussion with me aimed at finding alternative solutions to problems.----------	____%
____	When controversy arises, others tend to initiate confrontation with me in which one party or the other emerges as a winner.---	____%
____	When controversy arises, others tend to initiate compromise with me where everyone loses a little.----------	____%
____	When controversy arises, others tend to involve me in trying to find a solution for everyone to benefit and no one loses.-----	____%
____	Others tend to use reward and punishment to change my behavior.----------	____%
____	Others tend to use friendship to change my behavior.----------	____%
____	Others tend to use logic and reason to change my behavior.----------	____%
		TOTAL = 100 %

One of the CATEGORIES OF COMMUNICATION was --

"I initiate conversation about personal needs and goals with superiors, subordinates, and peers."

(IF YOU SPEND "0" TIME IN THIS CATEGORY, LEAVE THIS PAGE BLANK)

Of the amount of time you spend engaging in this activity, rank the following items from "1" (most amount of time spent doing this activity) to "10" (least amount of time spent doing this activity). If you do not engage in the activity at all, place a "0" in the space provided.

After you rank order the activities, go back and estimate the percent of your time that is devoted to that activity. The space provided to the "right" is for the percentage estimate. Remember, you must distribute exactly 100% of your time. In other words, the total of the per cent column should be 100%.

RANK	Personal Need Communication Activity	PER CENT
____	I ask for information.----------	____%
____	I give information.----------	____%
____	I initiate discussion aimed at defining problems.----------	____%
____	I offer alternative solutions to problems.----	____%
____	When controversy arises, I initiate a confrontation and pursue it until one party or the other emerges as a winner.-------	____%
____	When controversy arises, I initiate compromise, even though everyone loses a little.----------	____%
____	When controversy arises, I try to find a solution where everyone benefits and no one loses.----------	____%
____	I use reward and punishment to change the behavior of others.----------	____%
____	I use friendship to change the behavior of others.----------	____%
____	I use logic and reason to change the behavior of others.----------	____%
		TOTAL = 100 %

One of the CATEGORIES OF COMMUNICATION was --

"I receive information about personal needs and goals from superiors, subordinates and peers."

(IF YOU SPEND "0" TIME IN THIS CATEGORY, LEAVE THIS PAGE BLANK)

Of the amount of time you spend engaging in this activity, rank the following items from "1" (most amount of time spent doing this activity) to "10" (least amount of time spent doing this activity. If you do not engage in this activity at all, place a "0" in the space provided.

After you rank order the activities, go back and estimate the percent of your time that is devoted to that activity. The space provided to the "right" is for the percentage estimate. Remember, you must distribute exactly 100% of your time. In other words, the total of the percent column should be 100%.

RANK	Personal Need Communication Activity	PER CENT
____	Others tend to ask me for information.---------	____%
____	Others tend to give me information.----------	____%
____	Others tend to initiate discussion with me aimed at defining problems.----------	____%
____	Others tend to initiate discussion with me aimed at finding alternative solutions to problems.----------	____%
____	When controversy arises, others tend to initiate confrontation with me in which one party or the other emerges as a winner.----------	____%
____	When controversy arises, others tend to involve me in trying to find a solution for everyone to benefit and no one loses.------	____%
____	Others tend to use reward and punishment to change my behavior.----------	____%
____	Others tend to use friendship to change my behavior.----------	____%
____	Others tend to use logic and reason to change my behavior.----------	____%
		TOTAL = 100 %

APPENDIX B

MOTIVATION MEASURE (MOT)

This questionnaire gives you an opportunity to express your views about the work you do with your organization and about work in general. Circle the number that most agrees with your views on each question.

		Strongly Disagree		Slightly Disagree		Neither agree nor disagree		Slightly Agree		Strongly Agree
1.	It's often nice to be able to take it easy in work and only use your best abilities in a pinch.	1	2	3	4	5	6	7	8	9
2.	The raising of one's social position is one of the least important goals of work.	1	2	3	4	5	6	7	8	9
3.	Some good can still come from work that violates my moral, ethical, or religious beliefs.	1	2	3	4	5	6	7	8	9
4.	Work can be satisfying only when I have the chance to improve and develop my own special skills and abilities.	1	2	3	4	5	6	7	8	9
5.	I really enjoy supervising the work of others.	1	2	3	4	5	6	7	8	9
6.	If my job were losing its prestige and respect in the eyes of others, it would cause me very little worry or concern.	1	2	3	4	5	6	7	8	9
7.	To me, a very important part of my work is the opportunity to make friends.	1	2	3	4	5	6	7	8	9
8.	Having pleasant physical surroundings to work in is one of the least important things to look for in a job.	1	2	3	4	5	6	7	8	9

		Strongly Disagree		Slightly Disagree		Neither agree nor disagree		Slightly Agree		Strongly Agree
9.	There is almost nothing worse than doing work which is dull or monotonous.	1	2	3	4	5	6	7	8	9
10.	If I felt I was losing the approval or esteem of people I work with, I would go all-out to get it back.	1	2	3	4	5	6	7	8	9
11.	In choosing a job, the prestige that job has with the general public is of little importance.	1	2	3	4	5	6	7	8	9
12.	It is of very little concern whether the people you work with like you as a friend.	1	2	3	4	5	6	7	8	9
13.	When all is said and done, it is more important for a person to do work which satisfies his supervisors (program leaders) than to do work which satisfies himself.	1	2	3	4	5	6	7	8	9
14.	It is very important to have a line of work that no one can look down on.	1	2	3	4	5	6	7	8	9
15.	A person's work should serve some larger purpose beyond his own benefit or enjoyment.	1	2	3	4	5	6	7	8	9
16.	I really admire people like artists and scientists who do their own thing without regard for what others think of their work.	1	2	3	4	5	6	7	8	9

		Strongly Disagree		Slightly Disagree		Neither agree nor disagree		Slightly Agree		Strongly Agree
17.	The world being what it is, most people have to be concerned about making enough money to give themselves and their families most of what their friends and neighbors have.	1	2	3	4	5	6	7	8	9
18.	The jobs which don't require a person to learn new things and skills are really the most desirable ones.	1	2	3	4	5	6	7	8	9
19.	It would be of very little concern to me if people I worked with seldom complimented me when I did a good job.	1	2	3	4	5	6	7	8	9
20.	A primary goal of work is to gain advancement to a position of power and influence in your organization.	1	2	3	4	5	6	7	8	9
21.	Work can only be satisfying when the people you work with respect and appreciate your work.	1	2	3	4	5	6	7	8	9
22.	It would really upset me to have a job in which I would not get ahead as fast as most other people.	1	2	3	4	5	6	7	8	9
23.	In work, there is almost no substitute for having a chance to do the things you are best at.	1	2	3	4	5	6	7	8	9

APPENDIX C

PRODUCTIVITY MEASURE

Please rate the following workers on a scale of 1 to 9 as to their productivity.

	very unproductive								very productive
1.	1	2	3	4	5	6	7	8	9
2.	1	2	3	4	5	6	7	8	9
3.	1	2	3	4	5	6	7	8	9
4.	1	2	3	4	5	6	7	8	9
5.	1	2	3	4	5	6	7	8	9
6.	1	2	3	4	5	6	7	8	9
7.	1	2	3	4	5	6	7	8	9
8.	1	2	3	4	5	6	7	8	9
9.	1	2	3	4	5	6	7	8	9
10.	1	2	3	4	5	6	7	8	9
11.	1	2	3	4	5	6	7	8	9
12.	1	2	3	4	5	6	7	8	9
13.	1	2	3	4	5	6	7	8	9
14.	1	2	3	4	5	6	7	8	9
15.	1	2	3	4	5	6	7	8	9
16.	1	2	3	4	5	6	7	8	9
17.	1	2	3	4	5	6	7	8	9
18.	1	2	3	4	5	6	7	8	9
19.	1	2	3	4	5	6	7	8	9
20.	1	2	3	4	5	6	7	8	9
21.	1	2	3	4	5	6	7	8	9
22.	1	2	3	4	5	6	7	8	9
23.	1	2	3	4	5	6	7	8	9
24.	1	2	3	4	5	6	7	8	9
25.	1	2	3	4	5	6	7	8	9
26.	1	2	3	4	5	6	7	8	9
27.	1	2	3	4	5	6	7	8	9
28.	1	2	3	4	5	6	7	8	9
29.	1	2	3	4	5	6	7	8	9
30.	1	2	3	4	5	6	7	8	9

Please list what your judgements about productivity were based upon (like piece-rates, absentism, cooperation, reports, etc.)

_____ _____

_____ _____

APPENDIX D

RESULTS FOR EXPECTATIONS CONCERNING GROUPNESS AND ORGANIZATIONNESS

TABLE 1

T-TEST FOR ROLE USAGE (E_{1a})

Organization	Mean	SD	SE	T-Value	DF	1-Tail Prob.
Small business	1.57	.64	.065	8.02	171	.000*
Church	1.16	.38	.043			

* $p < .05$ Point Biserial Correlation = .35

TABLE 2

T-TEST FOR PROPORTION OF TIME (E_{1b})

Organization	Mean	SD	SE	T-Value	DF	1-Tail Prob.
Small business	5.79	2.11	.22	7.94	171	.000*
Church	6.81	1.92	.11			

* $p < .05$ Point Biserial Correlation = .24

TABLE 3

T-TEST FOR SELF-PERCEIVED SKILL (E_{1c})

Organization	Mean	SD	SE	T-Value	DF	1-Tail Prob.
Small business	1.32	1.86	.027	4.75	171	.000*
Church	2.01	1.70	.22			

* $p < .05$ Point Biserial Correlation = -.19

TABLE 4

T-TEST FOR ROLE USAGE (E_{2a})

Organization	Mean	SD	SE	T-Value	DF	1-Tail Prob.
Small Business	1.57	.64	.06	6.77	180	.000*
Military	1.14	.72	.08			

* $p < .05$ Point Biserial Correlation = .33

TABLE 5

T-TEST FOR PROPORTION OF TIME (E_{2b})

Organization	Mean	SD	SE	T-Value	DF	1-Tail Prob.
Small Business	6.81	2.11	.22	9.72	182	.000*
Military	4.98	1.38	.15			

* $p < .05$ Point Biserial Correlation = .43

TABLE 6

T-TEST FOR SELF-PERCEIVED SKILL (E_{2c})

Organization	Mean	SD	SE	T-Value	DF	1-Tail Prob.
Small Business	1.32	1.86	.27	3.29	180	.000*
Military	1.70	.53	.059			

* $p < .05$ Point Biserial Correlation = -.11

TABLE 7

PEARSON PRODUCT MOMENT CORRELATION BETWEEN TASK AND PERSON COMMUNICATION ROLES IN SMALL BUSINESS FIRM

Measure	Variance-Covar	r	r^2	p
Usage	.26	.73	.53	.000*
Time in Role	.95	.62	.38	.000*
Skill	.037	.92	.85	.000*

* $p < .05$

TABLE 8

PEARSON PRODUCT MOMENT CORRELATION BETWEEN TASK AND PERSON COMMUNICATION ROLES IN MILITARY ORGANIZATION

Measure	Variance-Covar	r	r^2	p
Usage	- .18	- .36	.13	.000*
Time in Role	- .03	- .09	.008	.27
Skill	.51	.41	.17	.000*

* $p < .05$

TABLE 9

PEARSON PRODUCT MOMENT CORRELATION BETWEEN TASK AND PERSON COMMUNICATION ROLES IN CHURCH ORGANIZATION

Measure	Variance-Covar	r	r^2	p
Usage	- .03	- .29	.08	.005*
Time in Role	- .98	- .17	.03	.02*
Skill	.05	.22	.05	.001*

* $p < .05$

TABLE 10

DESCRIPTIVE STATISTICS FOR MILITARY ORGANIZATION

Measure	Communication Roles	$\bar{X}$	Var.	S_tE	SD
Usage	Task	.67	1.33	.03	.43
	Person	.45	1.29	.04	.31
	Combined	1.13	3.63	.05	.52
Time	Task	2.82	1.29	.08	.82
	Person	2.16	2.21	.06	.56
	Combined	4.98	4.52	.09	1.18
Skill	Task	1.68	.45	.05	.32
	Person	1.89	.76	.03	.26
	Combined	1.70	1.21	.06	.53

TABLE 11

DESCRIPTIVE STATISTICS FOR
CHURCH ORGANIZATION

Measure	Communication Roles	$\bar{X}$	Var.	S_tE	SD
Usage	Task	.50	.83	.03	.02
	Person	.65	1.44	.05	.65
	Combined	1.16	3.48	.043	.38
Time	Task	2.79	.83	.61	.86
	Person	3.00	1.44	.72	1.34
	Combined	5.79	3.48	.11	1.92
Skill	Task	2.41	.57	.14	.84
	Person	1.79	.71	.17	.98
	Combined	2.01	1.62	.22	1.70

TABLE 12

DESCRIPTIVE STATISTICS FOR
SMALL BUSINESS FIRM

Measure	Communication Roles	$\bar{X}$	Var.	S_tE	SD
Usage	Task	.72	1.31	.05	.19
	Person	.85	.81	.02	.25
	Combined	1.57	3.41	.043	.38
Time	Task	3.70	1.44	.19	1.32
	Person	3.09	.83	.09	1.01
	Combined	6.81	3.48	.22	2.11
Skill	Task	1.35	.44	.06	.94
	Person	1.29	.23	.02	1.41
	Combined	1.32	1.48	.027	1.86

APPENDIX E

RESULTS FOR EXPECTATIONS CONCERNING COMMUNICATION AND LOCUS OF CONTROL

TABLE 1

PEARSON PRODUCT MOMENT CORRELATION BETWEEN INTRINSIC LOCUS OF CONTROL AND COMMUNICATION ROLES

Measure	Communication Roles	Variance-Covar	r	r^2	p
Usage	Task	-.06	-.22	.47	.000*
	Person	.12	.41	.64	.000*
Time	Task	-.04	-.11	.33	.03*
	Person	.08	.32	.56	.000*
Skill	Task	-.02	-.03	.17	.17
	Person	.08	.20	.45	.000*

* $p < .05$

TABLE 2

PEARSON PRODUCT MOMENT CORRELATION BETWEEN EXTRINSIC LOCUS OF CONTROL AND COMMUNICATION ROLES

Measure	Communication Roles	Variance-Covar	r	r^2	p
Usage	Task	.15	.47	.68	.000*
	Person	-.03	-.10	.32	.05*
Time	Task	.07	.21	.46	.000*
	Person	-.03	-.13	.36	.02*
Skill	Task	.06	.12	.35	.03*
	Person	-.03	-.06	.24	.15

* $p < .05$

APPENDIX F

RESULTS FOR EXPECTATIONS CONCERNING COMMUNICATION AND PRODUCTIVITY

TABLE 1

STEP-WISE MULTIPLE REGRESSION OF SIGNIFICANT PREDICTORS OF PRODUCTIVITY IN MILITARY ORGANIZATION

Measure	Communication Role (predicted order)	R	R^2	R^2 change	F
Usage	1. Task	.56	.32	.32	14.43*
	2. Person	.60	.36	.04	8.35*
Time	1. Task	.29	.08	.08	4.84*
Skill	1. Task	.23	.05	.05	4.22*

* $p < .05$ = df 1,30 - 4.17
df 2,29 - 3.33

TABLE 2

STEP-WISE MULTIPLE REGRESSION OF SIGNIFICANT PREDICTORS OF PRODUCTIVITY IN CHURCH ORGANIZATION

Measure	Communication Role (predicted order	R	R^2	R^2 change	F
Usage	1. Person	.55	.30	.30	12.92*
	2. Task	.58	.33	.03	7.32*
Time	1. Person	.26	.07	.07	4.39*
Skill	1. Person	.21	.04	.04	3.32

* $p < .05$ = df 1,30 - 4.17
df 2,29 - 3.33

TABLE 3

STEP-WISE MULTIPLE REGRESSION OF SIGNIFICANT PREDICTORS OF PRODUCTIVITY IN SMALL BUSINESS FIRM

Measure	Communication Role (predicted order)	R	R^2	R^2 change	F
Usage	1. Person	.40	.16	.16	5.80*
	2. Task	.52	.27	.11	5.55*
Time	1. Task	.63	.40	.40	20.65*
	2. Person	.64	.41	.004	10.16*
Skill	1. Person	.33	.11	.11	5.87*
	2. Task	.35	.12	.007	3.42*

* $p < .05$ = df 1,30 - 4.17
df 2,29 - 3.33