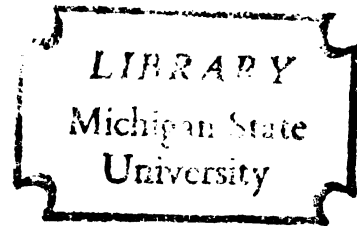


DIRECTION OF MESSAGE FLOW AS RELATED TO
SUBORDINATE'S COMMUNICATION SATISFACTION
IN THE SUPERVISOR/SUBORDINATE DYAD

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
JERRY BULEY
1971



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ABSTRACT

DIRECTION OF MESSAGE FLOW AS RELATED TO SUBORDINATE'S COMMUNICATION SATISFACTION IN THE SUPERVISOR/SUBORDINATE DYAD

By

Jerry Buley

It is not necessary to emphasize the critical nature of the relationship between the supervisor and the subordinate in organizations. A failure at this important juncture marks a failure in the basic structure of the organization.

Previous studies have shown that communication variables such as frequency of contact and initiation of contact between subordinate and supervisor are related to the subordinate's satisfaction with his job and with his relationship with his supervisor.

A theory which deals with frequency of contact and continuance of behavior in a relationship is social exchange theory. The chief exponent of this theory is George C. Homans. The purpose of the present study was to seek evidence to support an extension of social exchange theory to include a new interaction variable called direction of message flow in the supervisor/subordinate dyad.

The hypotheses were tested with data derived from a questionnaire completed by 193 clerical employees on all

levels of a department of the local state government. Seventy-five percent of the employees were in non-supervisory positions. The questionnaire was administered on the job at the respondent's desk by the researcher.

Four sets of three hypotheses were developed. Of the twelve hypotheses, three were significant with the shape of the relationship between the variables conforming to that predicted by the hypotheses.

The subordinate's percentage of solicited information-giving in the supervisor/subordinate dyad was not related to the subordinate's desired amount of change in percentage or frequency of solicited information-giving, nor was it related to the subordinate's evaluation of his supervisor's communication in the dyad.

Subordinates with a moderate percentage of unsolicited information-giving desire less change in that percentage and evaluate their supervisor's communication more highly than do subordinates with more extreme percentages. Subordinate's perceived percentage of unsolicited information-giving was not related to his desired amount of change in frequency of unsolicited information-giving.

Subordinates who perceived they had a moderate percentage of total information-giving in the dyad desired less change in that percentage.

Subordinate's perceived percentage of total information-giving was not related to subordinate's desired

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amount of change in frequency of information-giving, nor to the subordinate's evaluation of his supervisor's communication in the dyad.

There was no significant difference between the two dyad styles operationalized in the study (traditional and participation)¹ on the three variables: 1) subordinate's desired amount of change in percentage of information-giving; 2) subordinate's desired amount of change in frequency of information-giving; and 3) subordinate's evaluation of the supervisor's communication in the dyad.

The findings provide partial support for the extension of social exchange theory to include direction of message flow in the supervisor/subordinate dyad as a predictor of the subordinate's desire to change communication aspects of the relationship and of his evaluation of his supervisor's communication in that relationship. This is especially true for unsolicited information-giving.

Further research should operationalize the concept in other ways to further test the relationships, should look at supervisor's satisfaction with communication, and should look at direction of message flow on the group level. The present study indicates that the concept is

¹In the traditional dyad, the supervisor has more than or equal to 65% of the message transmission in the dyad. In the participation dyad, the subordinate has greater than or equal to 65% of the solicited information-giving and the supervisor has greater than or equal to 65% of the unsolicited information-giving.

Jerry Buley

meaningful, is related to important aspects of the supervisor/subordinate relationship, and can be operationalized to provide data which are easily analyzed.

DIRECTION OF MESSAGE FLOW AS RELATED
TO SUBORDINATE'S COMMUNICATION SATISFACTION IN
THE SUPERVISOR/SUBORDINATE DYAD

By

Jerry Buley

A THESIS

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ACKNOWLEDGMENTS

Early scholars may have been able to say their work was a product of their own endeavors. It is doubtful whether any modern scholar could honestly make that claim. Certainly I cannot do so.

However, it is difficult to acknowledge all of the people who have helped me reach this point in my intellectual growth. Many have cared and helped in so many different ways.

Becoming a scientist is somewhat like designing and building a house. Many people perform many different functions to reach the final product. My wife Jeanie has been my foundation, my reason for being. Dr. Donald K. Darnell has provided direction. Drs. Michael Moore, R. Vincent Farace, and Eugene Jacobson provided structure. Drs. Daniel Wackman and Donald Cushman have helped work out many of the problems which have come along. And, finally, Dr. David K. Berlo drove home the nails of rigor. All of this was made habitable by gentle jibes and the intellectual support from my fellow graduate students.

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CHAPTER ONE

INTRODUCTION

The purpose of the present chapter is to present a background for the study of the directionality of message flow in the supervisor/subordinate dyad as it is related to the subordinate's desire to change aspects of the communication occurring between them and to the subordinate's evaluation of his supervisor's communication in their dyad. There are two sections to the chapter. The first provides a very brief overview of the early conceptualizations of message flow. The second section describes the research on message flow in dyads with emphasis on those studies which have been concerned with message flow in the supervisor/subordinate dyad.

Message Flow in General

Some of the earliest research on message flow was concerned with rumor. (Caplow, 1946; Allport and Postman, 1947; Festinger, et al., 1948; and Back, et al., 1950). These and other studies are summarized in Guetzkow (1965). Caplow defined rumor as "an item of information with definite interest connotations transmitted only by informal person-to-person communication within a group." p. 491 (emphasis in original).

Caplow and other rumor researchers were interested in the "rapidity of diffusion," number of rumors within

a given time period, the components of a rumor message, the saturation of the message within a given system, the "veracity" of rumors, and the relationship between rumor channels and formal channels.

Caplow noted that there was a bidirectionality in the rumor channels. "These tended to be two-way channels since the communication of rumors is more often than not marked by an exchange. The customary quid pro quo for a rumor is either another rumor or a validity judgment upon the one received." (p. 493)

An analysis of the rumor research to date led Guetzkow (1965) to say that "these studies seem to reveal no characteristics which distinguish rumors in any fundamental way from other communications." (p. 562)

Next came an emphasis on the flow of messages in small groups contrived in the laboratory. (Bavelas, 1950; Leavitt, 1951; Guetzkow and Simon, 1955).

The researchers in the small group area were interested in such message flow concepts as number of messages, duration of communication, and direction of message flow. However, the bulk of the studies dealing with communication in small groups was concerned with structure, here defined as a person's unique position in an ongoing group of people among whom messages are transmitted, where position is defined as the set of people with whom the person communicates.

Structure is inextricably tied up with message flow. For example, if a person is at the "center" of

a communication network, his potential for transmitting and receiving messages is much higher than persons who are in other positions. Thus while the small group researchers have used the variable "centrality" and found it to be related to satisfaction with job in the group, it may be that the relationship may be the same as that found between frequency of communication and satisfaction with job.

Coincidental with the study of message flow in small groups came the study of the diffusion of new ideas, new products and news stories. (Katz and Lazarsfeld, 1955; Deutschman, 1960; Rogers, 1962; and Coleman, Katz, and Menzel, 1966).

The diffusion studies were concerned with the process by which new ideas, products and news stories were learned and adopted by a particular population. Characteristics of early learners and adopters, the stages through which a person goes prior to actual adoption, and the roles of the media and the change agent were common areas of research in the diffusion area. Rogers (1962) has summarized more than a decade of the diffusion studies.

The resources of science have not been marshalled behind the study of the flow of messages in organizations as they have been at one time or another behind the aforementioned areas, although it has been of much pragmatic interest to those in the management science and business

areas. (Halpin and Winer, 1952; Davis, K., 1953, a&b, and 1968; Turner, 1957; and Rubenstein, 1963 and 1966).

Davis (1953, a&b) was interested in the probability of a message being relayed, the proportion of members learning the message given that it was relayed, and the amount of distortion or elimination of information in the message. Rubenstein was interested in the flow of ideas in research and in industrial settings. He was primarily interested in the role of the individual and personality differences in determining whether ideas would be transmitted and accepted. Neither Davis nor Rubenstein related their variables to individuals' desire to change their relationship with or their evaluation of their superior.

Other researchers have asked organization members to compile daily diaries about their communication in the organization to get some indication of the message flow in the organization. (Turk and Wills, 1964; Farace, et al., 1970; and Lawler, 1968).

Message Flow in Dyads

Frequency of communication has repeatedly been shown to be related to satisfaction with the relationship and with evaluation of performance. Turner (1957) found a positive association between interaction rate and liking of the supervisor. Berlo et al. (1970) found that the more frequently communication occurs between supervisor

and subordinate: 1) the more likely either one of them initiates communication in the dyad; 2) the more likely it is that the subordinate will go to the supervisor or the supervisor's boss for work information rather than going elsewhere; and 3) the less likely the subordinate is to say his supervisor is not interested in the subordinate's personal problems.

Turk and Wills (1964), in a longitudinal study of student nurse and student physician dyad teams during a period of change in a university hospital, found that rate of interaction is inversely associated with an increase in the authority of one member (the student physician) over the other, is related to their expectations of the differences in authority between the two, and is positively associated with enjoyment of the relationship. Authority is defined as one person's direction of another person's activities. The more of person A's activities which can be directed by person B, the more authority person B has over person A.

Turk and Wills studied only the relationship of the authority of one person to rate of interaction and to enjoyment with the relationship. Consequently they studied only one half of the possible relationship between their variables. Figure 1a shows this truncation graphically. Figure 1b shows the full relationship given that their findings would be mirrored on the other side.

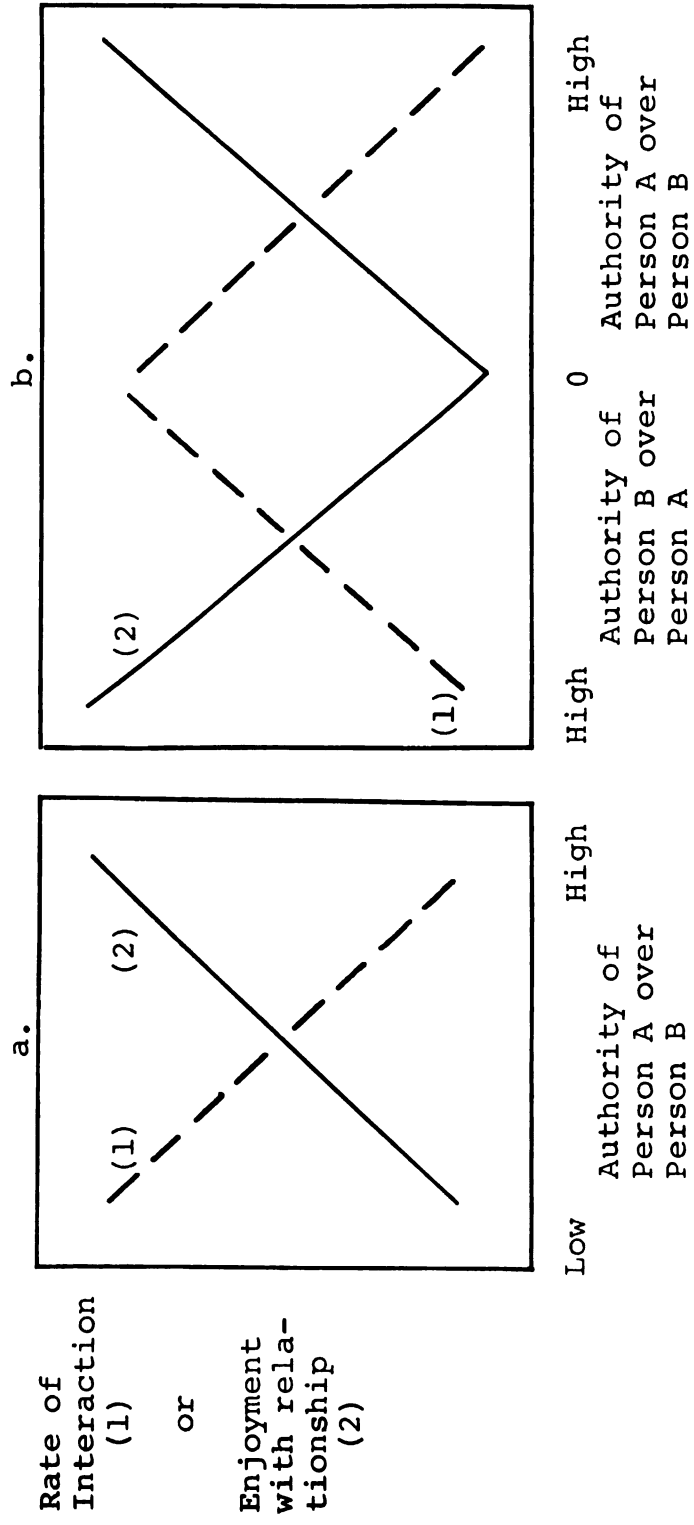


Figure 1

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Thus in any given dyad there would be a curvilinear relationship between authority and the two variables: rate of interaction and enjoyment with the relationship.

Turk and Wills found that the actual authority relationship was a result of the member's particularistic norms (those generated in the dyad) and was not necessarily related to their universalistic norms (those generated in their peer group). It must be remembered that the working relationship in this study was the dyad, not the group. I would expect this outcome to be reversed if the working relationship were the group. Their study, they claim, indicated that equality of power can lead to increased interaction, which in turn promotes mutual attractiveness.

There is some indication that initiating communication is more satisfying than receiving it. Whyte (1968) draws a strong generalization concerning initiation.

Whenever we see a high frequency of initiation down the line and little or no initiation upward, we always find workers expressing dissatisfaction with their superiors and generally with the work situation also. If we find, on the contrary, the subordinates are initiating upward for a significant portion of the time, then we tend to find quite different sentiments expressed toward their superiors. (p. 56)

Lawler (1968), using a diary self-report technique, asked his respondents to rate their satisfaction with the communication which they had initiated and the communication initiated by others with whom they had contact. He

found that his respondents were more favorable to their own initiations than to those of their contacts.

Berlo et al. (1970) in a study of lower level employees in a large financial organization found that if the subordinate perceived that each member of the supervisor/subordinate dyad was about as likely to initiate communication, the subordinate was more likely to say that his supervisor was just as, or more, interested in the subordinate's personal problems as he is in the subordinate's work problems. The same was not true if either member was more likely to initiate than the other. This finding would indicate that there is a curvilinear relationship between initiation and subordinate's perception of his supervisor's interest in the subordinate's personal problems. (Figure 2)

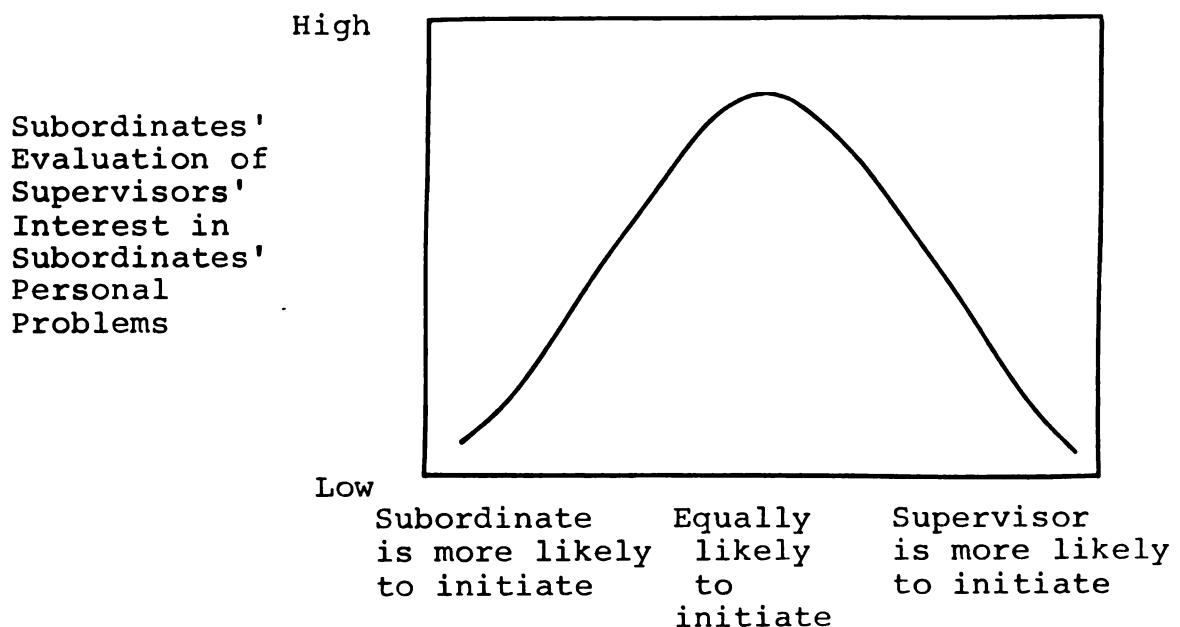


Figure 2

Another finding from this study was that subordinates who perceived that the supervisor was interested in their personal problems were less likely to have ideas or suggestions about how to change things but were more likely to communicate them if they had one. This would seem to indicate that a subordinate's desire to change aspects of his job and aspects of his relationship with his supervisor is related to his evaluation of his supervisor's present relation to the subordinate and possibly to the direction of message flow in the dyad.

Berkowitz and Bennis (1961) made a comprehensive study across several hierarchical levels in seven outpatient departments in hospitals in Boston. They found that initiation is inversely related to rank of the other persons. This compares to the finding by Turk and Wills that rate of initiation is related to authority of the other person. (Figure 1). Typically, initiation is from supervisor to subordinate, with communication with peers and supervisors generally more satisfying than communication with subordinates.

Bidirectionality of Message Flow

Blau and Scott (1962) report a study which focused on one aspect of initiation, that of soliciting information. They found that in some dyads either member was as likely to ask the other for information. In other dyads, one member was more likely than the other to ask the other

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for information. These authors found that when they classified groups by the number of reciprocal relationships they contained, there were significant differences between them.¹

In low reciprocity groups self-confident and competent persons were more likely to be consulted. In high reciprocity groups the reverse was true. That is, self-confidence and competence were inversely associated with being consulted by colleagues. Reciprocal dyads also had a higher frequency of interaction.

The concept of reciprocity has received considerable emphasis in the literature. Sherif (1967) has said that "this traffic among men is not haphazard or fortuitous. It falls into a pattern of reciprocities consisting of mutual expectations, role relations, and power arrangements." (pp. 19-20). Weiss (1958), Schwartz (1968) and MacDonald (1970) have defined reciprocity as the assertion by each of two individuals on separate questionnaires that they have contact with one another on some regular basis. This is the primitive definition of reciprocity; i.e., verification by two people that they have contact. However, knowledge of contact alone tells us only that messages do or can flow between two people.

¹Reciprocal relationships were those in which either member was as likely as the other to solicit information. If one member was more likely than the other, they were called unilateral relationships.

James Davis (1968) defines reciprocity somewhat differently. Given two different sociometric questions, it is the degree to which, if person A chooses person B on one question, person B will choose person A on the other. "We shall call it reciprocity and note that it could be of some interest to research workers interested in 'exchange' in interpersonal relations. If, for example, it is the case that respect is exchanged for advice, then if one asks persons to name those whom they respect and those to whom they give advice, the two items should show a positive reciprocity coefficient." Davis uses the word symmetry synonymously with the way MacDonald (1970) and others have used reciprocity; i.e., if A lists B, then B lists A for the same sociometric question.

Davis' reciprocity notion adds a message flow dimension to contact between individuals similar to that of Blau and Scott.

Mayhew, Gray and Richardson (1969) speak of symmetrical relationships as those in which power or influence in the relationship moves bidirectionally, as opposed to unidirectionally as in the asymmetrical relationship. Similarly, Foa (1958) uses the term balanced dyad which he defines as one in which both members receive equal amounts of reward from the interaction. Foa does not, however, mean to imply an equality in the proportion of information flow.

Watzlawick, Beavin, and Jackson (1968) have defined symmetrical relationships much as Foa has defined balanced

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dyads. "Symmetrical interaction, then, is characterized by equality and the minimization of differences." On the other hand, the complementary relationship "is based on the maximization of differences." (pp. 68-69)

Conclusion

This chapter has presented research related to the variables and relationships in the present study. A summary of the major areas of research in and out of organizations dealing with message flow was presented. Then, research focusing on message flow in the dyad and more specifically between supervisor and subordinate was covered. Finally, conceptualizations and research findings on the bidirectional flow of messages in dyads was presented.

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CHAPTER TWO

THEORETICAL PERSPECTIVE AND HYPOTHESES

The goals of the present study are to further our understanding of communication in the supervisor/subordinate dyad and to find ways to improve the supervisor's communication in it. This chapter will provide a framework for the study of communication behavior in supervisor/subordinate dyads as a predictor of the subordinate's desire for the dyad to change and of his evaluation of the supervisor's communication in the dyad.

One theory which has dealt with these and similar variables is social exchange theory. George C. Homans is the writer most commonly associated with this theory. His two books, The Human Group (1950) and Social Behavior: Its Elementary Forms, (1961) form the backbone of social exchange theory. The present study will attempt to extend this theory in order to predict a subordinate's desire for change in the supervisor/subordinate relationship and his evaluation of his supervisor's communication in the dyad, from the subordinate's percentage of the message flow in the dyad.

Theoretical Perspective

Homans analyzes human behavior through the use of two classes of constructs which he calls descriptive terms and variables. The former describe kinds of behavior (i.e.,

activity, sentiment and interaction), and the latter are the quantification of these.

Homans defines activity as any voluntary behavior. "The activities that the members of a particular verbal or symbolic community say are signs of the attitudes, and feelings a man takes toward another man or other men--these we call sentiments." (Italics in original; 1961, p. 33). Sentiments also, thus, are not internal states but "signs of" internal states; and, consequently are also activities.

When two persons exchange activities or sentiments, or as Homans puts it, "when an activity (or sentiment) emitted by one man is rewarded (or punished) by an activity emitted by another man, regardless of the kinds of activity each emits, we say that the two have interacted." (Italics in original; 1961, p. 35)

Quantity, according to Homans, is a frequency variable. It is "the number of units of activity that the organism in question emits within the given period of time." (Homans, 1961, p. 36). An example of such a quantification would be the number of times a person has contact with another person over a period of time.

Homans states that value has two components, one of which is relatively constant over a period of time, and another which is variable according to the present state of the individual. The first is a rank order of preferences regardless of his state. The second component is dependent upon the degree of satiation or deprivation of

the individual. (1961, p. 48-50) Thus, the more deprived a person is of a certain activity and the higher it is on his list of preferred activities, the higher he will value that activity.

Homans proposes the following relationships among these constructs and variables. He derived these propositions from "laws" of animal behavior.

PROPOSITION ONE: If in the past the occurrence of a particular stimulus situation has been the occasion on which a man's activity has been rewarded, then the more similar the present stimulus-situation is to the past one, the more likely he is to emit the activity, or some similar activity, now. (1961, p. 53)

PROPOSITION TWO: The more often within a given period of time a man's activity rewards the activity of another, the more often the other will emit the activity. (1961, p. 53)

PROPOSITION THREE: The more valuable to a man a unit of activity another gives him, the more often he will emit activity rewarded by the activity of the other. (1961, p. 55)

PROPOSITION FOUR: The more often a man has in the recent past received a rewarding activity from another, the less valuable any further unit of that activity becomes to him. (1961, p. 55)

Corollaries

- 1: The frequency of interaction between Person and Other depends upon the frequency with which each rewards the activity of the other and on the value to each of the activity he receives. (1961, p. 55)
- 2: The more cost Person incurs in emitting an activity, the less often he will emit it. . . . For an activity to incur cost, an alternative and rewarding activity must be foregone. (1961, p. 59)

- 3: The more often Person has emitted a costly activity, the more costly he finds any further unit of that activity. (1961, p. 60)

The Rule of Distributive Justice

A man in an exchange relation with another will expect that the rewards of each man be proportional to his costs--the greater the rewards, the greater the costs--and that net rewards, or profits, of each man be proportional to his investments--the greater the investments the greater the profit. (1961, p. 75)

When the expected proportionality does not occur, the law of distributive justice is said to have been violated.

This leads to Homans' fifth and last proposition.

PROPOSITION FIVE: The more to a man's disadvantage the rule of distributive justice fails of realization, the more likely he is to display the emotional behavior we call anger. (1961, p. 75)

Homans states that "distributive justice may, of course, fail in the other direction, to the man's advantage rather than to his disadvantage, and then he may feel guilty rather than angry; he has done better for himself than he ought to have done."

Frequency of contact is one of Homans' major variables. This is the only quantification of interaction treated in the social exchange theory. Yet frequency of interaction is a gross measure. It is possible to differentiate between several levels of interaction which could provide much finer measures of interaction than frequency.

Levels of Interaction

The first level is the most primitive. Either there is contact between two people or there is not. Variables associated with the existence of contact are propinquity, rules, and perceived similarity. An example of the propositions incorporating these variables is, the closer two people are in distance, the more likely they are to have contact.

Propositions incorporating contact as an independent variable are usually stated in the form, "given contact (or interaction, or communication), then . . ."

The second level of interaction in dyads looks at contact in terms of the duration and/or frequency of occurrence of contact. These variables come as a response to the question, given that two people have contact, how frequently do they interact, and how long do they interact when they do. Propositions are usually stated as, "the more frequently two persons interact . . ." It is interesting to note that interaction at the first and second levels need not be symbolic. John and Joe may meet every day at the same point on the road, walk down to the lake, fish for two hours, walk back to the road, part, and never interact symbolically the entire time.

Most of Homans' propositions, from The Human Group, (e.g., the more frequently two people interact the greater the amount of liking they will have for one another), are second level propositions and apply no less to the interaction between John and Joe than they do to two people who may spend the same two hours discussing world problems.

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Homans defines two additional concepts for application on this second level of interaction. They are initiation and origination of interaction. The former occurs whenever a person emits an action in the presence of another person.

Origination, then, is the first initiation of interaction by one of the members of a dyad after any period during which no interaction occurred in the dyad. The origination concept is the beginning of the idea of pattern in the interaction itself (i.e., other than its existence or nonexistence). It is possible for one member of a dyad to be much more likely to originate interaction in the dyad. It is also possible for any origination to be the product of both members' initiation; e.g., when John and Joe met in the road.

The third level of interaction incorporates the direction of message flow; that is, who is receiving a message and who is transmitting it in the dyad. Or, over a longer period of interaction, which member is more likely than the other to give the other information.

Just as the second level of interaction in a dyad is a combination of the first level and a new concept, the third level is the combination of the first and second levels and another new concept. Thus, proportion of message flow direction is the third level of interaction. Person A can originate a message flow either toward himself or away. That is, A can originate a message to B

for which B has not asked. Or, A can originate an interaction requesting information from B. The two patterns of message flow in a dyad will be called solicited and unsolicited information giving.

The fourth level of interaction in dyads breaks it into content categories. It represents an answer to the question, given that A and B have contact over time, what are the topics of the interaction. These categories may be broad and inclusive; e.g., Berlo's (1969) "environmental," "motivational," and "instructional" information categories. Or, they may be specific; e.g., the Dewey Decimal System or Library of Congress methods for categorizing library materials.

The fifth level of interaction consists of encoding behaviors; e.g., language usage, intonation patterns, channel choice, sequencing and punctuation of messages, etc. Each action--large or small--of an individual is analyzed in relation to the actions of the other individual in the dyad. Nonverbal communication (hand motions, gestures, and facial expressions, as well as other body movements) are also included on the fifth level of interaction. The fifth level of interaction incorporates all previous levels of interaction; and, therefore, it produces a richer form of data. The present study will be concerned primarily with the third level of interaction; i.e., the direction of message flow in a dyad. However, it will focus upon the transfer of symbolic information

which occurs in the dyad. Thus, message transmission in a dyad will be defined as the encoding of symbolic information by one person in the presence of another person who has the potential for and requisite skills to decode that symbolic information.¹

If members of a dyad value the reception of messages differently than they value the transmission of messages in the dyad, then propositions can be deduced from the propositions contained in the social exchange theory.

There is empirical support for the proposition that transmitting messages is more rewarding to participants than receiving them. Mulder (1966) divided subjects into four conditions in a small group study dealing with task completion. The four conditions were two levels of "self-realization" and two levels of "power."

S1: Receives solutions

S2: Receives information; forms own solution

P1: Does not transmit information

P2: Transmits information

After the completion of the task, Mulder had the subjects rate their satisfaction with their behavior in the study with the following results:

	P1	P2
S1	4.89	7.11
S2	5.37	6.57

¹This definition draws upon that presented by David K. Berlo, 1969.

Cell entries represent the means of the satisfaction ratings for subjects in that condition. "In an analysis of variance, only the effect of the power (P) variable is significant ($p < .001$); the S variable has no influence at all; the interaction (PxS) is far from significant." (emphasis in original; p. 265)

Mulder interpreted his findings as saying that power was more important in terms of satisfying the individual than self-realization. However, as he has operationalized his variables, there is even a more basic finding here. That is, transmitting messages is more satisfying than receiving messages.

Blau and Scott (1962) in a study of peer dyads in a governmental agency explored what may be called the solicited information-giving mode of message transmission in dyads. In general, people tend to interact more frequently with persons they perceive to be their equals in competence. And, while the most competent members had the higher interaction rates, they were more likely to talk with more different people. These authors found two different relationships among these workers. The first they referred to as a reciprocal relationship. In this relationship either member was as likely to ask the other for information. The second type of relationship they called a unilateral relationship. In this dyad one member was more likely than the other to ask for information.

The reciprocal relationship was more likely to occur among participants who perceived themselves to be equivalent or nearly equivalent in competence. The members of a unilateral dyad were more likely to perceive that one of them was less competent than the other.

X Blau and Scott theorize that solicited information-giving is rewarding to the giver but is perceived as a cost by the receiver in unilateral dyads. However, the same is not true in reciprocal dyads. In unilateral dyads the person must defer to the more competent member, and must grant him higher status; thus, the asker perceives it as a cost in terms of the relationship itself. While the asked person perceives being asked as rewarding up to a point, with increasing frequency, he perceives it more and more as a cost. This occurs for at least two reasons. For one thing, satiation sets in; that is, he no longer finds the asker's activity as rewarding as it had been previously. For another, the more often he has to attend to answering requests for information, the less time he has for his own work. Thus, unilateral dyads tend not to interact frequently.

On the other hand, in the reciprocal dyad the members are mutually supportive. Even though they may not get answers as good as they might from the more competent source, at the same time they reduce each other's anxiety, and serve as objective sources of information for

each other. Being asked for information, even though it is from a person equally as competent as oneself, is still rewarding.

Thus, message flow seems to have different values depending upon whether it is being received or transmitted, and propositions can be developed which relate message flow to valuation of the relationship, desire to change the relationship, and valuation of the other member's activities.

It is proposed that the relevant variable on the third level of interaction is not frequency, but rather, an individual's percentage of the transmission in the dyad. The latter is an index of message transmission by one individual relative to the total amount of message transmission in a dyad, while the former is relative to time.

We can represent this difference graphically. For example, we can use a circle to represent the total amount of communication in a dyad. The size of the circle will vary with the frequency and/or duration of communication in the dyad, as in Figure 3.

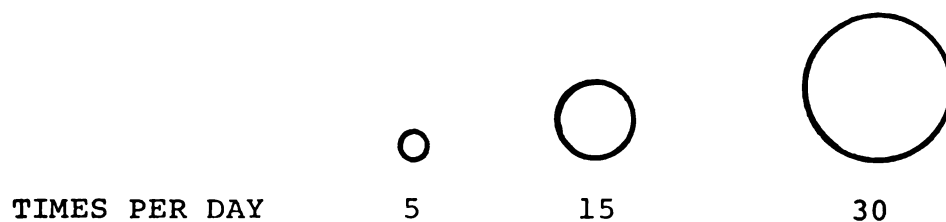


Figure 3

However, we can divide the circle representing the total amount of communication in the dyad into segments representing the percentage of that total which can be attributed to message transmission of each member of the dyad, as in Figure 4.

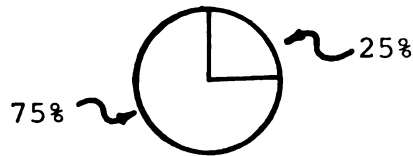


Figure 4

If message transmission in a dyad is more rewarding than message reception, then the latter might be viewed as a cost, because an alternative activity which is more rewarding (i.e., message transmission) is foregone.

Then, by Homans' Corollary Three:

PROPOSITION ONE: The higher a person's percentage of the message reception in a dyad, the more costly he finds any further unit of that activity in that dyad.

We would assume that the following would also be true.

PROPOSITION TWO: The lower a person's percentage of the message transmission in a dyad the more rewarding a unit of that activity is in that dyad.

Thus, combining the two, we would predict that there is a negative linear relationship between a person's percentage of the message transmission in a dyad and the reward potential of a unit of that activity in that dyad.

'Homans incorporates basic economics into his theory and postulates that reward minus cost equals profit. Thus, when a person has a low percentage of the message transmission (low reward) and thus a high percentage of the message reception (high cost) in a dyad, he will have a high loss.

Homans argues that the less a man's profit from a particular activity, the more likely he is to change and emit some other activity. There are two ways in which a person can change a relationship. He can change the frequency of interaction and/or he can change his percentage of the message transmission in the dyad.

Also, a person with a low percentage of the message transmission in a dyad should perceive that he is receiving less than his "fair share" of the rewards in the relationship and thus should desire for his percentage to be closer to that of the other member.

Persons having a larger percentage of the message transmission in a dyad, according to proposition two developed in the present paper, will find message transmission less rewarding than those who have a smaller percentage. In general, the less rewarding an activity is for a person, the less he will tend to emit that activity.

Again, if Homans' proposition concerned with the law of distributive justice is true, then persons having more than their "fair share" of the rewards derived from transmitting messages in the dyad should feel guilty. This

guilt may in turn cause them to want the relationship to change in such a way as to increase the other member's proportion of the message transmission.

Persons with a moderate percentage of the message transmission in the dyad are less likely to experience a loss in the relationship. They will view message transmission as being more valuable than will those having a higher percentage of the message transmission in their dyads, and they will have a lower message reception cost than will those who have a higher message reception percentage in their dyads.

Thus, those with a moderate percentage of the message transmission in their dyad should be less likely to want the relationship to be changed. That is, they will be less likely to desire for a change in the frequency of interaction or their percentage of message transmission in the dyad than will those having a higher or lower percentage of the message transmission in their dyads.

Evaluation of the Supervisor's Communication by the Subordinate

Research from two different areas has revealed a relationship between direction of message flow and perceived competence. The study reported by Blau and Scott (1962), found that unilateral (in terms of solicited information) dyads were more likely to occur between members who perceived that they differed in their levels of competence.

The direction of solicited information giving was from the more competent to the less competent.

Several researchers have studied this relationship in small groups. They have found that those who are more voluble (i.e., more talkative) are more likely to be selected as leaders by members of the group (Gray, Richardson, and Mayhew, 1968; Kirscht, 1959; Riecken, 1948; Shaw, 1959; and Smelser, 1961), are perceived to be more competent and are perceived to have better information and to make better suggestions. (Shaw and Penrod, 1962; and Jaffee and Lucas, 1969).

These data lead us to believe that subordinates with a low percentage of the message transmission in the supervisor/subordinate dyad will evaluate their supervisor's communication in the dyad positively and those with higher percentages will tend to evaluate his communication less positively.¹

However, if a person who has a low percentage of message transmission in the dyad is incurring a high cost in the relationship, it seems unlikely that he would evaluate his supervisor's communication in the dyad positively. Thus, those with a higher percentage of message flow will evaluate their supervisor's communication less positively. Evaluation of supervisor's communication should

¹Compare this to Jain (1971) who found a positive relationship between frequency of interaction and evaluation of supervisor's communication.

then increase with a decrease in percentage of message flow until the subordinate's percentage of message flow is low enough that it is viewed as a cost. At that point, further decrease in subordinate's percentage of message flow should lead to decrease in the subordinate's evaluation of his supervisor's communication.

Thus, rather than a simple linear relationship between percentage of message transmission in the dyad we would predict a curvilinear relationship. Again, those with a moderate percentage of the message transmission in their dyad will be more likely than those with higher or lower percentages to evaluate their supervisor's communication in the dyad positively.

Message Transmission--Two Variables

As mentioned earlier, message flow has two dimensions. It is either solicited or not solicited. This increases the complexity of the relationships which have been presented thus far, but not unnecessarily. We have stated that those with moderate percentages of message transmission are less likely to desire change in either frequency of interaction or percentage of message transmission and are more likely to evaluate their supervisor's communication positively. A person may have a moderate percentage of the message transmission in the dyad as a result of being just as likely as his partner to give solicited information and just as likely to give unsolicited information

in the dyad. However, he can also have a moderate percentage of message transmission by having a high percentage of one type of message transmission and a low percentage of the other type of message transmission. That is, the two counteract each other.¹

This "counteracting" possibility has implications for the supervisor/subordinate relationship. Traditionally in organizations messages flow from the top down the chain of command to the bottom. At any given interface between supervisor and subordinate then, messages are more likely to flow from supervisor to the subordinate; i.e., the supervisor will have a higher percentage of the message transmission in the dyad. (Berkowitz and Bennis, 1961)

If, as has been suggested, a high percentage of the message transmission in one mode can counteract a low percentage of message transmission in the other mode, then supervisors with a high percentage of the unsolicited message transmission in the dyad can counteract that by soliciting more information from his subordinate; i.e., increase the subordinate's percentage of solicited message transmission.

It would seem that solicited information giving should be more rewarding at any given percentage of

¹This is true given that the frequencies of the occurrence of each type of message transmission are roughly equal. However, this is a weighting problem which will be discussed later in another context.

solicited information giving than is unsolicited information giving at that given percentage of unsolicited information giving in a dyad. Both should be rewarding, because they are both forms of information giving. However, solicited information giving has a prerequisite that the other person asks for the information.

Asking for information is an acknowledgement that the other person knows more than the asker. It is rewarding to know that other people believe we know more than they do. Thus solicited information should potentially be more rewarding than is unsolicited information.

Homans felt that his theory of social behavior was limited to the explanation of non-normative non-rule governed behavior. He says that his theory cannot explain "why the more or less explicit rules of a society or some organization within it are what they are." More specifically, he says,

I shall not be concerned with the behavior of a man so far as he holds authority over others by reasons of appointment by a public or private corporation. Thus I shall not be concerned with the behavior of a supervisor so long as he acts as the representative of a firm, employed to get his subordinates to carry out rules. I shall on the other hand, be much interested in the behavior of a man who through his own exertions as an individual in his face-to-face dealings with other individuals, acquires influence over them not de jure but de facto. But it is not impossible, though it may be difficult, for a supervisor to exercise both sorts of authority, and then, if I am to explain his actual behavior, I shall certainly have to take account of the power he exercises by virtue of his official position.

Others following Homans have disagreed as to the applicability of his theory to the supervisor/subordinate dyad.

Abrahamson (1968) differentiates between institutional and subinstitutional behavior as does Homans. The latter, he says, is interaction which is not predominantly the result of clearly defined roles and role expectations. As such, each party is largely able to determine his own way of acting; he is not occupying a role which carries with it clear-cut behavioral expectations. (p. 4)

On the other hand, Caplow (1964) argues that the observation that there are informal and formal statuses "obscures the more important fact that the correlation between prescribed and observed status orders is very close. Accidents of personality and circumstances introduce status differences among people in nominally equal positions or reduce status differences between adjacent unequal positions, but major inequalities are seldom removed--let alone reversed--in this way." (p. 102)

Another argument in support of the applicability of the theory to the supervisor/subordinate dyad is that the relationships between the variables which Homans has predicted with his theory have been supported by studies in organizations and more specifically by studies of the supervisor/subordinate relationship. (Turk and Wills, 1964; Berlo, 1969; Jain, 1971.)

It can also be argued that with the addition of direction of message flow to the basic theory, the theory becomes even more appropriate for the description of communication in the supervisor/subordinate dyad. The

participatory models of organizational management developed by McGregor (1957), Likert (1961), and others assume that when a subordinate person is given an opportunity to determine how goals are achieved, he will be more satisfied than if he is told exactly what to do and when to do it. (Vroom and Deci, 1970). This assumption is based upon a philosophy of man which expresses a belief that man must strike a balance between being inner or other directed.

Maslow (1943) would suggest that the expanded theory would thus find differential application depending upon the level to which each person's needs have been fulfilled in the organization. Those who have their physiological, safety, and love needs satisfied are more likely to be concerned with their self-concept or self-esteem than are those who do not have these more basic needs fulfilled. The self-esteem needs as described by Maslow are,

First, the desire for strength, for achievement, for adequacy, for confidence in the face of the world, and for independence and freedom. Second, we have what we may call the desire for reputation or prestige (defining it as respect or esteem from other people), recognition, attention, importance or appreciation. (p. 32)

If self-esteem is garnered through interaction with others, and direction of message flow is associated with value, then self-esteem would seem to vary with the direction of message flow in a dyad.

Litwak (1961) would argue that the extended theory would be more applicable to some jobs than to others. He says that participation in making decisions is crucial

where the job requires people "to identify themselves with organizational goals, to cooperate in their social relations, and to communicate." He continues by saying that, "Since these involve social skills, participation in making decisions is important where jobs are chiefly defined by those abilities. Put differently, jobs characterized by social skills might be carried out most efficiently under a horizontal structure of authority, that permits all individuals to participate in decisions." Litwak further argues that organizations should be designed around a complex model of bureaucracy which permits differentiation of managerial style by job characteristics. Short cycle high redundant jobs and few social skills require less participation. On the other hand, low redundancy in a job which requires social skills requires more participation. Thus, the expanded theory would seem to find better application for those supervisor/subordinate dyads which occur in low redundancy jobs which require social skills than in those which do not conform to this description.

Hypotheses

Several sets of hypotheses will be tested in the present study. One set is concerned with the subordinate's percentage of solicited information giving. Another will be concerned with the subordinate's percentage of unsolicited information giving. A third set will combine the subordinate's percentage of solicited and his percentage

of unsolicited information giving to form a total information giving index. One last set of hypotheses will compare the traditional supervisor/subordinate relationship in which the supervisor has a higher percentage of information giving in both modes than does the subordinate with the supervisor/subordinate relationship in which the supervisor is more likely to give unsolicited information and the subordinate is more likely to give solicited information.

Each set of hypotheses will have the following dependent variables: Subordinate's desire to change the frequency of interaction, subordinate's desire to change his percentage of message transmission, and subordinate's evaluation of his supervisor's communication in the dyad. Argyle (1967) and Turk and Wills (1964) would argue that we should expect most people to be satisfied with their present relationship with their supervisor no matter what the direction of message flow in the dyad might be. They would probably state that most people will not wish to change their relationship because it would disturb the present steady state, thus decreasing the predictability of the partner's behavior. Also, since the present relationship is a result of the particularistic norms of the dyad (that is, the mode of interaction for each participant has been established by the members of that dyad) it represents a compromise that each can work with.

However, I believe that these arguments apply best to less formally prescribed relationships than those found in the supervisor/subordinate dyad. Informal relationships are much more flexible and the members can usually reach a steady state or compromise position which is somewhat acceptable to both. The latter may not be as true in the supervisor/subordinate dyad which is in part governed by the rules and policies of the organization, in part by universalistic norms for all supervisor/subordinate dyads, and less in part by the particularistic norms developed by the members of the dyad.

Thus, while the counter argument has strength relevant to the relationship being studied, we expect that the following hypotheses will find more support in the supervisor/subordinate dyad and less support in the friend or lover dyads, for example.

Solicited Information Giving

H1a: There is a curvilinear relationship between subordinates' percentage of solicited information giving in a dyad and the amount of change in that percentage they will desire; such that, those with a moderate percentage will desire less change than those with more extreme percentages.

Hlb: There will be a curvilinear relationship between subordinates' percentage of solicited information giving in a supervisor/subordinate dyad and the desired change in frequency of solicited information giving in the dyad; such that, those with a moderate percentage will desire less change in frequency than will those with more extreme percentages.

Hlc: There will be a curvilinear relationship between subordinates' percentage of solicited information giving in a dyad and the subordinates' evaluation of their supervisor's communication in the dyad; such that, those with a moderate percentage will evaluate their supervisor's communication more positively than will those with more extreme percentages.

Although not contained in the hypotheses, it was suggested earlier that solicited information giving should potentially be more rewarding than unsolicited information. Thus, while I predict the relationships suggested in these hypotheses, I would not be surprised to find that the distribution will be skewed such that subordinates with somewhat less than moderate percentages of solicited information giving will still desire little change in

frequency of interaction or in their percentage of solicited information, and will still evaluate their supervisor more positively than will those with more extreme scores.

The reason for suggesting that the distributions will be skewed is that both members of the supervisor/subordinate dyad are acting within a set of role expectations which prescribe that the relationship operate such that the supervisor is more likely to give the subordinate unsolicited information and the subordinate is more likely to ask him for information. This ensures that the supervisor is more likely to give solicited information in the dyad.

Given the normative aspect of these expectations, the subordinate may be less likely to desire a change when the relationship conforms to his expectations, and may be more likely to evaluate his supervisor positively when the supervisor conforms to the subordinate's expectations.

Unsolicited Information Giving

H2a: There is a curvilinear relationship between subordinates' percentage of unsolicited information giving and the amount of change they will desire in that percentage; such that, those with moderate percentages will desire less change than those with more extreme percentages.

]

H2b: There is a curvilinear relationship between subordinates' percentage of unsolicited information giving and frequency of occurrence of unsolicited information giving they will desire in the dyad; such that, those with moderate percentages will desire less change in frequency of unsolicited information giving in the dyad than will those with more extreme percentages.

H2c: There will be a curvilinear relationship between subordinates' percentage of unsolicited information giving and subordinates' evaluation of their supervisor's communication in the dyad; such that, those with a moderate percentage will evaluate their supervisor's communication more positively than will those with more extreme percentages.

Again, although not contained in the hypotheses, it is expected that the relationship between the subordinates' percentage of unsolicited information giving and the dependent variables will be somewhat skewed. It is expected that the subordinate who is somewhat less likely than the supervisor to give unsolicited information in the dyad will be more likely than subordinates with more extreme scores to desire less change in his percentage of giving unsolicited information; will be more likely to desire

for the frequency of unsolicited information giving to remain the same or increase; and will be more likely to evaluate his supervisor's communication in the dyad positively.

A comment should be made at this point. As stated near the beginning of the present chapter, there are two components to value. One of these components is fairly constant over time; the other varies with the individual's degree of deprivation and satiation.

However, the first component will vary from individual to individual for any particular value object. Thus, value for message transmission will vary across individuals. This means that members of dyads will find given percentages of message transmission differentially rewarding.

Thus, while overall the theoretic base used in the present study should predict the general relationships among the variables presented, further specification of individual differences could increase the precision of the predictions and the results.

Total Information Giving

As mentioned earlier, the reason for treating this as a different set of hypotheses is that in some dyads subordinates will not have moderate percentages of message transmission in either mode, but still may have a moderate percentage overall. This happens as a consequence

of one member having a high percentage in one mode and the other member having a high percentage in the other mode.

H3a: There is a curvilinear relationship between subordinates' percentage of total information giving and whether they will desire a change in that percentage; such that, subordinates with moderate percentages will desire less change than will subordinates with more extreme percentages.

H3b: There is a curvilinear relationship between subordinates' percentage of total information giving and the amount of change they will desire in frequency of interaction in the supervisor/subordinate dyad; such that, those with moderate percentages will desire less change in the frequency of interaction than will those subordinates with more extreme percentages.

H3c: There is a curvilinear relationship between subordinates' percentages of total information giving and the subordinates' evaluation of the supervisor's communication in the dyad; such that, subordinates with moderate percentages evaluate the supervisor more positively than subordinates with more extreme percentages.

Comparison of Traditional and Participation Supervisor/
Subordinate Dyads

In the traditional supervisor/subordinate dyad, the supervisor has a higher percentage of message transmission in both modes than the subordinate. In the participation supervisor/subordinate dyad, the supervisor has a higher percentage of unsolicited information giving and the subordinate has a higher percentage of solicited information giving. That is, the supervisor in the latter dyad is equal or more likely to ask the subordinate for information than the subordinate is to ask the supervisor for information.

H4a: Subordinates in participation supervisor/
subordinate dyads will desire less change in
total message giving than will those in tra-
ditional dyads.

H4b: Subordinates in participation supervisor/
subordinate dyads will be significantly less
likely than those in traditional dyads to
desire for their frequency of interaction to
change.

H4c: Subordinates in a participation supervisor/subordinate dyad will evaluate their supervisor's communication in the dyad more positively than will subordinates in traditional supervisor/subordinate dyads.

CHAPTER THREE

RESEARCH METHODS AND PROCEDURES

This chapter will present the operations for testing the hypotheses. First, the design and construction of the questionnaire is covered. This is followed by a description of the sample. Then, the administration of the questionnaire along with other procedures is presented. Finally, the statistics used to test the significance of the results end the chapter.

The Questionnaire

Pretest

An initial questionnaire was designed and administered to seventeen individuals. All of these respondents held information processing jobs. Seven of them worked as tellers and clerks in a loan company. Five of them worked in a branch of the local state judiciary as lawyers and clerks. The remaining five consisted of one manager of public relations of a large local industry and four secretaries.

The key questions on this questionnaire dealt with perceived and desired likelihood of solicited and unsolicited information giving. The sequence of questions measuring perceived and desired likelihood of solicited information giving are presented below. The actual questionnaire is presented in the appendix.

Think of the times when you talk with your supervisor. Some of these conversations are about work. Sometimes you ask him for work information and sometimes he asks you for work information. (Percentages of respondents using each category are shown in the space before the foil.)

Which of you is more likely to ask the other for work information?

12% He is more likely
12 We are about equal
76 I am more likely

How do you feel about this?

0% Prefer he ask me more
60 I'm satisfied
22 Prefer I ask him more (NOTE: 6% wrote in "dissatisfied")
12 DK, NR

Which of you is more likely to give the other work information which the other had not previously asked about?

59% He is more likely
35 We are equally likely
6 I am more likely
 DK, NR

How do you feel about this?

12% Prefer he give me more
60 I'm satisfied
 Prefer I give him more (NOTE: 14% wrote in "dissatisfied")
14 DK, NR

One of the problems with the questions used in the pre-test was that one foil in each question usually collected a very large number of respondents. Another was that the foils to the question used to index a person's desire for change were not perceived as exhaustive by some respondents.

It was also felt that in order to relate the variables in the manner suggested by the hypotheses that no point

along the dimension being quantified have an evaluative dimension. The "we are about equal" foil seemed to have that failing. The same may be true for the "I'm satisfied" foil to the desire for change question.

Consequently, the items were altered drastically. The final form of the solicited information-giving sequence of questions is presented below. Questions concerned with unsolicited information giving followed the same format. The actual questionnaire is attached as an appendix to the present study.

Think about the times when one of you is giving the other work information which the other has not requested. Sometimes you give your boss work information which he or she has not requested and sometimes your boss gives you work information which you have not requested.

Of all the times when one of you is giving the other work information which the other has not requested, what percentage of those times are you the one doing the giving compared to the percentage of times that your boss is the one doing the giving?

It's about . . .

_____	95% me and	5% my boss
_____	80% me and	20% my boss
_____	65% me and	35% my boss
_____	50% me and	50% my boss
_____	35% me and	65% my boss
_____	20% me and	80% my boss
_____	5% me and	95% my boss

What percentage of the times that one of you is giving the other work information which the other has not requested would you prefer to be the one doing the giving compared to the percentage of the time that your boss is the one doing the giving?

I'd prefer about . . .

☐ 95% me and 5% my boss
☐ 80% me and 20% my boss
☐ 65% me and 35% my boss
☐ 50% me and 50% my boss
☐ 35% me and 65% my boss
☐ 20% me and 80% my boss
☐ 5% me and 95% my boss

How often during the day does one of you give the other work information which the other has not requested?

It's about . . .

☐ 20 or more times a day
☐ 15 - 19 times a day
☐ 10 - 14 times a day
☐ 5 - 9 times a day
☐ 1 - 4 times a day
☐ less than once a day

How often would you prefer that one of you be giving the other work information which the other has not requested?

I'd prefer about . . .

☐ 20 or more times a day
☐ 15 - 19 times a day
☐ 10 - 14 times a day
☐ 5 - 9 times a day
☐ 1 - 4 times a day
☐ less than once a day

The scales used to index subordinates' evaluation of supervisors' communication in the dyad were not pretested

for the present study. However, they have been used in a prior study, also of a bureaucratic organization.¹

The following items loaded on the same factor in a factor analysis of all questions in the study. The factor analysis consisted of an orthogonal rotation of the inter-item correlation matrix for a varimax solution. The Kiel-Wrigley criterion was used for terminating rotation.²

How would you rate your supervisor's communication on the following points? (Place an X in the appropriate space.)

<u>Scale No.</u>	Good	Average	Poor	
2	_____	_____	_____	Being easy to talk to about problems or complaints
7	_____	_____	_____	Taking prompt action on problems or complaints
3	_____	_____	_____	Listening to what I say
4	_____	_____	_____	Giving me the information I need to do a good job
6	_____	_____	_____	Explaining clearly what he wants
5	_____	_____	_____	Letting me know how well I am doing
1	_____	_____	_____	Letting me know what he thinks of my proposals or ideas
Code	3	2	1	

¹Berlo et al. (1970)

²Kiel, (1966)

<u>Scale No.</u>	<u>Loading</u>	<u>Second Highest Loading</u>	<u>Item Mean</u>	<u>Item Standard Deviation</u>
1	.71	-.26	2.45	.71
2	.69	-.08	2.77	.54
3	.68	-.18	2.68	.56
4	.66	-.29	2.44	.69
5	.64	-.27	2.29	.73
6	.64	-.25	2.42	.65
7	.61	-.22	2.45	.70

Average factor loading is .66. The number of people responding to this questionnaire was 289.

The complete questionnaire consisted of the following items in the order in which they are listed below.

1. A practice question for those questions concerned with percentage of message flow.
2. A question asking for general frequency of communication.
3. A set of questions asking for . . .
 - a. Perceived percentage of solicited information-giving.
 - b. Desired percentage of solicited information-giving.
 - c. Perceived frequency of occurrence of solicited information-giving.
 - d. Desired frequency of solicited information-giving.
4. A set of questions asking for . . .
 - a. Perceived percentage of unsolicited information-giving.
 - b. Desired percentage of unsolicited information-giving.
 - c. Perceived frequency of occurrence of unsolicited information-giving.
 - d. Desired frequency of unsolicited information-giving.

5. The set of items used to index evaluation of supervisor's communication in the dyad. (7 items)
6. Demographic questions which asked for . . .
 - a. Age of respondent
 - b. Sex of respondent
 - c. Age of supervisor
 - d. Sex of supervisor
 - e. Length of time under present supervisor
 - f. Respondent's rank in the organization.

Description of the Sample

The sample consisted of persons who perform clerical tasks, such as filing, bookkeeping, and accounting in an office of the state government of Michigan. Ninety percent of the respondents were female. Sixty-five percent of the respondents worked for male supervisors. The average age of the respondents was 35 years. Average age of the supervisor was around 45. (Supervisor's age was provided by the subordinate and so may be somewhat in error.)

Seventy-five percent of the respondents were first-level employees. Seventeen percent were first-level supervisors; and seven percent were second-level managers, or higher.

Preparation for Questionnaire Administration

Because the questionnaire contained what could be anxiety producing questions for the respondents, it was decided that the normal channels of distribution should not be utilized. If the supervisor distributed questionnaires, asking his subordinates to evaluate him, it is likely that the responses would be biased.

Using normal distribution channels also has another weakness; it would allow the respondents to discuss the questionnaire among themselves while they were completing it. This would tend to bias their answers to the questions.

It was decided that the questionnaire would be distributed and collected by the researcher in the various work areas instead of using normal channels. This procedure had the advantage of linking the questionnaire directly with the researcher, rather than with the organization or the supervisor. Also, it still allowed for minimal interruption of ongoing activities.

In order to accomplish this, a letter was prepared by the researcher and sent out to all supervisors under the signature of the director of the organization. The letter (contained in the appendix of the present study) stated: 1) the researcher's interest in the supervisor/subordinate dyad; 2) that the researcher was performing the research for a thesis; and 3) the method for administering the questionnaire in the work areas. The letter was sent three working days prior to the day of

administration. The supervisors were told to inform their people of the administration so that little time would be wasted when the researcher came to the work area with the questionnaire.

Another letter (also contained in the appendix of the present study) was written as the cover sheet to the questionnaire. This letter also describes the researcher's interest in the supervisor/subordinate dyad, and states that the research is being performed as part of a thesis requirement. Additionally, the respondents were asked to be as accurate as possible in their responses.

This letter had many purposes. First, it eliminated the need to give the same information orally to each work group. This prevented any bias which might be due to giving different information to the different work groups.

Second, since this letter was signed by the researcher, it further identified the questionnaire with the researcher rather than the organization. This was done to decrease any anxiety the respondents might have about the questionnaire; and as a result, to increase the accuracy of their responses.

Thirdly, the letter attempted to provide a rationale for the need to collect the data so that the respondents would perceive that they were performing a useful function.

Administration

On the day prescribed by the letter to the supervisors, the researcher and the secretary to the director of the organization went to each work area to administer the questionnaires to the respondents at their desks.

In most cases, the questionnaires were placed in front of the respondent by the secretary or by the researcher. In the larger departments, either the supervisor or a subordinate helped with the distribution and collection of the questionnaires.

Most of the respondents completed the questionnaire in five to seven minutes. When the respondents in a work area had finished the questionnaires, they were collected; and the researcher and the secretary went on to another work area. The entire data collection took little more than an hour. Consequently, there was little opportunity for respondents who had completed the questionnaire in one area to talk with respondents who had yet to complete the questionnaire in another area.

Also, there was little opportunity for the respondents to discuss the questionnaire among themselves during the administration, particularly in the smaller work areas. It was possible to observe everyone in the smaller areas and verify that there was little interaction. In the larger work areas, it was impossible to view all respondents at the same time. Consequently, it was possible for respondents to interact without the researcher being aware of it.

Since the researcher collected the major proportion of the questionnaires himself, he also received the respondents' volunteered evaluations of the questionnaire. None of these was related to the questions which operationalized the direction of message flow.

The total number of questionnaires collected by the researcher was 203. Three of these were blank, and two contained unuseable data.

There were officially 230 working in the organization at the time of the administration of the questionnaire. The disparity between the number of completed questionnaires and the number of employees is explained by absences and by the mobility of the staff. Some of the workers were away from their desks during the data collection period. These people were checking files, etc., in another part of the building.

For two reasons, it was decided not to return for those who had not completed the questionnaires. First, it would be difficult to find these people, since names were not requested on the questionnaire. And, secondly, the results obtained from these questionnaires might be biased by the later respondents' having discussed the questionnaire with earlier respondents.

The total number of questionnaires transcribed to computer cards was 198. The computer program used to calculate Eta could not handle missing data; i.e., non-responses. Consequently, those hypotheses requiring

the correlation coefficient for their test were tested on the 193 respondents who had completed all responses.

Statistical Tests of Hypotheses

Several statistics will be computed for each of the curvilinearity hypotheses. These are: Pearson's Product Moment Correlation (r); the correlation ratio (η); the F-test of the significance of each of these; and an F-test of the difference between the correlation ratio and the correlation coefficient. The formulae used for the F-tests are as follows.

$$\begin{array}{ll}
 1. \quad Fr_{xy} = \frac{r^2}{(1-r^2)/(N-2)} & \begin{array}{l} \text{d.f.} = 1, \quad n-2 \\ \text{(p. 308)}^1 \end{array} \\
 2. \quad F\eta_{yx} = \frac{\eta^2/G-1}{(1-\eta^2)/(N-G)} & \begin{array}{l} \text{d.f.} = G-1, \quad N-G \\ \text{(p. 308)}^1 \end{array} \\
 3. \quad Fr_{xy} - \eta_{yx} = \frac{(\eta^2 - r^2)/(G-2)}{(1-\eta^2)/(N-G)} & \begin{array}{l} \text{d.f.} = G-2, \quad N-G \\ \text{(p. 314)}^1 \end{array}
 \end{array}$$

The correlation coefficient (r) is an index of degree of linear association between two variables. Eta (η) is an index of the total association including any curvilinearity component, of one variable to the other.

¹From McNemar (1969)

Formula Number 3 above is a test of the difference between r^2 and η^2 . When the difference between the two is significantly large, the linear hypotheses must be abandoned in favor of a more complex function. A significant difference indicates that there is a significant curvilinear component in the relationship between the two variables. It does not mean, however, that the curvilinear component is as predicted in the hypotheses.

Therefore, for each test the means of the arrays of the independent variable will be plotted to see if they conform to the curve specified in the hypotheses. The level of significance for the tests will be $p < .05$.

H1a, b, c

The solicited information scale will be reflected in the analysis so that the percentage of information asking becomes the percentage of solicited information giving. For H1a the absolute difference between perceived and desired percentage of solicited information will be correlated with perceived percentage of solicited information.

For H1b the perceived percentage of solicited information giving will be correlated with the absolute difference between perceived and desired frequency of solicited information giving.

For H1c the evaluation of supervisors' communication in the dyad scales will be summed to form an index. This

index will then be correlated with the subordinates' perceived percentage of solicited information giving in the dyad.

H2a, b, c

These tests will be performed exactly as the previous three tests; with the exception that the perceived unsolicited information giving scale need not be reflected.

H3a, b, c

In order to combine the perceived percentages from both kinds of information giving, it will be necessary to weight these modes according to the frequency with which they occur in the dyad. This will be accomplished according to the formula:

Subordinate's total percentage of message transmission =

$$\frac{P_{sig} (F_{sig}) + P_{uig} (F_{uig})}{F_{sig} + F_{uig}}$$

Where

P_{sig} = subordinate's perceived percentage of solicited information giving

P_{uig} = subordinate's perceived percentage of unsolicited information giving

F_{sig} = frequency of occurrence solicited information giving in the dyad

F_{uig} = frequency of occurrence unsolicited information giving in the dyad

For actual computation the coded value of each response will be used rather than the percentage represented in the foil. The values resulting from the formula will vary from 0 to 6, corresponding to the following percentages:

0	=	95% subordinate,	5% supervisor
1	=	80% subordinate,	20% supervisor
2	=	65% subordinate,	35% supervisor
3	=	50% subordinate,	50% supervisor
4	=	35% subordinate,	65% supervisor
5	=	20% subordinate,	80% supervisor
6	=	5% subordinate,	95% supervisor

For H3a a chi-square test will be performed which will use the absolute difference between scores derived from the coded values of perceived and desired percentages of subordinates' message transmission in both modes. Respondents will then be divided into two categories: Desire change and desire no change. These will then be compared to total percentage of message transmission. The level of significance used will be $p < .05$.

For H3b the total percentage of message transmission will be compared, in a fashion similar to that used in testing H3a, to the absolute difference between perceived frequency of occurrence of each mode and desired frequency of occurrence of each mode. A chi-square test of significance will be used with $p < .05$.

For H3c the total percentage of message transmission will be correlated with the index of the subordinates'

evaluation of the supervisors' communication in the dyad. Again Eta will be used to test the significance of the curvilinearity.

H4a, b, c

The traditional and participation dyads will be drawn from the rest of the sample in the following manner:

Traditional dyads: All subordinates who report that their supervisors have a percentage of 65% or over in both modes of message transmission.

Participation dyads: All subordinates who report that their supervisors have a percentage of 65% or over for unsolicited information giving, but a percentage of 35% or lower for solicited information giving.¹

A two-tailed t-test of the differences between means will be used to test the significance of the relationships, $p < .05$.

For H4a, the means on total change in percentage of those desiring no change will be compared between traditional and participation dyads.

¹Note that participation here does not refer to the participatory forms of management suggested by such writers as Argyris (1964) and McGregor (1970). It merely implies that both members have a high level of information-giving but in different modes. The subordinate has a higher proportion of the solicited information-giving and the supervisor has a higher proportion of unsolicited information giving.

For H4b, the means on total change in frequency of interaction will be compared between traditional and participation dyads.

For H4c, the means of the evaluations of supervisor's communication will be compared between traditional and participation dyads.

CHAPTER FOUR

RESULTS

There will be four sets of hypotheses tested in this chapter. Each set will consist of the relationship of one variable to desired amount of change in percentage of message flow, desired amount of change in frequency of contact, and evaluation of supervisor's communication.

The first set of hypotheses is concerned with the relationship between solicited information-giving and: 1) desired amount of change in percentage of solicited information-giving; 2) desired amount of change in frequency of solicited information-giving; and 3) evaluation of supervisor's communication.

The second set of hypotheses is concerned with the relationship between unsolicited information-giving and: 1) desired amount of change in percentage of unsolicited information giving; 2) desired amount of change in frequency of unsolicited information-giving; and 3) evaluation of supervisor's communication.

The third set of hypotheses is concerned with the relationship between perceived percentage of total information flow and: 1) desired amount of change in percentage of total information flow; 2) desired amount of change in frequency of total information flow; and 3) evaluation of supervisor's communication.

The fourth and final set of hypotheses is concerned with the differences between participation and balanced supervisor/subordinate dyads on three variables: 1) desired amount of change in total percentage of message flow; 2) desired amount of change in total frequency of message flow; and 3) evaluation of supervisor's communication.

Solicited Information Giving

H1a: There is a curvilinear relationship between subordinates' percentage of solicited information giving in a dyad and the amount of change in that percentage they will desire; such that, those with a moderate percentage will desire less change than those with more extreme percentages.

The correlation coefficient and Eta between the two variables was not significant. With these data, the null hypothesis cannot be rejected. (Table 1)

Table 1

% Solicited Information Giving by Desired Amount
of Change of % Solicited Information Giving

		<u>F</u>	<u>d.f.</u>
N = 193	r^2	1.753	1,191
r = .095	η^2	1.770	6,186
$\eta = .232$	$\eta^2 - r^2$	1.768	5,186

H1b: There will be a curvilinear relationship between subordinates' percentage of solicited information giving in a supervisor/subordinate dyad and the desired change in frequency of solicited information giving in the dyad; such that, those with a moderate percentage will desire less change in frequency than will those with more extreme percentages.

Table 2

% Solicited Information Giving by Desired Amount of
Change in Frequency of Solicited Information Giving

		<u>F</u>	<u>d.g.</u>
N = 193	r^2	.172	1,191
r = .03	η^2	.923	6,186
$\eta = .17$	$\eta^2 - r^2$	1.073	5,186

There is not a significant linear or curvilinear relationship between the two variables. Consequently the null hypothesis cannot be rejected. (Table 2)

H1c: There will be a curvilinear relationship between subordinates' percentage of solicited information giving in a dyad and the subordinates' evaluation of their supervisor's communication in the dyad; such that, those with a moderate percentage will evaluate their supervisor's communication more positively than will those with more extreme percentages.

Table 3

% Solicited Information Giving by Subordinate's Evaluation of Supervisor's Communication in the Dyad

		<u>F</u>	<u>d.f.</u>
N = 193	r^2	.557	1,191
$r = -.05$	η^2	1.127	6,186
$\eta = .04$	$\eta^2 - r^2$	1.240	5,186

The correlation coefficient and the Eta were not significant. Thus, the null hypothesis cannot be rejected.

The three hypotheses in the first set did not receive support from the data.

Unsolicited Information Giving

H2a: There is a curvilinear relationship between subordinates' percentage of unsolicited information giving and the amount of change they will desire in that percentage; such that,

those with moderate percentages will desire less change than those with more extreme percentages.

Table 4

% Unsolicited Information Giving by Desired Amount of Change of % Unsolicited Information Giving

		<u>F</u>	<u>d.f.</u>
N = 193	r^2	1.722	1,191
$r = -.09$	η^2	3.897*	6,186
$\eta = .33$	$\eta^2 - r^2$	4.302*	5,186

*Significant past the .05 level.

The correlation coefficient was not significant. However, Eta and the difference between Eta and r^2 were significant past the .05 level. Thus, the linear hypothesis can be rejected (Table 4)

Figure 5 presents the plot of the means of the arrays for unsolicited information giving. The curve for the relationship is complex with those desiring least change occurring at "50% me" and "35% me." There is also a minor mode occurring again at "85% me." Thus, hypothesis 2a finds support in the data.

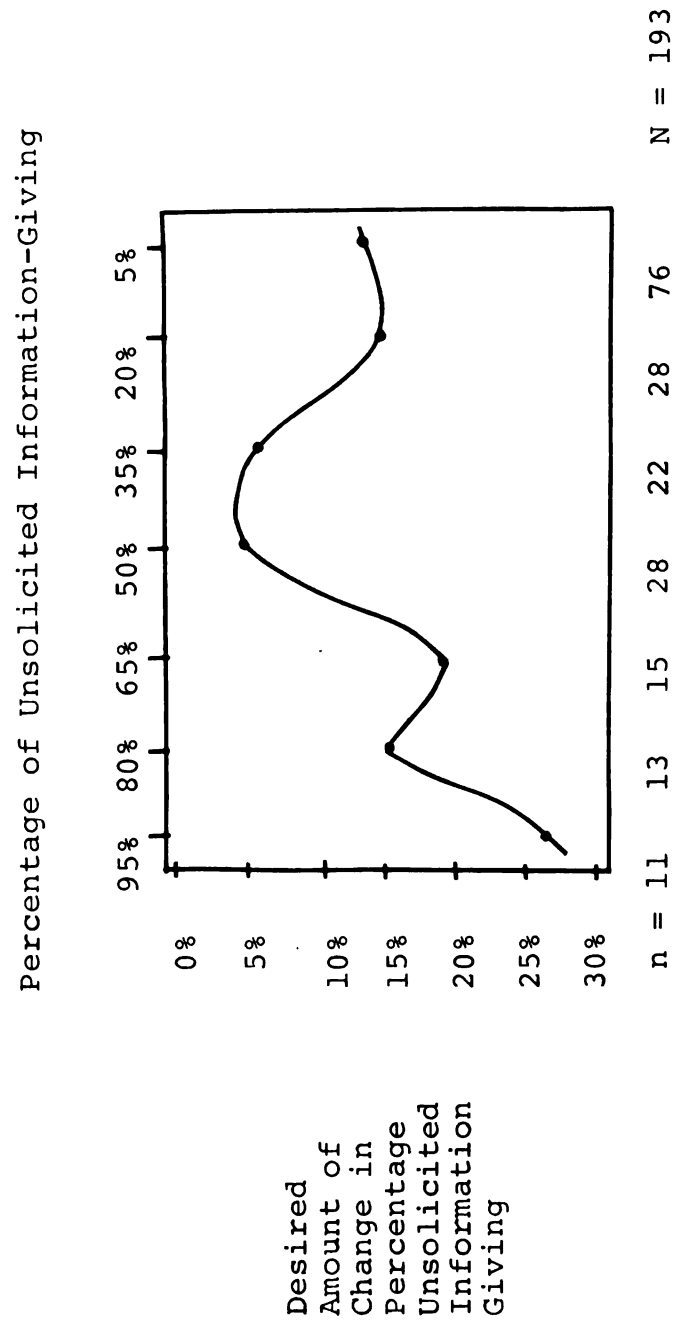


Figure 5

H2b: There is a curvilinear relationship between subordinates' percentage of unsolicited information giving and frequency of occurrence of unsolicited information giving they will desire in the dyad; such that, those with moderate percentages will desire less change in frequency of unsolicited information giving in the dyad than will those with more extreme percentages.

Table 5

% Unsolicited Information Giving by Desired Amount of Change in Frequency of Unsolicited Information Giving

		<u>F</u>	<u>d.f.</u>
N = 193	r^2	.052	1,191
r = .02	η^2	.611	6,186
$\eta = .14$	$\eta^2 - r^2$	.723	5,186

There is no curvilinear or linear relationship between unsolicited information giving and amount of desired change in frequency of unsolicited information giving.
(Table 5)

H2c: There will be a curvilinear relationship between subordinates' percentage of unsolicited information giving and subordinates' evaluation of their supervisor's communication in the dyad; such that, those with a moderate

percentage will evaluate their supervisor's communication more positively than will those with more extreme percentages.

The correlation coefficient was not significant. Eta was significant as was the difference between Eta and r^2 . Therefore, the linear hypothesis may be rejected and the curvilinear hypothesis finds support in the data. (Table 6)

Table 6

% of Unsolicited Information Giving by Subordinate's Evaluation of Supervisor's Communication in the Dyad

		<u>F</u>	<u>d.f.</u>
N = 193	r^2	.385	1,191
r = .045	η^2	3.000*	6,186
$\eta = .297$	$\eta^2 - r^2$	6.980*	5,186

*Significant past the .05 level.

The plot of the means of the arrays gives general support to the shape of the curve prescribed by the hypothesis. There is, however, a minor mode occurring at 80% of the message flow. (Figure 6)

Percentage of Unsolicited Information Giving

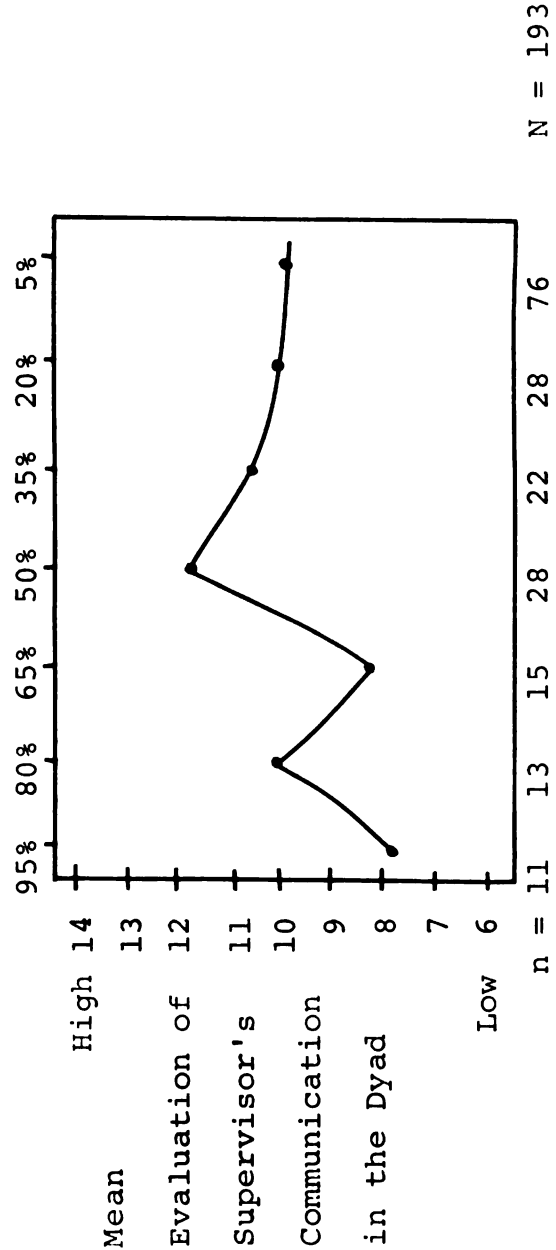


Figure 6

Thus in the second set of hypotheses, perceived percentage of unsolicited information-giving is curvilinearly related in the manner predicted by the hypotheses to the amount of change in percentage of unsolicited information-giving the subordinate will desire and to subordinate's evaluation of his supervisor's communication in the dyad. It was not found to be related either linearly or curvilinearly to the amount of change in frequency desired by the subordinate.

Total Information-Giving

H3a: There is a curvilinear relationship between subordinates' percentage of total information giving and whether they will desire a change in that percentage; such that, subordinates with moderate percentages will desire less change than will subordinates with more extreme percentages.

Amount of total information flow is a transformed variable ranging from zero to six. It is the percentage of each mode times its frequency of occurrence summed and divided by the sum of their frequencies of occurrence. In the actual transformations the recoded values of percentages and frequencies were used. The recoded values conform to the following percentages:

0 = 95% subordinate, 5% supervisor
1 = 80% subordinate, 20% supervisor
2 = 65% subordinate, 35% supervisor
3 = 50% subordinate, 50% supervisor
4 = 35% subordinate, 65% supervisor
5 = 20% subordinate, 80% supervisor
6 = 5% subordinate, 95% supervisor

A respondent with a value of 4 transmits thirty-five percent of the total information in the dyad. The supervisor in the same dyad transmits 65% of the total information in the dyad. Thus direction of message flow, both solicited and unsolicited is from supervisor to subordinate.

The lower the number, the higher the respondent's proportion of total information flow, with the value of 3 corresponding to the supervisor/subordinate dyad in which either member is equally likely to transmit messages. The number of respondents who perceive that they have a very large proportion of the total information flow in the dyad was very small. Consequently, their responses were collapsed in order to be analyzed. The category 2.5 to 3.4 represents the "moderate" percentage category.

As can be seen in Table 7, χ^2 is significant past the .05 level. Thus, hypothesis 3a receives support from the data.

Table 7

Amount of Total Information Giving by
Desired Change in Total Information Giving

Desired Change in Message Flow	<u>Amount of Total Information Giving</u>				
	<u>0-2.4</u>	<u>2.5-3.4</u>	<u>3.5-4.4</u>	<u>4.5-5.4</u>	<u>5.5-6.0</u>
Desire no Change	18%	58%	49%	41%	42%
	n = 16	48	45	41	45

$\chi^2=9.648^*$; d.f. = 4

*Significant past the .05 level

H3b: There is a curvilinear relationship between subordinates' percentage of total information giving and the amount of change they will desire in frequency of interaction in the supervisor/subordinate dyad; such that, those with moderate percentages will desire less change in the frequency of interaction than will those subordinates with more extreme percentages.

Table 8 shows that x^2 is not significant past the .05 level, although the 2.5-3.4 category again had a larger percentage than did any of the other categories. Hypothesis 3b is not supported by the data.

Table 8

Amount of Total Information Giving by Desired Change
in Frequency of Total Information Giving

Desired Change in Frequency	<u>Amount of Total Information Giving</u>				
	<u>0-2.4</u>	<u>2.5-3.4</u>	<u>3.5-2.4</u>	<u>4.5-5.4</u>	<u>5.5-6.0</u>
Desire no Change	31%	48%	40%	46%	42%
	n = 16	48	45	41	45

$x^2 = .8507$; d.f. = 4

H3c: There is a curvilinear relationship between subordinates' percentage of total message giving and the subordinates' evaluation of the supervisor's communication in the dyad; such that, subordinates with moderate percentages evaluate the supervisor more positively than subordinates with more extreme percentages.

The correlation coefficient, Eta and the difference between the two were not significant. (Table 9)

Table 9

Amount of Total Information Giving by Subordinate's
Evaluation of Supervisor's Communication in the Dyad

		<u>F</u>	<u>d.f.</u>
N = 193	r^2	1.377	1,191
$r = -.083$	η^2	.838	6,186
$\eta = .148$	$\eta^2 - r^2$	.721	5,186

The hypothesis was not supported by the data.

In the third set of hypotheses, one of the three was significant. Subordinates' perceived percentage of total information-giving is curvilinearly related in the manner predicted by the hypotheses to the amount of change in that percentage he will desire. Perceived percentage of total information-giving is not related to amount of change desired in frequency of total information giving, nor is it related to subordinates' evaluation of the supervisor's communication in the dyad.

Dyad Style: Traditional versus Participative

A two-alternative test of significance of (t) was used for testing the following hypotheses with $p < .05$.

H4a: Subordinates in participation supervisor/
subordinate dyads will desire less change in
total message giving than will those in tra-
ditional dyads.

Table 10 presents the results of the analysis.

Table 10

Type of Supervisory Relationship by Mean Amount of
Change Desired in Total Message Giving

	<u>Supervisor/Subordinate Dyads</u>	
	<u>Traditional</u>	<u>Participation</u>
Mean amount of Desired change	.839	.885
Standard Deviation	.882	.891
Number in each group	87	26
t = .2291; d.f. = 111		

The null hypothesis cannot be rejected, given the present data.

H4b: Subordinates in participation supervisor/
subordinate dyads will be significantly less
likely than those in traditional dyads to
desire for their frequency of interaction to
change.

Table 11 presents the results of the analysis.

Table 11

Type of Supervisory Relationship by Mean Desired
Amount of Change in Frequency of Interaction

	<u>Supervisor/Subordinate Dyads</u>	
	<u>Traditional</u>	<u>Participation</u>
Mean amount of desired change in frequency	1.080	1.192
Standard Deviation	1.096	.828
Number in each group	87	26
t = .0525; d.f. = 111		

The difference between the means is not significant.
Thus, the null hypothesis cannot be rejected.

H4c: Subordinates in a participation supervisor/
subordinate dyad will evaluate their supervisor's
communication in the dyad more positively than
will subordinates in traditional supervisor/
subordinate dyads.

Table 12 presents the results of the analysis.

Table 12

Type of Supervisory Relationship by Mean of Subordinate's
Evaluation of Supervisor's Communication in the Dyad

	<u>Supervisor/Subordinate Dyads</u>	
	<u>Traditional</u>	<u>Participation</u>
Mean evaluation of supervisor's communication in the dyad	9.942	10.000
Standard Deviation	3.767	2.948
Number in each group	87	26
t = .0716;d.f. - 111		

The difference between the means is not significant past the .05 level. The null hypothesis cannot be rejected, given the present data.

In the fourth set of hypotheses there were no significant differences between traditional and participative dyads on the three variables: 1) desired amount of change in percentage of total information-giving; 2) desired amount of change in frequency of total information-giving; and 3) evaluation of supervisor's communication in the dyad.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

Chapter Five summarizes the results of the present study. In addition, it presents some implications as to how the communication-oriented manager may vary his behavior so as to change the subordinate's level of satisfaction with the communication in the supervisor/subordinate dyad. Also suggested in the present chapter are other variables which may be related to direction of message flow in the hierarchically differentiated dyad. Lines of future research are also suggested.

Summary of Findings

Hypotheses 1a, b, and c failed to receive support from the data. These hypotheses were concerned with the relationship of perceived percentage of solicited information-giving to three other variables: 1) desired change in percentage of solicited information-giving; 2) desired change in frequency of solicited information-giving; and 3) evaluation of the supervisor's communication in the dyad.

Hypotheses 2a, b, and c received some support from the data. These hypotheses predicted a curvilinear relationship between perceived percentage of unsolicited information-giving and each of three variables: 1) desired change in percentage of unsolicited information-giving; 2) desired change in frequency of unsolicited information-giving; and

3) evaluation of the supervisor's communication in the dyad. A curvilinear relationship of the form predicted by the hypotheses was found between the criterion variable and the desired change in percentage of unsolicited information-giving, and between the criterion variable and evaluation of the supervisor's communication in the dyad. The relationship did not hold for the criterion variable and desired change in frequency of unsolicited information-giving.

Thus, those subordinates who perceive that they are as likely as their supervisor to give the other unsolicited information are less likely to desire to change that percentage and will evaluate their supervisor's communication more highly than will subordinates with either a smaller or larger percentage of unsolicited information-giving in the dyad.

The third set of hypotheses (3a, b, and c) received less support. These hypotheses were concerned with the relationship between total information-giving and three variables: 1) desired change in percentage of total information-giving; 2) total desired change in frequency; and 3) evaluation of supervisor's communication in the dyad. Only the first hypothesis received support.

Those subordinates who perceived that they were equally likely to give the other information (solicited or unsolicited) were less likely to desire to change that aspect of their relationship.



The fourth set of hypotheses (4a, b, and c) received no support from the data. It was hypothesized that participative and traditional dyads¹ would differ on three variables: 1) desired change in percentage of total information-giving; 2) desired change in frequency of information-giving; and 3) evaluation of supervisor's communication in the dyad. There was no significant difference between the two types of relationships.

Table 13 indicates that the supervisor cannot manipulate the subordinate's satisfaction with the communication in the dyad by asking the subordinate more questions (i.e., increasing the subordinate's percentage of solicited information-giving).² However, he can increase the subordinate's satisfaction with communication in the dyad by attempting to equalize the subordinate's percentage of unsolicited information-giving. This is more difficult than is equalizing solicited information giving between them. The latter is equalized by asking the subordinate for more or

¹In the participative dyad the subordinate has 65% or more of the solicited information-giving while the supervisor has 65% or more of the unsolicited information-giving. In the traditional dyad, the supervisor has 65% or more of the solicited and unsolicited information-giving in the dyad. Thus in the participation dyad each has a high percentage of message transmission but in different modes. In the traditional dyad, the supervisor has a high percentage in both modes; and, thus the subordinate has a lower percentage in both modes.

²Unless he increases the frequency of contact at the same time. Frequency of contact is linearly related to the satisfaction variables with correlations ranging from .27 to .29.

Table 13

Significant and Non-Significant Results from the Study			
	<u>Desired Change in Percentage</u>	<u>Desired Change in Frequency</u>	<u>Evaluation of Supervisor's Communication in the Dyad</u>
Perceived Percentage of Solicited Information Giving	Not significant	Not significant	Not significant
Perceived Percentage of Unsolicited Information Giving	Significant	Not significant	Significant
Total Percentage of Information Giving	Significant	Not significant	Not significant
Dyad Style	Not significant	Not significant	Not significant

less information than previously. In order to equalize unsolicited information-giving, the supervisor must create a climate in which the subordinate feels free to bring unsolicited information to him if the supervisor has a larger percentage than the subordinate. Or, the supervisor should attempt to increase his own percentage of unsolicited information-giving if his percentage is lower than the subordinate's.¹

It is interesting to note that the desired amount of change in frequency of information-giving in either mode was not related to any of the criterion variables in the manner predicted by the hypotheses. Frequency of contact, as well as frequency of information-giving in either mode were related linearly with evaluation of supervisor's communication.

Evaluation of
Supervisor's Communication

Frequency of contact	$r = .29$
Frequency of solicited information-giving	$r = .26$
Frequency of unsolicited information-giving	$r = .24$

¹It would be difficult to believe that this situation would occur often.

This would indicate that frequency of contact, as suggested by several of the studies mentioned earlier in this study, is related linearly to satisfaction with communication, such that the higher the frequency of contact the higher the level of satisfaction.

However, direction of message flow is not related to frequency of contact or to desired change in frequency of contact.

The fact that both direction of unsolicited information-giving and frequency of contact explain a portion of the variance in the evaluation of supervisors on communication and that the two are independent, both linearly and curvilinearly, indicates that a theory containing both will be stronger than a theory containing only one. In this case, social exchange theory can be extended to include direction of message flow.

Implications for Future Research

Variables which have been related to change and innovativeness in the diffusion research (such as age, mobility, and education) may have an effect on the relationship between direction of message flow and desire to change the direction of message flow. That is, for younger, more mobile, and more educated people the relationship will be stronger than for older, less mobile, less educated people.

It is also suspected that the relationship between message flow direction and desire to change the direction of message flow will vary with the duration of the relationship between the two members of the dyad. If, as suggested by Turk and Wills (1964), the behaviors of members of a dyad and their expectations concerning the relationship are at first determined by previous experience and other external factors, then they should be more desirous of change if the direction of message flow is not as they would want it. However, as the relationship continues over time the expectancies and behaviors of the members are more and more determined by previous experience in that dyad. The members will be less desirous of change in the relationship, no matter what the direction of message flow may be.

While no direct analysis of this was performed in the present study, there was indeed a linear correspondence between what the subordinate perceived his relationship with his supervisor to be and what he desired it to be. Fifty-five percent of the respondents, for example, said that they desired no change in their present percentage of solicited information-giving, no matter what percentage they perceived they had. The correlations between perceived percentage and frequency of information-giving

and desired percentage and frequency of information-giving ranged from .45 for percentage of solicited information-giving to .53 for percentage of unsolicited information-giving.

This leads to another theoretic point. The relationship between direction of message flow and desire to change the direction of message flow is stronger for those who are dissatisfied (that is, desire some change) than for those who are not. While seemingly a simple point, this says that while the existing relationship is the one most subordinates desire, those who are dissatisfied with their present relationship can be predicted by the direction of message flow in the dyad. It is suspected, then, that if all persons desiring no change in their present relationship are removed from the analysis, the resulting relationship between direction of message flow (both solicited and unsolicited) would be much stronger, and the subordinate's evaluation of his supervisor's communication would be more strongly related to the direction of message flow in the manner set out by the hypotheses in the present study. A question for further research is, what is the relationship between frequency of contact, direction of message flow, and dissatisfaction with communication in the supervisor/subordinate dyad.

A question of immediate concern is why solicited information-giving is not related to subordinate's

communication satisfaction in the dyad. We have evidence that it is related in non-hierarchically differentiated dyads from the study reported by Blau and Scott. (1962)

The supervisor/subordinate dyad is based upon norms and prescriptions set out by the organization. Status in that relationship is non-negotiable. On the other hand in non-hierarchically differentiated dyads, the norms and prescriptions for the particular relationship are not set out by the organization but are determined by the participants. Thus, status is a negotiable item. Blau and Scott argue that in this relationship, the act of asking for information is associated with the giving up of status to the person being asked. Solicited information-giving in the non-hierarchically differentiated dyad, because it is related to the negotiability of status in the relationship, is also related to the desire to change aspects of the communication in the relationship. In the supervisor/subordinate dyad, status is not negotiable and, therefore, solicited information-giving is not related to the desire to change the communication in the relationship.

However, the giving of unsolicited information in the non-hierarchically differentiated dyad may be related to a member's desire to change the communication in the dyad. The Blau and Scott study only focused on the solicited information-giving mode. Therefore, another direction of future research should be testing the relationship

of direction of message flow in the supervisor/subordinate dyad to satisfaction with the communication in the relationship.

There may be a methodological ambiguity in the instrument used. It did not allow the respondent to make a distinction between his idealized and realistic expectations for desired percentage of message transmission. A respondent may have interpreted the question to be asking for a "best of all worlds" answer; or, he may have interpreted it to be asking for a "given present constraints" answer. This ambiguity of interpretation calls the precision of the data into question. Further research would seek to eliminate this ambiguity by pointing out the distinction to the respondent and then asking him for his realistic desired percentage of message transmission.

There is one final theoretic point that must be made. Homans specifies that he does not feel his theory predicts for a dyad in which the rights of the members are determined by a role in the organization or institution. It would seem that the theory also would not apply to those relationships in which the rights of the members are determined by the organization itself or by another organization. For example, a supervisor in a profit-making organization generally has the right to fire a subordinate for incompetence. This is one of the reward/punishment alternatives open to him. The same is not true for the

supervisor in a bureaucracy. This right is withheld from him by another organization called civil service.

Communication would seem to take on more importance as a reward/punishment mechanism as reward/punishment alternatives available to the supervisor in the hierarchically differentiated dyad become fewer. The thrust of this argument is toward the need for specifying the level of rights of (or the range of reward/punishment alternatives available to) the supervisor in the particular organization being studied.

Two areas of importance which have not been touched upon in the present study are supervisor's satisfaction with communication and group satisfaction with communication. Since the present study found support for the proposition that a relationship exists between direction of message flow and communication satisfaction of the subordinate, consideration should be given to further studies with both supervisor and subordinate satisfaction, as well as with communication satisfaction across group members.

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APPENDICES

APPENDIX A

SUPERVISOR/SUBORDINATE
Message Flow Questionnaire

We are interested in how messages tend to flow between supervisors and the people who work for them. Consequently, we are asking many people in many different organizations to tell us something about their communication with their supervisors.

We do not want your name on this questionnaire. However, we would like for you to answer each of the questions as objectively as you can.

1. First, we would like to know how long you have worked for your present supervisor?

_____ years _____ months

2. How frequently you talk with him?

_____ several times a day---(about how many times a day _____)
_____ once a day
_____ less than once a day, but more than once a week
_____ once a week
_____ less than once a week

Think about the times when you talk with your supervisor. Some of these conversations are about work. Sometimes you ask him for work information and sometimes he asks you for work information.

3. Which of you is more likely to ask the other for work information?

_____ he is more likely
_____ we are about equal
_____ I am more likely

4. How do you feel about this?

_____ I'd prefer that he ask me for information more frequently
_____ I'm satisfied
_____ I'd prefer that I could ask him for information more frequently

Other times when you and your immediate supervisor are talking about work, sometimes he gives you information which you had not previously asked for and sometimes you give him information which he had not previously asked for.

5. Which of you is more likely to give the other work information which the other had not previously asked about?

_____ he is more likely
_____ we are equally likely
_____ I am more likely

6. How do you feel about this?

_____ I'd prefer that he give me information more frequently
_____ I'm satisfied
_____ I'd prefer that I give him information more frequently

Now we want you to think about the times when your supervisor starts a conversation with you about work. When he starts a conversation with you about work, sometimes he asks you for information; sometimes he gives you information which you had requested previously; and sometimes he gives you information which you had not previously requested.

7. Of the times when your supervisor starts a conversation with you about work in which he either asks for information or gives unrequested information, what percentage of those times does he . . .

☐ ask you for information
☐ give you information which you had not requested

8. How satisfied are you with this?

☐ I'd prefer he'd ask for information more
☐ I'm satisfied
☐ I'd prefer he'd give unrequested information more

This time we want you to think about the times when you start a conversation with your supervisor about work. Sometimes you ask him for information; other times you give him work information which he requested; and other times you give him work information which he had not requested.

9. Of the times when you start a conversation with your supervisor about work in which you ask him for information or give him unrequested information, what percentage of those times do you . . .

☐ ask him for information
☐ give him information which he had not requested

10. How satisfied are you with this?

☐ I'd prefer to ask him for information more frequently
☐ I'm satisfied
☐ I'd prefer to give him unrequested information more frequently

11. In general, how satisfied are you with your relationship with your boss?

☐ very satisfied
☐ satisfied
☐ neither satisfied nor dissatisfied
☐ dissatisfied
☐ very dissatisfied

12. If your relationship with your boss were different could you work more efficiently?

☐ Yes
☐ I don't know
☐ No

Please complete the following questions. Thank you.

13. Your occupation _____
14. Your age _____ years
15. Your sex ()Female ()Male
16. Your boss's sex ()Female ()Male
17. Your boss's age (approximately) _____ years

APPENDIX B

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING
INTER OFFICE

TO All Supervisors - Income Tax Section

FROM Chester Zawislak, Director

DATE April 21, 1971

SUBJECT Questionnaire on Communications

FILE NO.

Early next week on Monday afternoon, April 26, 1971, Mr. Jerry Buley will be in your area to administer a questionnaire to you and your people. Mr. Buley is a graduate student in the Department of Communication at Michigan State University. His area of interest is communication in organizations. Mr. Buley's specific interest is in the communication which occurs between supervisor and subordinate and his questionnaire has been designed to collect data on the communication patterns which occur in that relationship. He is performing this research as part of his Master's degree requirements.

The procedure for administering the questionnaire will be as follows: At some point in the day Mr. Buley and someone from Personnel will distribute the questionnaires in your area and then in a few minutes come back to collect them. The questionnaire is short and should take no more than five to seven minutes to complete. Thank you very much for your cooperation.

APPENDIX C

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48824

COLLEGE OF COMMUNICATION ARTS • DEPARTMENT OF COMMUNICATION • CABLE: COMMDEPT

April 26, 1971

Dear Employee:

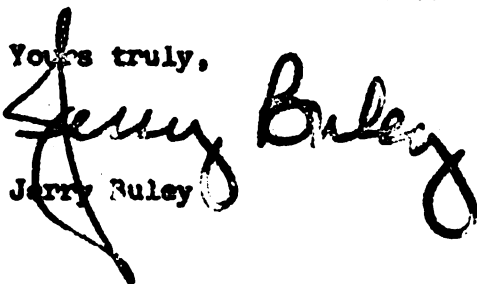
For as much time as people have spent and will continue to spend talking with their supervisors, science really can tell us very little about what happens in that particular communication situation. The following questionnaire is an attempt to fill the gap in our knowledge about communication between subordinates and supervisors.

My name is Jerry Buley. I am a graduate student in the Department of Communication at Michigan State University. My area of interest is communication in organizations; specifically, communication between subordinate and supervisor. The data from this questionnaire will be part of a Master's thesis that I am writing which deals with this important topic.

I want to emphasize that there are no "right" answers to the questions, just your answers. The questionnaire is going to provide me with a "picture" of communication between subordinates and their supervisors. I do not have any idea what that picture should look like. Also, I want to emphasize my need for you to be as accurate as you can be when answering the questions. To the extent that your answers are accurate, for you, we can be sure to learn useful information about communication.

Thank you very much for your time and for completing the questionnaire. I will be making a summary sheet of the results available to you managers in about a month for those who may be interested in them.

Yours truly,


Jerry Buley

TO: DIRECTOR, FBI

FROM: SAC, NEW YORK

SUBJECT: [REDACTED]

RE: [REDACTED]

10/10/68

10/10/68

On 10/10/68, [REDACTED] advised that [REDACTED] had been contacted by [REDACTED] who stated that [REDACTED] was currently in the [REDACTED] area and was being held by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED].

On 10/10/68, [REDACTED] advised that [REDACTED] had been contacted by [REDACTED] who stated that [REDACTED] was currently in the [REDACTED] area and was being held by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED].

On 10/10/68, [REDACTED] advised that [REDACTED] had been contacted by [REDACTED] who stated that [REDACTED] was currently in the [REDACTED] area and was being held by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED].

On 10/10/68, [REDACTED] advised that [REDACTED] had been contacted by [REDACTED] who stated that [REDACTED] was currently in the [REDACTED] area and was being held by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED]. [REDACTED] stated that [REDACTED] was being held in a [REDACTED] building and was being guarded by [REDACTED].

[REDACTED]

APPENDIX D

MESSAGE FLOW QUESTIONNAIRE

We are interested in how messages tend to flow between supervisors and subordinates. Therefore, we are asking many people here to answer several questions about their communication with their boss. We do not want your name on this questionnaire, but we do want to emphasize that we need accurate information from you.

Some of the questions in this questionnaire are concerned with the percentage of time that you are giving or asking for information from your boss compared to the percentage of time that your boss is giving or asking for information from you.

For example: Suppose you talk with your boss about ten times a week about television. Some of those times you might ask your boss for information about television shows and some of those times your boss might ask you for such information. Let's say that two times a week you ask your boss for information about television shows and eight times a week your boss asks you about television shows. We could say then, that of all the times when one of you is asking the other for information about television shows, 20% of those times you are asking your boss and 80% of those times your boss is asking you.

Thus, you would answer a typical question in this questionnaire as in the example below.

EXAMPLE

Of all the times when one of you is asking the other for information about television shows, what percentage of those times are you doing the asking compared to the percentage of times your boss is doing the asking?

It's about. . .

☐	95% me and 5% my boss
☐	80% me and 20% my boss
☐	65% me and 35% my boss
☐	50% me and 50% my boss
☐	35% me and 65% my boss
☒	20% me and 80% my boss
☐	5% me and 95% my boss

OKAY, LET'S GET ON WITH THE QUESTIONNAIRE.

1. First, we want to know approximately how frequently you and your boss communicate.

☐	20 or more times a day
☐	15 - 19 times a day
☐	10 - 14 times a day
☐	5 - 9 times a day
☐	1 - 4 times a day
☐	less than once a day

1. The first step is to identify the problem. This involves understanding the current situation and the goals that need to be achieved.

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

1. The first step in the process of the investigation is to identify the problem.	2. The second step is to gather information about the problem.	3. The third step is to analyze the information and determine the cause of the problem.	4. The fourth step is to develop a plan to solve the problem.	5. The fifth step is to implement the plan and monitor the results.
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10-10-68

[illegible]

• • • • •

[illegible]

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[illegible]

Now, think about the times when you and your boss talk about work. Sometimes you ask your boss for work information and sometimes your boss asks you for work information.

2. Of all the times when one of you is asking the other for information about work, what percentage of those times are you the one doing the asking compared to the percentage of times that your boss is the one doing the asking?

It's about. . .

☐ 95% me and 5% my boss
☐ 80% me and 20% my boss
☐ 65% me and 35% my boss
☐ 50% me and 50% my boss
☐ 35% me and 65% my boss
☐ 20% me and 80% my boss
☐ 5% me and 95% my boss

3. What percentage of the times that one of you is asking for work information would you prefer that you were the one doing the asking compared to the percentage of time that he is the one doing the asking?

I'd prefer about. . .

☐ 95% me and 5% my boss
☐ 80% me and 20% my boss
☐ 65% me and 35% my boss
☐ 50% me and 50% my boss
☐ 35% me and 65% my boss
☐ 20% me and 80% my boss
☐ 5% me and 95% my boss

4. How often during the day does one of you ask the other for work information?

It's about. . .

☐ 20 or more times a day
☐ 15 - 19 times a day
☐ 10 - 14 times a day
☐ 5 - 9 times a day
☐ 1 - 4 times a day
☐ less than once a day

5. How often would you prefer that one of you be asking the other for work information?

I'd prefer about. . .

☐ 20 or more times a day
☐ 15 - 19 times a day
☐ 10 - 14 times a day
☐ 5 - 9 times a day
☐ 1 - 4 times a day
☐ less than once a day

1. The first part of the report is a general introduction to the subject of the study.

2. The second part of the report is a detailed description of the methods used in the study.

3. The third part of the report is a discussion of the results of the study.

4. The fourth part of the report is a conclusion and a list of references.

5. The fifth part of the report is a list of references.

6. The sixth part of the report is a list of references.

7. The seventh part of the report is a list of references.

8. The eighth part of the report is a list of references.

9. The ninth part of the report is a list of references.

10. The tenth part of the report is a list of references.

11. The eleventh part of the report is a list of references.

12. The twelfth part of the report is a list of references.

13. The thirteenth part of the report is a list of references.

14. The fourteenth part of the report is a list of references.

15. The fifteenth part of the report is a list of references.

16. The sixteenth part of the report is a list of references.

17. The seventeenth part of the report is a list of references.

18. The eighteenth part of the report is a list of references.

19. The nineteenth part of the report is a list of references.

20. The twentieth part of the report is a list of references.

21. The twenty-first part of the report is a list of references.

22. The twenty-second part of the report is a list of references.

23. The twenty-third part of the report is a list of references.

24. The twenty-fourth part of the report is a list of references.

25. The twenty-fifth part of the report is a list of references.

26. The twenty-sixth part of the report is a list of references.

27. The twenty-seventh part of the report is a list of references.

28. The twenty-eighth part of the report is a list of references.

29. The twenty-ninth part of the report is a list of references.

30. The thirtieth part of the report is a list of references.

31. The thirty-first part of the report is a list of references.

Now think about the times when one of you is giving the other work information which the other has not requested. Sometimes you give your boss work information which he or she has not requested and sometimes your boss gives you work information which you have not requested.

6. Of all the times when one of you is giving the other work information which the other has not requested, what percentage of those times are you the one doing the giving compared to the percentage of times that your boss is the one doing the giving?

It's about. . .

_____ 95% me and 5% my boss
_____ 80% me and 20% my boss
_____ 65% me and 35% my boss
_____ 50% me and 50% my boss
_____ 35% me and 65% my boss
_____ 20% me and 80% my boss
_____ 5% me and 95% my boss

7. What percentage of the times that one of you is giving the other work information which the other has not requested would you prefer to be the one doing the giving compared to the percentage of the time that your boss is the one doing the giving?

I'd prefer about. . .

_____ 95% me and 5% my boss
_____ 80% me and 20% my boss
_____ 65% me and 35% my boss
_____ 50% me and 50% my boss
_____ 35% me and 65% my boss
_____ 20% me and 80% my boss
_____ 5% me and 95% my boss

8. How often during the day does one of you give the other work information which the other has not requested?

It's about. . .

_____ 20 or more times a day
_____ 15 - 19 times a day
_____ 10 - 14 times a day
_____ 5 - 9 times a day
_____ 1 - 4 times a day
_____ less than once a day

9. How often would you prefer that one of you be giving the other work information which the other has not requested?

I'd prefer about. . .

_____ 20 or more times a day
_____ 15 - 19 times a day
_____ 10 - 14 times a day
_____ 5 - 9 times a day
_____ 1 - 4 times a day
_____ less than once a day

1. I am a member of the _____
2. I am a member of the _____
3. I am a member of the _____

4. I am a member of the _____
5. I am a member of the _____
6. I am a member of the _____

7. I am a member of the _____
8. I am a member of the _____
9. I am a member of the _____

10. I am a member of the _____
11. I am a member of the _____
12. I am a member of the _____

13. I am a member of the _____
14. I am a member of the _____
15. I am a member of the _____

16. I am a member of the _____
17. I am a member of the _____
18. I am a member of the _____

19. I am a member of the _____
20. I am a member of the _____
21. I am a member of the _____

22. I am a member of the _____
23. I am a member of the _____
24. I am a member of the _____

10. How often
(Please)

GOOD

11. What

Y

12. What

f

m

13. What

Y

14. What

f

m

15. How long

Y

16. Do you

n

y

Because the
completed
over the

Thank you

10. How would you rate your boss's communication on the following points?
(Place an X in the appropriate space.)

GOOD AVER- POOR
 AGE

_____	_____	_____	being easy to talk to about problems or complaints
_____	_____	_____	taking prompt action on problems or complaints
_____	_____	_____	listening to what I say
_____	_____	_____	giving me information I need to do a good job
_____	_____	_____	explaining clearly what he or she wants
_____	_____	_____	letting me know how well I am doing
_____	_____	_____	letting me know what he or she thinks of a proposal or suggestion I have made

11. What is your age?

_____ years

12. What is your sex?

_____ female
_____ male

13. What is your boss's age (approximately)?

_____ years

14. What is your boss's sex?

_____ female
_____ male

15. How long have you worked for your present boss?

_____ years _____ months

16. Do you have anyone working under you?

_____ no
_____ yes --- (Do you have any supervisors working under you?)

_____ no
_____ yes

Because the analysis which will be performed requires that every question be completed or the questionnaire must be thrown out, would you please check back over the questionnaire to be sure that you have answered every question?

Thank you very much for your time.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 3, 1862. It is a very important document, as it contains the President's annual message to Congress.

2. The second part of the document is a report from the Secretary of the Treasury, dated January 3, 1862. It contains information about the state of the Treasury and the financial condition of the country.

3. The third part of the document is a report from the Secretary of the Interior, dated January 3, 1862. It contains information about the state of the Interior and the land policy of the country.

4. The fourth part of the document is a report from the Secretary of the Navy, dated January 3, 1862. It contains information about the state of the Navy and the naval policy of the country.

5. The fifth part of the document is a report from the Secretary of the War, dated January 3, 1862. It contains information about the state of the War and the military policy of the country.

6. The sixth part of the document is a report from the Secretary of the State, dated January 3, 1862. It contains information about the state of the State and the foreign policy of the country.

7. The seventh part of the document is a report from the Secretary of the Education, dated January 3, 1862. It contains information about the state of the Education and the educational policy of the country.

8. The eighth part of the document is a report from the Secretary of the Agriculture, dated January 3, 1862. It contains information about the state of the Agriculture and the agricultural policy of the country.

9. The ninth part of the document is a report from the Secretary of the Commerce, dated January 3, 1862. It contains information about the state of the Commerce and the commercial policy of the country.

10. The tenth part of the document is a report from the Secretary of the Finance, dated January 3, 1862. It contains information about the state of the Finance and the financial policy of the country.

11. The eleventh part of the document is a report from the Secretary of the Justice, dated January 3, 1862. It contains information about the state of the Justice and the judicial policy of the country.

12. The twelfth part of the document is a report from the Secretary of the War, dated January 3, 1862. It contains information about the state of the War and the military policy of the country.

13. The thirteenth part of the document is a report from the Secretary of the State, dated January 3, 1862. It contains information about the state of the State and the foreign policy of the country.

14. The fourteenth part of the document is a report from the Secretary of the Education, dated January 3, 1862. It contains information about the state of the Education and the educational policy of the country.

15. The fifteenth part of the document is a report from the Secretary of the Agriculture, dated January 3, 1862. It contains information about the state of the Agriculture and the agricultural policy of the country.

16. The sixteenth part of the document is a report from the Secretary of the Commerce, dated January 3, 1862. It contains information about the state of the Commerce and the commercial policy of the country.

17. The seventeenth part of the document is a report from the Secretary of the Finance, dated January 3, 1862. It contains information about the state of the Finance and the financial policy of the country.

18. The eighteenth part of the document is a report from the Secretary of the Justice, dated January 3, 1862. It contains information about the state of the Justice and the judicial policy of the country.

19. The nineteenth part of the document is a report from the Secretary of the War, dated January 3, 1862. It contains information about the state of the War and the military policy of the country.

20. The twentieth part of the document is a report from the Secretary of the State, dated January 3, 1862. It contains information about the state of the State and the foreign policy of the country.

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