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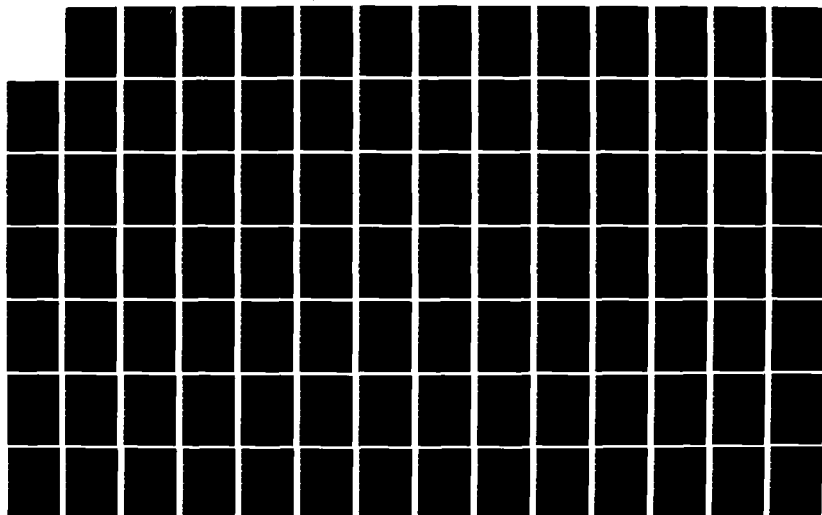
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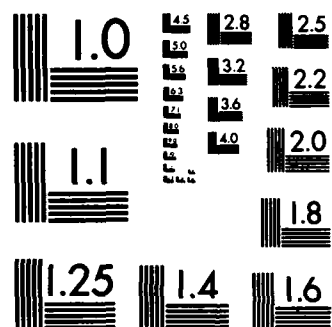
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TOWARD AN INTERPERSONAL PARADIGM FOR  
SUPERIOR-SUBORDINATE COMMUNICATION

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A Dissertation

Presented to

The Faculty of the Graduate School of Arts and Sciences  
University of Denver

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

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by

Terry L. Bangs

November 1983

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## ABSTRACT

The purpose of this dissertation is to report formula-  
tive research on an interpersonal paradigm for superior-  
subordinate communication. The suggested paradigm goes  
beyond traditional structural approaches to leadership and  
rests on the interpersonal perception theory of Laing,  
Phillipson, and Lee. This research is based on the belief  
that a relationship exists between the openness of a leader's  
communication, as perceived by a subordinate, and the open-  
ness of the subordinate's communication with the leader. The  
following theoretical propositions were tested:

- (1.) Highly confirming behavior by a superior, as perceived  
by an immediate subordinate, is related to a high  
degree of subordinate feedback.
- (2.) Highly confirming behavior by a superior, as that  
behavior is perceived by a subordinate, is related  
to greater communication of creativity from the subor-  
dinate to the superior.
3. High superior disclosure, as perceived by a subordinate,  
is related to a high degree of subordinate feedback.
- (4.) A high degree of superior accessibility, as perceived by  
a subordinate, is related to greater communication of  
creativity from the subordinate to the superior.

5. A high degree of superior accessibility, as perceived by a subordinate, is related to a high degree of subordinate feedback.

The Perceived Open-Mindedness Scale, the Perceived Confirmation Index, The Supervisor Disclosure Scale, The Supervisor Visibility Scale, the Test of Subordinate Feedback and the Test of Subordinate Creativity were the six instruments used to test the propositions. These instruments were administered to thirty-nine superior-subordinate pairs drawn from among United States Air Force officer and enlisted members stationed at two different locations. The resulting data were evaluated using chi-square, Pearson Product-Moment, and "t" tests.

Though none of the hypotheses was entirely supported, data analyses showed significant relationships among perceived superior confirmation, perceived superior open-mindedness, and subordinate specificity. In addition, tests showed that significant differences exist between officer subordinates' and enlisted subordinates' perceptions of their respective superiors, especially in perceived confirmation and perceived open-mindedness. Future research using larger, more diverse samples, and more direct measures of subordinate feedback and creativity, may yield more generalizable results.

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THE GRADUATE SCHOOL OF ARTS AND SCIENCES  
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Upon the recommendation of the chairman of  
the Department of Speech Communication  
this dissertation is hereby accepted in partial  
fulfillment of the requirements for the degree of

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## I. INTRODUCTION

Robert McMurry (n.d.) tells an anecdote about a retiring chief executive of a large corporation who, as he leaves his office for the last time, turns to his bright-eyed successor and says, "Yesterday was the last day you heard the truth from your subordinates. Good luck" (p. 1). Though some corporate executives might accuse the retiring CEO of exaggeration, most would have to admit sadly that what he said was true. Many of today's business, industrial, and government leaders are effectively isolated from the people they lead. They send out memoranda, preside at meetings, and conduct interviews. They read suggestions, attend stockholders' conventions, and pay visits to subordinates' offices and work-centers. They sit in their offices, confident that communication is flowing smoothly both up and down the corporate channels. Then suddenly they're bewildered to see production drop dramatically in one of the outlying plants, or to see extremely high attrition among the bright crop of junior executives they hired two years ago, or to be greeted one morning by the resignation letter of a top subordinate.



Weak communication between leaders and the people they lead is a potential problem in any formal organization, a problem that is well-documented (see, among others, Haney, 1976; Farace, Monge, and Russell, 1977; Mitchell, 1970; McMurry, n.d.; Harriman, 1974), and a problem for which no dearth of possible solutions exists. Armed with such solutions, the typical executive responds to problems like those above by taking the traditional approach: subordinates are shuffled, work groups are realigned, and, to use the executive's own words, "the chain-of-command is streamlined." The result: formal communication flows more smoothly for awhile, and managers feel they've licked the problem. Suddenly, though, more surprises occur, convincing the leaders that, once again, a realignment or "fresh approach" is needed. And so the process continues, with reorganization after reorganization accomplished or fresh approach after fresh approach dabbled with, all to cure the apparent communication ills. But the leaders discover that no matter how often they reorganize or how often they try to tap the attitudes of their people, the real word doesn't get to them until it's too late to prevent a bombshell.

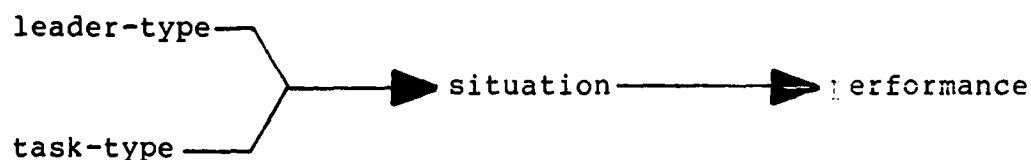
The difference between such macro-management approaches as those above and the micro-management approach proposed in this thesis is the difference between a structural philosophy and a communication philosophy. The macro-management leader tries to force information up the chain by changing the

structure of the organization or the nature of the employees. The micro-management leader, on the other hand, seeks to improve his own communicative abilities so that strong interpersonal trust builds between himself and the people he supervises.

Macro-management approaches to communication problems in an organization rarely solve what McMurtry calls the leader's "insulation from the everyday realities" of the organization (p. 2). This insulation, though, is only innocently self-imposed. Most organizational leaders have been taught that problems of corporate communication can be alleviated by adopting a "program solution," and they turn to job enhancement, participative organization, management by objectives, quality circles, or one of a myriad other such programs. Valuable as these approaches may be, many leaders forget--or perhaps fail to realize--that inherent in each of these programs is an essential communication component. To a greater or lesser degree, all of the so-called "human relations" theorists emphasize the importance communication, especially interpersonal communication, plays in their respective structural recommendations. An examination of some key contributors to the human relations school of leadership--arranged from least to most emphasis on communication--illustrates this point.

### Fiedler

Fiedler's (1973) contingency approach to leadership could be modeled in the following way:



This approach says that achieving top job performance is contingent on matching leader-type to task-type. Such a matching creates a situation which, in turn, determines the level of job performance.

Task-type, says Fiedler, is defined by three dimensions, one of which is "leader-member relations" (LMR):

Leaders will have more power and influence if they have good relationships with members and if members like, respect, and trust them. . . .[studies show] this is the most important single dimension."  
(Fiedler, 1973, p. 201)

While LMR is clearly a communication dimension, Fiedler is not concerned with how a leader may influence LMR or build better LMR. On the contrary, Fiedler's view is that both leader type and task type are "givens" in the management

equation (Fiedler, 1982); that the job for management is not to train leaders in ways to improve communication with subordinates, but rather is to fit leader-type to task-type, as one might fit a new suit on a clothing store customer.

An intriguing question for future research might be to ask whether Fiedler's contingency theory acts as a self-fulfilling prophecy (Weick, 1979): does the interaction between leader-type and subordinate-type help create a given LMR climate and, in turn, a given task-type?

### Herzberg

Herzberg's approach to leadership, like Fiedler's, could be modeled as a series of interrelationships:

job enrichment —————> job satisfaction —————> job performance

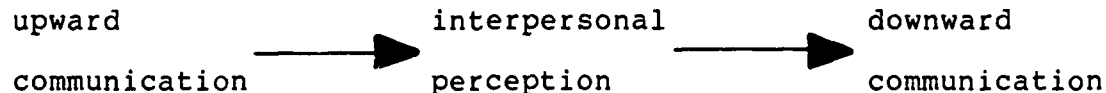
In this model, job enrichment leads to job satisfaction which, in turn, leads to better job performance (Herzberg, 1966). In order to enrich a subordinate's job, a leader must increase the motivator--intrinsic--factors of that job, such factors as recognition for achievement, responsibility, and potential for growth and advancement (p. 86).

Implicit in a job factor such as "recognition for achievement" are certain obvious requirements for interpersonal contact between leader and subordinate. Most

organizations, though, translate "recognition for achievement" into formal recognition programs: annual awards banquets, merit promotions, and salesperson-of-the-year nominations. Few interpret Herzberg as including interpersonal recognition in his definition. Few organizations see training leaders in interpersonal skills as a key method for enriching subordinate jobs.

### Harriman

Harriman (1974) would model the leadership task in the following way:



In this model, improved upward communication from subordinates to their superior leads to improved interpersonal perception within the superior-subordinate work group. This improved perception leads, in turn, to improved downward communication from superior to subordinates.

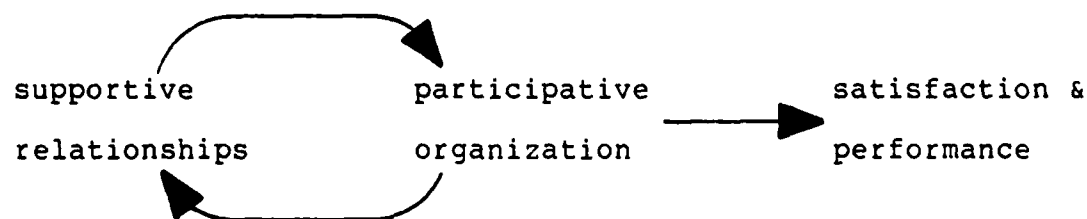
Harriman maintains that because a subordinate's survival may depend on her ability to "read the boss," subordinates are better at such "reading" than are their leaders. The leader's task, then, is to find ways to improve her own ability to "read" subordinates, thereby allowing her to send

more selective messages downward and to achieve control of the interpersonal perception factor.

Harriman started a program to improve upward communication at New England Telephone, a program that included anonymous discussions with or letters from subordinates, publishing worker letters in the company paper, and forming "task teams" of employees to work on local problems. While Harriman's program appears on the surface to be more macro- than micro-management, in fact his program is aimed at improving perceived accessibility to management, a key aspect of interpersonal relations proposed in this thesis.

### Likert

Rensis Likert (1961) proposed a decidedly interpersonal approach to leadership. His theory might be modeled as follows:



This model is based on Likert's principle of supportive relationships, which takes a decidedly individualistic view of the subordinate:

The leadership and other processes of the organization must be such as to ensure a maximum probability that in all interactions and all relationships with the organization each member will, in the light of his background, values, and expectations, view the experience as supportive, and one which builds and maintains his sense of personal worth and importance. (p. 103)

A participative organization, based on the principle of supportive relationships, is at one extreme of a continuum ranging from, at the other extreme, "exploitative authoritative," and including "benevolent authoritative" and "consultative" (Likert, p. 234). Such a participative organization is characterized by, among other qualities, "full and efficient flow of relevant information in all directions: up, down, and across" (p. 238). Given such a continuous flow of information, and given that decision-making in a participative organization is shared among all hierarchical levels, job satisfaction and performance are at their peaks in such an organization.

True, achieving such utopian levels, according to Likert, comes only after a long-term restructuring of the organization into linked working groups. But after the restructuring, a genuinely participative organization emerges, and from the participative organization emerges, in

turn, "emotionally and socially mature persons capable of effective interaction, initiative, and leadership" (p. 236).

### An Interpersonal Communication Approach

Fiedler, Herzberg, Harriman, and Likert, as examples of today's approaches to leadership and management, imply to varying degrees the importance of effective superior-subordinate communication. Looking to the future, John Naisbitt (1982) implies the same when he discusses the critical balance between a high tech society and the individual's countervailing need for "high touch." The paradigm suggested in this thesis is explicit, based on the belief that most of the communication problems in modern organizations find their roots in dyadic communication between superiors and subordinates.

This approach is based philosophically on the interpersonal perception theory of Laing, Phillipson, and Lee (1966), which maintains that human behavior, especially dyadic behavior, reflects the perceptions, meta-perceptions, meta-metaperceptions, ad infinitum, operating within an interpersonal system. This "spiral of reciprocal perspectives" is summarized in the following first-person narrative:

What I think you think of me reverberates back to  
what I think of myself, and what I think of myself



in turn affects the way I act towards you. This influences in turn how you feel about yourself and the way you act towards me, and so on. (Laing, et al, 1966, p. 27)

Translated to the superior-subordinate setting, how the subordinate views his superior's attitude toward him affects how the subordinate feels about himself and the subordinate's subsequent behavior. Likewise, the subordinate's behavior, whether positive or negative, will influence the superior's perception of the subordinate, will influence the superior's subsequent action, will influence the subordinate's subsequent perception, ad infinitum. This constant spiral of interdependent perceptions comprise what Laing, et al., call the "dyadic system" (p. 27), in which both members' self-perceptions and behaviors reflect the perspectives, meta-perspectives, and meta-meta-perspectives that constantly operate.

If the superior and subordinate have achieved understanding in their dyadic relationship--in other words, if they share accurate, common perceptions of the relationship, of each other, and of each other's perceptions (Laing, et al., 1966, p. 29)--the relationship is functional. If, on the other hand, such conjunction doesn't exist, "a relatively steady state of reciprocal mistrust, precarious happiness, common misery, or terror becomes established" (Laing, et al.,

1966, p. 29). Though Laing and his associates were specifically discussing the effects of a destructive spiral on a marriage, the same effects are evident in a dysfunctional superior-subordinate relationship. The solution, according to Laing, is that one of the dyadic members has to make the initial change.

The philosophical basis of this thesis is that the perceptions, meta-perceptions, and meta-meta-perceptions operating in a superior-subordinate dyad determine the degree to which the dyad is functional or dysfunctional. If a subordinate sees himself as reliable, competent, and trustworthy, and if he feels his superior shares that perception, the subordinate's relationship with the superior will be functional and positive. If, on the other hand, the superior appears to see the subordinate, in the subordinate's eyes, as unreliable, incompetent, and untrustworthy, the relationship between the two will be dysfunctional and negative. Implicit is the superior's responsibility to change his communication behavior so the destructive spiral stops.

### Research Objectives

Consistent with the interpersonal perception theory discussed above, my research objectives are to examine whether certain subordinate perceptions of the superior--confirmation, accessibility, and disclosure--are associated with

subordinate feedback and creativity. Specifically, my objective is to discover if relationships exist among these five units: 1. perceived superior confirmation, 2. perceived superior accessibility, 3. perceived superior disclosure, 4. subordinate feedback, and 5. subordinate communication of creativity.

### Summary

Chapter I lays the foundation for the research discussed in this dissertation. Many researchers have implied the importance of interpersonal communication between superiors and subordinates. Laing, Phillipson, and Lee have discussed the role of interpersonal perception in achieving understanding between two people. My research seeks to discover if a relationship exists among certain aspects of interpersonal perception, interpersonal communication, and behavior within the superior-subordinate dyad.

The following chapters discuss the research in detail. Chapter II reviews the literature of the theoretical constructs and introduces the propositions examined. Chapter III describes the methods used to conduct the research and introduces the hypotheses. Chapter IV states the results of the research, and Chapter V discusses these results, drawing conclusions and making recommendations for future research.

## II. REVIEW OF LITERATURE

This chapter reviews the literature associated with five theoretical units: perceived confirmation, perceived disclosure, creativity, feedback, and accessibility, the latter unit including open-mindedness and visibility. Not all the literature of superior-subordinate communication is reviewed here because much would be irrelevant. Jablin (1979) has conducted a comprehensive review, as have the American Business Communication Association (ABCA) and the International Communication Association (ICA) (see, for example, Greenbaum, Falcione, and Hellweg, 1983). Moreover, I have tried to limit the review to seminal works and those follow-on works that relate at least tangentially to communication between superiors and subordinates. Self-disclosure, for example, has been examined in hundreds of studies over the past twenty years. My review is limited to Jourard's (1971) seminal work and later studies of the effects of disclosure on superior-subordinate relations. The chapter concludes by proposing the theoretical relationships among these units.

The primary sources of literature reviewed here are the computer files of The American Psychological Association and The American Sociological Association, relevant literature from Jablin's 1979 review, and relevant literature from the ABCA and ICA Organizational Communication series.

### Perceived Confirmation

The confirmation/disconfirmation construct has philosophical roots in the writings of Martin Buber, and psychological roots in the work of R. D. Laing, and of Watzlawick, Beavin, and Jackson (1967) among others (Sieburg, 1969; Jacobs, 1973; Cissna, 1976). At its most fundamental, confirmation is "any behavior that causes another person to value himself more." Disconfirmation, in contrast, is "any behavior that causes another person to value himself less" (Sieburg and Larson, 1971, p. 1). More specifically, confirmation is a response that implicitly or explicitly communicates acceptance of the dyadic other. Disconfirmation communicates the opposite: explicit or implicit rejection (Dance and Larson, 1976).

In her 1969 dissertation, Evelyn Sieburg was the first scholar to break the construct into its component parts (Cissna, 1976). Following an intensive search of the communication and psychology literature, including special emphasis on the literature of schizophrenic communication, Sieburg

(1969) identified 40 types of "unhealthy" communicative responses. She then consolidated these responses into five general "dysfunctional" categories, and added two categories of "functional" responses, resulting in the following seven response-types:

1. Content response (functional)--one that refers directly to the content of the previous message.
2. Metacommunicative response (functional)--one that refers to the communicative nature of the previous message or to the relationship between speakers.
3. Impervious response (dysfunctional)--one that implies unawareness of the previous speaker or message.
4. Tangential response (dysfunctional)--one that bears only the most limited relation to the previous message; one that digresses from the previous speaker's intent.
5. Projective response (dysfunctional)--one that discounts the feelings in a previous message or one that projects the respondent's feelings onto the previous speaker.
6. Inadequate response (dysfunctional)--one that "says little or nothing because its message is incomplete, overqualified, or lost in a mass of trivia"

7. Ambiguous response (dysfunctional)--one that is meaningless because "it contains more than one message" and is often self-contradictory. (Sieburg, 1969, pp. 148-149)

To test her categories, Sieburg (1969) trained three expert judges to identify the seven response types, and added an eighth category--"unclassifiable"--for those responses not fitting one of the seven functional/dysfunctional descriptions. She then asked the judges to evaluate tape recordings of the interaction among members of both effective and ineffective groups. From these evaluations, Sieburg discovered that the effective groups had significantly fewer dysfunctional responses than did the ineffective groups, and that the effective groups had significantly more content responses than did ineffective groups.

In 1971, Sieburg and Larson attempted to further clarify the response types identified in Sieburg's 1969 research. They first identified twenty-four categories to define the various responses one member of a dyad might use in replying to the other member. These categories were then arranged into a questionnaire format and mailed to ninety-five members of the International Communication Association, who were asked to use the categories in describing those with whom they most enjoy and least enjoy conversing.

Following statistical analysis of the survey results, Sieburg and Larson concluded that "two basic underlying dimensions" describe, in different degrees, both most-enjoy and least-enjoy others (p. 6). The first dimension they labeled "disconfirming response," which included imperviousness, interrupting response, irrelevant response, tangential response, impersonal response, incoherent response, and incongruent response. The second category they labeled "confirming response," which included direct acknowledgement, clarifying response, supportive response, agreement about content, and expression of positive feelings (p. 6). Sieburg and Larson concluded that "the most preferred response, using a standard of confirmation, is one that recognizes the other's communication, elicits more information from him, or agrees with him; the least preferred . . . is that which fails to acknowledge the speaker even minimally, or responds to him in an impersonal fashion" (p. 7).

Sieburg's 1969 dissertation and the follow-on research of Sieburg and Larson provided the well-spring for confirmation/disconfirmation research throughout the '70s and into the '80s, research conducted primarily at the University of Denver. Sundell (1972) studied confirmation in teacher-student interaction, finding a reciprocal relationship: teacher confirmation and disconfirmation of students led to student confirmation and disconfirmation, respectively, of teachers. The following year, Jacobs (1973), basing her research on



proposals in an unpublished paper by Evelyn Sieburg, attempted to prove two hypotheses: first, that subjects will be able to perceive and report differential conditions of confirmation; and second, that a hierarchy exists among conditions of confirming and disconfirming behavior. While Jacobs did find that imperviousness is more likely than any other condition to cause a subject to feel disconfirmed, she failed to substantiate the proposed hierarchy among the remaining conditions. On the other hand, Jacobs affirmed her first hypothesis that subjects would be able to perceive and report varying conditions of confirming and disconfirming behavior (for elaboration on Jacobs' methods, see Chapter III, pp. 73-75).

Clarke (1973) studied the effects of confirmation, self-disclosure, and interpersonal perception on satisfaction and attraction among married couples, finding that perceived confirmation was the best predictor of marital satisfaction and attraction regardless of the stage (length) of the marriage.

Cissna (1975) found a relationship between facilitative communication--empathy, respect, genuineness, and self-disclosure--and perceived confirmation among married university couples (also reported in Cissna and Keating, 1979). More recently, Murphy (1980) failed to find a relation between perceived confirmation and compliance in a doctor-patient relationship, and Sperhac (1982) failed to find a relation between communication competence and perceived confirmation

among second- and third-grade students. Methodology may have influenced the latter two findings, however, a limitation mentioned by both authors.

The role of confirmation in the superior-subordinate setting differs little from its role in other interpersonal contexts, as substantiated by the literature of organizational communication. Very simply, confirmation is communicative behavior by the superior that says to the subordinate, "I care about who you are and what you're thinking and feeling."

In 1952, Rogers and Roethlisberger identified the major barrier to effective interpersonal communication in the organization as the tendency to evaluate, judge, or disapprove the statement of another, all of which are characteristic disconfirming behaviors. Likert (1961) addressed aspects of confirming behavior in his discussion of how favorable attitudes in subordinates can be attained primarily by appealing to their desires to achieve and to maintain a sense of personal worth and importance. In his study of superior-subordinate relations, Likert found that those superiors with the most favorable and cooperative work groups were perceived by their subordinates as being supportive, friendly, and helpful; and as showing confidence in employee integrity, ability, and motivations (p. 101). "Subordinates react favorably," said Likert, "to experiences which they feel are

supportive and contribute to their sense of importance and self-worth" (p. 102).

Among the hypotheses positively supported in the 1961 research of Indik, Georgopoulos, and Seashore was that "the degree to which subordinates are satisfied with their superior's supportive behavior . . . facilitates acceptance of organizational objectives . . . [and] performance [by subordinates]" (p. 360). Gibb (1961) described work-group members as having fundamental desires to be seen as valued persons, as having special worth, and as objects of concern and affection. More importantly, Gibb found that speech with little or no affect more often communicates rejection than mere neutrality (p. 146).

Following a listing of the fifty-five focal communicative behaviors his research identified, Rogers (1976) summarized the behaviors into three things a superior must be willing to do: 1) ask subordinates for suggestions, personal opinions, and new ideas; 2) listen to and accept what subordinates say; and 3) follow up on subordinate suggestions, ideas, and gripes (p. 200).

Sieburg (1969, 1976) makes the strong point that confirmation doesn't necessarily mean the superior must always agree with the subordinate. On the contrary, a leader may strongly disagree with a subordinate's position, yet still be confirming in response. This same point was substantiated by Sieburg and Larson (1971) and by Cissna and Keating (1979).

Sieburg and Larson, in fact, discovered that while "agreeing response" was one of the behaviors characterizing "most enjoy" targets, "disagreeing response" was insignificant. A logical conclusion is that a supervisor may disagree with a subordinate yet convey the message that the subordinate is still a worthwhile person. This distinction was made even clearer by Jablin (1977).

Fredric Jablin's 1977 examination of "openness" in the superior-subordinate relationship was one of several such studies conducted at ~~Purdue University~~ under the direction of W. Charles Redding. The foundation for Jablin's research was the work of Baird (1973) and Stull (1974), both of whom had also examined openness (Jablin, 1977, pp. 8-11). Baird (1973) had discovered a significant positive relationship between a subordinate's trust in his boss and the subordinate's perception of the boss's "willingness to listen." Baird also found that subordinate satisfaction correlated positively with the subordinate's actual openness on task, impersonal, and positive topics: the more satisfied the subordinate, the more open his communication. Building on Baird's research, Stull (1974) found that both supervisors and subordinates sought "acceptance" and reciprocal openness in response to task and non-task messages. Stull concluded that accepting and reciprocal responses are important to both supervisors and subordinates.

Basing his study on the work of Baird (1973), Stull (1974), and Sieburg and Larson (1971), Jablin (1977) hypothesized that message responses can be categorized in a hierarchical matrix defined by two dimensions: the valence (positive, negative, irrelevant) of the response, and the target (content, relation) of the response. The resulting categories of interpersonal message response are shown in Figure 2.1.

Jablin exposed a sample of 385 subordinates to videotaped recordings of superior-subordinate interaction characterized by one of the five response types. He then administered questionnaires to each subject to determine how he perceived his own superior-subordinate relationship, how he perceived the relationship he had just witnessed, how he would predict responses to the dramatized situations, and what he would consider to be appropriate responses to each dramatized situation. Jablin discovered that, regardless of perceived openness in the relationship, subordinates "clearly and consistently prefer communicative responses from a superior which are, in descending rank-order: confirming, disagreeing, acceding, repudiating, and disconfirming" (p. 184). In other words, positive response on the relational level, regardless of valence on the content level, is preferred to any negative relational response. A subordinate would prefer disagreement to rejection. Jablin also found that subordinates perceive disconfirmation--irrelevance on both levels--

		C O N T E N T		
		+	-	Irrelevant
R E L A T I O N	+	confirming	disagree	
	-	acceding	repudiating	
	Irrelevant			disconfirming

Figure 2.1 Response Categories (Source: Jablin, 1977, p. 16).

as inappropriate regardless of perceived degree of openness or the content of previous message.

An implication of confirmation theory has been that high levels of interpersonal confirmation lead to high levels of interpersonal trust (see, for example, Gibb, 1967; Burke and Wilcox, 1969; Sieburg, 1969; Cissna, 1975; Jablin, 1977). A line of research at the University of Denver, however, questioned this assumption and warrants discussion here. In his research, Ross (1973) factor-analyzed the self-reported and perceived communication processes in eighty-six supervisor-

subordinate dyads. Among the processes Ross identified was a factor he labeled "perceived shared environment of rejection," in which supervisors "characterized themselves and were characterized by their subordinates as rejecting, not supporting, or not accepting their subordinates . . ."

(p. 105). Contrary to expectations, Ross discovered that this factor, closely resembling Sieburg's "disconfirmation" and Jablin's "repudiation," correlated significantly with the accuracy with which supervisors perceived their subordinates. In other words, Ross' results suggested that the more disconfirming a supervisor, both as self-reported and as perceived, the more accurate the supervisor was in predicting the subordinate's perceptions of the job and work environment.

Using essentially the same methods Ross had used, Northouse (1974) found a negative correlation ( $r = -.40$ ) between interpersonal trust and accuracy. Through a series of six "laws," Northouse suggested that the reason for the surprising negative correlation was that distrust in a dyad leads ultimately to a greater sensitivity to what little information the other reveals. If person A distrusts person B, A will reveal less to B; moreover, A will be more sensitive to B's communication as she tries to discover "what B is up to." The result, suggests Northouse, is that distrust will ultimately lead to greater accuracy on the part of A.

Northouse's reasoning could certainly help explain Ross' results and may in fact be a valid phenomenon. On the other

hand, the validity of Northouse's explanation fails to warrant his conclusion that "increased trust may not always be advantageous" (p. 78). That distrust may lead to greater accuracy doesn't necessarily refute the contention that trust also leads to accuracy. The question may simply be, "Which atmosphere is a better means to the desired end: trust or distrust?"

As conceptualized here, then, leader confirmation is consistent with Sieburg's (1973, 1976) four behavioral clusters, arranged in order from least to most confirming:

1. Indifferent response: those behaviors by a superior that say to the subordinate, "I don't bother to listen to you; I hardly even know you exist."

Example: While the subordinate stands in the superior's office discussing a problem, the superior is shuffling through papers, reading memos, or working on the balance sheet. All such behaviors say to the subordinate, "What you're saying will make no difference in the way I feel about the problem in question or in the way I feel about you."

2. Impervious response: a response by the superior that either discounts or judges a subordinate's feelings about an issue.

Example: A subordinate tells her leader that she feels uncomfortable working with a co-worker and asks to move to



another shop. The leader replies, "Aw, don't worry. You're just having a tough time adjusting; you'll get over it." Such a response says to a subordinate, "Your feelings are unwarranted bellyaches. Don't be such a complainer."

3. Disqualifying response: a response by the superior that indicates the superior either didn't hear or didn't understand the subordinate's comments.

Example: In a meeting, a subordinate suggests modifying working hours to increase productivity, and the superior replies with a statement about pay and vacation time. Such a response only minimally acknowledges the subordinate's message then implicitly discounts it by moving off to an irrelevant or tangential area.

4. Dialogue: recognition of the other's existence, of the other's uniqueness as a person, of the other's significance, and of the other's unique way of experiencing the world. "It expresses concern for the other person and a willingness to be involved with him; . . . it imparts value to the relationship" (Sieburg, 1976, p. 132). Such genuine dialogue most likely includes one or all of the three factors suggested by Dance and Larson (1976): clarifying responses, direct responses, and expression of positive feelings (pp. 83-84).

Sieburg's (1976) discussion of how the confirmation paradigm applies to the organizational context is an appropriate summary to the preceding review:

It may seem that I am idealistically urging that everyone "like" everyone else, respond positively to everyone, and seek intimacy with everyone. . . . What I am suggesting is that each person has a right to be recognized as a unique individual, a right to be listened to with respect, a right to have his communication acknowledged, a right to have his feelings and perceptions validated in interaction with others. . . . If, however, he lives in a world where he gets none of these validations--where he is treated with indifference, discounted, misunderstood, confused, and carefully kept at a remote impersonal distance--then he will very likely begin to make trouble for the world."  
(pp. 147-148)

#### Perceived Disclosure

In his original work on self-disclosure, Sidney Jourard (1971) claimed that "no man can come to know himself except as an outcome of disclosing himself to another person" (p. 6). Moreover, said Jourard (1973), "Mutual collaboration

can't take place unless the collaborators know each other. Mutual disclosure leads to mutual anticipation of each other's reactions" (p. 92).

While Jourard fathered the concept of self-disclosure, many others have subscribed to the idea as a necessity in building genuine interpersonal relationships. Rogers and Roethlisberger (1952), for example, discussed the importance of openness in building good, free communication between persons. Pace and Boren (1973) addressed "leveling" as the technique in which persons reveal information about their personal feelings or behavior so that others may come to understand and trust them better. Haney (1976) stressed the importance of mutual disclosure: that to communicate genuinely, individuals must understand each other's unique frames of reference.

Powell (1973) described five levels of communication which lead from the most superficial, cliché-ridden conversation to peak communication, in which both partners share an "absolute, two-way openness and honesty" (pp. 101-106). While Powell acknowledged that such peak communication can never be permanent even in the most intimate relationships, he maintained that only through such communication can genuine trust develop between two people. Citing Goldbrunner, Powell states, "if we want another to be open with us, we must begin by opening ourselves . . . by telling the other honestly and openly our feelings" (p. 113).

Jourard's concept of self-disclosure, and such writings as those cited above, led to what Parks (1982) has called "the ideology of intimacy": the idea that authentic interpersonal relationships cannot exist unless the dyadic partners are willing to share intimate information with each other. This ideology was strongly in vogue through the late 1960's and well into the 1970's, and has only recently been attacked as, at best, lacking solid empirical support (Parks, 1982) and, at worst, being misleading and potentially damaging to relationships (Bochner, 1982).

What is being argued here is that selected elements of the so-called ideology of intimacy can work in the formal organization, though certainly not all elements of the ideology would fit comfortably. Willits (1967), for example, made a critical distinction between what might be appropriate disclosure within the family and what is appropriate in the organizational setting: "Personal anxieties that are task-related might be revealed by an open manager, but psychodynamic concerns of childhood would not" (p. 92). Willits explored the difference between superiors' expression "of" feelings--actual display of anger, sadness, confusion, etc.--and expression "about" feelings (e.g., "this is how I feel"). Willits found that "of feelings" correlates negatively with company performance, but hypothesized that "about feelings" will correlate positively. To go one step further, I hypothesize that the subordinate's perception of the superior's

willingness to disclose feelings, regardless of the superior's actual disclosures, is critical to building what Stull (1978) describes as "an organizational climate in which the employee feels free to say what is on his mind" (p. 124). One of the keys to building this climate is to create a perception of communication openness in the organization.

Though perceived disclosure is a relatively unexplored concept in the literature, organizational openness has been examined extensively. Indik, Georgopoulos, and Seashore (1961) found that "mutual understanding among interacting organizational members [supervisory and non-supervisory] is positively related to job performance" (p. 360). Likert (1961) discussed how openness relates to interpersonal trust and, in turn, to developing high group loyalty and favorable attitudes. Rubin and Goldman (1968) defined open communication as the degree to which a subordinate would be willing to disclose job-related feelings to his or her supervisor. Using a self-report questionnaire to operationalize the construct, Rubin and Goldman found a significant correlation between a manager's "ability to import good information" and the manager's effectiveness as rated by his or her supervisor.

In his study of open communication as perceived by supervisors and subordinates, Baird (1973) found that subordinates are more willing to discuss personal topics than are their supervisors, and that for subordinates a positive

correlation exists between trust and their supervisors' perceived willingness to listen. Farace, Monge, and Russell (1977) addressed the importance of the superior's and subordinate's accurately knowing each other's feelings and interpretations in establishing effective rules for communication.

In a highly relevant study, Young (1978) found that in "organic task groups"--those characterized by a climate of trust and openness--members were more willing to disclose "organizationally relevant but personally threatening information" to their superiors than were members of "mechanistic" groups. Young's findings supported Heron's (1942) contention that sharing information with employees leads to employees' sharing information with management.

In contrast, Haenszel (1980) found no significant correlation between superiors' and subordinates' cognitive disclosures, though she did report positive correlations between affective disclosures of supervisors and subordinates. In other words, Haenszel concluded that sharing feelings between superior and subordinate appears to be reciprocal, but she failed to find support for Heron's and Young's contentions that sharing information is reciprocal. Haenszel conducted her study in a university setting, so her results may not be generalizable to other types of organizations. On the other hand, Haenszel's results are consistent with the hypothesized relationship between perceived supervisor self-disclosure and subordinate feedback.

As stated earlier, perceived self-disclosure is a relatively unexplored area in the literature. Moreover, authors vary on whose perception they examine. In his 1972 dissertation, for example, Gilbert examined how intimate disclosure by an experimenter affected the actual and perceived self-disclosure of subjects. Gilbert's findings were mixed: actual self-disclosure increased in response to experimenter intimacy, but subjects perceived themselves as disclosing less in those situations when the experimenter reciprocated less.

Contrasting Gilbert is a second perspective: examining how one member perceives the self-disclosures of another, the perspective adopted here. Weigel, Dinges, Dyer, and Straumfjord (1972) examined the relationships among liking, perceived self-disclosure, and mental health in five sensitivity groups, finding highly significant correlations between the degree to which members liked other members and the degree to which members perceived others as high self-disclosers. Somewhat in contrast, Rogers and Wright (1976) found no significant relationship between the perceived disclosure of others and self-disclosure. Rogers and Wright's results are questionable, though, because of their methodology: they used slides and scripts to operationalize the dyadic "other" rather than real persons in real relationships. Wright (1979) investigated the differences between the perceived and actual self-disclosures of subjects in

same-sex and opposite-sex friendships, finding that no significant differences exist.

Most recently, Baile (1981) examined, among other effects, the relationships among liking, valence of disclosure (negative vs. positive information), and whether the disclosure is perceived as appropriate or inappropriate by subjects. Though Baile's methods were similar to those of Rogers and Wright--the use of scripts to operationalize disclosure--her findings differed. Baile discovered that subjects perceived negative disclosures as appropriate if the disclosures were related to the ongoing relationship and that disclosure in such an event had no effect on how much the discloser was liked.

Jourard (1971) contended that "disclosure begets disclosure," a relationship he called "the dyadic effect" (p. 66). This effect is more clearly explained by Dindia (1981): "A's self-disclosure to B causes B's self-disclosure to A, and vice-versa" (p. 506). In contrast, my question is How does the subordinate's perception of the supervisor as a discloser affect the subordinate's self-disclosures to the supervisor? This shifted emphasis from actual to perceived disclosure makes the question of reciprocity only partially applicable, at least as the question has been studied in the past.

The issue of reciprocity is problematic at best. Following an extensive literature review, Dindia (1982) contends



that previous methods to measure reciprocity have determined only correlations between self-disclosures, not the mutual causes implied in Jourard's concept. Using a lag sequential analysis method to evaluate dyadic conversations among eight volunteers, Dindia found no significant reciprocation between the self-disclosures of one and the self-disclosures of another. Dindia concluded that "self-disclosure may be related but not reciprocal" (p. 524).

Yet Dindia, like others who have examined the reciprocity question, studied actual self-disclosures as determined by, in Dindia's case, independent observers. Burke and Wilcox (1969), in contrast, examined perceived self-disclosure and arrived at totally different conclusions. Burke and Wilcox surveyed 323 female telephone operators, asking each subject two questions: 1) How free and open are you in communicating your feelings and ideas about your job and your situation to your immediate supervisor?; and 2) How free and open is your immediate supervisor in communicating to you? Their findings included a significant positive correlation between the perceived openness of a superior and the self-perceived openness of the subordinate, which led Burke and Wilcox to conclude, perhaps rashly, that supervisor openness "causes" subordinate openness. While I don't agree that the Burke and Wilcox work showed a causal relation, I do agree that their study, along with the others mentioned earlier,

lend strong support to Dindia's contention that dyadic self-disclosures are at least related.

The applicable literature on openness and disclosure, then, indicates that appropriate levels of disclosure by superiors is related to disclosure of feelings by subordinates and that such mutual openness is, in turn, positively related to job satisfaction. The remaining question is how to define "appropriate levels" in the supervisor-subordinate relationship. Jourard (1971) offered his answer in the "work (or studies)" section of the self-disclosure questionnaire:

1. What I find to be the worst pressures and strains in my work.
2. What I find to be the most boring and unenjoyable aspects of my work.
3. What I enjoy most, and get the most satisfaction from in my present work.
4. What I feel are my shortcomings and handicaps that prevent me from working as I'd like to, or that prevent me from getting further ahead in my work.
5. What I feel are my special strong points and qualifications for my work.
6. How I feel that my work is appreciated by others.
7. My ambitions and goals in my work.
8. My feelings about the salary or rewards that I get for my work.

9. How I feel about the choice of career that I have made.
10. How I feel about the people I work for or work with. (p. 214)

A subordinate's perception of the degree to which his superior would likely reveal this information, regardless of actual past disclosures, is the definition of perceived superior disclosure I use here.

#### Subordinate Creativity

Though much of the literature tends to use the terms "innovativeness" and "creativity" interchangeably, most authors make a clear distinction: "innovativeness" refers to the rate of adoption of a new idea or concept (for example, E. Rogers, 1962; E. Rogers & Shoemaker, 1971) whereas "creativity" refers specifically to the invention of the idea or concept. I make the same distinction here.

"The search for knowledge about creativity," say Rothenberg and Hausman (1976), "is linked with magic, the demonic, and the divine. . . . Creativity is paradoxical and complex, and the most steadfast investigator is constantly beset with feelings of awe and a sense of mystery as he pursues his inquiry" (p. 3). Perhaps it is this awe and mystery that led May (1959) to lament "the paucity and inadequacy" of the

extant research on creativity: "The subject has been generally avoided as unscientific, mysterious, disturbing, and too corruptive of the scientific training of graduate students" (p. 55). As the more significant collections of scholarly work on creativity illustrate, the "paucity" still exists. Most past research on creativity has indeed been more philosophical than scientific (see, for example, Taylor, 1956; Anderson, 1959; Rothenberg & Hausman, 1976). Yet some consensus is evident on the nature of creativity and the types of environments that foster or discourage creativity.

According to Guetzkow (1965), creativity is distributed among human beings along a continuum: from the "totally uncreative" to the "extraordinarily creative" (p. 35). Rokeach (1965) maintains that creativity is at one extreme of a "unidimensional characteristic" in humans running from conformity through independence to creativity (p. 70). Barron (1963), too, would agree that individual creativity may range from extraordinarily creative to totally uncreative.

Most authors, however, feel that all individuals have at least a degree of creative potential. Fromm (1959), for example, considers creativity a character trait: "the creative attitude" (p. 44). This creative attitude "does not refer to a quality which particularly gifted persons or artists could achieve, but to an attitude which every human being should and can achieve. Education for creativity is nothing short of education for living" (p. 54). May (1959)

defines creativity as "the process of bringing something new into birth" (p. 57), and regards the process as a universal characteristic: "Any penetrating explanation of the creative process must take it as the expression of the normal man in the act of actualizing himself . . . as the representation of the highest degree of mental health" (p. 58).

Carl Rogers (1959) defines the creative process as "the emergence in action of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life on the other" (p. 71). Maslow (1959), too, sees creativity in every person, "if only as a suppressed potential, [which leads to such questions as] 'Why was it lost?' 'How much is left?' 'How much can be recovered?'" Maslow views creativity as one of the defining characteristics of self-actualization and, in turn, of "essential humanness" (p. 94). Arieti (1976) agrees that creativity is an attribute of every human being "provided we refer to a different level of creativity: . . . that of the ordinary fellow when he departs a little from the usual ways by modifying old things and improving them" (p. 10).

Barron's 1963 study is one of the few scientific examinations of creativity. Barron conducted his study of originality using as subjects 100 U. S. Air Force captains, testing each for originality using eight different measures, including the Rorschach ink blot test, the Thematic

Apperception Test, anagrams, and word rearrangements. After finding significant correlations among the eight measures, Barron used cumulative deviation scores to identify the top fifteen ("regularly original") and bottom fifteen ("regularly unoriginal") subjects. Using various measures, Barron then tested five hypotheses of differences, finding:

1. that original persons prefer complexity and some degree of apparent imbalance in phenomena;
2. that original persons are more complex psychodynamically and have greater personal scope;
3. that original persons are more independent in their judgement;
4. that original persons are more self-assertive and dominant; and
5. that original persons reject suppression as a mechanism for the control of impulse.

Barron's use of the term "regularly unoriginal" is unfortunate, implying as it does that some persons may rarely, if ever, be creative. On the other hand, one of Barron's concluding observations is highly relevant here: "Originality . . . flourishes where suppression is at a minimum and where some measure of disintegration is tolerable in the interests of a higher level of integration which may yet be reached" (p. 212).

More recent research has been characterized by studies of innovativeness, or the willingness of individuals or organizations to adopt creative ideas. Hurt, Joseph, and Cook (1977), for example, developed a twenty-item self-report based on the adopter categories of Rogers and Shoemaker (1971). The purpose of the self-report is to categorize subjects as to their innovativeness: innovator, early adopter, early majority, late majority, or laggard (Hurt, et al., p. 60; also see Rogers & Shoemaker, 1971, pp. 175-195).

More pertinent to the present study is the effort by Siegel and Kaemmerer (1978) to develop an instrument for measuring perceived innovativeness of an organization. Siegel and Kaemmerer propose that innovative organizations--those most willing to adopt new ideas--differ from non-innovative organizations in five dimensions: leadership, ownership, norms for diversity, continuous development, and consistency (pp. 554-555). Using these dimensions as key factors, Siegel and Kaemmerer designed a sixty-one-item, Likert-type scale to measure perceived support for innovation in an organization. The authors administered their questionnaire to teachers and students in a traditional secondary school and an innovative secondary school, then refined the instrument and administered it to 1900 subjects in several traditional high schools. Their findings showed significant differences between traditional and alternative schools on perceived support of creativity and perceived tolerance of

diversity. For future research, Siegel and Kaemmerer suggested going "beyond members' perception of support for innovation . . . and on to relating the scale to behavioral indices of innovation" (p. 561). One might interpret this suggestion as asking, How do these perceptions of innovativeness affect creative behavior?

Though little is known about how to promote creativity (Arieti, 1976), all authors agree that environment plays a critical part in encouraging or discouraging creativity. Anderson (1959) claims that "an open system" is absolutely essential to fostering creativity: ". . . the open system means that . . . the persons in one's meaningful environment are permitting or even encouraging him to be himself and to make adventures into the unknown. . . . Anything that tends to close the system makes the environment unpropitious for creativity" (pp. 252-253). In contrast to such an open system is one marked by evaluation and power over another:

This power over may be real, potential, or symbolic. It may be intentional or unintentional. The net result of power over another is the ultimate achievement of conformity by the individual to external standards. It denies to the creating person the opportunity and the right to be himself. It is thus a prime source of anxiety in the person and an instigator of resistant defenses. It



detracts by that much from the 'originality' of the behavior." (Anderson, 1959, p. 263)

Skinner (1976) proposes that environment is solely responsible for creativity and that the creator is simply a vehicle in which the creation takes form. "The task," says Skinner, "is not to think of new forms of behavior but to create an environment in which they are likely to occur" (p. 272). Drawing on Darwinism, Skinner maintains that a person's future creative efforts are determined by reactions to his past creative efforts: "When a person acts, the consequences may strengthen his tendency to act in the same way again" (p. 270). Positive consequences--"contingencies of reinforcement" (p. 271)--will make future creative efforts more likely. Negative consequences will likely result in less creativity.

Wallas' (1976) four stages of the creative process--preparation, incubation, illumination, and verification--all depend on the proper environment if one stage is to lead to the next. In fact, the verification stage, in which the idea is validated and refined, coincides with the Skinnerian concept of reinforcement for creativity. Without a positive validation stage, the likelihood of future creative efforts is reduced (Wallas, 1976, p. 70).

Rogers (1959) believes that the motivation for creativity "exists in every individual and awaits only the proper

conditions to be released and expressed" (p. 72). Among these proper conditions are three Rogers considers essential:

1. An openness to experience, or extensionality;
2. An internal locus of evaluation, which causes values to be established not by external judgements but by the creative person; and
3. The ability to toy with elements and concepts

Finally, says Rogers, the desire to communicate usually accompanies creativity. Once a person has been creative, "he desires to share this new aspect of himself-in-relation-to-his-environment with others" (p. 78). Stein (1956), in fact, includes communication as the third element in the creative process, following hypothesis-formation and hypothesis-testing. "Creativity," says Stein, "may be manifest in any one or all of the aspects of this process" (p. 172).

Given the creative potential as a universal quality, and given the natural desire to communicate this creativity, Rogers proposes that leaders can permit these inner conditions of creativity to emerge by:

1. accepting individuals as of unconditional worth;
2. providing a climate in which external, personal evaluation is absent (e.g., "I don't like your idea, but I still have positive feelings about you" vice

"Your idea is useless, and I assign this quality to you.");

3. understanding empathically; and
4. maintaining an environment of psychological freedom, which "is not softness or indulgence. . . .[but rather] is permission to be free, which also means that one is responsible." (p. 80)

If a leader establishes and maintains such a group environment, Rogers hypothesizes that the group will spontaneously form a greater number of creative products, and that the group will be marked by more "harmonious interpersonal relationships than in a matched group in which these conditions are present to a lesser degree" (p. 81).

Arieti (1976) claims that ". . . such social and personal determinants as a climate of indulgence, safety, friendliness, cooperation, permissiveness, and so on" are essential to increase original thinking. "This kind of social climate suggests to the individual that he does not need to be on guard. He does not need to eliminate what is likely to be unaccepted by the environment" (pp. 8-9). "The magic synthesis [creativity]," continues Arieti, ". . . is greatly facilitated by a proper climate or milieu" (p. 312).

Luthe (1976) maintains that not only is creative potential in all of us, but also that the potential can be fertilized and harvested using the correct techniques. Luthe's

suggestion is the "no-thought-mess-painting" technique--free paint expression--which he designed and tested as a means of developing the synthesizing abilities of the brain's right hemisphere (pp. 6-10). The neurological bases for Luthe's work are not important for the present purposes, but what are important are the psychological bases Luthe discovered both from his own research and from an extensive literature review. Among the elements that discourage creativity, Luthe includes:

- creativity-discouraging behavior by family members, peers, friends, (e.g., teasing, rejecting, scolding, lack of sincere interest, hypocritical or uniform praise, pressure to perform with immediate success, lack of supportive, constructive criticism.)
- destructive criticism
- overemphasis on the social game of cultural conformity and standardization
- evaluative, critical attitude. (pp. 12-14)

In contrast, Luthe includes the following among the elements that tend to encourage creativity:

- lessening of defenses, inhibitions, noninterference, spontaneity of expression.
- self-respect

- self-confidence, self-acceptance
- self-assurance
- ability to express feelings and emotions
- willingness to take risks, moral courage (pp. 15-17)

Luthe agrees, then, that environment and self-image play critical roles in creative processes.

The problem for the creative individual, says Guetzkow (1965), is that he must contend with organizations that simultaneously demand "routinization and innovation, . . . [and] the balance of the countervailing pressures determines the organization's climate for the creative member" (p. 36). The more the organization communicates innovativeness, the more encouraging is the organizational climate to the creative person (Guetzkow, 1965; D. Rogers, 1978). Such a climate, says Rokeach (1965), is marked by true independence: psychological freedom from authority and the resulting receptivity to new ideas regardless of source (p. 73).

When the creative individual encounters an organizational climate he or she perceives as discouraging creativity, the result is "innovative dissonance," a concept based on Festinger's theory of cognitive dissonance and defined by Rogers and Shoemaker (1971):

When an individual's attitudes are dissonant with the overt behavior demanded by the organization,

the individual will attempt to reduce the dissonance by changing either his attitudes or his behavior. (p. 311)

In essence, the individual will modify his behavior to reduce the dissonance between his creative impulses and the routinization he perceives his supervisor as demanding. His likely response will be to subdue those creative impulses.

The literature of creativity, then, points to three fundamental concepts. First, creativity means inventiveness: the formulation of new ideas or concepts of operation. Second, the preponderance of the literature agrees that creativity is a universal characteristic present, at least to some degree, in everyone. Finally, the environment, and particularly the openness and encouragement of the environment, will determine whether the creative potential will flower or remain dormant. If a subordinate perceives his or her leader as being unreceptive to creative ideas, the subordinate is less likely to propose new ideas. Based on the literature, this relationship is almost tautological.

#### Subordinate Feedback

I use "subordinate feedback" and "upward communication" interchangeably because the latter is more commonly found in the literature. Though "feedback" may refer to any

information passed up, down, or laterally within an organization, my interest here is the specific aspect of subordinate feedback defined by Jablin (1979): that which "provides the [superior] member of the dyad with knowledge of the other party's sentiments about formal and informal organizational activities" (p. 1212). I'm examining here that information relating to the emotions and feelings--the rewards and frustrations--of those subordinates who report to a particular superior. Subordinate feedback may occur in the formal reports, letters, and memos that flow up and down the chain in organizations. More often, though, such feedback flows in informal channels: one-on-one chats, coffee breaks, cocktail hours, or luncheons. Such feedback relays information about what McMurtry (n.d.) called "the everyday realities" of organizational life, the realities from which most leaders are isolated.

A leader's receiving subordinate feedback is critical if the leader genuinely is to understand the various frames of reference from which his or her subordinates are operating (Haney, 1976). Harriman (1974) highlighted this importance in his discussion of interpersonal perception and its role in superior-subordinate communication and relations. Likewise, Burke and Wilcox (1969) showed the correlation between subordinate openness, superior openness, and job satisfaction. Likert's (1961) principle of supportive relationships is absolutely dependent upon the ability of organization leaders

to know the "background, values, and expectations" of their subordinates (p. 103). In essence, the entire human relations movement in management depends to a large extent on discovering the feelings and emotions of employees.

Subordinate perceptions of organizational and superior-subordinate climate appear to affect significantly the quality and quantity of subordinate feedback. Marcus and House (1973), for example, explain subordinate feedback in terms of social exchange theory, suggesting that subordinates "reward" supportive supervisors with "loyalty, compliance, and job information" (p. 211). Following surveys of supervisors and subordinates in a large utility company, Marcus and House found that expressive behavior by supervisors--that "which is more social-emotional and person-oriented" (p. 221)--is highly correlated with subordinates' providing supervisors with job information and with low levels of conflict between supervisors and subordinates.

According to Vogel (1976), ninety percent of employees "say it is 'very' or 'fairly' important to them to be able to discuss their ideas about work problems . . ." (pp. 52-53). Yet this upward communication is inhibited by a number of formidable obstacles perceived by subordinates:

1. The fear that expressing true feelings about the company to the boss could be dangerous.



2. The fear that disagreeing with the boss could block promotion.
3. The belief that management is not interested in employee problems.
4. The belief that employees are not rewarded for good ideas.
5. The lack of supervisory accessibility and responsiveness. [see pp. 55-62 for a detailed discussion of superior accessibility]
6. The belief that management doesn't act fast enough on problems. (Vogel, 1976, pp. 53-56)

Among the conditions Vogel claims facilitates upward communication are perceived acceptance of criticism by management and perceived sensitivity to employee gripes and problems.

Young (1978) studied the effect of organization type on a subordinate's willingness to disclose information to a superior. Young's results are weakened somewhat by his design, in which he asked undergraduate students to evaluate "appropriateness" based on narrative descriptions of organization type and disclosure situation. Regardless, within the context of this limitation, Young found highly significant ( $p < .001$ ) support for his hypothesis that subjects in a more participative organization (Likert, 1961) would rate "open discussion of organizationally relevant but personally threatening information as more appropriate" than would those

subjects who perceive their organizations as more closed or "mechanistic" (Young, 1978, p. 119).

Johnson's (1977) field study of 149 superior-subordinate pairs revealed significant relationships between accurate downward flow of information and low upward distortion; between accurate reporting by subordinates and perceptions of the superior as open and free in communication; and between accurate reporting by subordinates and high interpersonal trust in the superior. Level and Johnson (1978) found that as a superior's consideration style of leadership increased, upward distortion of information from his subordinates decreased. Level and Johnson also confirmed Johnson's (1977) finding of a significant relation between accurate downward flow of information and low distortion of upward communication, suggesting this relationship as a good starting point for correcting communication problems between superiors and subordinates.

A body of feedback research appears to show linkage between desire for advancement and upward communication. Using a role-playing experimental format with university students, Cohen (1958) found that subordinates with upward mobility aspirations and opportunities are more likely to use upward communication in a facilitative way, sending longer, less critical, and more self-serving messages than those subordinates with little opportunity for upward mobility.

Read (1962) tested Cohen's conclusions in an industrial field setting and found a significant relationship between upward aspirations and distortion, but a relationship modified significantly in the negative direction by interpersonal trust. In other words, claimed Read, "free and accurate information exchange may depend significantly upon positive and harmonious relationships between organizational members. . . . It must be pointed out, however, that high mobility aspirations strongly militate against accurate communication or potentially threatening information even when high trust prevails" (original underlined, p. 13).

In his 1973 research, Athanassiades attempted to test his theory of linkage between subordinate distortion of upward communication and motivation theory. Using a subordinate-only sample, Athanassiades found that subordinates most likely to distort upward-flowing information were those "characterized by strong feelings of insecurity and strong ascendance drive(s)" (pp. 212 & 223). The research concluded that as one's feeling of security increases and his or her ascendance drive decreases, the likelihood of distortion decreases.

Interpersonal trust between the supervisor and subordinate has repeatedly been shown as a significant factor affecting upward communication. In 1956, Mellinger found support for his hypothesis that a sender who distrusts her receiver tends to conceal genuine attitudes and may cause the receiver

to "overestimate agreement in some cases and underestimate agreement in others" (p. 309). Falcione conducted a 1972 field study which showed a direct relationship between perceived trust and satisfaction with supervision. Moreover, Falcione found that the trust was based in large measure on "reciprocal interpersonal relationships between superiors and subordinates" (p. 4460).

O'Reilly and Roberts (1974) concluded that three factors influence the accuracy of subordinate feedback: 1) subordinate trust in his or her superior; 2) subordinate perception of his superior's influence over his future; and 3) subordinate mobility aspirations. Though their research failed to support the "influence" factor, they found that "more total, unfavorable, important, and unfavorable and unimportant information is passed when the sender trusts the receiver" (p. 262). A related study (Roberts and O'Reilly, 1974) showed that trust correlated significantly with desire for interaction and that low trust is related to a "subordinate's disclosed tendency to block or withhold information . . . ." (pp. 208-209). Roberts and O'Reilly conclude that "the untrusting subordinate has little desire for interaction with his superior. Certainly in an ambience like this it is easy to envision groups operating with . . . inadequate data flow and partial efficiency . . . ." (p. 213).

Especially significant for the present study was Roberts and O'Reilly's finding that, of three large organizations

surveyed, only their military sample supported the relationship between upward mobility aspirations and upward communication behaviors. This finding implies that Read's (1962) conclusions "may operate only in certain groups," among which may be military populations (Roberts & O'Reilly, 1974).

Subordinate feedback, then, is information that is disclosing in nature and that is normally found only in situations marked by trust between the supervisor and subordinate. It is likely to be affected by the upward mobility aspirations of a subordinate, but trust, again, seems to ameliorate somewhat this effect. Finally, the subordinate's perception of the organization's openness and, especially, openness in the superior-subordinate relationship seems directly related to accuracy and openness in the subordinate's feedback.

Granted, the quality and quantity of subordinate feedback to the supervisor is only as effective as the supervisor's ability--and inclination--to perceive the feedback and modify his or her behavior accordingly (Smith, 1967; Sussman, 1973; O'Reilly and Anderson, 1980). Nevertheless, such feedback is potentially the most valuable information available to a leader because it helps paint a picture of the organization's soul--its genuine health.

### Accessibility

Melcher and Beller (1967) discussed the importance of using informal channels of communication when individuals in the organization are trying to arrive at a consensus. DeMare (1979), in fact, claims that as much as seventy percent of communication in an organization occurs "at this informal, unorganized level" (p. 38). The problem in many organizations, though, is that subordinates hesitate to use informal channels or informal means because they perceive their leader as inaccessible. The result is that superior-subordinate communication is too often limited to formal channels--meetings, letters, memos, etc.--and little face-to-face, genuine dialogue takes place. The result, suggest Melcher and Beller, is more attention to following procedures than to attaining organizational goals.

Two of the characteristics Katz and Kahn (1978) mention as marks of the consideration style of leadership are friendliness and approachability (p. 560). In fact even "charismatic" leaders "must be like followers in some readily perceptible ways so that a common bond can be formed" (p. 546). The suggestion here is that such a bond may be aided by increasing the degree of leader accessibility as perceived by subordinates. Accessibility includes two dimensions: perceived open-mindedness and visibility.

Perceived Open-Mindedness.

Rokeach (1960) defined open-mindedness as a matter of how a person believes rather than what the person believes. Rokeach theorized that belief systems fall along a continuum from "beliefs" to "disbeliefs," relating to the divergence between what a person does and does not believe (1960, pp. 55-56). In the highly closed mind, the separation between beliefs and disbeliefs is very wide with little intrapersonal communication taking place between the two. In the open-minded individual, the opposite is true: what the person believes today he may not believe tomorrow, depending on the information he's exposed to and how he processes that information intrapersonally. Such a switch is highly unlikely in the closed mind.

The closed-minded individual, according to Rokeach, sees the world as predominantly threatening in the sense that all action leads to either reward or punishment. Because of this view, the closed mind clings to proven beliefs as a protection against the hostile world. The open-minded individual, on the other hand, views the world as friendly, and is less likely to be concerned about extrinsic factors such as reward or punishment; he or she can find intrinsic rewards from actions or decisions, a strong factor in his or her ability to move back and forth along the belief-disbelief continuum (Rokeach, 1960, pp. 56-57).

While a leader may not be able to change how she believes, she must be aware that the open- or closed-mindedness of her belief system is perceptible to her subordinates. Gibb (1961) discussed the importance of this perception when he described how perceived certainty in the leader can contribute to creating a defensive climate, while perceived open-mindedness ("provisionalism") can contribute to creating a supportive climate (p. 148). Gibb found that subordinates viewed the closed-minded superior as "needing to be right, as wanting to win an argument rather than solve a problem, and as seeing his ideas as truths to be defended" (p. 148). "To reduce [subordinate] defensiveness," Gibb continued, "[a superior] must communicate a willingness to experiment with his or her own behavior, attitudes, and ideas" (p. 148).

In their 1960 study of leader authoritarianism and employee attitudes, Vroom and Mann found that the more superior-subordinate interaction demanded by the job, the poorer will be the employee's attitude toward an authoritarian leader, and Rokeach (1960) found many aspects of closed-mindedness in authoritarian leaders (pp. 199-400).

The closed-minded leader is concerned as much with the source of information as he is with the information itself, often unable to differentiate the one from the other (Rokeach, 1960, p. 59). In contrast, the more open a belief system, the better able the individual will be to make a distinction between source and content (pp. 67-68). The open-



minded leader, then, is less threatening to his subordinates because he is able to differentiate between the individual and the information the individual is communicating. This ability to differentiate contributes to the atmosphere of trust between superior and subordinate. The subordinate feels confident bringing a new idea to her boss because she knows from past experience that the possibility of rejection extends only to the idea and does not threaten her standing in the organization.

The studies that recently have come closest to examining perceived open-mindedness are those generated by Hurt and Teigen's (1977) examination of perceived innovativeness. Hurt and Teigen developed an instrument to measure the degree to which a member perceives his or her organization as being innovative or "adaptable" (p. 377; also see Siegel and Kaemmerer, 1978). They found significant correlations between perceived organizational innovativeness and employees' satisfaction with supervision, promotion, co-workers, and pay. Hurt and Teigen concluded that "employees' perceptions of organizational innovativeness may be at least as important as predictors of job satisfaction as the actual innovative behavior of organizations" [original emphasized] (p. 383).

Richmond and McCroskey (1979) used the Hurt and Teigen scale to determine whether a correlation exists between management communication style (MCS) (Sadler, 1970) and

perceived organizational innovativeness. Richmond and McCroskey also examined employees' perceptions of their managers' tolerance for disagreement, which, when combined with perceived innovativeness, captures two important factors of perceived open-mindedness. The 1979 study revealed that "as MCS becomes more employee-centered, the organization is perceived to be more innovative and the supervisor is perceived to be more tolerant of disagreement" (p. 371).

The perceived open-mindedness construct, then, includes the degree to which a subordinate perceives his or her superior as being receptive to new ideas and tolerant of disagreement (Hurt & Teigen, 1977; Richmond & McCroskey, 1979). It also includes the degree to which a subordinate perceives his or her superior as being able to differentiate between message and sender, and as being able to adjust beliefs as new information is received and processed (Rokeach, 1960; Gibb, 1961). In essence, perceived open-mindedness is the degree to which a subordinate perceives his or her superior as being psychologically accessible.

#### Visibility.

While perceived open-mindedness is the psychological component of superior accessibility, visibility is the physical component. Visibility includes both a quantitative and a qualitative dimension. Quantitatively, how often

subordinates see their leader will affect how they see the leader. But where the leader is seen--the qualitative dimension--is equally important. Many leaders in an organization restrict themselves to only those locations that are "suitable" for persons in their positions. They remain in their offices, whether large and paneled or mere corners in a shop, except when official business calls them out. Rarely do they make what might be called "social visits" to their subordinates, stopping by a subordinate's office to "see how things are going," or walking through the shop to engage in informal talk with the people who turn the wrenches and inspect the welds.

The visible leader, on the other hand, conveys a feeling of accessibility to his subordinates. The leader makes the effort to stop by an office either "to see how that new home of yours is shaping up," or "to see how that report's coming," not in a manner that conveys pressure but rather one that conveys genuine interest. Likewise, during his visits to subordinate work areas, the visible leader conveys the attitude that he genuinely is interested in the subordinates as people rather than merely as cogs in the bureaucratic wheel. In essence, leader visibility is the vehicle through which the leader is able to convey the personal attributes--confirmation, disclosure, and open-mindedness--that encourage communication with subordinates.

The literature has little to say about the significance of leader visibility except by implication. Argyris (1959), for example, discusses how senior managers can cause bitterness in foremen by being overly visible in the foremen's shops. Frequent trips to the shops by managers can lead foremen to believe they're not trusted, a belief, in fact, Argyris says is usually true. DeMare (1979), on the other hand, maintains that as a manager rises through the organizational hierarchy, the only way he or she can bridge the increasing distance from employees is to make frequent trips "to the field" (p. 40). Both Argyris and DeMare, however, are discussing senior executives' visiting work areas several steps below them in the hierarchy. Neither author would question the importance of a superior's visiting the work areas of his or her immediate subordinates.

The importance of superior visibility to immediate subordinates is supported by Brenner and Sigband (1973), who designed a forty-one-item questionnaire to evaluate communication problems in a large organization. After administering the questionnaire to 465 employees of a large aerospace firm, Brenner and Sigband tentatively concluded that "Subordinates keep their superiors better informed when the former knows [sic] what will be done with his work, when they share common references, and when the superior is easily available to the subordinate" [emphasis mine] (p. 325).

The importance of leader visibility is almost self-evident, though only the Brenner and Sigband study has offered empirical evidence. A superior is more likely to receive feedback from his or her subordinates if he or she is visibly accessible to those subordinates. Such accessibility includes visiting subordinates' work places; being available when subordinates need information, advice, or encouragement; attending social functions with subordinates; in short, being perceived by immediate subordinates as having an "open door policy" for them in fact as well as in theory.

#### Theoretical Propositions

The paradigm suggested in this thesis is based on the belief that when the communication climate between superiors and subordinates is marked by confirmation, disclosure, and accessibility, then information and creative ideas will flow naturally rather than forcibly. Perceived confirmation, perceived disclosure, and accessibility are units that define the openness of a superior's communication system. Likewise, subordinate feedback and creativity define the openness of a subordinate's communication system. The interaction between these two communication systems, then, can be expressed as follows:

A relationship exists between the openness of a leader's communication system, as that system is perceived by a subordinate, and the openness of the subordinate's communication system with the leader.

This relationship has two boundaries: 1) it refers only to formal organizations with an established, defined superior-subordinate structure; and 2) it relates only to one superior and that superior's first echelon of subordinates.

The first boundary limits the definition of "organization." While almost any gathering of two or more organisms could be called an "organization"--Weick (1979), for example, defines "to organize" as any assembly of "ongoing interdependent actions" (p. 3)--I limit the relationship to those organizations with a defined hierarchical structure. For research purposes, only in such an organization are superiors and subordinates clearly identifiable.

Within such a hierarchy, then, the relationship is limited to only a superior and his or her first echelon of immediate subordinates. It is certainly likely that a superior's openness with her immediate subordinates would have a complementary effect on subordinates' communication with their respective subordinates. Likert (1961) suggested as much in his discussion of the linking function of group leaders in the hierarchy. Such "down-the-chain" effects,

however, are outside the bounds of the strictly interpersonal relationship suggested here.

My purpose is to test five propositions that flow from the theoretical relationship between superior and subordinate communication systems:

1. Highly confirming behavior by a leader, as perceived by an immediate subordinate, is related to a high degree of subordinate feedback.

A subordinate's perception of his or her superior's confirming behavior is a necessary and possibly sufficient factor in the theoretical relationship. If a subordinate perceives his superior's behavior as confirming, subordinate self-esteem will rise, interpersonal trust between superior and subordinate will rise, and subordinate feedback, based as it is on both trust and self-esteem, will rise. Without trust and self-confidence, there can be little if any feedback or creativity. Moreover, the lack of trust and self-esteem in the superior-subordinate relationship will affect subordinate perception of the leader across the entire spectrum of the leader's communication system.

2. Highly confirming behavior by a superior, as that behavior is perceived by a subordinate, is related

to greater communication of creativity from the subordinate to the leader.

Proposition two is based on the assumption detailed in the review of creativity literature that all humans have at least a degree of creative potential. Confirming behavior by a superior is a driving force to tap the subordinate's creative potential and to encourage the subordinate's communication of creative ideas to the superior. Perceived confirmation cannot make a relatively uncreative subordinate more creative, but a climate marked by perceived confirmation will allow the subordinate's creative potential--whatever that potential is--to bear fruit.

3. High superior disclosure, as perceived by a subordinate, is related to a high degree of subordinate feedback.

The self-disclosure literature is mixed on the reciprocity of self-disclosure, but the literature of openness in the superior-subordinate relationship is unambiguous: superior openness fosters trust, and trust leads to subordinate openness, though the degree of such openness may vary according to such factors as the subordinate's upward mobility aspirations. This proposition clearly does not account for



all the variance in subordinate disclosure, only a significant portion of the variance.

4. A high degree of superior accessibility, as perceived by a subordinate, is related to greater communication of creativity from the subordinate to the leader.

If a subordinate perceives the leader as both open-minded and visible, the subordinate is more likely to seek out the leader and communicate new ideas and concepts. If, on the other hand, the leader is one perceived as closed-minded and isolated, the subordinate will be less likely to risk communicating a creative idea.

5. A high degree of superior accessibility, as perceived by a subordinate, is related to a high degree of subordinate feedback.

If a subordinate sees the superior as both psychologically and physically accessible, the subordinate will be more likely to disclose information to the superior. Perceived accessibility is a necessary but not sufficient factor in generating subordinate feedback. Open-mindedness and visibility alone are insufficient to cause subordinate openness, but perceived open-mindedness and visibility account

for a significant amount of the variance in subordinate openness.

### Summary

Discussing the rationale for his 1976 research, Donald Rogers criticized prior explorations into superior-subordinate communication as having been "more concerned with global perceptions of openness than with specific communicative behaviors which influence those perceptions" (p. 190). Rogers asked implicitly, "What specific communicative behaviors influence interpersonal perception between superiors and subordinates?" I'm suggesting that the fifty-five behaviors Rogers identified can be combined into the five units discussed here: perceived confirmation, perceived disclosure, accessibility, subordinate feedback, and creativity. Further, I suggest these five units form a paradigm for interpersonal communication between superiors and subordinates in organizations.

Chapter III will introduce the instruments selected to measure the theoretical units and will combine the instruments and propositional statements into the five hypotheses tested in this research. Finally, chapter III will describe the research design and methodology I used to test these five hypotheses.

### III. METHODS

This chapter discusses the research methods I used in conducting a study designed to test the propositions introduced in Chapter II. The following sections describe the empirical instruments designed for this study: the Subordinate Perception Scale, the Test of Subordinate Creativity, and the Test of Subordinate Feedback. After discussing the instruments, the chapter lists the study's hypotheses and concludes with a discussion of the methods used to test these hypotheses. Chapter IV presents results of the study.

#### Subordinate Perception Scale (SPS)

"The Subordinate Perception Scale" (Appendix A, pp. 156-169) is a blanket term I use for the four independent-variable measures: 1. The Perceived Open-Mindedness Scale; 2. the Perceived Confirmation Index; 3. The Perceived Disclosure Scale; and 4. The Supervisor Visibility Scale. The four sections of the SPS correspond to these four instruments, each of which is discussed on the following pages.

I conducted a preliminary administration of the SPS in January, 1983, to test reliability and partial validity of section I--the open-mindedness scale--and of section IV--the visibility scale. The subjects for this administration were twenty-four graduate students enrolled in a University of Denver course titled "Theories of Group Communication." The subjects were instructed to use their immediate supervisor in their most recent full-time job as "target." Results of this administration are discussed in the respective sections.

The following pages discuss in detail each of the SPS sections: I. The Perceived Open-Mindedness Scale, II. The Perceived Confirmation Inventory, III. The Perceived Supervisor Disclosure Scale, and IV. The Supervisor Visibility Scale.

#### I. Perceived Open-Mindedness Scale (SPS items 1-20)

The Perceived Open-Mindedness Scale (pp. 157-161) is a twenty-item, Likert-type scale based on the Trohldahl and Powell (1965) short-form dogmatism scale. Trohldahl and Powell concluded that the scale Rokeach (1960) designed to test his theory of belief systems was discouraging empirical use because of its length. Their short-form was designed to be a valid, reliable, and more efficient tool with which to test the Rokeach theory. The perceived scale is the short form with an "other" rather than "self" orientation.

To build a valid short-form, Troldahl and Powell administered the Rokeach forty-item scale to 227 Boston residents, then computed correlations between respondents' scores on each item and their total scores. The resulting correlations, ranging from +.59 to +.18, were arranged from highest to lowest, and the corresponding items from the Rokeach scale were used to build ten-, fifteen-, and twenty-item short forms.

To determine validity, Troldahl and Powell first correlated the Boston scores on the forty-item scale with recomputed scores for the ten-, fifteen-, and twenty-item scales. As a double-check, Troldahl and Powell also administered the forty-item scale to eighty-seven Lansing, Michigan, residents, then computed the same data they had for the Boston study. Table 3.1 shows the results of both computations.

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Table 3.1  
Short-Form Cross-Validation Data

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	Boston	Lansing
	Data	Data
10-item vs. 40-item	.88	.79
15-item vs. 40-item	.91	.73
20-item vs. 40-item	.95	.94

(Source: Troldahl & Powell, 1965, p. 212)

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Based on these data, Troldahl and Powell concluded that the twenty-item scale "is a good predictor of what one would obtain using the forty-item [Rokeach] version" (p. 212).

Again using the Lansing data, Troldahl and Powell computed estimates of the split-half reliability for each of the three scales. The resulting predicted reliabilities are as follows:

20 items	.79
15 items	.73
10 items	.66

The .79 predicted reliability for the twenty-item scale approaches the .84 predicted reliability for the Rokeach scale (Troldahl & Powell, 1965, p. 214).

The short-form dogmatism scale has been used in many published studies over the past eighteen years. Included among this body of research have been studies to determine correlation between dogmatism and student political activities (Kirtley and Harkless, 1970); to test the validity of a South African conservatism scale (Orpen and Rodenwoldt, 1973); to test a theory of cognitive dissonance (Woodyard, 1973); to determine if a correlation exists between dogmatism and marijuana use among students (Cunningham, Cunningham, and English, 1974); to test Rokeach's theorized linkage between misanthropy and dogmatism (Hanson, 1975); to

differentiate between high- and low-dogmatic subordinates (Weed, Mitchell, and Moffitt, 1976); and to determine if a difference in open-mindedness exists among levels of managers in a hierarchical organization (Close, 1975).

I used the twenty items from the Troldahl and Powell scale verbatim, except my instructions ask respondents to predict how their supervisors would likely respond to each statement. I could have designed an original scale, one based on the Rokeach theory yet one asking subjects to respond to more direct statements (e.g., "My supervisor feels that a person must believe in a cause if his life is to have any meaning"). I chose to adapt the short-form for two reasons. First, I wanted to base the scale on an instrument of proven validity. Even though the respondent's perspective changes in the perceived scale, a change that may affect validity, the Troldahl and Powell scale provides a strong foundation. Second, I reasoned that subordinates might be reluctant to respond to direct questions about how their supervisors believe, but that they would have less reluctance predicting what their supervisors may or may not say about a subject.

The preliminary administration of the SPS (see p. 69) provided tentative indication of the open-mindedness scale's validity and reliability. Items forty-two and forty-eight of the SPS were included specifically to test validity of the open-mindedness scale's ability to measure perceived

innovativeness of the supervisor. The correlation between these two items was .863 ( $p < .01$ ). I added each respondent's score for items forty-two and forty-eight and correlated the sums with scores on the perceived open-mindedness scale. The resulting correlation ( $-.639$ ;  $p < .01$ ) is a preliminary indication that the open-mindedness scale is a valid measure of a supervisor's perceived innovativeness, which is one construct of the Rokeach (1960) theory. The negative correlation, a result of the open-mindedness scale's reverse scoring, is in the expected direction. The open-mindedness scale also correlated significantly ( $-.639$ ,  $p < .05$ ) with the Supervisor Visibility Scale.

To test reliability, I used the Spearman-Brown formula (Ferguson, 1981, pp. 437-438) on the graduate student data. I first computed odd- and even-number scores for each respondent's perceived open-mindedness scale, correlated these scores, then computed the estimated reliability using the Spearman-Brown formula. The resulting .896 coefficient indicates a high degree of estimated reliability for the open-mindedness scale.

## II. Perceived Confirmation Inventory (SPS items 21-26)

The Perceived Confirmation Inventory (PCI) is a six-item, Likert-type scale developed by Evelyn Sieburg in a 1973 unpublished paper at the University of Denver. According to



Jacobs (1973), who was the first to use the inventory in original research, Sieburg designed the six-item inventory to measure the degree to which a subject feels confirmed by a target individual according to six criteria: awareness, interest, acceptance, respect, liking, and trust. Each item of the inventory offers a continuum of responses ranging from "7--agree very strongly" to "1--disagree very strongly." Three items (numbers 22, 24, and 25 in the SPS) are reverse-scored so that a subject response of "1," for example, is scored as "7," and vice-versa, in determining the subject's perceived confirmation score.

A presumption of content validity exists in the PCI because Sieburg based the six items on the confirmation construct she developed between 1969 and 1973 (Jacobs, 1973, p. 48). Jacobs (1973) established construct validity of the PCI by correlating item scores with total scores following an administration of the inventory to sixty University of Denver students. The basis of this technique lies in the presumption that total score is valid and that a significant correlation between item-score and total-score means that item-score, too, is valid. In Jacobs' administration, subjects were asked to rate their feelings of confirmation from three targets: mother, friend, and professor. Jacobs found moderate to high correlations between each item and total score with only one exception: correlation between the professor-target total score and the "awareness" item was fairly low.

Jacobs also correlated total scores for each of the three targets and found correlations of .11 (mother-friend), -.08 (mother-professor), and .15 (friend-professor). These near-zero correlations indicate that subjects were able to adequately differentiate their feelings of confirmation among the three targets. Jacobs' results, then, showed that the PCI is both a valid measure of perceived confirmation and a measure that yields differentiating results among target individuals.

Both Clarke (1973) and Cissna (1976) have determined test-retest reliability for the PCI. Clarke administered the PCI twice--three weeks between administrations--to thirty husband-wife pairs. Clarke computed a Pearson Product-Moment correlation coefficient for the two administrations, finding  $r = .70$ . Cissna's 1976 reliability test was more complex, involving two administrations of the PCI to adults and undergraduate students and involving both parent-targets and friend-targets. Cissna's correlation coefficients ranged from a low of  $r = .50$  (adult-friend) to a high of  $r = .92$  (student-parent). Cissna concluded that the lower correlation was due to subjects' not remembering which friend they had used as target in the first administration, whereas subjects had no confusion over the "parent" target. Besides, concluded Cissna, feelings toward friends vary more over time than do feelings toward parents, and this variance may be reflected in the relatively low adult-friend coefficient.

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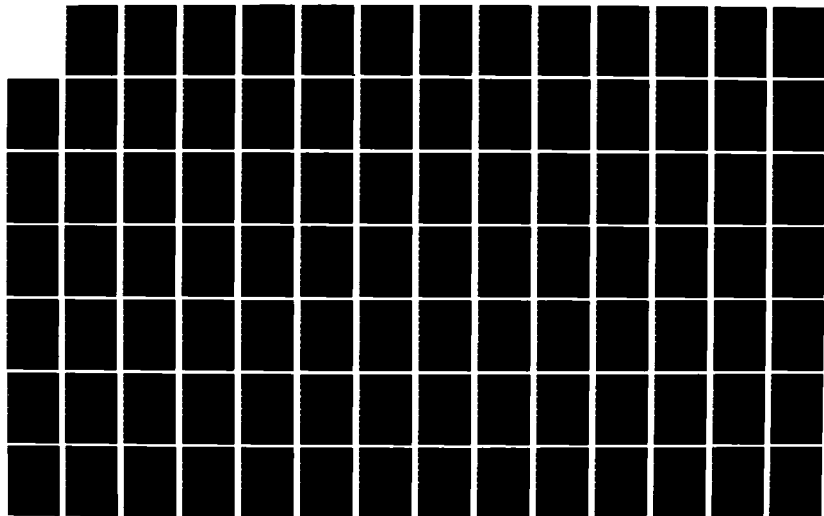
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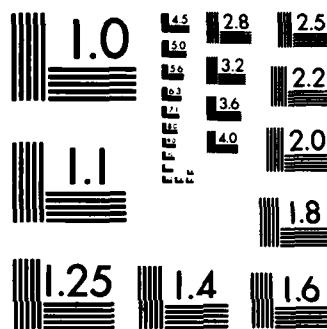
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MICROCOPY RESOLUTION TEST CHART  
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The PCI has yielded useful results from subjects as varied as husbands and wives (Jacobs, 1973), patients and health care professionals (Murphy, 1980), married university students (Cissna, 1975), librarians and library patrons (Mathews, 1977), and grammar school students (Sperhac, 1982).

### III. Perceived Supervisor Disclosure Scale (SPS items 27-36)

The Perceived Supervisor Disclosure Scale (pp. 163-164) is a ten-item, Likert-type scale based on the "work (or studies)" section of Jourard's (1964) sixty-item Self-Disclosure Questionnaire. Jourard designed his self-report questionnaire to measure the degree to which a person would be willing to disclose information to specific targets (e.g., parents, friends, etc.). The perceived disclosure scale, in contrast, asks respondents to report the likelihood of their supervisors' disclosing information to them.

As was the case with the perceived open-mindedness scale, the changed perspective here from self-report to report of perceived behavior negates prior validity and reliability tests. For the record, Jourard's scale has achieved a reputation of having high concurrent and construct validity, and an internal reliability as high as .94 (Larson, Backlund, Redmond, and Barbour, 1978, p. 124). Moreover, Pedersen and Breglio (1968) found that the "studies" section of the Jourard instrument was the only topic area in which a

significant correlation existed between self-reported and actual disclosures. Pederson and Breglio explained this result by speculating that "the other topics are more personal" than the "work (or studies)" topics, implying that subjects see the "work (or studies)" items as more appropriate to disclose among non-intimates.

The Pederson and Breglio results help build a case for claiming strong content validity for the perceived supervisor disclosure scale. Moreover, Chapter II defined this construct in terms of the "work (or studies)" section of the Jourard scale. The perceived supervisor disclosure scale simply takes the "work (or studies)" section and asks, "How likely is it that your supervisor would disclose information about these feelings to you?" Reliability for the perceived scale was computed using the Spearman-Brown formula on data obtained from the forty-four subordinate respondents of the main study. The data yielded an estimated reliability coefficient of .905.

Following administration of the SPS to twenty-four graduate students (see p. 69 for details), a Pearson Product-Moment correlation coefficient was computed comparing the perceived supervisor disclosure scores with scores on the supervisor visibility scale (for a description of the visibility scale, see pp. 78-79). The .655 correlation coefficient ( $p < .01$ ) tentatively indicates a strong relation between the degree of supervisor visibility and how his or

her subordinates perceive his or her disclosing behavior. (For further discussion of internal-SPS correlations following the main study, see the "Additional Results" section of Chapter IV, pp. 112-119).

#### IV. Superior Visibility Scale (SPS items 37-48)

The Superior Visibility Scale (pp. 164-165) is a ten-item, Likert-type instrument I designed to measure the degree to which a subordinate sees his or her supervisor as being physically accessible. Items forty-two and forty-eight are not part of the visibility scale but, rather, are items included to check partial validity of the perceived open-mindedness scale (see pp. 72-73 for discussion).

Larson, et al. (1978), say that a test has content validity to the extent it draws "from the substance or content" of the area it purports to measure (p. 88). The Superior Visibility Scale has both strong face validity and strong content validity, drawing, as it does, on my definition of the visibility construct. In addition, the preliminary administration of the SPS showed a significant correlation ( $-.431$ ,  $p < .05$ ) between the visibility and perceived open-mindedness scales, a tentative indication that the two instruments validly measure portions of the same construct. Just as perceived open-mindedness defines the psychological accessibility of the supervisor, visibility defines the

her subordinates perceive his or her disclosing behavior. (For further discussion of this and other internal-SPS correlations following the main study, see the "Additional Results" section of Chapter IV, pp. 112-119).

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through his or her supervisor. For example, the test administered to a military sample might have detailed a problem in military pay and asked each respondent to write a short suggested solution to be sent "up the chain" through the respondent's supervisor. These responses would have been evaluated for creativity by a panel of individuals familiar with the real-world problem area. In the above example, the rating panel would have been selected from a military finance office or finance center.

I substituted an open-ended approach for the specific-problem plan because I reasoned those respondents who had been previously exposed to the selected problem area would have the advantage of having considered solutions before taking the test. Such answers would obviously have a creative edge over those proposed by respondents seeing the problem for the first time. The open-ended approach would allow all respondents to air a suggestion they had considered previously but would retain the limitation of tacit approval by the supervisor. The evaluation process was to remain the same--adjudication by a panel--except the panel would be chosen at random from a population of volunteers who simply belonged to the same organization, rather than a panel of experts. For example, the military subordinates' suggestions would be evaluated for creativity by a panel of volunteers selected from another military installation rather than the finance experts needed for the original test.

Results for the creativity test were inappropriate for panel analysis and were evaluated, instead, by content analysis. The "Treatment of Data" section (pp. 99-101) explains this procedure in detail.

#### Test of Subordinate Feedback

The Test of Subordinate Feedback (TSF) is a twenty-item, forced-choice instrument in two forms. Form "A," included here as section V of the Subordinate Perception Scale (Appendix A, pp. 166-167), measures subordinate attitudes toward work-related subjects. Form "B" (Appendix A, pp. 170-174) includes two sections of identical statements, the first to measure supervisor predictions of subordinate responses and the second to measure supervisor attitudes toward the statements.

The items used in the TSF are based on the ten "work (or studies)" items from the Jourard Self-Disclosure Questionnaire (Jourard, 1964, p. 214), which was discussed in detail earlier (pp. 35-36). Pederson and Breglio (1968) found that only this section of the Jourard questionnaire correlated significantly with actual disclosures, implying that respondents would be more likely to disclose work-related information to non-intimates than they would information regarding, for example, attitudes, personality, or tastes.

physical accessibility of the supervisor: does he visit subordinate work areas?; does he attend organization social events?; is he available when problems arise?; is he, in short, a visible part of the working relationship? The Superior Visibility Scale measures these aspects directly.

Another measure of the adequacy of a test is its internal reliability: do both halves of the test measure the same thing? (Larson, et al., 1978). A Spearman-Brown split-half test of reliability (Ferguson, 1981) was run on the data yielded by the preliminary administration of the SPS (see p. 69), resulting in an estimated reliability coefficient for the supervisor visibility scale of .852. These results confirm the claim of high content validity and provide evidence of high internal reliability as well.

#### Test of Subordinate Creativity

The Test of Subordinate Creativity, (Appendix A, pp. 168-169) asks subjects to discuss an original solution to a perceived problem as they would present the solution to their immediate superiors. My original intention for this section was to present all subordinate subjects with a set of circumstances in a specific problem area with which they would all be generally familiar. After presenting facts surrounding the problem, the test would have asked each subject to propose a solution as he or she would forward that solution

The twenty TSF items include two items based on each of the ten Jourard items. Each TSF item is written so that a respondent faces a forced choice between agreeing and disagreeing with the statement. For example, the Jourard item 5 ("What I feel are my special strong points and qualifications for my work") becomes "My boss genuinely appreciates how hard and how well I work" (TSF item 6), and "I don't get enough recognition for the quality of my work" (TSF item 16). Two of the corresponding TSF pairs (numbers 3-13 and 5-15) are both positively phrased, three (numbers 1-11, 2-12, and 4-14) are negatively phrased, and the remainder are mixed positive-negative. As is the case with the Perceived Supervisor Disclosure Scale (see pp. 76-78), the TSF has high content and face validity, drawn as it is from the Jourard scale and the subordinate feedback construct defined in Chapter II (pp. 47-54).

The format of the TSF is based on the Hobart and Fahlberg (1965) paradigm for tests designed to measure empathic ability (see also Larson, et al., 1978, pp. 81-83). Hobart and Fahlberg proposed that tests designed to measure empathy, or "interpersonal perception" (Larson, et al., p. 78), must be constructed to meet, at minimum, two criteria: to avoid the influence of cultural norms and "stereotype accuracy," they must consist of items "not having clear cultural definition"; and, to avoid the tendencies of some respondents to make all mid-scale responses and others to make all end-scale

responses, the items must include only two response categories ("forced-choice").

The primary purpose of the Hobart and Fahlberg design is to eliminate the contaminating influence of projection from tests designed to measure interpersonal perception. In my study, for example, a supervisor might project that his subordinate shares his own attitudes toward the job. Though the supervisor may be correct, such projection would require little if any interpersonal communication between superior and subordinate; the superior simply assumes, "if I feel this way, so must he." Larson, et al. (1978), clearly explain the difference. Empathy is concerned with "the ability of one person to understand another or to comprehend another's feelings, attitudes, or sentiments" (p. 78). In contrast, projection occurs when one simply assumes the other shares the same thoughts and feelings (p. 79). Empathy is based on both cognitive and affective cues: one empathizes with another because of what one knows about the other and, therefore, is able to feel. For my purposes, an instrument to measure accurate perception of subordinate feedback must clearly discriminate between genuine interpersonal perception ("empathy") and mere projection. Only the Hobart and Fahlberg formula approaches such a distinction with confidence.

To eliminate the contamination of projection, Hobart and Fahlberg's paradigm calls for identical tests to be administered to a judge (J) and to an other (O). After O takes the

forced-choice test, J first predicts O's responses then answers the items to reflect his own attitudes. Four "raw" scores result:

1. similarity score: identical own answers for J and O.
2. dissimilarity score: non-identical own responses.
3. correct prediction score: number of items for which J correctly predicts O's responses.
4. incorrect prediction score: number of items to which J incorrectly predicts O's responses. (Hobart & Fahlberg, p. 599)

The four raw scores are then used to compute four similarity and prediction scores:

1. compounded score: number of items to which pair gave identical own responses and J correctly predicted O responses.
2. empathy score: number of items to which pair gave non-identical own responses and J correctly predicted O responses.
3. projection score: number of items to which pair gave non-identical responses and J incorrectly predicted O responses.

4. unperceived similarity score: number of items to which pair gave identical responses and J incorrectly predicted 0 responses. (Hobart & Fahlberg, pp. 599-600)

According to this paradigm, then, only the empathy score reveals true interpersonal perception uncontaminated by possible projection. To make empathy scores comparable across a sample, Hobart and Fahlberg suggest dividing the empathy score by the raw dissimilarity score, yielding an empathy ratio score (ERS), the score used in this study. Form A of the TSF, the subordinate form, is designed to measure the Hobart and Fahlberg "other"; form B, the supervisor form, yields the "judge's" own and prediction scores. Figure 3.1 shows the relationships among all paradigm scores.

Three studies conducted at the University of Denver illustrate the Hobart and Fahlberg paradigm in operation. Mix (1972) administered a thirty-item personal preference instrument to a sample of fathers and their university-enrolled sons. In the Mix study, the sons were asked to predict fathers' choices between paired statements of personal preferences. The study yielded ERS scores ranging from fourteen to eighty-eight. Ross (1973) designed a forced-choice questionnaire based on a 1967 study by Smith, and administered it to 172 superior-subordinate pairs. The Ross questionnaire, designed in the "He . . . Me"/ "I . . . Him"

Judge's predictions			
		CORRECT	INCORRECT
Judge's and other's responses	SIMILAR	COMPOUNDED	UNPERCEIVED SIMILARITY
	DISSIMILAR	EMPATHY	PROJECTION

Figure 3.1 Hobart and Fahlberg score relationships. (source: Larson, et al., 1978, p. 82)

format, yielded ERS scores ranging from zero to eighty-eight. Northouse (1974) adapted the Ross questionnaire into a thirty-five-item, forced-choice scale of the agree-disagree type, similar to the one used in my study. Northouse administered his scale to a total of eighty-three superior-subordinate pairs in two related studies, resulting in ERS scores ranging from zero to seventy (Chapter II, pp. 23-25, contains a more complete discussion of the Ross and Northouse studies).



A potential problem with the TSF is its possible violation of Hobart and Fahlberg's first criterion: the use of items "not having clear cultural definition" (p. 599). Hobart and Fahlberg's caution here was that if the culture in which the study takes place says that one attitude is more "correct" than another attitude, both the "own" and the predicted responses may be colored more by cultural norms than by actual attitudes or by empathy. Within a military culture, such as the one from which the samples used in the present study were drawn, clearly defined norms certainly exist. Moreover, certain of the items in the TSF have clear definitions within that culture.

I recognize the "cultural definition" problem but feel that innocuous, neutral items would neither reveal genuine subordinate attitudes nor would they reveal clear knowledge of subordinate attitudes by superiors. My rationale for apparently disregarding Hobart and Fahlberg's first criterion was that the personal nature of the TSF items combined with the heavy emphasis on anonymity would yield both accurate subordinate attitudes and an accurate indication of supervisor knowledge of the subordinate. If "own" attitudes differ from the cultural norms, the TSF should allow such differences to emerge. If, on the other hand, both subordinate and superior attitudes conform to cultural norms, such conformity should be compensated for by the empathy ratio

score's ability to compensate for a "likeness" bias in the sample (Hobart & Fahlberg, p. 603).

As they left the test room after completing the Subordinate Perception Scale, several respondents commented that they had "enjoyed taking the test" because they had "never been asked questions like that before." Such statements indicated to me that the TSF would yield accurate rather than culturally defined attitudes, and that the Hobart and Fahlberg formula for measuring empathy would still be valid.

### Hypotheses

The specific purpose of this study is to test the following five hypotheses, which are based on the propositions introduced in Chapter II combined with the empirical indicators introduced in the previous sections of Chapter III:

- H1. Highly confirming behavior by a superior, as measured by The Perceived Confirmation Inventory, is related to greater feedback from the subordinate to the superior, as measured by the Test of Subordinate Feedback.
- H2. Highly confirming behavior by a superior, as measured by the Perceived Confirmation Inventory, is related to greater communication of creative ideas

flowing from subordinate to superior, as measured by the Test of Subordinate Creativity.

- H3. High superior disclosure, as measured by the Perceived Disclosure Questionnaire, is related to greater subordinate feedback to the superior, as measured by the Test of Subordinate Feedback.
- H4. High superior accessibility, as measured by the Perceived Open-mindedness Scale and The Supervisor Visibility Scale, is related to greater communication of creativity flowing from subordinate to superior, as measured by the Test of Subordinate Creativity.
- H5. High superior accessibility, as measured by the Perceived Open-Mindedness Scale and the Supervisor Visibility Scale, is related to greater subordinate feedback, as measured by the Test of Subordinate Feedback.

### Methodology

The vertical dyad linkage (VDL) approach is the methodological basis for this research (Dansereau, Cashman, and Graen, 1973). Dansereau, et al., explain VDL by contrasting it to the more traditional average leadership style (ALS) approach, which assumes that reactions to and perceptions of all subordinates assigned to a leader are relatively

homogeneous. The VDL approach, on the other hand, examines the dyadic relationship between a superior and a particular subordinate. Two assumptions provide the foundation for the VDL approach:

1. . . . the behavior of the leader likely will be more homogeneous and consistent toward particular members than it will be toward members-in-general.
2. . . . the composition of the unit [superior and all assigned subordinates] may be quite heterogeneous regarding the members' perceptions, interpretations, and reactions to the leader's behavior. (Dansereau, et al., p. 188)

The VDL approach, then, assumes that superior and subordinate interpersonal behaviors depend more on dyadic relationships than on the generalized style of the superior toward all subordinates.

#### Sampling Plan

Adapting the VDL approach to my research, I chose to test my hypotheses by examining a sample of superior-subordinate dyads in two United States Air Force organizations. Because the Air Force Institute of Technology (AFIT) sponsored this research, my goal was to select a sample that

would yield results generalizable to all superior-subordinate dyads in the Air Force. To accomplish this goal, I selected two large Air Force installations from which to draw the sample. The first, an air force base located in the Western United States, was the installation from which I drew the enlisted superior-subordinate sample. The second, a major air force headquarters located in the Eastern United States, was the installation from which I drew the officer superior-subordinate sample. The resulting sample included all grades from E1 (airman basic) through O6 (colonel). As a matter of policy, Air Force general officers do not participate in research studies.

Following approval of my plan by the Air Force's Manpower and Personnel Center (Appendix B, p. 176), I contacted directors of personnel at the two selected installations. After obtaining the directors' approvals, I requested computer print-outs from each installation listing all supervisor-subordinate pairs. The print-outs I received were the airman performance report and officer performance report management rosters from each location, rosters that included names of all assigned personnel and who wrote performance reports on whom. This "rating official" criterion served as my definition of "immediate superior."

I reviewed each roster and selected all superior-subordinate pairs that met two criteria: 1) the subordinate must have been assigned to the superior for at least six months,

and 2) the superior must have had a minimum of three assigned subordinates. The purpose for the first criterion was to allow time for interpersonal perceptions to have formed, and the purpose for the second was to avoid those pairs who might be more "close friends" than superior-and-subordinate. Obviously such close friendships exist among superiors and subordinates, but if they emerged in my sample, I wanted them to emerge from the interpersonal relationship rather than from the artificiality of assignment. Of the over-4000 enlisted members and a like number of officers assigned to the respective locations, 1267 enlisted and 1522 officer members met the first two criteria.

I next assigned a number to each subordinate and selected a random seventy-five superior-subordinate pairs from each location. I added an additional criterion here that no two subordinates of the same superior would be included, using only the first-selected when numbers for two subordinates of the same superior were generated.

The initial sample for the research, then, included seventy-five enlisted and seventy-five officer superior-subordinate dyads meeting the following three criteria:

1. Length of supervision must be six months or more.
2. Each superior must have at least three assigned subordinates.
3. Only one subordinate for each selected superior.

Directors of personnel at each location sent letters to the selected members asking them to report for administration of the questionnaire at specific times and locations (Appendix B, pp. 178-179). The letter, which I drafted, emphasized that the survey was voluntary, a statement required by the Manpower and Personnel Center. On the other hand, I expected the authority of the directors of personnel to compensate somewhat for the emphasis on volunteerism.

I administered questionnaires to sample members on 13 and 20 May, 1983, the first date at the air force base and the second date at the headquarters location. Administrations were identical at both locations. At the assigned times in the morning, subordinates arrived, were asked to write their last names and their duty locations on a numbered sheet, and were given a Subordinate Perception Scale form with a number corresponding to their number on the sign-in sheet. Between the morning and afternoon sessions, I numbered the superior forms to correspond with the numbers assigned to subordinates in the morning. For example, if Airman Jones' supervisor was Sergeant Smith, and if Airman Jones was assigned SPS form number fifteen in the morning, between administrations I wrote "15" in the corner of Sergeant Smith's form.

At the assigned times in the afternoon, superiors arrived and were given their numbered forms of the Feedback Scale. These forms contained peel-off name labels containing

the superior's name and the name of his or her participating subordinate. Once I ensured that superior and subordinate forms were accurately paired, I destroyed the subordinate sign-in sheets to guarantee the promised anonymity of the respondents.

Response rates at both locations were rather low, reflecting, I imagine, the voluntary nature of the survey. Subordinate response, the driving factor in assembling the needed dyads, was twenty-four enlisted members and twenty officers, or rates of 32% and 27%, respectively. As might be expected, the number of responding superiors whose subordinates had responded in the morning was even lower: eight of twenty-four enlisted and six of twenty officers.

To ensure sufficient power in the sample, I asked a staff member in each director of personnel office to call superiors who had not responded but whose subordinates had, and ask the superiors to come "at their convenience" to complete the survey. I asked the staff members not to mention the specific nature of the survey when they called the superiors and to insist on the superiors' coming to them to complete the survey rather than their mailing the survey to the superiors. This follow-on procedure, which took approximately three weeks at each location, netted a final response of nineteen out of the possible twenty-four enlisted pairs and all twenty officer pairs, for a total sample of thirty-nine superior-subordinate pairs.



### Sample Characteristics

Though the hypotheses were tested by using all superior-subordinate pairs as a single body of data, the sample is best described by rank categories. Among the enlisted subordinates, the grade and time-in-service (TIS) characteristics ranged from an E1 (airman) with ten months TIS to an E6 (technical sergeant) with seventeen years, one month TIS. The median subordinate grade was E3 (airman first class) and the mean TIS was five years, two months.

Enlisted superiors ranged from an E4 (sergeant) with three years, six months TIS, to an E7 (senior master sergeant) with twenty years, eleven months TIS. The median superior grade was E5 (staff sergeant), and the mean TIS was eleven years, six months.

The mean difference between enlisted superior and subordinate TIS was six years, four months, and ranged from a minimum of one year, ten months to a maximum difference of thirteen years, two months.

Among the officer subordinates, grade and TIS ranged from an O2 (first lieutenant) with two years, eleven months TIS, to an O4 (major) with twenty-one years, two months TIS. Median subordinate grade was O4, and mean TIS was thirteen years, four months.

For officer superiors, the range was from an O4 (major) with fifteen years, five months TIS to an O6 (colonel) with

twenty-eight years, nine months TIS. Median superior grade was O6, and mean TIS was twenty-one years, eleven months.

The mean TIS difference between officer superior-subordinate dyads was seven years, seven months, and ranged from a minimum difference of minus one year, three months--a case of a subordinate with more TIS working for a superior who had achieved higher rank--to a maximum difference of twenty-five years, five months.

Table 3.2 shows complete descriptive data for all superior-subordinate pairs in the sample.

The enlisted sample is a highly representative microcosm of the enlisted population in the Air Force. The sample members included representatives from most job specialty areas, and, as indicated above, included a broad range of grades and lengths of service. The officer sample, on the other hand, is a bit problematic because of the nature of officer assignment policies in the Air Force. If a sample of officers were drawn, for example, from an operational base such as that used for the enlisted sample, the grades and lengths of service would cluster toward the low end. This phenomenon would result from the disproportionately large number of younger flying and non-flying officers working at the base level. On the other hand, officers generally move to headquarters assignments in the mid (e.g., O4) and later (e.g., O6) points of their careers. Samples drawn from headquarters locations, therefore, would tend to cluster toward the higher end of the

Table 3.2

## Sample Characteristics (Officer and Enlisted)

Subordinate		Superior		Subordinate		Superior	
Grade	TIS	Grade	TIS	Grade	TIS	Grade	TIS
04	14'3	05	17'11	E1	0'11	E4	3'6
03	9'11	06	21'8	E4	3'7	E6	12'7
06	10'10	06	26'11	E2	1'8	E5	8'2
03	7'10	04	15'5	E5	6'9	E6	14'3
03	5'11	06	20'10	E2	2'9	E5	7'8
05	17'6	06	20'11	E2	2'3	E5	11'6
03	11'9	06	22'4	E4	5'9	E6	15'3
06	20'10	06	22'7	E2	2'8	E5	5'6
05	19'5	06	22'3	E4	4'11	E5	10'1
04	21'2	06	19'11	E1	0'10	E5	6'3
03	7'1	06	24'11	E2	1'10	E3	3'8
02	2'11	06	28'4	E4	4'1	E6	14'9
03	7'7	06	28'9	E2	1'9	E5	10'11
04	11'11	06	19'11	E5	9'4	E6	17'4
04	14'11	06	20'11	E2	1'8	E6	14'10
05	18'10	06	21'11	E6	12'10	E7	17'5
05	16'9	06	20'10	E6	17'1	E7	20'11
05	18'9	05	15'8	E5	12'6	E6	14'10
05	16'2	06	20'9	E3	3'9	E5	9'0
04	15'9	06	21'11				
Med=04		Med=06		Med=E3		Med=E5	
Mean=13'4		Mean=21'11		Mean=5'2		Mean=11'6	

grade and lengths of service curves. The latter case is true for the present sample, and was chosen because, of the two alternatives, I felt the headquarters sample would be where the hypothesized phenomena would be most pronounced.

### Treatment of Data

Feedback hypotheses. To test the feedback hypotheses (H1, H3, and H5), I first computed empathy ratio scores for each of the superior-subordinate pairs (n= 39) using the Hobart and Fahlberg (1965) method. I then computed mean scores on each section for each subordinate respondent (n= 44). In computing the means, I reverse-scored all of section I--the Perceived Open-Mindedness Scale--scoring a "7" as a "1," a "6" as a "2," and so on. I reversed the scores to avoid negative correlations in the hypothesized relationships, so that a high score on section I--high perceived open-mindedness--would correlate with, for example, a high empathy ratio score. I likewise reverse-scored items twenty-two, twenty-four, and twenty-five of the Perceived Confirmation Index and item forty-one of the Visibility Scale. I also eliminated items forty-two and forty-eight, the validation items.

I computed Pearson Product-Moment correlation coefficients for the feedback hypotheses using a computer program I

designed (Appendix C, p. 180) and a Commodore model 8032 microcomputer. Chapter IV reports these results.

Creativity hypotheses. Because of the diversity of responses to the creativity test, I discarded my original idea of convening a panel consisting of Air Force members. Many of the responses were so job-specific that convening a panel competent to evaluate creativity would have been impractical. Instead, I performed a content analysis on the creativity responses (n= 29), categorizing each according to three criteria:

1. specific vs. general-- I called the response "specific" if it included specific recommended action; I called it "general" if it simply described a problem and stated or implied that "something needs to be done."
2. job-related vs. non-job related-- I called the response "job-related" if it included a suggestion that related to the suggestor's immediate job (e.g., a suggestion to improve aircraft maintenance procedures, suggested by an aircraft mechanic). I called the response "non-job related" if it included a suggestion that related to an installation or Air Force-wide problem (e.g., a suggestion to implement

an incentive pay program for all mid-level non-commissioned officers).

3. personal vs. impersonal-- I called the response "personal" if it included some degree of feeling, whether the feeling was one of anger, frustration, or enthusiasm. I called the response "impersonal" if it included no feeling but, rather, was written in neutral, impersonal language.

To provide a reliability estimate for the content analysis, I asked Dr. Carl Larson, professor of speech communication at the University of Denver, to perform a content analysis of the responses using the criteria outlined above. Percentages of agreement between Dr. Larson's analyses and my own are as follows:

specific vs. general	.724
job-related vs. non-job	.793
personal vs. impersonal	.655

The first two categories show acceptable reliability. The lower percentage for the personal/impersonal category is likely due to my experiences as an Air Force member and my resulting tendency to label as "personal" any degree of affect in correspondence between a subordinate and his or her superior. Of the ten responses where Dr. Larson and I

differed, for example, eight were cases of his labeling as "impersonal" responses I had labeled "personal."

To evaluate the creativity hypotheses (H2 and H4), I performed chi-square analyses on the categorized responses to the creativity test and the four sections of the Subordinate Perception Scale. Chapter IV reports the results of these analyses.

Additional tests. Using the same computer program mentioned above, I conducted several additional tests to see what relationships, if any, exist among the four constructs measured by the Subordinate Perception Scale (SPS). First, I computed the "t" statistic to determine if differences exist between officer and enlisted scores on the four SPS sections. Next, I computed correlation coefficients among the four SPS sections using all the sample data. Finally, I computed correlation coefficients among the four sections using officer-only data and enlisted-only data. The results of these tests are reported in the "Additional Results" section of Chapter IV (pp. 112-119).

### Summary

Chapter III has described the measurement instruments I used to conduct this research. These instruments included the Perceived Open-Mindedness Scale, the Perceived

Confirmation Index, The Supervisor Disclosure Scale, and the Supervisor Visibility Scale, all of which I include in the blanket term "Subordinate Perception Scale." The other two instruments described were the Test of Subordinate Feedback and the Test of Subordinate Creativity. Next, the chapter introduced the five hypotheses tested in this research, discussed the sampling plan, and described the sample, which was drawn from active-duty populations at two large U. S. Air Force installations. Finally, the chapter discussed methods of analysis I used to evaluate the resulting data.

Chapter IV reports the results of the data collection and analysis, and Chapter V discusses these results, including recommendations for future research.



#### IV. RESULTS

Chapter IV presents results of the research discussed in the previous chapter. The "Test of Subordinate Feedback" section presents results from the TSF only. The "Tests of Hypotheses" section presents results from those statistical tests designed to determine validity of the hypotheses presented in Chapter III. Finally, the "Additional Results" section presents results from those statistical tests designed to determine if relationships exist among the constructs measured in the Subordinate Perception Scale (i.e., perceived open-mindedness, perceived confirmation, perceived disclosure, and superior visibility).

Chapter IV does not include a detailed discussion of methodology or a discussion of the results. Chapter III addressess methodology, and Chapter V discusses and draws conclusions from the results. This chapter is limited strictly to a presentation of test results and those methodological details necessary for clarity.

### Test of Subordinate Feedback (TSF)

Empathy ratio scores (ERS) were computed for each superior-subordinate pair using the Hobart and Fahlberg (1965) formula discussed in Chapter III (see pp. 82-88). Scores ranged from 0 to 1.0, with a score of "0" indicating a superior's incorrectly projecting the subordinate's response for all statements on which the pair disagreed, and a score of "1.0" indicating a superior's correctly perceiving the subordinate's response for all statements on which the pair disagreed. Mean ERS for the total sample was .338, with enlisted ERS= .394 (n= 20) and officer ERS= .296 (n= 18), a non-significant difference.

As discussed in Chapter III, Hobart and Fahlberg cautioned that items having clear cultural definition may taint results of empathy tests (see pp. 87-88). Such contamination may have occurred in the TSF results, particularly among the officer sample. Of the nineteen officer pairs, eleven disagreed on fewer than three "own" TSF items. In contrast, only one enlisted pair disagreed on fewer than three items. Overall, officer pairs disagreed on a mean of 3.055 items, while enlisted pairs disagreed on a mean of 6.3 items, a highly significant difference ( $t = 4.144$ ,  $p < .001$ ).

The fact that eleven officer pairs disagreed on fewer than three "own" items leaves empathy ratio scores for these pairs suspect. How, for example, can one infer that a

subordinate has communicated work attitudes to her superior if the subordinate and superior share essentially the same attitudes? Because such an inference would be weak, four sets of ERS scores were used to evaluate results: all ERS scores, all non-zero ERS scores, all ERS scores for those pairs having dissimilarity scores of three or higher, and all ERS scores for enlisted subjects only. These results are differentiated in the following sections.

### Tests of Hypotheses

#### Feedback Hypotheses

- H1. Highly confirming behavior by a superior, as measured by The Perceived Confirmation Inventory, is related to greater feedback from the subordinate to the superior, as measured by the Test of Subordinate Feedback.

A Pearson Product-Moment correlation coefficient was computed for Perceived Confirmation Inventory (PCI) scores and all empathy ratio scores ( $n = 39$ ). The  $-.043$  coefficient is nonsignificant. The hypothesis was tested further by computing correlation coefficients between PCI scores and all non-zero empathy ratio scores ( $n = 25$ ), between PCI scores and all empathy ratio scores for superior-subordinate pairs who

differed on three-or-more "own" feedback items ( $n = 27$ ), and between all enlisted respondent PCI scores and empathy ratio scores ( $n = 20$ ). All the coefficients were non-significant (see Table 4.1, p. 108). Hypothesis H1 was not supported.

H3. High superior disclosure, as measured by the Perceived Disclosure Questionnaire, is related to greater subordinate feedback to the superior, as measured by the Test of Subordinate Feedback.

A Pearson Product-Moment correlation coefficient was computed for all Perceived Disclosure Questionnaire (PDQ) scores and empathy ratio scores ( $n = 39$ ). The  $-.052$  coefficient is nonsignificant. The hypothesis was tested further by computing correlation coefficients between PDQ scores and all non-zero empathy ratio scores ( $n = 25$ ), between PDQ scores and all empathy ratio scores for superior-subordinate pairs who differed on three-or-more "own" feedback items ( $n = 27$ ), and between all enlisted respondent PDQ scores and empathy ratio scores ( $n = 20$ ). Only the coefficient for PDQ scores and empathy ratio scores for pairs differing on three-or-more "own" items approached the established level of significance ( $-.322$ ,  $p < .10$ ), implying a possible negative relationship between the two. All other coefficients were

non-significant (see Table 4.1, p. 108). Hypothesis H3 was not supported.

H5. High superior accessibility, as measured by the Perceived Open-Mindedness Scale and the Superior Visibility Scale, is related to greater subordinate feedback, as measured by the Test of Subordinate Feedback.

Pearson Product-Moment correlation coefficients were computed comparing Perceived Open-Mindedness Scale (POS) and Superior Visibility Scale (SVS) scores with empathy ratio scores ( $n = 39$ ). The resulting coefficients (.075 and  $-.20$ , respectively) were nonsignificant. The hypothesis was tested further by computing correlation coefficients between POS/SVS scores and all non-zero empathy ratio scores ( $n = 25$ ), between POS/SVS scores and all empathy ratio scores for superior-subordinate pairs who differed on three or more "own" feedback items ( $n = 27$ ), and between all enlisted respondent POS/SVS scores and empathy ratio scores ( $n = 20$ ). All coefficients were non-significant (see Table 4.1, p. 108). Hypothesis H5 was not supported.

An additional test was performed to determine if a difference exists between scores for the four Subordinate Perception Scale measures when these scores are categorized according to high and low empathy ratio scores (ERS). For

Table 4.1  
Correlation Coefficients Between Empathy Ratio Scores  
and The Subordinate Perception Scale

	A.	B.	C.	D.
SPS Section				
I	.075	.188	0	-.114
II	-.043	.246	.05	-.09
III	-.052	.057	-.322*	-.275
IV	-.2	.037	-.21	-.214

\* =  $p < .10$

I = Perceived Openmindedness Scale

II = Perceived Confirmation Scale

III = Perceived Supervisor Disclosure

IV = Visibility Scale

A = all empathy ratio scores (n= 39)

B = all non-zero empathy ratio scores (n= 25)

C = all empathy ratio scores for pairs who differed on 3 or more "own" Feedback Scale items (n= 27)

D = all empathy ratio scores for enlisted pairs

this test, only those superior-subordinate pairs who differed on five or more "own" feedback responses were included (n= 20). These pairs were then separated into high ERS ( = or > .5, n= 9) and low ERS ( <.5, n= 11) categories, and the mean scores on each of the four SPS sections were calculated for

Table 4.2  
Differences Between Empathy Ratio Scores and  
Subordinate Perception Scale Means

		E.R.S.	E.R.S.	
		< .5 (n= 11)	=or> .5 (n= 9)	t
	I	4.209	4.183	0.092
SPS	II	5.817	5.776	0.082
Section	III	3.045	2.7	1.649
	IV	5.918	5.511	1.071

I = Perceived Openmindedness Scale

II = Perceived Confirmation Index

III = Perceived Supervisor Disclosure Scale

IV = Supervisor Visibility Scale

(Note: included are E.R.S. scores only for pairs who differed on 5 or more "own" feedback responses)

each category. These means were subjected to a "t" test of differences between means, and the results for all four sections were nonsignificant. No difference appears to exist between high and low empathy ratio score superiors and the various ways those superiors are perceived by their subordinates (see Table 4.2, above).

### Creativity Hypotheses

Twenty-nine of the subordinates in the sample responded to the creativity section. The remaining fifteen either wrote no response or wrote an unusable response. For the reasons discussed in Chapter III, the creativity responses were subjected to content analysis rather than evaluation by an independent panel (see p. 99). The content analysis categorized each creativity response according to three criteria: specific/general, job-related/non-job related, and personal/impersonal (see pp. 99-100 for a complete description of these categories).

Though relating these categories to creativity is tangential and inferential, I would conclude that specific, job-related, and personal responses are more indicative of creative communication than are non-specific, non-job related, impersonal responses. I base this conclusion on the literature reviewed in Chapter II (see pp. 36-47). Arieti (1976), Rogers (1959), and Anderson (1959), for example, emphasize the importance of open communication in the creative process, and openness is characterized by more personal and more specific messages. I likewise cite Barron's (1963) finding, supported by Luthe (1976), that originality is characterized by more self-assertiveness, which includes, among other qualities, both specificity and, in this study, job-relatedness. Others (for example Guetzkow, 1965, and Rokeach, 1965) at



least implicitly support my conclusion, so it was on this conclusion that I based my tests of the creativity hypotheses.

- H2. Highly confirming behavior by a superior, as measured by the Perceived Confirmation Inventory, is related to greater communication of creative ideas flowing from subordinate to superior, as measured by the Test of Subordinate Creativity.

The content-analyzed responses were separated into high PCI ( $>6.11$ ,  $n = 18$ ) and low PCI ( $<6.11$ ,  $n = 11$ ) categories, and these categories were evaluated by the chi-square method. Though none of the response categories showed significant ( $p < .05$ ) differences, the "specific" vs. "general" category approached the significant level (chi square = 3.164,  $p < .10$ ), with high PCI scores being associated with more specific responses. According to the established criteria, however, hypothesis H2 was not supported. Tables 4.3, 4.4, and 4.5 (pp. 113-115) show complete results of this test.

- H4. High superior accessibility, as measured by the Perceived Open-mindedness Scale and The Supervisor Visibility Scale, is related to greater communication of creativity flowing from subordinate to

superior, as measured by the Test of Subordinate Creativity.

The content-analyzed responses were separated into high perceived open-mindedness ( $>4.35$ ,  $n = 17$ ) and low perceived open-mindedness ( $<4.35$ ,  $n = 12$ ) categories, and into high visibility ( $>5.84$ ,  $n = 19$ ) and low visibility ( $<5.84$ ,  $n = 10$ ) categories. These categories were then evaluated by the chi-square method. The "specific" vs. "general" category showed a significant difference between high perceived open-mindedness and low perceived open-mindedness (chi-square = 5.15,  $p < .05$ ), with high perceived open-mindedness in the superior associated with more specific subordinate responses. The remaining results were all non-significant, leaving hypothesis H4 partially supported. Tables 4.3, 4.4, and 4.5 (pp. 113-115) show complete results of this test.

#### Additional Results

Though I hypothesized no relationships among the four constructs measured in the Subordinate Perception Scale (SPS), I tested the SPS data both for differences and for correlations. This section reports the results of these tests, designed to determine what relationships, if any, exist among perceived superior open-mindedness, perceived

Table 4.3

## Chi-Square Analysis

<u>"Specific" v. "General"</u>		
Section	I	I
	>4.35	<4.35
Specific	14	5
General	3	7
chi-square= 5.15 (p< .05)		
Section	II	II
	>6.11	<6.11
Specific	14	5
General	4	6
chi-square= 3.164 (p< .10)		
Section	III	III
	>2.91	<2.91
Specific	12	7
General	5	5
chi-square= 0.466		
Section	IV	IV
	>5.84	<5.84
Specific	13	6
General	6	4
chi-square= 0.203		

Table 4.4  
Chi-Square Analysis

<u>"Job-related v. "Non-job related"</u>		
Section	I	I
	>4.35	<4.35
Job	9	4
Non-job	8	8
chi-square= 1.092		
Section	II	II
	>6.11	<6.11
Job	8	5
Non-job	10	6
chi-square= 0.003		
Section	III	III
	>2.91	<2.91
Job	10	3
Non-job	7	9
chi-square= 3.25 (p< .10)		
Section	IV	IV
	>5.84	<5.84
Job	8	5
Non-job	11	5
chi-square= 0.167		

Table 4.5  
Chi-Square Analysis

Section	<u>"Personal" v. "Impersonal"</u>	
	I	I
	>4.35	<4.35
Personal	8	7
Impersonal	9	5
	chi-square= 0.355	
Section	II	II
	>6.11	<6.11
Personal	10	5
Impersonal	8	6
	chi-square= 0.279	
Section	III	III
	>2.91	<2.91
Personal	7	8
Impersonal	10	4
	chi-square= 1.824	
Section	IV	IV
	>5.84	<5.84
Personal	9	6
Impersonal	10	4
	chi-square= 0.421	

superior confirmation, perceived superior disclosure, and superior visibility.

#### Differences Among SPS Means

To determine if differences exist between how enlisted and officer Air Force members perceive their superiors, I computed officer ( $n = 20$ ) and enlisted ( $n = 24$ ) means for each of the four SPS sections. Using a self-designed computer program (Appendix C, p. 180), I then computed the "t" statistic to determine if a difference exists between means for the four sections.

Results of this test (Table 4.6, p. 117) show a significant difference between officer and enlisted means on the Perceived Open-Mindedness Scale ( $t = 2.136$ ,  $p < .05$ ) and a highly significant difference between means on the Perceived Confirmation Index ( $t = 3.024$ ,  $p < .01$ ). Officer subordinates appear to perceive their superiors as both more open-minded and more confirming than do enlisted subordinates. The difference between officer and enlisted means for the Superior Visibility Scale approached significance ( $t = 1.857$ ,  $p < .10$ ), while the difference for the Perceived Disclosure Scale was non-significant ( $t = .331$ ).

Table 4.6  
Differences Between Officer and Enlisted  
Subordinate Perception Score Means

		officer	enlisted	
		mean (n= 20)	mean (n= 24)	t
SPS Section	I	4.617	4.2	2.136*
	II	6.491	5.756	3.024**
	III	2.9	2.949	.331
	IV	6.085	5.649	1.857 (p< .10)

\* =  $p < .05$

\*\* =  $p < .01$

I = Perceived Openmindedness Scale

II = Perceived Confirmation Index

III = Perceived Supervisor Disclosure Scale

IV = Supervisor Visibility Scale

#### Correlations Among SPS Means

To determine if correlations exist among the four constructs measured by the SPS, I subjected the data to three tests: the first to determine if correlations exist between the constructs across the entire subordinate sample, and the

second and third to determine if correlations exist for only the officer or for only the enlisted subordinate samples.

For the first test, I computed Pearson Product-Moment correlation coefficients between SPS scores for the entire subordinate sample ( $n = 44$ ), using a self-designed computer program (Appendix C, p. 180). Results (Table 4.7) of this test showed significant correlations between scores for the Perceived Open-Mindedness Scale and the Perceived Confirmation Index ( $r = .356$ ,  $p < .05$ ), between scores for the

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Table 4.7  
Correlation Coefficients Within  
The Subordinate Perception Scale

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Section	I	II	III	IV
I	-	.356*	-.125	.242
II		-	.112	.695**
III			-	.406**

$n = 44$

\* =  $p < .05$

\*\* =  $p < .01$

---

I = Perceived Openmindedness Scale

II = Perceived Confirmation Index

III = Perceived Supervisor Disclosure Scale

IV = Supervisor Visibility Scale



Perceived Confirmation Index and the Supervisor Visibility Scale ( $r = .695$ ,  $p < .01$ ), and between scores for the Perceived Disclosure Scale and the Supervisor Visibility Scale ( $r = .406$ ,  $p < .01$ ).

For the second test, I computed Pearson Product-Moment correlation coefficients between scores for only the officer subordinate sample ( $n = 20$ ). Results (Table 4.8, p. 120) showed a significant correlation between scores for the Perceived Confirmation Index and the Perceived Open-Mindedness Scale ( $r = .581$ ,  $p < .01$ ). The remaining coefficients were all nonsignificant.

Finally, I computed Pearson Product-Moment correlation coefficients for only the enlisted subordinate sample ( $n = 24$ ). Results (Table 4.9, p. 121) showed significant correlations between scores for the Perceived Confirmation Index and the Perceived Disclosure Scale ( $r = .740$ ,  $p < .01$ ), and between scores for the Perceived Disclosure Scale and the Supervisor Visibility Scale ( $r = .548$ ,  $p < .01$ ). The remaining coefficients were all nonsignificant.

### Summary

This chapter has presented results of the tests designed to determine validity of the five hypotheses introduced in Chapter III. Of the three "feedback" hypotheses, none was supported by the data. Of the two "creativity" hypotheses,

Table 4.8  
Correlation Coefficients Within  
The Subordinate Perception Scale (Officers)

Section	I	II	III	IV
I	-	.581**	-.289	.242
II		-	-.204	.291
III			-	.059

n = 20

\*\* =  $p < .01$

I = Perceived Openmindedness Scale

II = Perceived Confirmation Index

III = Perceived Supervisor Disclosure Scale

IV = Supervisor Visibility Scale

Table 4.9  
Correlation Coefficients Within  
The Subordinate Perception Scale (Enlisted)

Section	I	II	III	IV
I	-	.145	-.026	.155
II		-	.255	.740**
III			-	.548**

n = 24

\*\* =  $p < .01$

---

I = Perceived Openmindedness Scale

II = Perceived Confirmation Index

III = Perceived Supervisor Disclosure Scale

IV = Supervisor Visibility Scale

a significant relationship was found between perceived superior open-mindedness and subordinate specificity in the test of creativity, providing partial support for the hypothesized relationship between perceived leader accessibility and subordinate creativity. The hypothesized relationship between perceived superior confirmation and subordinate creativity was not supported.

Results of tests conducted on only the subordinate data showed that significant differences exist between officer and enlisted perceptions of their superiors. Officers see their superiors as both more open-minded and more confirming than do enlisted subordinates, and a near-significant difference exists in the degree of superior visibility perceived by the officer and enlisted subordinates.

Finally, significant correlations exist between perceived superior confirmation and perceived superior visibility, and between perceived superior disclosure and perceived superior visibility. Moreover, for the officer sample, a significant correlation exists between perceived superior confirmation and perceived superior open-mindedness. For the enlisted sample, significant correlations exist between perceived superior confirmation and perceived superior visibility, and between perceived superior disclosure and perceived superior visibility.

Chapter V discusses these results, drawing conclusions and making recommendations for future research.

## V. DISCUSSION OF RESULTS

Chapter V discusses the test results presented in the previous chapter, attempting to explain why these results occurred, what the results may mean, and the directions in which the results should point future research. This chapter follows essentially the same pattern as did Chapter IV, beginning with a discussion of Test of Subordinate Feedback results, continuing with a discussion of results from the hypotheses tests, and concluding with a discussion of the data from within the Subordinate Perception Scale. The final section recommends future research directions.

Because each construct--perceived dogmatism, perceived confirmation, perceived disclosure, visibility, subordinate feedback, and subordinate creativity--has been operationally defined as a score on its respective instrument, no separate section discusses the instruments. Rather, each instrument is discussed in the same section as the construct it purports to measure. The only exception is the Test of Subordinate Feedback, which is discussed separately because of the differences that emerged between officer and enlisted results

and the effect these differences may have had on the tests of hypotheses.

### Test of Subordinate Feedback

As discussed in Chapter III, Hobart and Fahlberg (1965) cautioned that to use culturally defined items in a test of empathy risks contamination of the results (see pp. 87-88). Certainly some items in the TSF (e.g., "I made a mistake when I joined the military.") have answers that are more acceptable than the alternative in a military culture, and these items may have caused the extreme difference between the enlisted and officer dissimilarity scores. Moreover, as discussed in the "sample characteristics" section of Chapter III, the officer subjects were generally older with more time-in-service than were the enlisted subjects. Logically, the more years one has spent in a culture, the more that culture should have influenced his thinking, a phenomenon that would account for the officer/enlisted difference.

If it's true that time-in-service accounts for the low dissimilarity scores for officers, the same should occur as more senior enlisted members are tested. In other words, low-ranking superior-subordinate pairs should have higher dissimilarity scores than high-ranking pairs because the pairs with more time-in-service should have acquired the culturally determined "correct" attitudes. To test this

hypothesis, enlisted pairs were separated into low-ranking (below-E4 subordinate) and high-ranking (E4-and-above subordinate) groups, and mean dissimilarity scores were compared for each group. No difference between the low- ( $x = 6.9$ ) and high- ( $x = 5.777$ ) ranking groups emerged ( $t = .895$ ,  $p > .20$ ). Enlisted superior-subordinate pairs, as a group, appear to be more dissimilar in work-related attitudes than are officer pairs.

It would be premature to make unqualified judgements based on the TSF results. One would seem on solid ground to conclude that officer superior-subordinate pairs tend to share more similar attitudes toward their jobs than do enlisted pairs, but to leap from this conclusion to an inference such as "all officers think alike," for example, would be unjustified. Sharing similar attitudes toward their jobs is a long way from "thinking alike." In fact, similar attitudes should facilitate decision-making by, if nothing else, reducing time and effort spent trying to discover co-workers' sensibilities.

On the other hand, a fraternity of decision-makers all sharing the same attitudes usually doesn't facilitate change. Original thinkers, said Barron (1963), are more independent in their judgement, and cultural conformity is one of the elements Luthe (1976) maintains discourages creativity. If conformity discourages creativity, one would expect the officer responses to the Test of Subordinate Creativity to

be less specific, less job-related, and less personal than the enlisted responses. A chi-square analysis comparing officer and enlisted creativity responses, however, showed no differences (see Table 5.1 below). At least in this study, no differences appear to exist between officer and enlisted creativity despite the apparently more conforming nature of the officers.

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Table 5.1  
Chi-Square Analysis  
Officer v. Enlisted Creativity

	Officer	Enlisted
Specific	11	8
General	4	6
chi-square= 0.8362		

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	Officer	Enlisted
Personal	7	8
Impersonal	8	6
chi-square= 0.318		

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	Officer	Enlisted
Job-related	8	5
Non-job rel.	7	9
chi-square= 0.911		



### Feedback Hypotheses

#### Perceived Confirmation and Subordinate Feedback

Past work in interpersonal confirmation and related constructs unanimously concludes that a highly confirming environment leads to more satisfaction in the perceiver whether the perceiver is husband, child, or subordinate (see Chapter II, pp. 14-27, for a review of supporting literature). With the possible exception of Baird's (1973) study of the relationship between trust and subordinate openness, however, no relationship has yet been found between perceived confirmation and subordinate behavior. The same is true of the present study: no relationship was found between perceived confirmation and subordinate feedback.

The fact that no correlation emerged between the degree to which subordinates see their superiors as confirming and superior knowledge of subordinate attitudes may reflect superiors' inability to perceive the attitudes rather than subordinates' communication behaviors. In other words, subordinates who feel confirmed by their superiors may be talking more, but their superiors may not be hearing what's being said. Smith (1967), Sussman (1973), and O'Reilly and Anderson (1980) all addressed this possibility. A future qualitative study may be able to detect such behavior. Meanwhile, the present results, like those of Murphy (1980) and

Sperhac (1982), fall short of showing a link between the affect of perceived confirmation and observable behavior.

Though managers might question the value of confirming behavior if such behavior doesn't result in some positive subordinate response, the results presented here simply say that, empirically, no link exists between perceived confirmation and superior knowledge of subordinate attitudes. Past research, on the other hand, has shown an irrefutable link between perceived confirmation and positive job attitudes (see, for example, Likert, 1961; Indik, et al., 1961; Jablin, 1977), and the data from my present research show a relation between perceived confirmation by subordinates and positive attitudes toward superiors (see pp. 117-119). Moreover, my results fail to support the implied negative relation between confirmation and accuracy reported by Ross (1973) and Northouse (1974). Whether the results reported here reflect reality or reflect shortcomings in the feedback instrument (see previous section, this chapter), they certainly don't reduce the importance of confirming behavior in the superior-subordinate relationship.

#### Superior Disclosure and Subordinate Feedback

Though the correlation between perceived leader disclosure and subordinate feedback approached significance, the correlation was in the negative direction ( $-.322$  for pairs

differing on three or more "own" items,  $p < .10$ ). This result suggests disclosure in the superior-subordinate dyad is not reciprocal, supporting the work of Rogers and Wright (1976), Haenszel (1980), and Dindia (1982), and refuting the Burke and Wilcox (1969) findings. Moreover, the negative correlation suggests that the more a subordinate sees his superior as disclosing, the less likely the subordinate may be to disclose feelings to the superior.

Does a negative relation exist between perceived leader disclosure and actual subordinate disclosure, and if so, why? Certainly the present study falls far short of proving such a relation, but the possibility that such a relation exists is at least intriguing. A possible answer to the "why?" question may be that subordinates feel good about the implicit trust a disclosing superior is showing, but that the same subordinates view such disclosures as inappropriate coming from the boss. Such a dissonant situation might cause a subordinate to withhold personal information from his superior, reasoning, perhaps, that if the boss is so open about her own feelings, she might be just as likely to share "my" feelings with others. A boss, after all, is supposed to be a boss not a buddy, and is expected to maintain a certain appropriate social distance.

The above discussion is highly speculative, of course, but the results presented here at least suggest that openness in the superior-subordinate relationship must be tempered

with restraint. Jourard (1973) and Farace, Monge, and Russell (1977) may have been right that, to work together, superiors and subordinates must know each other, but the data presented here suggest that superior disclosure is not the way to attain such knowledge. On the contrary, the trend in my research supports Bochner's (1982) implication that, in some settings, disclosure may be counter-productive.

#### Superior Accessibility and Subordinate Feedback

Based on the data presented in Chapter IV, no relation exists between subordinate feedback and either perceived superior open-mindedness or leader visibility. In fact, the eight correlation coefficients resulting from the three measures of the relationship ranged from  $-.214$  to  $.188$ , with four coefficients in the "plus" range and four in the "negative." These near-random results are strong evidence that there is, indeed, no relation between how psychologically and physically accessible a subordinate sees his superior as being, and the amount of affective feedback passed from subordinate to superior.

#### Summary

Two limiting factors cloud the data on subordinate feedback. First, the relatively small sample size limits the

### Creativity Hypotheses

#### Perceived Confirmation and Subordinate Creativity

Though the hypothesized relationship between perceived confirmation and creativity was not supported by the data, a near-significant relationship emerged between perceived confirmation and subordinate specificity ( $\chi^2 = 3.164$ ,  $p < .10$ ). This trend, when combined with the significant relationship between specificity and perceived superior open-mindedness (see following section), warrants a tentative conclusion that subordinates tend to be more specific in their communication with superiors they see as more confirming.

That subordinates would be more specific with confirming superiors supports Baird's (1973) conclusion that subordinate trust in the superior is positively related to a subordinate's perception of the superior as willing to listen. Likewise, the trend supports the findings of Sieburg (1969, 1976), Sieburg and Larson (1971), and Cissna and Keating (1979) that disagreement isn't necessarily disconfirming. A subordinate who sees his superior as confirming is more willing to make specific suggestions because the subordinate knows that possible disagreement with the suggestion doesn't mean personal rejection. Specificity involves risk--the more specific the suggester, the less room available for waffling--so a subordinate who makes a specific suggestion must feel

tionship affect at least cognitive communication within the dyad. If this is, indeed, the case, the creativity hypotheses may be unproven in this study, but the underlying propositions remain justifiable. Methodology may be the key.

### Additional Results

Data yielded by comparing results of the four Subordinate Perception Scale measures are perhaps the most interesting aspects of this research. They illustrate the heterogeneity of even a military sample, a sample many would consider representative of a very homogeneous population. Moreover they illustrate that no single approach to communication will work in all superior-subordinate relationships.

Judging from the results of my study, officer subordinates see their superiors as both more open-minded ( $p < .05$ ) and as more confirming ( $p < .01$ ) than do enlisted subordinates. Moreover, officers tend to see their superiors as more visible, though a lack of power in the sample makes this a very tentative conclusion ( $p < .10$ ). These results may simply reflect cultural differences between officer and enlisted members of the Air Force. The nature of officer jobs, for example, is more mental than is the general nature of enlisted jobs, so one might expect officers to be more sensitive to perceptions of open-mindedness and confirmation. On the other hand, the differences may correlate with differences

in job satisfaction and performance, constructs not examined in my research. Such possible relationships are lucrative territory for future research.

A certain degree of homogeneity did emerge from the data. For the entire sample, a relationship exists between perceived confirmation and perceived open-mindedness, with those superiors seen as more open-minded also being seen as more confirming ( $p < .05$ ). Likewise, those superiors seen by subordinates as more visible are seen as more confirming ( $p < .01$ ), and, not surprisingly, those seen as more visible are seen as more disclosing ( $p < .01$ ). The latter correlation, by the way, is the only significant correlation between the perceived disclosure construct and any other construct.

Finally, and most interestingly, correlation differences emerged when the sample was separated into officer and enlisted members. Officer subordinates felt more confirmed by superiors they saw as more open-minded ( $p < .01$ ), while no such relationship existed for enlisted superior-subordinate pairs. On the contrary, enlisted subordinates felt more confirmed by superiors they saw as more visible ( $p < .01$ ). Moreover, the correlation between visibility and perceived disclosure seems to be limited to the enlisted group ( $p < .01$ ). No such relationship exists for the officer group.

These latter results tend to support the conclusion mentioned earlier: officers are more sensitive to mental confirmation while enlisted subordinates appear to require more

6. Conduct a study to determine if a relationship exists between trust and perceived confirmation in the superior-subordinate dyad.
7. Design a self-disclosure instrument to measure both cognitive (job-related information) and affective disclosures and administer both the disclosure instrument and the Perceived Confirmation Inventory to a subordinate sample. Such a study would help determine if a relation exists between PCI scores and either, both, or neither type disclosures. Jourard's (1971) "Work (or Studies)" section of the Self-Disclosure Questionnaire would be a good place to start for the affective portion of such a dual-purpose instrument.
8. Conduct a study to determine if a difference in job satisfaction exists between officer and enlisted (or white-collar and blue-collar) subordinates. Are such differences related to differences in perceived superior open-mindedness and perceived confirmation?
9. Conduct a study to determine if relationships exist between perceived confirmation and subordinate satisfaction and between perceived confirmation and subordinate performance.



### Conclusions

The purpose of this research was to discover if support exists for a proposed paradigm for superior-subordinate communication in complex organizations. The underpinnings of the proposed paradigm rest on the theory of Laing, Phillipson, and Lee (1966) that human behavior is "a spiral of interpersonal perceptions" (p. v), in which one's behavior is determined to a large extent by how he perceives the other's behavior, and how he perceives the other perceives him. Translated to the superior-subordinate relationship, the paradigm proposes that subordinate feedback is dependent on the degree to which the subordinate perceives the superior as confirming, disclosing, and accessible; and that subordinate creativity is dependent on the degree to which the subordinate sees the superior as confirming and accessible.

Though none of the research hypotheses was supported, data yielded by the research shed light on construct relationships. Perceived confirmation, for example, shows a strong likelihood of being linked to subordinate specificity, and is significantly related to perceived accessibility of the superior. Likewise, perceived confirmation is related to perceived open-mindedness among officers and to perceived visibility among enlisted subjects. On the other hand, perceived superior disclosure appears to be at least insignificant in eliciting subordinate feedback and may even be a

deterrent to feedback. Finally, significant differences seem to exist in the degrees to which officer and enlisted subordinates see their superiors as being confirming and open-minded.

No attempt is made here to generalize these conclusions beyond an Air Force population. Roberts and O'Reilly (1974), among others, showed that differences exist between superior-subordinate behavior in a military organization and such behavior in other complex organizations. The results from the present research may not be duplicated if the same methods were applied to, for example, IBM or Honeywell. On the other hand, I believe the constructs of the paradigm are so universal that their interaction in a military setting would be little different in a non-military setting.

This research has been formulative. It began with an unqualified belief in the interaction among the five constructs, and stands now on the belief that the constructs do, indeed, interact, but that such interaction is, as Fiedler (1973) suggested, highly situational. Perceived confirmation, for example, appears to be important in the superior-subordinate relationship and is definitely linked to perceived superior accessibility, but the specific subordinate behavior--except for the rather vague "subordinate specificity"--that depends on perceived confirmation is yet to be defined and measured. Moreover, this behavior is probably dependent not only on the degree of perceived confirmation

and accessibility but also on the superior-subordinate position in the organizational hierarchy. Finally, future studies will have to examine the types of superior behavior that communicate both confirmation and accessibility to the subordinate.

To establish the proposed paradigm, then, three very broad questions still need answering:

1. What subordinate behavior results from perceived confirmation and accessibility in the superior?
2. How do these behaviors differ among subordinates at varying hierarchical levels?
3. What communication behaviors can superiors adopt to convey confirmation and accessibility to their subordinates?

These three questions should form the bases of future research into the proposed interpersonal paradigm for superior-subordinate communication.

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APPENDIX A

## SUBORDINATE PERCEPTION SCALE

The purpose of this survey is to describe certain aspects of your relationship with your immediate supervisor. There are no "right" or "wrong" answers to any of the questions you'll be asked, and you can be sure that many other people would answer each question the same way you do. What we want to discover is how you feel, not how you think you ought to feel or how your supervisor or co-workers would like you to feel. YOUR RESPONSES WILL BE COMPLETELY CONFIDENTIAL; nobody but the people conducting this research will ever see your answers. Please answer each question as honestly as possible, and please make sure you answer all questions.

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PRIVACY ACT STATEMENT

In accordance with paragraph 8, AFR 12-35, Air Force Privacy Act Program, the following information about this survey is provided:

- a. Authority. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.
  - b. Principle Purpose. This survey is being conducted to examine certain aspects of supervisor-subordinate communication and relations in complex organizations.
  - c. Routine Use. Survey data will be used to support or refute certain hypotheses relating to supervisor-subordinate relations and communication in complex organizations. Results will be published in a dissertation and in articles prepared for professional journals. Individual responses will be strictly confidential.
  - d. Participation in this survey is entirely voluntary.
  - e. No adverse action of any kind may be taken against any individual who elects not to participate in any or all of this survey.
-

I. INSTRUCTIONS: In this survey, we use the term "supervisor" to refer to that person assigned as your immediate rating official: the person who writes your OER or APR. Based on your own impressions of your supervisor, decide whether he or she would agree or disagree with each of the following statements. Then circle the number corresponding to the degree of that agreement or disagreement. For example, if you think your supervisor would agree strongly with statement #1, then circle "6." Even if you're unsure of some items, please circle a number for each statement based on your own best guess of how your supervisor feels.

1. "In this complicated world of ours, the only way we can know what's going on is to rely on leaders or experts who can be trusted."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

2. "My blood boils whenever a person stubbornly refuses to admit he's wrong."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

3. "There are two kinds of people in the world: those who are for the truth and those who are against the truth."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

4. "Most people just don't know what's good for them."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly



5. "Of all the different philosophies in the world today, there's probably only one that's correct."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

6. "The highest form of government is a democracy, and the highest form of democracy is a government run by those who are most intelligent."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

7. "The main thing in life is for a person to want to do something important."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

8. "I'd like it if I could find someone who could tell me how to solve my personal problems."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

9. "Most of the ideas that get printed nowadays aren't worth the paper they're printed on."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

10. "Man on his own is a helpless and miserable creature."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

11. "Only when a person devotes himself to an ideal or cause is life really meaningful."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

12. "Most people just don't give a damn for others."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

13. "To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

14. "It's often best to reserve judgement about what's going on until one has had a chance to hear the opinions of those one respects."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

15. "The present is all too often full of unhappiness. It's only the future that counts."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

16. "The United States and Russia have just about nothing in common."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

17. "In a discussion I often find it necessary to repeat myself several times to make sure I'm being understood."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

18. "While I don't like to admit this even to myself, my secret ambition is to become a great man like Einstein, Beethoven, or Shakespeare."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

19. "Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups."

My supervisor would probably:

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

20. "It's better to be a dead hero than to be a live coward."

My supervisor would probably:

7  
Agree  
very  
strongly

6  
Agree  
strongly

5  
Agree

3  
Disagree

2  
Disagree  
strongly

1  
Disagree  
very  
strongly

II. INSTRUCTIONS: The following section contains statements about the way your supervisor may or may not behave toward you. Circle the number on each scale that most accurately reflects your feeling about the statement.

21. He/she is aware of me.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

22. He/she isn't at all interested in what I say.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

23. He/she accepts me.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

24. He/she has no respect for me at all.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

25. He/she dislikes me.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

26. He/she trusts me.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Agree	Agree	Agree	Disagree	Disagree	Disagree
very	strongly			strongly	very
strongly					strongly

III. INSTRUCTIONS: The statements in this section describe areas in which your supervisor probably has strong feelings. How likely is it that he or she would disclose these feelings to you? It's not important that he or she has disclosed the feelings; what's important is how likely you feel he or she would be to disclose the feelings to you. Using the following scale, circle the answer you think is most accurate:

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
Would probably talk about this in full and complete detail.	Would probably talk about this in general terms.	Unlikely to discuss this.	Would never discuss this.

27. The worst pressures and strains in his/her work.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

28. The most boring and unenjoyable aspects of his/her work.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

29. The most enjoyable and satisfying aspects of his/her work.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

30. His/her shortcomings and handicaps that prevent him/her from working as he/she would like to or that prevent him/her from getting ahead.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

31. His/her special strong points and qualifications.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

32. How much his/her work is appreciated by others (e.g. boss, fellow workers, subordinates, etc.).

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

33. His/her ambitions and goals in work.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

34. His/her feelings about his/her salary and rewards for work.

<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
----------	----------	----------	----------

35. How he/she feels about his/her choice of career--whether or not he/she is satisfied with it.

4                      3                      2                      1

36. How he/she really feels about the people he/she works for or works with.

4                      3                      2                      1

IV. INSTRUCTIONS: The following section asks you to describe the amount of direct contact you have with your supervisor. For each statement, circle the number corresponding to the most accurate description of the situation.

37. My supervisor visits my work area or office.

7        6        5        3        2        1  
Always   Often   Once in   Infre-   Rarely   Never  
                 awhile   quently

38. I see my supervisor socially.

7        6        5        3        2        1  
Always   Often   Once in   Infre-   Rarely   Never  
                 awhile   quently

39. My supervisor attends organizational social functions.

7        6        5        3        2        1  
Always   Often   Once in   Infre-   Rarely   Never  
                 awhile   quently

40. I visit my supervisor in his/her work area or office.

7        6        5        3        2        1  
Always   Often   Once in   Infre-   Rarely   Never  
                 awhile   quently

41. I need an appointment to visit my supervisor in his/her work area or office.

7        6        5        3        2        1  
Always   Often   Once in   Infre-   Rarely   Never  
                 awhile   quently

42. My supervisor encourages people to be creative and to look for better ways to do the job.

7        6        5        3        2        1  
Always   Often   Once in   Infre-   Rarely   Never  
                 awhile   quently

43. I can count on my supervisor's being in his/her work area or office when I need to talk to him/her.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Always	Often	Once in awhile	Infre- quently	Rarely	Never

44. My supervisor visits my work area or office for no "official" reason--just to see how I'm doing.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Always	Often	Once in awhile	Infre- quently	Rarely	Never

45. I talk to my supervisor during an average work day.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Always	Often	Once in awhile	Infre- quently	Rarely	Never

46. I know I can find my supervisor fast when I need to talk to him/her.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Always	Often	Once in awhile	Infre- quently	Rarely	Never

47. I feel comfortable and relaxed when I talk to my supervisor.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Always	Often	Once in awhile	Infre- quently	Rarely	Never

48. My supervisor welcomes new ideas.

<u>7</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>
Always	Often	Once in awhile	Infre- quently	Rarely	Never



V. INSTRUCTIONS: This section contains statements regarding the way you may or may not feel about your job and the people you work with. For each statement, indicate whether you agree or disagree. When a statement refers to your "boss," it's referring to your rating official: the person who writes your OER/APR.

1. Work deadlines are a major source of on-the-job worries for me.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

2. My work is pretty much the same grind, day-in and day-out.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

3. I get a lot of pleasure seeing the results of my work.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

4. I need more education to really get ahead in a career.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

5. I'm darn good at my job because it fits my abilities well.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

6. My boss genuinely appreciates how hard and how well I work.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

7. All I'm really interested in is surviving at my present job and moving on to something else as quickly as possible.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

8. I'm not paid enough for the quality and quantity of work I do.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

9. I made a mistake when I joined the military.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

10. The people I work with--my peers--are well-trained and competent.

\_\_\_\_\_ Agree \_\_\_\_\_ Disagree

11. I have the feeling that my superiors are constantly looking over my shoulder.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

12. I'm rarely given new, interesting tasks to do.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

13. My job is important to the mission of my organization.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

14. I need to learn how to get along better with people.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

15. No doubt about it: I'm well-qualified to do my job.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

16. I don't get enough recognition for the quality of my work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

17. I'd like to have my boss's job some day.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

18. I'm earning more now in salary and benefits than I thought I would be at this point in my life.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

19. I like the work I'm doing, and I want to get better at it.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

20. Sometimes I have the feeling that my superiors know nothing about my job and even less about their own.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

VI. INSTRUCTIONS: During your time in the Air Force, whether that time has been many years or just a few months, you've undoubtedly had ideas about ways things could be improved: work procedures, standards of behavior or dress, benefits, services, recreational activities, etc. Perhaps you've even submitted formal suggestions in the past. Imagine that you were given a direct line to the person or persons who could make a particular change, and the only restriction was that whatever you suggested must first be seen and approved by your immediate supervisor. In the space below, write a brief description of your idea--a new or better way of accomplishing a task or providing a service--as you would forward it through your supervisor.

Now imagine that you didn't have to secure your supervisor's approval of the idea, that you could send it directly to the people who had the authority to adopt it. Would you word the suggestion differently? Would you make a totally different suggestion? In the space below, write a brief description of the idea as you would forward it without the requirement of having it approved by your supervisor. If you wouldn't change anything from your first description, simply write "no change."

FEEDBACK SCALE  
[ B ]

The purpose of this questionnaire is to describe one aspect of the working relationship between you and the person whose name appears with yours on the above label. There are no "right" or "wrong" answers to any of the questions you'll be asked, and YOUR RESPONSES WILL BE COMPLETELY CONFIDENTIAL; nobody but the people conducting this research will ever see your answers. Please answer each question as honestly as possible, and please make sure you answer all questions. To preserve confidentiality, remove the above name label before you begin.

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PRIVACY ACT STATEMENT

In accordance with paragraph 8, AFR 12-35, Air Force Privacy Act Program, the following information about this survey is provided:

- a. Authority. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.
  - b. Principle Purpose. This survey is being conducted to examine certain aspects of supervisor-subordinate communication and relations in complex organizations.
  - c. Routine Use. Survey data will be used to support or refute certain hypotheses relating to supervisor-subordinate relations and communication in complex organizations. Results will be published in a dissertation and in articles prepared for professional journals. Individual responses will be strictly confidential.
  - d. Participation in this survey is entirely voluntary.
  - e. No adverse action of any kind may be taken against any individual who elects not to participate in any or all of this survey.
-

1. INSTRUCTIONS: The person ("subordinate") whose name appears with yours on the cover sheet was asked to indicate his or her agreement or disagreement with each of the following statements. Based on your own knowledge of this person, indicate how you believe he or she responded to each of the following statements. When a statement refers to "your boss," it's referring to you. Remember, the question is "How did your subordinate respond to each statement?"

1. Work deadlines are a major source of on-the-job worries for me.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

2. My work is pretty much the same grind, day-in and day-out.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

3. I get a lot of pleasure seeing the results of my work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

4. I need more education to really get ahead in a career.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

5. I'm darn good at my job because it fits my abilities well.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

6. My boss genuinely appreciates how hard and how well I work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

7. All I'm really interested in is surviving at my present job and moving on to something else as quickly as possible.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

8. I'm not paid enough for the quality and quantity of work I do.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

9. I made a mistake when I joined the military.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

10. The people I work with--my peers--are well-trained and competent.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

11. I have the feeling that my superiors are constantly looking over my shoulder.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

12. I'm rarely given new, interesting tasks to do.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

13. My job is important to the mission of my organization.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

14. I need to learn how to get along better with people.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

15. No doubt about it: I'm well-qualified to do my job.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

16. I don't get enough recognition for the quality of my work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

17. I'd like to have my boss's job some day.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

18. I'm earning more now in salary and benefits than I thought I would be at this point in my life.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

19. I like the work I'm doing, and I want to get better at it.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

20. Sometimes I have the feeling that my superiors know nothing about my job and even less about their own.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

II. INSTRUCTIONS: The following statements are identical to the ones you just read, but now the focus is on you. Please indicate whether you agree or disagree with each. When a statement refers to your "boss," it's referring to your immediate supervisor. ALL YOUR RESPONSES ARE STRICTLY CONFIDENTIAL and will be seen only by the people conducting this research.

1. Work deadlines are a major source of on-the-job worries for me.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

2. My work is pretty much the same grind, day-in and day-out.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

3. I get a lot of pleasure seeing the results of my work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

4. I need more education to really get ahead in a career.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

5. I'm darn good at my job because it fits my abilities well.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

6. My boss genuinely appreciates how hard and how well I work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

7. All I'm really interested in is surviving at my present job and moving on to something else as quickly as possible.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

8. I'm not paid enough for the quality and quantity of work I do.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

9. I made a mistake when I joined the military.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

10. The people I work with--my peers--are well-trained and competent.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree



11. I have the feeling that my superiors are constantly looking over my shoulder.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

12. I'm rarely given new, interesting tasks to do.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

13. My job is important to the mission of my organization.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

14. I need to learn how to get along better with people.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

15. No doubt about it: I'm well-qualified to do my job.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

16. I don't get enough recognition for the quality of my work.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

17. I'd like to have my boss's job some day.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

18. I'm earning more now in salary and benefits than I thought I would be at this point in my life.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

19. I like the work I'm doing, and I want to get better at it.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

20. Sometimes I have the feeling that my superiors know nothing about my job and even less about their own.

\_\_\_\_\_ Agree

\_\_\_\_\_ Disagree

APPENDIX B



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR FORCE MANPOWER AND PERSONNEL CENTER  
RANDOLPH AIR FORCE BASE, TX 78150

MPCYP

29 MAR 1983

Supervisor-Subordinate Communication Survey

AFIT/ED

1. Major Bangs' Survey has been reviewed and has been approved. Per telecon with Major Bangs on 18 Mar 83 the assigned survey control number is USAF SCN 83-21, which expires 30 Sep 83. Please insure that the above number and date appears on each part/copy of the survey to insure the respondent can identify it as an authorized survey.
2. As per telecon between Major Bangs and Capt Collins, please insure some sort of number pair system is used with the survey booklets to relate supervisor to respective subordinate. This system can be used instead of requiring their names directly on the booklets. (Survey booklets will have to be modified to delete name references, etc.) I realize that a separate sheet of numbers and names will be used so that supervisors know what subordinates rated them and vice versa. Major Bangs had mentioned that this requirement is necessary to his study. As discussed per the telecon, please insure this "separate sheet" is destroyed as soon as possible to maintain supervisor-subordinate confidentiality.
3. Attached is a sample privacy act statement which is required to be included in each survey booklet. Major Bangs will have to complete the statement items as appropriate for his survey. Items a, d and e should not be changed.
4. There are a couple minor changes that should be made that were not previously discussed. Item 18, the second "this" should be deleted. Section III, under Instructions, should include a statement telling the respondent to circle the number that most accurately reflects his feeling about each statement.
5. Please insure the above changes are reflected in the instrument prior to administration. Paragraph 100, AFR 100-17, requiring

submission of report of findings to us is waived. If we can be of any further assistance, please contact my project officer, Capt Collins, AUTOVON 487-2449/6122.

FOR THE COMMANDER



BERT K. ITOGA, Lt Col, USAF  
Chief, Research & Measurement Div

1 Atch  
Privacy Act Statement

Cy to: AFIT/CIR✓  
Major Terry L. Bangs

AD-A135 863

TOWARD AN INTERPERSONAL PARADIGM FOR  
SUPERIOR-SUBORDINATE COMMUNICATION(U) AIR FORCE INST OF  
TECH WRIGHT-PATTERSON AFB OH T L BANG NOV 83  
AFIT/CI/NR-83-77D

3/3

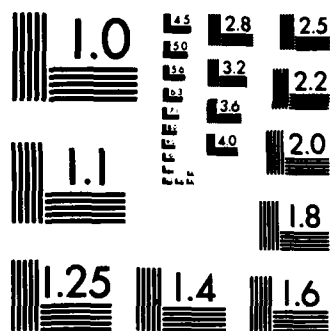
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A



## DEPARTMENT OF THE AIR FORCE

87 APR 1983

REPLY TO  
ATTN OF DP

SUBJECT

TO

1. You have been selected at random to participate in a study of communication in the Air Force. Your part in this study will require no more than 30 minutes and there's nothing you'll need to do for preparation. Please advise your supervisor that you've been selected for this study, then report to room 202 building 180 at 1300 hrs on 13 May 83. Everything you need to complete the survey will be provided.

2. Though your participation is voluntary, you are part of a small sample so your role is very important. Please make every effort to attend.

Colonel, USAF  
Director of Personnel



## DEPARTMENT OF THE AIR FORCE

REPLY TO:  
ATTN: OF:

13 MAY 1983

**SUBJECT: Survey Participation**

**TO:**

1. You have been selected at random to participate in an AFIT-sponsored study of interpersonal communication in the Air Force. Your part in this study will require no more than 30 minutes and there's nothing you'll need to do for preparation. Please report to room 5E229, at            hrs on 20 May 83. Everything you need to complete the survey will be provided.
2. Though your participation is voluntary, you are a part of a small sample so your role is very important to the success of the study. Please make every effort to attend.

Chief, Military Personnel Division



APPENDIX C

```

5 REM *****
10 REM * STATISTICAL ANALYSIS OF 2 ONE-DIMENSIONAL ARRAYS *
11 REM *****
15 DIMX(50),Y(50),X1(50),Y1(50)
20 N=0:DX=0:XD2=0:DY=0:YD2=0:CDS=0:XSUM=0:YSUM=0:Q$="0":PRINT""
100 PRINTTAB(5)"MENU":PRINT
110 PRINT"1. 'T' TEST OF DIFFERENCES (EQUAL VARIANCES/UNCORRELATED)"
111 PRINT"2. [ NOT USED ]"
113 PRINT"3. CORRELATION COEFFICIENT":PRINT
130 INPUT"YOUR CHOICE";Q$
190 IFQ$<>"3"GOTO300
199 REM *****
200 REM * INPUT CORRELATION INFO *
201 REM *****
210 PRINT"":INPUT"SAMPLE SIZE";J
220 INPUT"VARIABLE NAMES (X,Y)";X$,Y$:PRINT"":GOTO400
299 REM *****
300 REM * INPUT 'T' TEST INFO *
301 REM *****
310 PRINT"":INPUT"NAME OF FIRST SAMPLE";X$:INPUT"NAME OF SECOND SAMPLE";Y$
320 INPUT "NUMBER IN FIRST SAMPLE";N1:INPUT"NUMBER IN SECOND SAMPLE";N2
325 IF N1=N2 THEN J=N1
326 IF N1>N2 THEN J=N1
327 IF N1<N2 THEN J=N2
330 GOTO500
399 REM *****
400 REM * INPUT DATA FOR PEARSON CORRELATION *
401 REM *****
410 FORI=1TOJ
420 INPUT"VARIABLE SET (X,Y)";X(I),Y(I)
430 XSUM=XSUM+X(I)
440 YSUM=YSUM+Y(I)
450 N=N+1
460 NEXTI
470 MX=XSUM/N
480 MY=YSUM/N:GOTO600
499 REM *****
500 REM * CALCULATE MEANS *
501 REM *****
510 PRINT"":PRINT"ENTER ONE FIRST SAMPLE SCORE FOR EACH '?'"
520 FOR I=1TON1
530 INPUTX(I):XSUM=XSUM+X(I):NEXTI
540 PRINT"":PRINT"ENTER ONE SECOND SAMPLE SCORE FOR EACH '?'"
550 FOR I=1TON2
560 INPUTY(I):YSUM=YSUM+Y(I):NEXTI
570 MX=XSUM/N1:MY=YSUM/N2:GOTO620
599 REM *****
600 REM * CALC. DEVIATION SCORES *
601 REM *****
610 FORI=1TOJ:DX=(X(I)-MX)+DX:XD2=(X(I)-MX)^2+XD2:X1(I)=X(I)-MX:NEXTI:GOTO680
620 FORI=1TON1
630 DX=(X(I)-MX)+DX
640 XD2=(X(I)-MX)^2+XD2
650 X1(I)=X(I)-MX
660 NEXTI
670 IFQ$="3"GOTO690
680 FORI=1TOJ:DY=(Y(I)-MY)+DY:YD2=(Y(I)-MY)^2+YD2:Y1(I)=Y(I)-MY:NEXTI:GOTO800

```

```

460 NEXT I
470 MX=XSUM/N
480 MY=YSUM/N:GOTO600
499 REM *****
500 REM *      CALCULATE MEANS      *
501 REM *****
510 PRINT"":PRINT"ENTER ONE FIRST SAMPLE SCORE FOR EACH '?'"
520 FOR I=1TON1
530 INPUTX(I):XSUM=XSUM+X(I):NEXTI
540 PRINT"":PRINT"ENTER ONE SECOND SAMPLE SCORE FOR EACH '?'"
550 FOR I=1TON2
560 INPUTY(I):YSUM=YSUM+Y(I):NEXTI
570 MX=XSUM/N1:MY=YSUM/N2:GOTO620
599 REM *****
600 REM *      CALC. DEVIATION SCORES      *
601 REM *****
610 FORI=1TOJ:DX=(X(I)-MX)+DX:XD2=(X(I)-MX)^2+XD2:X1(I)=X(I)-MX:NEXTI:GOTO680
620 FORI=1TON1
630 DX=(X(I)-MX)+DX
640 XD2=(X(I)-MX)^2+XD2
650 X1(I)=X(I)-MX
660 NEXTI
670 IFQ$<>"3"GOTO690
680 FORI=1TOJ:DY=(Y(I)-MY)+DY:YD2=(Y(I)-MY)^2+YD2:Y1(I)=Y(I)-MY:NEXTI:GOTO800
690 FORI=1TON2
700 DY=DY+(Y(I)-MY)
710 YD2=YD2+(Y(I)-MY)^2
720 Y1(I)=Y(I)-MY
730 NEXTI:IFQ$<>"3"GOTO890
799 REM *****
800 REM *      CALC. SUM OF DEVIATION SCORE PRODUCTS FOR PEARSON      *
801 REM *****
810 FORI=1TOJ
820 CDS=CDS+(X1(I)*Y1(I))
830 NEXTI:GOTO1020
889 XSD=SQR(XD2/(N1-1)):YSD=SQR(YD2/(N2-1))
899 REM *****
900 REM *      CALC. POOLED 'T' SCORE      *
901 REM *****
910 T=(MX-MY)/SQR(((XD2+YD2)/(N1+N2-2))*((N1+N2)/(N1*N2))):T=INT(T*1000)/1000
999 REM *****
1000 REM *      CALC. STD. DEV. OF 2 SAMPLES      *
1001 REM *****
1010 XSD=SQR(XD2/(N1-1)):YSD=SQR(YD2/(N2-1)):GOTO1300
1020 XSD=SQR(XD2/(N-1)):YSD=SQR(YD2/(N-1))
1100 R=CDS/SQR(XD2*YD2)
1110 SL=R*(YSD/XSD)
1120 A=MY-(SL*MX)
1199 REM *****
1200 REM *      CALC. Z SCORES      *
1201 REM *****
1210 FORI=1TOJ
1220 X1(I)=X1(I)/XSD
1230 Y1(I)=Y1(I)/YSD
1240 NEXTI:GOTO1500
1300 FORI=1TON1:X1(I)=(X(I)-MX)/XSD:NEXTI
1310 FORI=1TON2:Y1(I)=(Y(I)-MY)/YSD:NEXTI
1499 REM *****
1500 REM *      ROUNDING      *
1501 REM *****
1510 MX=INT(MX*1000)/1000:MY=INT(MY*1000)/1000:IFQ$="1"GOTO1550
1520 R=INT(R*1000)/1000
1530 SL=INT(SL*1000)/1000
1540 A=INT(A*1000)/1000
1550 XSD=INT(XSD*1000)/1000:YSD=INT(YSD*1000)/1000:IFQ$="1"GOTO2000
1560 FORI=1TOJ

```

```

810 FORI=1TOJ
820 CDS=CDS+(X1(I)*Y1(I))
830 NEXTI:GOTO1020
839 XSD=SQR(XD2/(N1-1)):YSD=SQR(YD2/(N2-1))
899 REM *****
900 REM *   CALC. POOLED 'T' SCORE *
901 REM *****
910 T=(MX-MY)/SQR(((XD2+YD2)/(N1+N2-2))*((N1+N2)/(N1*N2))):T=INT(T*1000)/1000
999 REM *****
1000 REM *   CALC. STD. DEV. OF 2 SAMPLES *
1001 REM *****
1010 XSD=SQR(XD2/(N1-1)):YSD=SQR(YD2/(N2-1)):GOTO1300
1020 XSD=SQR(XD2/(N-1)):YSD=SQR(YD2/(N-1))
1100 R=CDS/SQR(XD2*YD2)
1110 SL=R*(YSD/XSD)
1120 A=MY-(SL*MX)
1199 REM *****
1200 REM *   CALC. Z SCORES *
1201 REM *****
1210 FORI=1TOJ
1220 X1(I)=X1(I)/XSD
1230 Y1(I)=Y1(I)/YSD
1240 NEXTI:GOTO1500
1300 FORI=1TON1:X1(I)=(X(I)-MX)/XSD:NEXTI
1310 FORI=1TON2:Y1(I)=(Y(I)-MY)/YSD:NEXTI
1499 REM *****
1500 REM *   ROUNDING *
1501 REM *****
1510 MX=INT(MX*1000)/1000:MY=INT(MY*1000)/1000:IFQ$="1"GOTO1550
1520 R=INT(R*1000)/1000
1530 SL=INT(SL*1000)/1000
1540 A=INT(A*1000)/1000
1550 XSD=INT(XSD*1000)/1000:YSD=INT(YSD*1000)/1000:IFQ$="1"GOTO2000
1560 FORI=1TOJ
1570 X1(I)=INT(X1(I)*1000)/1000:Y1(I)=INT(Y1(I)*1000)/1000
1580 NEXTI
1597 REM *****
1598 REM *   PRINT RESULTS *
1599 REM *****
2000 OPEN2,4:IFQ$<>"3"GOTO2020
2010 PRINT#2,TAB(24)"PEARSON PRODUCT-MOMENT ANALYSIS":GOTO2090
2020 PRINT#2,TAB(18)"'T' TEST OF DIFFERENCES BETWEEN MEANS"
2021 FORI=1TON1:X1(I)=INT(X1(I)*1000)/1000:NEXTI
2022 FORI=1TON2:Y1(I)=INT(Y1(I)*1000)/1000:NEXTI
2090 PRINT#2," "
2100 PRINT#2,TAB(5)X$;:PRINT#2,TAB(42-LEN(X$))Y$
2110 PRINT#2," "
2200 PRINT#2,TAB(2)"SCORE";:PRINT#2,TAB(12)"Z";
2210 PRINT#2,TAB(25)"SCORE";:PRINT#2,TAB(12)"Z"
2290 PRINT#2," "
2300 FORI=1TOJ
2310 PRINT#2,TAB(2)X(I);:PRINT#2,TAB(12-LEN(STR$(X(I))))X1(I);
2320 PRINT#2,TAB(28-LEN(STR$(X1(I))))Y(I);
2340 PRINT#2,TAB(12-LEN(STR$(Y(I))))Y1(I)
2350 NEXTI
2400 PRINT#2," ":IFQ$="3"GOTO2419
2410 PRINT#2,TAB(5)"N="N1;:PRINT#2,TAB(39-LEN(STR$(N1)))"N="N2;:GOTO2420
2419 PRINT#2,TAB(30)"N="J
2420 PRINT#2,TAB(5)"MEAN="MX;:PRINT#2,TAB(37-LEN(STR$(MX)))"MEAN="MY
2430 PRINT#2,TAB(5)"STD. DEV.="XSD;
2440 PRINT#2,TAB(33-LEN(STR$(XSD)))"STD. DEV.="YSD:PRINT#2," "
2450 IFQ$="3"GOTO2600
2460 PRINT#2,TAB(27)"F="F;" (DF="N1+N2-2;)"":PRINT#2:IFQ$="2"GOTO4100
2501 GOTO2590
2510 PRINT#2,TAB(24)"CORRELATION="R;" (DF="J-1;)"

```

```

0090 REM *****
2000 OPEN2,4:IFQ$<>"3"GOTO2020
2010 PRINT#2,TAB(24)"PEARSON PRODUCT-MOMENT ANALYSIS":GOTO2090
2020 PRINT#2,TAB(18)"'T' TEST OF DIFFERENCES BETWEEN MEANS"
2021 FORI=1TON1:X1(I)=INT(X1(I)*1000)/1000:NEXTI
2022 FORI=1TON2:Y1(I)=INT(Y1(I)*1000)/1000:NEXTI
2090 PRINT#2," "
2100 PRINT#2,TAB(5)X$;:PRINT#2,TAB(42-LEN(X$))Y$
2110 PRINT#2," "
2200 PRINT#2,TAB(2)"SCORE";:PRINT#2,TAB(12)"Z";
2210 PRINT#2,TAB(25)"SCORE";:PRINT#2,TAB(12)"Z"
2270 PRINT#2," "
2300 FORI=1TOJ
2310 PRINT#2,TAB(2)X(I);:PRINT#2,TAB(12-LEN(STR$(X(I))))X1(I);
2320 PRINT#2,TAB(28-LEN(STR$(X1(I))))Y(I);
2340 PRINT#2,TAB(12-LEN(STR$(Y(I))))Y1(I)
2350 NEXTI
2400 PRINT#2," ";IFQ$="3"GOTO2419
2410 PRINT#2,TAB(5)"N= "N1;:PRINT#2,TAB(39-LEN(STR$(N1)))"N= ";N2:GOTO2420
2419 PRINT#2,TAB(30)"N= ";J
2420 PRINT#2,TAB(5)"MEAN=";MX;:PRINT#2,TAB(37-LEN(STR$(MX)))"MEAN=";MY
2430 PRINT#2,TAB(5)"STD. DEV.=";XSD;
2440 PRINT#2,TAB(33-LEN(STR$(XSD)))"STD. DEV.=";YSD:PRINT#2," "
2450 IFQ$="3"GOTO2600
2500 PRINT#2,TAB(27)"I= ";I;" (DF=";N1+N2-2;)"":PRINT#2:IFQ$="2"GOTO4100
2501 GOTO2990
2600 PRINT#2,TAB(24)"CORRELATION=";R;" (DF=";J-1;)" "
2610 PRINT#2,TAB(24)"SLOPE=";SL
2620 PRINT#2,TAB(24)"Y INTERCEPT=";A:PRINT#2
2670 CLOSE2
2700 PRINT"":INPUT"ANOTHER ANALYSIS (Y/N)";C$
2800 IFC$="Y"GOTO20
2900 STOP
EADY

```

TOWARD AN INTERPERSONAL PARADIGM FOR  
SUPERIOR-SUBORDINATE COMMUNICATION

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An Abstract of a Dissertation  
Presented to  
The Faculty of the Graduate School of Arts and Sciences  
University of Denver

---

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

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by  
Terry L. Bangs  
November 1983

## ABSTRACT

The purpose of this dissertation is to report formula-  
tive research on an interpersonal paradigm for superior-  
subordinate communication. The suggested paradigm goes  
beyond traditional structural approaches to leadership and  
rests on the interpersonal perception theory of Laing,  
Phillipson, and Lee. This research is based on the belief  
that a relationship exists between the openness of a leader's  
communication, as perceived by a subordinate, and the open-  
ness of the subordinate's communication with the leader. The  
following theoretical propositions were tested:

1. Highly confirming behavior by a superior, as perceived  
by an immediate subordinate, is related to a high  
degree of subordinate feedback.
2. Highly confirming behavior by a superior, as that  
behavior is perceived by a subordinate, is related  
to greater communication of creativity from the subor-  
dinate to the superior.
3. High superior disclosure, as perceived by a subordinate,  
is related to a high degree of subordinate feedback.
4. A high degree of superior accessibility, as perceived by  
a subordinate, is related to greater communication of  
creativity from the subordinate to the superior.

5. A high degree of superior accessibility, as perceived by a subordinate, is related to a high degree of subordinate feedback.

The Perceived Open-Mindedness Scale, the Perceived Confirmation Index, The Supervisor Disclosure Scale, The Supervisor Visibility Scale, the Test of Subordinate Feedback and the Test of Subordinate Creativity were the six instruments used to test the propositions. These instruments were administered to thirty-nine superior-subordinate pairs drawn from among United States Air Force officer and enlisted members stationed at two different locations. The resulting data were evaluated using chi-square, Pearson Product-Moment, and "t" tests.

Though none of the hypotheses was entirely supported, data analyses showed significant relationships among perceived superior confirmation, perceived superior open-mindedness, and subordinate specificity. In addition, tests showed that significant differences exist between officer subordinates' and enlisted subordinates' perceptions of their respective superiors, especially in perceived confirmation and perceived open-mindedness. Future research using larger, more diverse samples, and more direct measures of subordinate feedback and creativity, may yield more generalizable results.



**FILM**  
**1-8**