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AN INVESTIGATION OF ORGANIZATIONAL COMMUNICATION
AND ITS RELATIONSHIP TO TWO ORGANIZATIONAL
MODELS INVOLVING JOB PERFORMANCE AND
JOB SATISFACTION

DISSERTATION

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas

August, 1985

JRB

Goris, Jose R., An Investigation of Organizational Communication and Its Relationship to Two Organizational Models Involving Job Performance and Job Satisfaction, Doctor of Philosophy (Organization Theory and Policy), North Texas State University, August, 1985, 395 pp., 38 tables, 5 figures, bibliography, 136 entries.

The correlates of organizational communication to other organizational constructs have been scarcely researched. Two constructs of interest to management researchers and practitioners are job performance and job satisfaction. This interest arises from the fact that the quality of organizational life and effectiveness may be determined by the quality of the two constructs.

This study investigates the moderating influence of organizational communication on two models involving the variables of performance and satisfaction: (1) the relationship between performance and satisfaction and (2) the relationship between the congruence of the individual and the job with performance and satisfaction. Organizational communication is assessed in terms of ten dimensions: trust in superiors; influence of superiors; accuracy of information; desire for interaction; communication satisfaction; overload and underload information; and upward, downward, and lateral communication.

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Executives, research and middle management people, office workers, and manufacturing individuals from two firms provided the data for the study. An expected moderating influence was evaluated through differential validity or differential predictability, as appropriate, and moderated regression analysis.

Organizational communication received very weak support as a moderator of both the relationship between the target variables of performance and satisfaction and the individual-job congruence association with the same target variables. Accuracy of information, desire for interaction, and directionality of communication--upward, downward, and lateral--received support as moderators of particular performance/satisfaction relationships. Trust in superiors, influence of superiors, accuracy of information, and desire for interaction acted as moderators of specific individual-job congruence relationships with performance and satisfaction.

Organizational communication received moderate-to-strong support as a predictor of the two relationships researched. Thus, either as a moderator or as a predictor, communication constitutes an avenue for improving the quality of organizational life and effectiveness; the performance and satisfaction of individuals may be fostered through communication.

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CHAPTER I

INTRODUCTION

Mechanical systems are generally activated and coordinated through electrical impulses. However, social systems are different. They are activated and coordinated mainly through communication. Consequently, the importance of communication in organizational functioning is well recognized by organizational theorists. Nevertheless, there remains a noticeable need to relate organizational communication measures to other organizational concepts (56, 57). The correlates of organizational communication to other organizational constructs have been scarcely investigated.

Organization theory has to do with organizational functioning, and organizational functioning depends on communication (1, 2, 39). Therefore, as a field of study, organization theory should provide for a better understanding of the role of communication in organizational functioning. This research is intended to constitute an essential step toward the improvement of such understanding. It investigates the moderating impact of organizational communication on two models: the relationship between job performance and job satisfaction, and the individual-job congruence relationship with both job performance and job

satisfaction, separately. The justification of this study is highlighted below. It includes a description of the two models investigated.

Justification of Research

The discussion of the appropriateness of the present research begins by emphasizing the importance of communication in organizations. It then turns to the need for relating organizational communication to other organizational constructs. The discussion of this need includes a description of the two basic models investigated, the relationship between job performance and job satisfaction, and the individual-job congruence relationship with job performance and job satisfaction. After these two models are introduced, attention then focuses on the rationale for investigating the moderating impact of organizational communication on each one of them. The rationale for investigating the moderating influence of organizational communication on the job performance relationship with job satisfaction is presented first, and is followed by the reasonableness for studying the moderating impact of the same variable on the individual-job congruence relationship with performance and satisfaction.

Importance of Communication in Organizations

The importance of communication for organizational functioning has been long recognized by behavioral and

organizational theorists. It has been argued that without the capacity to obtain and disseminate information, the very survival of an organization may be threatened. Communication has been viewed as being so vital for organizations that several theorists have written extensively in this area. Barnard, one of the first theorists to write about the importance of communication in organizations, stated that "in an exhaustive theory of organization, communication would occupy a central place, because the structure, extensiveness, and scope of organization are almost entirely determined by communication techniques" (1, p. 91).

Bavelas and Barrett theorized that it is entirely acceptable to view an organization as "an elaborate system for gathering, evaluating, recombining, and disseminating information" (2, p. 368). They argued that communication should not be considered a secondary or derived aspect of organizations, but the essence of all organized activity. They viewed communication as a process out of which all other functions are derived.

Lesikar, while considering the role of communication in organizations, indicated that communication "... is vital to the functioning of organizations . . . (and) we could go so far as to say that organizations exist through communication" (39, p. 4). This importance is further recognized by Rogers and Rogers who argue that "communication is the lifeblood of an organization; if we could

somehow remove communication flows from an organization, we could not have an organization" (59, p. 7). Numerous other authorities also support this concept. Therefore, the importance of communication in organizations is well established.

The Need for Relating Organizational Communication
to Other Organizational Constructs

Inasmuch as the importance of communication in organizations is well recognized, what remains is a need for relating communication measures to more theoretically established organizational concepts. This approach is needed as an essential step in the process of theory development in organizational communication. Porter and Roberts concede that communication is an area rich in "contingent, interactive effects," but that a "clarifying perspective" does remain hidden. The need for a better understanding of communication in organizations is presented by Porter and Roberts as follows:

There have been some advances in the last decade or so with respect to increasing our understanding of communication as it is found in the organizational context, but we are a very long way from achieving adequate comprehension (56, p. 1554).

If communication is so important in organizational functioning, as it has been argued, advances must take place in the study and understanding of communication in organizations. This increase in the understanding of organizational communication, which is the purpose of this

research, should take place before a sound theory of organizational communication can be developed. Roberts and O'Reilly have recognized this need and have stated that "theories relevant to communication in organizations cannot be developed until facets of organizational communication are specified and some of their correlates identified." Such mapping procedures, they emphasize, "have not been carried out" (57, p. 42). The current research studies the role of communication dimensions on the quality of organizational life and effectiveness.

The quality of organizational life and effectiveness has been conceptualized in terms of high levels of employee satisfaction and performance (10, 19, 45, 72). Consequently, these two constructs, performance and satisfaction, have come to be of interest to management researchers and practitioners. This interest is because it has been argued that the quality of these two variables within an organization may determine the success or failure of it (72).

As a consequence of the above interest, researchers in particular have investigated the relationship between job performance and job satisfaction, as well as the variables that may predict such outcomes (4, 16, 22, 28, 77). Two of the variables that have received attention, while procuring the prediction of job performance and job satisfaction, are job scope and growth need strength (20, 53). It has been argued that an appropriate match between job characteristics

(job scope) and individual needs (growth need strength) fosters high levels of the two outcome variables of performance and satisfaction. From this conceptualization, the individual-job congruence/job performance/job satisfaction model has emerged (16, 28). So this model and the relationship between the outcome variables themselves have been widely investigated.

The investigations conducted, however, concerning the relationship between the target variables of performance and satisfaction and the individual-job congruence relationship with the same target variables are plagued with inconsistent results. As a consequence, some researchers have argued that moderators may be influencing these results, and that such moderators should be identified (6, 45, 62). The "moderator approach" is a systematic way of studying in what manner other organizational and/or individual facets exert their influence and alter the relationship between target variables, or how these facets operate as boundary conditions beyond which discovered relationships may not exist or may exist in a different form (18). This investigation is conducted on the assumption that organizational communication may be one of those organizational variables that may exert a moderating effect on the two models already described. Thus, the purpose of the present research is to investigate the moderating impact of organizational communication on the job performance/job

satisfaction relationship and on the individual job congruence/job performance/job satisfaction model. Hopefully, this investigation will help to clarify the nature of these two models as well as the role of communication in organizations.

Having reviewed the importance of communication in organizations and the need for relating it to other organizational constructs, the intent now is to discuss the rationale for considering organizational communication as a feasible moderator of the above two models. The rationale for expecting organizational communication to moderate the relationship between job performance and job satisfaction is offered first. It is then followed by the reasonableness for expecting the same variable to influence the individual-job congruence relationship with performance and satisfaction.

Rationale for Investigating the Moderating
Influence of Organizational Communication
on the Job Performance Relationship
with Job Satisfaction

The actual presentation of the rationale for expecting organizational communication to moderate the relationship between job performance and job satisfaction is enhanced by reviewing two related aspects. First of all, the background of the performance/satisfaction relationship is further expanded. And secondly, a description of the moderating approach for studying this same relationship is reviewed.

Background of the relationship between job performance and job satisfaction.--Reviews of the literature concerning the relationship between performance and satisfaction indicate that attempts to find a consistent and meaningful relationship between these variables have been largely unsuccessful (4, 22, 77). This unsuccessful attempt has been substantiated by reviews conducted by Brayfield and Crockett (4); Herzberg, Mausner, Peterson, and Capwell (22); and Vroom (77). The findings of these researchers are synthesized below.

Brayfield and Crockett's (4) review, the first to be conducted, has had a profound impact on later thinking and research. In many respects newer theoretical models concerning the job performance/job satisfaction relationship are only restatements of their concepts in different terms. After reviewing more than fifty studies, Brayfield and Crockett made the following conclusion:

it appears that there is little evidence in the available literature that employee attitudes of the type usually measured in morale surveys bear any simple--or for that matter, appreciable--relationship to performance on the job (4, p. 408).

The second major review was published by Herzberg, Mausner, Peterson, and Capwell (22). They were somewhat less restrictive in the kinds of studies they accepted as supporting the job performance/job satisfaction relationship and arrived at a more optimistic conclusion. Herzberg and his colleagues concluded that "there is a frequent evidence

for the often suggested opinion that positive job attitudes are favorable to increased productivity" (22, p. 103). However, they recognized that such relationship was not absolute. The studies that these authors reviewed reported generally a weak, though usually positive, relationship between job performance and job satisfaction.

The third significant review of the job performance/job satisfaction relationship was contained in Vroom's (77) text dealing with work motivation. Summarizing only those investigations reporting a correlation coefficient between performance and satisfaction, he found the median correlation for twenty-three cases to be $r = .14$. Although the correlations ranged from $-.31$ to $+.86$, twenty out of twenty-three coefficients were positive. Vroom concluded that "there is no simple relationship between job satisfaction and job performance . . . and the median correlation of $.14$ has little theoretical or practical significance" (77, p. 186).

Taken together, the above major reviews show that the relationship between the target variables, job performance and job satisfaction, is highly variable. However, they also indicate that, on the average, the two constructs are weakly or moderately related in the positive direction. These conclusions have been substantiated by three more recent reviews by Katzell, Barrett, and Parker (30); Fisher (12); and Srivastva, Salipante, and Cummings (70).

Schwab and Cummings (62) noted the highly variable and weak or moderate relationship between the target variables. They observed that these conditions may result from the impact of organizational and/or individual moderators. Consequently, they recommended additional research on the identification of specific conditions that may moderate such relationship. "We . . . urge researchers," they said, "to obtain as much information about potential moderating variables as their data sources and methodological skills permit" (62, p. 429).

The moderating approach to the study of the job performance/job satisfaction relationship.--Schwab and Cummings' view suggesting that moderating variables may be influencing the relationship between job performance and job satisfaction has been supported by Srivastva, Salipante, and Cummings (70). These last authors have observed that the target variables, performance and satisfaction, may be strongly and positively related in some situations, and only weakly or even negatively related in other circumstances. Although the moderating approach to the study of the relationship of the target variables has only been implemented recently, the idea is not new. In 1955, Brayfield and Crockett (4) had criticized researchers for paying too little attention to individual and organizational factors in job performance/job satisfaction relationship studies.

More recent studies concerning the relationship between job performance and job satisfaction have also shown inconsistent results. For example, Greene and Organ (14), LaFollette and Sims (35), Locke (40), Slocum (68), and Sheridan and Slocum (64) reported a positive relationship between job performance and job satisfaction. On the other hand, Friedlander and Greenberg (13), Hulin (23), Lawler and Hall (37), and Schneider and Snyder (61) reported a lack of relationship. These discrepant findings could be due to a variety of factors including differences in methodology, but they do increase the plausibility that moderating influences may be operating.

Research has already been conducted which points out that the job performance/job satisfaction relationship may indeed vary as a result of the moderating impact of some variables. One of these variables is self-esteem. In an experimental study, Korman (34) found that subjects' self-esteem moderated the relationship between task success (performance) and task liking (satisfaction). Subsequent investigations have supported Korman's findings (15, 25, 42, 65).

In a study conducted among female first-level supervisors in a large public utility, Steers (71) found that n Ach (need for Achievement) was a moderator of the job performance/job satisfaction relationship. Among other researchers, Lawler and Porter (38); Kessleman, Wood, and

Hagan (31); and Cherrington, Reitz, and Scott (9) have presented data indicating that reward may represent another important moderator of the performance-satisfaction relationship. Other researchers have also found that organizational level (18, 67, 74), job fit (8), organizational pressure for performance and experienced time pressure (3), as well as participation in decision making and task characteristics (18) are potential moderators of the job performance/job satisfaction relationship.

Taken together, the literature reviewed substantiates the existence of eight moderators of the job performance/job satisfaction relationship. They are highlighted in Figure 1. Some researchers have suggested that further investigations should be conducted in order to identify other personal and situational variables that may be moderating the proposed relationship (3, 26). Bhagot has specifically emphasized the need for "further investigations of situational contingencies that influence the strength of

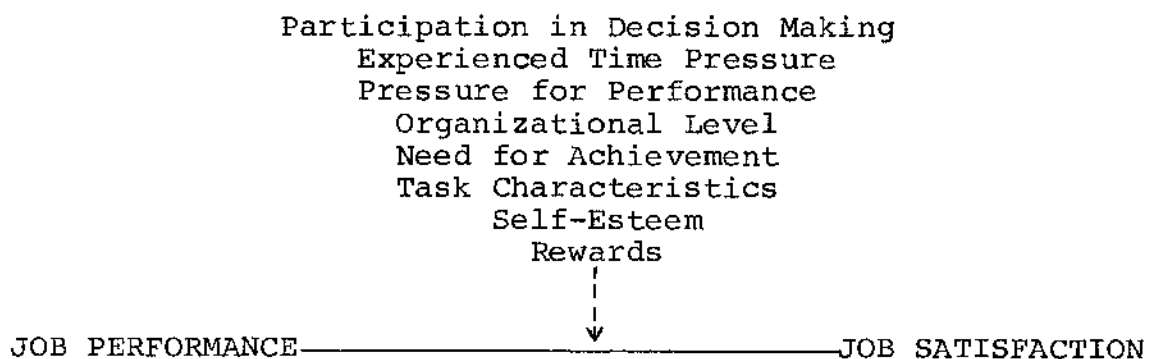


Fig. 1--Variables shown to moderate the relationship between job performance and job satisfaction.

performance-satisfaction relationships" (3, p. 786). The present research intends to investigate the moderating effect of organizational communication on the relationship of the two identified variables.

Organizational communication as an expected moderator of the relationship between job performance and job satisfaction.--The current investigation proposes that organizational communication is one of those situational variables that possibly exert a significant impact on the job performance/job satisfaction relationship. Such proposition emerges from two factors. First of all, Schwab and Cummings (62) theorize that variables which differentially affect satisfaction and performance become potential moderators of satisfaction/performance relationships. Since organizational communication has been shown to be related to both job satisfaction and job performance (27, 29, 44, 48, 63), Schwab and Cummings' theory reasonably makes the researcher expect organizational communication to moderate the job performance/job satisfaction relationship.

Secondly, Porter and Lawler (54) hypothesized and found support for the proposition that variations in job performance are primarily responsible for variations in satisfaction. Through a review of the literature, Schwab and Cummings (62) found support for this proposition. Therefore, since organizational communication has been shown

to be related to job performance (24, 29, 32, 50, 51, 69), it seems appropriate to expect organizational communication to moderate the relationship between job performance and job satisfaction. Additional theoretical and empirical information for expecting organizational communication to moderate the proposed relationship is presented in the third chapter of this dissertation.

Rationale for Investigating the Moderating Influence
of Organizational Communication on the Individual-
Job Congruence Relationship with Job Performance
and Job Satisfaction

The reasonableness for expecting organizational communication to moderate the individual-job congruence relationship with performance and satisfaction is enriched by considering two related factors. First, some further background of the individual-job congruence/job performance/job satisfaction model is presented. And second, a description of the moderating approach for studying the above model is offered.

Background of the individual-job congruence/job performance/job satisfaction model.--There have been many attempts to define the best way to operate organizations. Until recently, the argument had been for a humanistic/participative approach versus a bureaucratic/classical approach. Morse and Lorsch indicated that "during the past 30 years, managers have been bombarded with two competing approaches (classical versus participative) to the problem

of human administration and organization" (43, p. 61). But the fact is that most management theorists and practitioners have had to contend with the inadequacy of universal principles. Because no guidelines are offered regarding the conditions under which a given principle may apply, universal principles have become of little theoretical or practical value (70). As a consequence, the contingency approach to management has emerged. It considers that "the task of managers is to identify which technique will, in a particular situation, under particular circumstances, and at a particular time, best contribute to the attainment of management goals" (73, p. 54). This new perspective has facilitated the managerial task of dealing with diverse conditions.

In an attempt to deal with different conditions faced by organizations, organizational and behavioral theorists have developed several "contingency" models. Those models are intended to respond to specific situations and to specific individuals. They also have the expressed purpose of improving organizational effectiveness and the quality of work life. One of those contingency approaches is that of the individual-job congruence model (16). Individual-job congruence refers to the extent to which the growth needs of the individual match the motivational characteristics of the job being performed (16). This contingency model suggests that individuals with strong growth needs will respond favorably to high scope (enriched) jobs,

whereas individuals with low growth need strength will respond less favorably. More specifically, it has been argued that a correct match between the employee's needs and the characteristics of the job should result in high levels of performance and satisfaction. Therefore, high levels of performance and satisfaction are predicted for high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs. Consequently, the individual-job congruence model involves two submodels, the high and the low individual-job congruence submodels.

Some researchers have found support for the individual-job congruence/job performance/job satisfaction approach. Hackman and Lawler examined its appropriateness among 270 employees of an eastern telephone company and reported that "higher order need strength do in fact show differential responsiveness to jobs high on the core dimension" (20, p. 278). Hackman and Lawler's conclusions also included the following statement:

The results of this study suggest that there are important interdependencies among the characteristics of individuals and the characteristics of jobs which must be taken account of in the development of any full understanding of the impact of various kinds of job designs (20, p. 280).

Hackman and Lawler's reported findings have been substantiated by Wanous (78); O'Reilly (49); Brief and Aldag (5); Hackman and Oldham (21); Sims and Szilagyi (66); and Pierce, Dunham, and Blackburn (53). Consequently,

the individual-job congruence model, based on a match between job characteristics and individual growth need strengths, has received general recognition (16, 28).

It should be noted, however, that the findings have not always been consistent. In a job enrichment field experiment, Lawler, Hackman, and Kaufman (36) found no evidence of moderating effects for higher order need strength. Similarly, Cummings and Griggs (11) found that higher order need strength produced an inconsistent pattern of moderating effects in a sample of fifty-six blue-collar employees with nine months of experience in autonomous work groups. It has also been shown that when individual growth need strength scores were used to match jobs and employees, the effects were more determinant on job satisfaction than on job performance (76). Recent literature reviews have also reported inconsistent results (17, 79). These inconsistent findings have made some organizational theorists think that further study within an expanding framework of the individual-job congruence model should be conducted if meaningful proportions of performance and satisfaction are to be explained. This new conceptualization has resulted in the moderating approach to the study of the described model.

The moderating approach to the study of the individual-job congruence/job performance/job satisfaction model.--

Several authors have called attention to the possibility

that an individual's reaction to his or her job may be influenced not only by the properties of the job and his or her needs, aptitudes, and motives, but also by the nature of the work context or organizational "milieu" surrounding the job (6, 45, 55). As a result of this view, the moderating approach to the study of the individual-job congruence/job performance/job satisfaction model has emerged.

In 1981, Clayton (10) stated that the empirical work examining moderator effects on the individual-job congruence/job performance/job satisfaction model was practically nonexistent. He reported that only Griffin (16) had examined this approach. However, for the time of the current investigation, the present researcher was able to locate five different studies concerning this area.

Oldham, Hackman, and Pearce (47) analyzed data from 210 respondents of a large metropolitan bank. The analysis showed that contextual factors such as pay, security, interpersonal relations, and supervision influenced the individual-job congruence relationship with job performance. Based on their findings, Oldham, Hackman, and Pearce arrived at the following conclusion:

individuals are most likely to perform well on an enriched job when they are desirous of growth satisfactions and satisfied with the organization's internal environment. If only one of these two conditions is present, a less strong relationship between the job characteristics and the outcome measures is expected (47, p. 401).

Pierce, Dunham, and Blackburn (53) conducted a study among 397 employees of an insurance company and found the highest levels of performance and satisfaction among individuals with strong growth needs who performed complex jobs within organic organizational units. They suggested that "full effects of job design cannot be understood without knowledge of both the worker (GNS) and the organization (social system structure)" (53, p. 239). James (28) also found support for this proposition.

Analyzing data from 171 employees of a multinational corporation, Griffin (16) found that predicted causal inference relationships between leader behavior(s) and performance and satisfaction were not supported for the congruent situations. His interpretation of his finding indicates that "when individual-task congruence is high, there is little the leader can and/or should do" (16, p. 680). This conclusion was later substantiated by Clayton (10).

Clayton (10) investigated the moderating effect of thirteen substitutes for leadership on the individual-job congruence/job performance/job satisfaction model. He found that three of them influenced the individual-job congruence relationship with job satisfaction. These three potential moderators were identified as subordinate need for independence, intrinsically, satisfying tasks, and closely-knit, cohesive interdependent work groups.

In summary, the preceding review provides support for eight variables as moderators of the individual-job congruence/job performance/job satisfaction model. The moderating influence of these eight variables is exerted differently on the described model, as shown in Figure 2. Organizational structure, inter-personal relations, supervision, security, and pay have received support as moderators of the individual-job congruence relationship with job

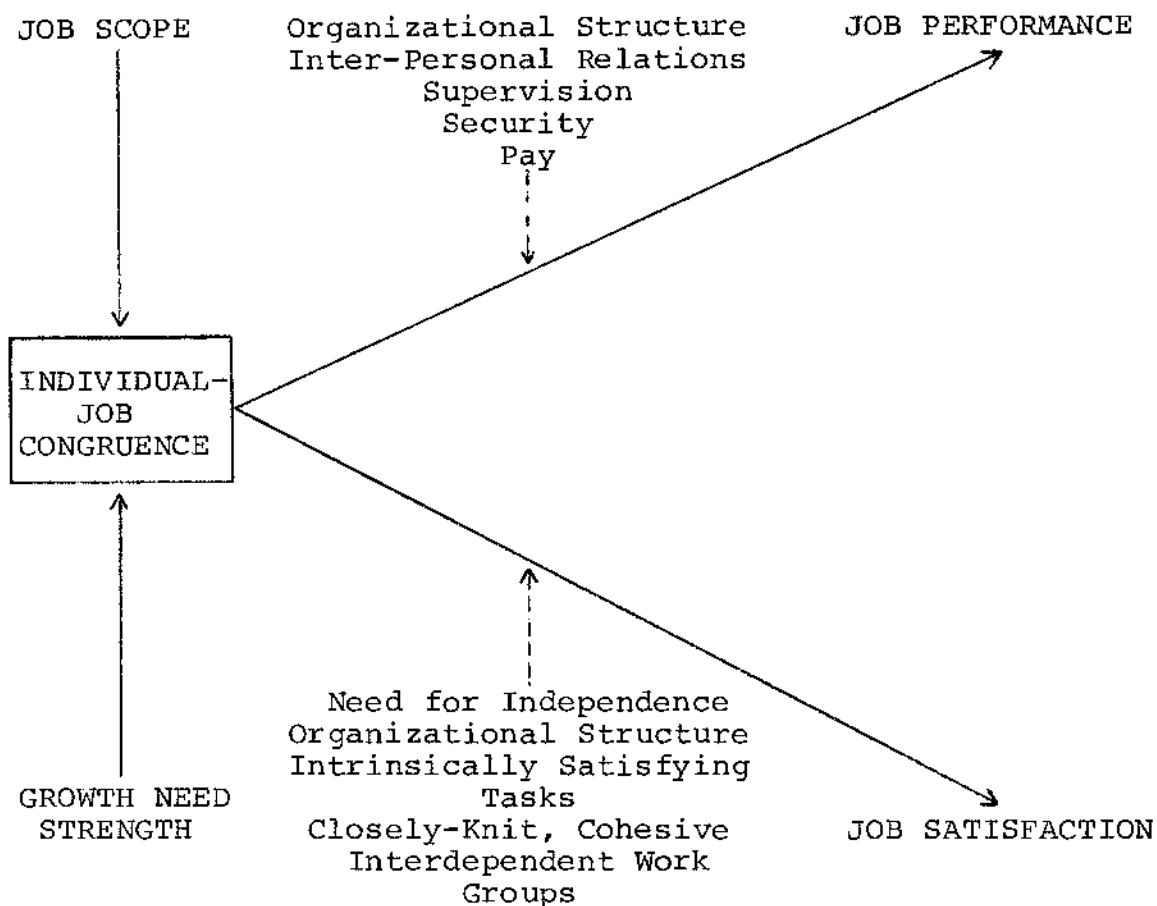


Fig. 2--Variables shown to differentially moderate the individual-job congruence relationship with job performance and job satisfaction.

performance. On the other hand, the relationship between the individual-job congruence and job satisfaction has been reported to be moderated by organizational structure, need for independence, intrinsically satisfying tasks, and closely-knit, cohesive interdependent work groups. These findings point to an expanded view of individual-job relationships. Work outcomes, such as job performance and job satisfaction, may depend on the job, the person, and the broader work situation. It is considered that this proposition needs further investigation before the proposed contingency/congruence approach, the individual-job congruence/job performance/job satisfaction model, is abandoned for the more controversial "one-best-way" approach (28). It is the contention of this research that organizational communication may be one of those organizational variables that may exert a moderating effect on the proposed contingency/congruence model.

Organizational communication as an expected moderator of the individual-job congruence relationship with job performance and job satisfaction.--Recognizing the need for a better approach to the study of the proposed contingency-congruence model, some organizational theorists (e.g., 45, 55) have expanded the individual-job congruence model and have offered a more comprehensive model to predict both performance and satisfaction. This model suggests that

desired employee behavior and attitudes are contingent upon the individual-job design-organizational structure congruence. When organizational structure is considered equivalent to organizational communication, this new model serves as a basis for expecting communication to moderate the individual-job congruence/job performance/job satisfaction model. The rationale for this view is presented below.

The individual-job design-organizational structure congruence model has been theorized by Nemiroff and Ford (45) and Porter, Lawler, and Hackman (55). Nemiroff and Ford (45) hypothesized that task effectiveness, performance, and human fulfillment would be highest and absenteeism would be lowest under certain conditions: (1) when the higher order need strength of the individual is high and the bureaucratic orientation is low, when the job design is complex and when the organizational structure is organic; and (2) when the individual is low in higher order need strength and high in bureaucratic orientation, when the job design is simple, and when the organizational structure is mechanistic. Likewise, the Porter, Lawler, and Hackman (55) congruence model predicted high quality performance, high satisfaction, good attendance, and low turnover when the individual is high in growth needs, when the job is enriched, and when the organizational design is organic. The same model also predicted that a congruent condition will be present when the individual is low in growth needs, when

the job is simple, and when the organizational design is mechanistic.

Mechanistic and organic organizational structures have been described by certain characteristics of communication in organizations. In describing a mechanistic organization, Burns and Stalker (7) first indicated that jobs and assignments are broken down into specialties, or into something less than can be identified as a whole job or assignment to a particular problem. The authority and activities of each position or role are precisely defined. The remainder of the description of a mechanistic system treats mainly the direction of information flow.

Interaction within management tends to be vertical, i.e., between superior and subordinate. Operations and working behavior are governed by instructions and decisions issued by superiors. This command hierarchy is maintained by the implicit assumption that all knowledge about the situation of the firm and its tasks is, or should be, available only to the head of the firm. Management, often visualized as the complex hierarchy familiar in organization charts, operates a simple control system, with information flowing up through a succession of filters, and decisions and instructions flowing downwards through a succession of amplifiers (7, p. 5).

On the other hand, in describing an organic organization, Burns and Stalker pointed out that individuals in such systems have to know the tasks or objectives of the firm as a whole in order to perform their assignments. Again, as in the description of a mechanistic structure, the remainder of the description of an organic structure mainly concerned the direction of information flow.

Jobs lose much of their formal definition in terms of methods, duties, and powers, which have to be redefined continually by interaction with others participating in a task. Inter-communication between people of different ranks tends to resemble lateral consultation rather than vertical command. Omniscience can no longer be imputed to the head of the concern (7, p. 6).

Nemiroff and Ford (45) and Porter, Lawler, and Hackman (55) discuss the individual-job design-organizational structure congruence model to predict performance and satisfaction. Burns and Stalker (7) interpret organizational structure in terms of information flow. When this interpretation is considered, it seems appropriate to expect organizational communication to moderate the individual-job congruence/job performance/job satisfaction model. The fact that some researchers (e.g., 44, 50) have found organizational communication to be related to both job performance and job satisfaction offers additional support to this expectation. An expanded view for expecting organizational communication to moderate the individual-job congruence/job performance/job satisfaction model is presented in the third chapter.

The justification for conducting the present investigation reaches its final stage. The importance of communication in organizational functioning has been reviewed as well as the need for relating it to other organizational constructs. The constructs of job performance and job satisfaction have been identified as the target variables; and the reasonableness for studying the

moderating influence of organizational communication on the relationship of these target variables, performance and satisfaction, and on the individual-job congruence relationship with the same variables has also been presented. Attention now turns to the statement of the problem which prompted the current research. The description of the problem is followed by the delineation of the purpose of the study, the research questions and hypotheses, the significance of the investigation, the limitations, and the scope of the current research, in that order. The first chapter terminates with a summary and preview of the entire dissertation. Hopefully, the content of these new sections will expand the rationale and extent of the actual investigation.

Statement of the Problem

As previously documented, the significance of communication in organizations is well recognized. What remains is the need for conducting empirical work relating this construct to more theoretically established organizational concepts. This work is needed as a fundamental step in the process of theory development in organizational communication. The problem of this investigation is to analyze the moderating impact of organizational communication on the relationship between job performance and job satisfaction and the individual-job congruence/job performance/job satisfaction model.

Purpose of the Study

The primary focus of this research is twofold. First of all, the relationship between job performance and job satisfaction has itself become a focus of study, and recommendations have been made to identify moderating variables that may have an influence on such a relationship. This study explores the impact of organizational communication on the job performance/job satisfaction relationship. The hypothesized impact of organizational communication on the relationship between job performance and job satisfaction is graphically presented in Figure 3.

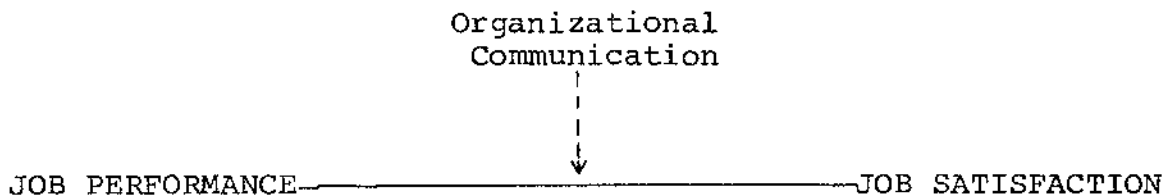


Fig. 3--Conceptual impact of organizational communication on the job performance/job satisfaction relationship.

Another purpose of the primary focus of this research is to explore the impact of organizational communication on the individual-job congruence model. The extent of this purpose is illustrated in Figure 4. In its original version, the individual-job congruence approach--a match between job and individual characteristics, as determined by job scope and growth need strength, respectively--is utilized to predict both job performance and job satisfaction, separately. However, it is being criticized because the

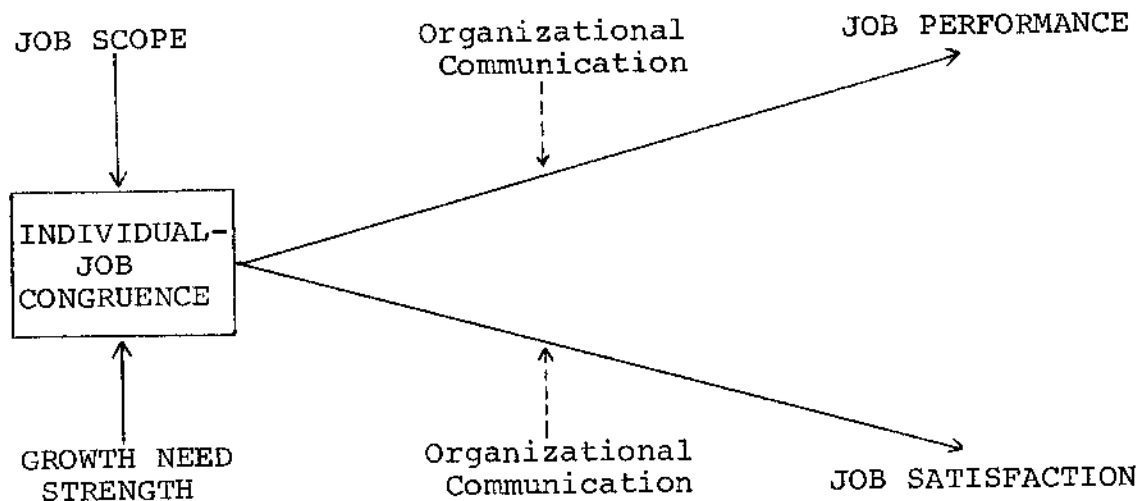


Fig. 4--Conceptual impact of organizational communication on the individual-job congruence/job performance/job satisfaction model.

findings have not always been consistent. Defenders of the contingency approach to management, on the other hand, contend that further research of the individual-job congruence approach should take place before it is abandoned for the more controversial "one best way" approach. This study investigates the moderating impact of organizational communication on the identified approach. More specifically, study is given to the moderating effect of organizational communication on the individual-job congruence relationship with both job performance and job satisfaction, independently.

The secondary focus of this research is to compute and briefly analyze the intercorrelations among the variables being studied: organizational communication, job satisfaction, job performance, growth need strength, and job scope. Special attention is given to the relationship of organizational communication to each of the other variables.

Research Questions and Hypotheses

The following three questions are investigated in this research.

1. Does organizational communication moderate the job performance/job satisfaction relationship?

2. Does organizational communication moderate the individual-job congruence/job performance relationship?

3. Does organizational communication moderate the individual-job congruence/job satisfaction relationship?

The first question relates to the first model being investigated, the relationship between the target variables of job performance and job satisfaction. On the other hand, the last two refer to the second model, the individual-job congruence relationship with the same target variables.

In order to procure responses to the three questions, this researcher implemented the process of the scientific approach for the study of organizational behavior, which appears to be essential for the development of organizational theory. He followed the six steps identified by Szilagyi and Wallace (75, p. 28). The six steps are (1) recognition of the problem or idea, (2) review of theories and models, (3) development of hypotheses, (4) selection of research design and methodology, (5) actual observation-test-experiment, and (6) interpretation of results.

Significantly, the delineation of acceptable hypotheses (step 3) is preceded by a review of the

pertinent literature (step 2). This sequence seems reasonable inasmuch as the literature review concerning pertinent theories and models serves to substantiate and justify the hypotheses to be tested. Following this logical procedure, the statements of the hypotheses researched in this study appear in Chapter III. The third chapter develops the conceptual framework for deriving the different hypotheses that are investigated.

Significance of the Study

Behavioral and organizational theorists have recognized the importance of communication in organizational functioning. Bavelas and Barrett manifested that it is entirely acceptable to view an organization as "an elaborate system for gathering, evaluating, recombining, and disseminating information" (2, p. 368). And Koontz and O'Donnell have indicated that "it is no exaggeration to say that communication is the means by which organized activity is unified" (33, p. 536). What remains is a need for improving the understanding of the impact of organizational communication on more established organizational constructs. This research is intended to constitute an improvement in this respect. It studies the moderating effect of organizational communication on both the job performance/job satisfaction relationship and on the individual-job congruence/job performance/job satisfaction model.

The fact that job performance and job satisfaction are key variables of the two models being investigated increases the relevance of this study. Management theorists and practitioners are interested in the relationship between job performance and job satisfaction as well as in the variables that may predict such outcomes. This interest results from the fact that performance and satisfaction are frequently used to determine both the quality of organizational life and the level of organizational effectiveness. It is expected that this investigation will expand the understanding of the job performance/job satisfaction relationship. Also, it should prove beneficial in understanding the prediction of both job performance and job satisfaction from the individual-job (job scope/growth need strength) congruence approach.

This contingency model, the individual-job congruence approach, is being criticized because inconsistent findings have been reported. However, it has been argued that an individual's reaction to his or her job may be influenced not only by the properties of the job and his or her needs, aptitudes, and motives, but also by the nature of the work context or organizational characteristics surrounding the job. It is considered that the addition of the organizational communication construct into the model may improve the practicality of such contingency congruence approach for predicting job performance and job satisfaction.

Besides evaluating the nature of the individual-job congruence approach and the job performance/job satisfaction relationship, this research may also have practical managerial impact. It may provide some specific guidelines in terms of what management may do to positively affect the investigated models positively, thereby providing for an increase in both organizational effectiveness and the quality of organizational life. More specifically, determining the moderating effect of some facets of organizational communication on the individual-job congruence approach may aid in identifying the managerial skills needed for increasing employee performance and satisfaction. For example, if desire for interaction is identified as a significant moderator of the individual-job congruence model, then one possible alternative may be to strengthen the manager's participative leadership skills where appropriate (e.g., involving employees in matters that relate to their work). Similarly, if overload communication, for example, shows a significant moderating effect on the job performance/job satisfaction relationship, then the managing information load may become a focus area for enhancing organizational effectiveness and the quality of organizational life.

In summary, the strengths of this investigation are as follows.

1. It increases the understanding of the job performance/job satisfaction relationship.

2. It improves the understanding concerning the prediction of both job performance and job satisfaction from the individual-job contingency approach.

3. It improves the understanding concerning the impact of communication in organizational functioning. Specifically, it provides knowledge on whether organizational communication moderates the relationships investigated, the job performance/job satisfaction relationship, and the individual-job congruence relationship with job performance and job satisfaction.

4. It impacts the practice of management by suggesting what managers may do to affect positively the performance/satisfaction and the individual-job congruence/job performance/job satisfaction relationships. Such suggestions may provide for an increase in both the quality of organizational life and organizational effectiveness.

Limitations

The most recognizable limitation of this study is the use of perceptual data. These data are collected through self-description inventories. Locke explains that the use of data collected through these instruments is dependent on two assumptions (41, p. 1335). First, the assumption of perfect (or at least reasonably good) self-insight, which involves both the capacity and willingness to introspect; and second, the assumption of a common core of meaning across individuals in interpreting the scales or items.

However, it is evident that not all individuals are aware or able to identify their feelings and that not all individuals interpret a given item in the same way. This situation poses serious problems to the administration of questionnaires. Therefore, the accuracy of the data used in this study is limited by the degree of participants' frankness and truthfulness.

This study is also limited by the instruments that were chosen to measure the different variables. The instruments that were used had already been developed by previous researchers and some of them had undergone considerable psychometric testing; however, for some of the variables there is little agreement among researchers as to the one best way to measure the constructs. The actual developmental stage of organizational theory, as a field of study, may be the reason for this lack of agreement.

Finally, another less apparent limitation concerns the validity of studying the moderating effect of organizational communication on both the job performance/job satisfaction and the individual-job congruence/job performance/job satisfaction relationships. Some researchers have contended that moderators do not exist (60). With regard to ability-to-performance associations, for example, Schmidt and Hunter (60) indicated that if the variability in validity coefficients across a wide range of work situations was to be accounted for by psychometric properties of measurement,

then it could not be concluded that such differences were due to systematic operation of moderators which explained the differences between those work situations. They examined a number of "statistical artifacts" (e.g., criterion reliability, predictor reliability, range restriction, etc.) and determined that from fifty to sixty-eight per cent of the variability in validity coefficients can be explained by such "statistical artifacts." Then Schmidt and Hunter made three conclusions:

1. It is unlikely that moderators exist.
2. If moderators exist, they are not very strong effects.
3. Since they represent very weak effects, then a very large sample size will be required to detect them.

Thus, Schmidt and Hunter's conclusions, together with White's (79) commentary that moderator effects in individual differences and task design outcomes are generally minimal and inconsistent, pose a bleak picture to the probability of detecting moderator variables.

However, other authors have been more positive (46, 52, 58). O'Connor and his colleagues (46) discussed several conceptual and methodological situations which could account for Schmidt and Hunter's and White's conclusion. O'Connor and his colleagues argue for (1) using more objective (as opposed to perceptual) measures of task characteristics, (2) focusing research on complementary levels of individuals

and task characteristics, and (3) utilizing larger samples and/or less rigorous significance criteria to achieve the necessary power for testing the moderating effects of individual differences. The present research is in part justified by the somewhat large sample investigated--the sample is described in Chapter IV. It is also enhanced by the reasonableness of expecting organizational and individual variables to moderate the job performance/job satisfaction relationship as well as the individual-job congruence model. In fact, empirical studies have already been conducted that substantiate this moderating expectation. As previously documented, specific moderators have already been identified. Consequently, the investigation of organizational communication as a feasible moderator of the two described models makes promise for practical management application. It is the objective of this study to provide reasonable statistical evidence to support or refute specific hypotheses predicting moderating effects.

Scope of Study

The present research is essentially an exploratory type of investigation. This exploratory approach occurs because of a scarcity of research literature directly related to the current study.

While evaluating the moderating effect of organizational communication on the strength of the job performance relationship with job satisfaction, the direction of the

relationship of the target variables is not considered. On the other hand, in the individual-job congruence/job performance/job satisfaction model, the variables determining the congruent situations, job scope and growth need strength, represent the independent variables. It should be recalled that these two variables, job scope and growth need strength, serve to measure job and individual characteristics, respectively. A match between job and individual characteristics is then used to predict both target variables, performance and satisfaction. Consequently, these last two variables are dependent ones. This research explores the impact of different levels of organizational communication facets on levels of job performance and job satisfaction of high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs.

In analyzing the intercorrelations among the research variables, special attention is given to the relationship of organizational communication with the other research variables, job satisfaction, job performance, job scope, and growth need strength. A need to identify and better understand the correlates of some of the facets of organizational communication justifies this position (57).

Summary and Preview of Dissertation

The justification for conducting the present research has been delineated in this first chapter. The research

problem and its relevance as well as the purpose, the research questions, the significance, the limitations, and the scope pertaining to this investigation have also been considered. While doing so, it has become apparent that the picture concerning the limitations and scope of the current study needs further consideration. It is obvious that the variables and the dimensions of the variables that are included in this research further delimit its scope. When the limitations of the study were reviewed, it was stated that the set of instruments that were finally chosen to measure the different variables would also delimit the scope of the research. Therefore, it appears appropriate to continue reviewing the variables and measurement instruments that have been adopted in this investigation. Besides enriching the scope of the present study, this review will also facilitate the comprehension of the hypotheses that are developed in Chapter III. However, before turning to such a review, it seems reasonable to finalize the current chapter with a preview of the entire dissertation.

Having established the background of the present research in Chapter I, attention is given in Chapter II to the definition and description of the variables adopted in this research. It also identifies the measurement instruments utilized to assess the adopted variables.

Chapter III reviews some of the more significant literature related to the study being conducted. Specific

hypotheses are developed concerning the expected moderating effect of organizational communication on the relationship between job performance and job satisfaction and on the individual-job congruence/job performance/job satisfaction model. These hypotheses were developed for testing purposes and are presented along with the literature review. Chapter IV, on the other hand, includes a detailed presentation of the methodology implemented in this investigation. It also provides a description of the means that have been used for collecting and analyzing the data.

Chapters V and VI highlight the results of the analysis of the data collected. Chapter V presents the findings concerning the expected moderating impact of organizational communication on the job performance relationship with job satisfaction. Chapter VI shows the results pertaining to the expected moderating effect of the same proposed moderator, organizational communication, on the individual-job congruence relationship with performance and satisfaction.

Finally, Chapter VII provides an overall summary of the research, along with an analysis and discussion of some of its findings. Some of the implications for management practice and research are also discussed.

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CHAPTER II

RESEARCH VARIABLES AND MEASUREMENT INSTRUMENTS

The definition and the description of each research variable are the focus of attention in this chapter. The instrument(s) used to measure each construct is (are) also identified. The purpose for placing these considerations at this stage is twofold. First of all, they improve the understanding of the limitations and scope of the actual investigation in terms of the variables and the measurement instruments adopted. And secondly, they facilitate the comprehension of the hypotheses that are developed and tested. These hypotheses are presented in the next chapter.

Five different variables constitute the framework within which this investigation takes place. These variables are job satisfaction, job performance, job scope, growth need strength, and organizational communication. Two models partially or completely representing this set of variables are researched. First, the expected moderating influence of organizational communication on the job performance/job satisfaction relationship is studied. And second, the proposed moderating effect of organizational communication on the individual-job congruence/job performance/job satisfaction model is also investigated.

Within the context of the individual-job congruence/job performance/job satisfaction model, the dependent variables are job performance and job satisfaction, separately. These variables are discussed first. The independent variables are job scope and growth need strength; these will be reviewed next. Job scope and growth need strength are the variables utilized for assessing job and individual characteristics, respectively. The congruence of these characteristics are utilized for predicting the outcome variables of performance and satisfaction. Finally, the proposed moderating variable, organizational communication, is presented.

Job Satisfaction

Much ambiguity has been reported to exist among theorists concerning the definition of job satisfaction. Schwab and Cummings identify three partially overlapping issues as being responsible for this ambivalence: (1) it is frequently unclear whether job satisfaction is being used in a "narrow," need deprivation sense, or in a "broad," attitudinal sense; (2) it is generally not clear which needs or which attitudinal referents are being considered; and (3) there is a question whether feelings of job satisfaction are generated with or without reference to conditions on other jobs (33, p. 421). The identified ambiguity has resulted in the preparation of a great diversity of "personalized measurement instruments" (24, p. 18), which make the interpretation and generalization of many empirical relationships difficult.

Locke's definition of job satisfaction is adopted in this study. The analytical background of his definition, as shown below, justifies the selection made. He has defined satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" (20, p. 1300). Locke distinguishes job satisfaction from the concepts of morale and job involvement. Relying on Viteles' definition of morale, which says that "morale is an attitude of satisfaction with, desire to continue in, and willingness to strive for the goals of a particular group or organization" (41, p. 284), Locke identifies two differences between job satisfaction and morale.

First, while discussing these differences between job satisfaction and morale, Locke says that morale is more future-oriented, while satisfaction is more present and past-oriented; and second, he argues that morale often has a group referent (based on a sense of common purpose and the belief that group goals can be attained and are compatible with individual goals), while job satisfaction typically refers to the appraisal made by a single individual of his/her job situation. Based on this interpretation of the difference between job satisfaction and morale, Locke views morale as being caused, in part, by job satisfaction. He considers that a person who achieves his/her job goals or is making progress toward them should feel more confident about the future than one who is not so successful.

In distinguishing job satisfaction from job involvement, Locke considers that a "person who is involved in his job is one who takes it seriously, for whom important values are at stake in the job, whose moods and feelings are significantly affected by his job experiences, and who is mentally pre-occupied with his job" (20, p. 1301). He also explains that a person who is highly involved in his task should be more likely to feel extremely satisfied or extremely dissatisfied with it (depending upon his/her degree of success) than an uninvolved person would be. An uninvolved person is expected to have less extreme emotional reactions to the same or similar job experience. Therefore, according to Locke, a person's level of job satisfaction appears to be determined by his/her level of job involvement. And this relationship is furtherly influenced by the individual's degree of success.

A controversy also exists regarding whether or not job satisfaction and organizational climate are redundant concepts (15). Research indicates that the two concepts are highly related (7). The concept of job satisfaction includes many of the same elements of the organizational climate concept, but the first concept views these elements differently. Theoretically, organizational climate represents objective descriptions of the work environment, and job satisfaction represents affective or emotional responses to the environment (38).

In an investigation involving the relationship between job satisfaction and organizational climate, Sharbrough found that "there is little of the variance in either of the concepts that may be explained by variance in the other" (34, p. 60). Based on this finding, Sharbrough concluded that job satisfaction and organizational climate, although related concepts, refer and measure different aspects of organizations. LaFollette and Sims (19) also found support for this conclusion. These researchers found that although climate and satisfaction were related, the two constructs were not related to performance in the same fashion. They argued that because these constructs, climate and satisfaction, did not relate to the third variable, performance, in a similar fashion, then it was difficult to defend the contention that they do represent the same construct. Evidently, there seems to be a strong relationship between job satisfaction and organizational climate. However, it has been shown that the two concepts are not redundant. Therefore, the uniqueness of job satisfaction appears to be preserved.

As noted earlier, a great diversity of instruments have been developed to measure job satisfaction; this lack of standardization has led to a lack of uniformity in job satisfaction measurement. The most widely used instrument, the Job Descriptive Index (37), was used in only 99 of the 346 studies which were reported between 1973 and 1978 by

O'Connor, Peters, and Gordon (24). This represents only 28.6 per cent of the reported research.

The Job Descriptive Index has been described as one of the most carefully developed scales measuring job satisfaction (42). Its continuous reliability makes it the index with the greatest acceptance among students of organizational behavior (34). Therefore, the concept of job satisfaction, as used in this investigation, is measured with this instrument.

The Job Descriptive Index classifies job satisfaction into five different dimensions: (1) satisfaction with work, (2) satisfaction with supervision, (3) satisfaction with pay, (4) satisfaction with promotions, and (5) satisfaction with co-workers. Smith, Kendall, and Hulin (37) have defined these facets of job satisfaction as noted in Table I. The measure of job satisfaction through these five facets or dimensions is enriched with an overall measure of job satisfaction. The purpose of this additional assessment of satisfaction is to facilitate a general interpretation of the analysis of the research data.

The overall measure of job satisfaction is attained by summing up the responses to two global, direct questions included in a five-point Likert-type of scale developed by Wanous (44). These questions are (1) Generally speaking, how satisfied are you with your job, and (2) How characteristic is this statement of you? Taking everything into

TABLE I
DEFINITION OF JOB SATISFACTION FACETS*

Facet of Job Satisfaction	Definition
Satisfaction with work	Perceived satisfaction with the work itself; i.e., the nature of the respondent's job
Satisfaction with pay	Perceived satisfaction with the level of pay in the respondent's job
Satisfaction with promotions	Perceived satisfaction with the respondent's opportunity for promotions with the organization
Satisfaction with supervision	Perceived satisfaction with the method of supervision of the respondent
Satisfaction with people	Perceived satisfaction with co-workers, peers, i.e., the people the respondent works with

*Source: Smith, Kendall, and Hulin (37).

account, I am very satisfied with my job. Wanous reported a correlation of .73 between these two items.

In sum, six dimensions of job satisfaction are included in this investigation. The Job Descriptive Index (37) is used to assess five of them: (1) satisfaction with work, (2) satisfaction with supervision, (3) satisfaction with pay, (4) satisfaction with promotions, and (5) satisfaction with co-workers. The other dimension, an overall measure of job

satisfaction, is attained through a Likert-type of scale developed by Wanous (44).

Job Performance

Performance is that variable which is the key to evaluating the effectiveness of individuals, groups, organizations, and leaders (40). The most frequently used forms of performance measurement are based on traditional methods and "usually take one of two basic forms: rating or ranking" (40, p. 458). This research adopts the rating method of performance measurement. This method seems to be the one more generally used by organizational researchers (9, 13, 14, 43).

An individual's performance is assessed in terms of quality and quantity. These are two of the more traditional measures that are attained. The assessment of quality and quantity of performance by researchers (10, 25, 36, 44) uses both self-rated performance scores and supervisory rating scores. Both the employee and his/her immediate supervisor are to respond to quality and quantity items that are rated on a seven-point Likert-type scale. This scale range is frequently used by students of organizational theory (10, 25). The scale range from very poor to excellent is presented below.

1. Very Poor
2. Poor
3. Fair
4. Average

5. Good
6. Very Good
7. Excellent

There are two questions concerning the quality of performance that are to be administered to each respondent. Two other questions are related to the quantity of performance. The phraseology that is utilized in these questions concerning quality and quantity is intended to increase an individual's objectivity while rating his/her performance. He/she is not only asked to assess his/her performance based on his/her own judgment, but also on his/her supervisor's. The quality items are (1) How would you rate the quality (think about quality only) of your own performance in your job? and (2) How do you think your supervisor would rate the quality of your performance? The quantity questions are (1) In terms of quantity (think about quantity only) of work being done by you in your job, how would you rate your own performance? and (2) How do you think your supervisor would rate the quantity of work being done by you in your job? On the other hand, supervisors are asked to simply rate the performance of his/her employees, using the described scale, in terms of quality and quantity.

Self-rating and supervisory rating scores are combined to arrive at the final measures of quality and quantity of performance. This combination has also the purpose of enhancing performance rating objectivity (4). The attained measures of quality and quantity are in turn averaged for

an overall assessment of job performance (44). Together with the previously introduced overall measure of satisfaction, the overall measure of performance has the purpose of facilitating the general interpretation of the findings of the present investigation.

In conclusion, three measures of performance are obtained, using a seven-point Likert-type scale: quality, quantity, and overall job performance. The measures attained represent combinations of self-rating and supervisory rating scores. The combination of these scores has the intention of increasing the objectivity of the actual measures of performance.

Job Scope

What is meant by the term job scope? Stone (39) has defined it in terms of the degree to which a job is enriched. High scope jobs are perceived by employees as having relatively high degrees of variety, identity, significance, autonomy, and feedback. These are classified as enriched jobs. Simplified jobs, on the other hand, are those with low scope; that is, low degrees of variety, identity, significance, autonomy, and feedback. Hackman and Oldham's (11) Job Diagnostic Survey provides the most widely used perceptual measure of job scope (27).

Specifically, Hackman and Oldham (11) combine the elements previously indicated--variety, identify, significance, autonomy, and feedback--into a single index, called

the Motivating Potential Score, to reflect the overall level of job scope. The Motivating Potential Score or MPS is determined through a subscale of the Job Diagnostic Survey that has fourteen items and a formula that integrates the five stated elements as follows:

$$\text{MPS} = \left[\frac{\text{skill variety} + \text{task identity} + \text{task significance}}{3} \right] \times \text{autonomy} \times \text{feedback}$$

The MPS index is used to identify participants' perceptions of job scope. The elements of this index are described in Table II.

Growth Need Strength

Growth need strength refers to an employee's desire to obtain "growth" satisfactions from his or her work (11). Individual growth need strength is measured by a subscale of the Job Diagnostic Survey developed by Hackman and Oldham (11). These authors' subscale provides "two separate measures of growth need strength . . . one from items in a 'would like' format, and one from items in a 'job choice' format" (11, p. 163). This research utilizes the "job choice" format, which is constituted by a subscale of twelve items. The "job choice" measure of growth need strength is adopted because it offers a more specific measure of an individual's preference for specific job characteristics

TABLE II
 DEFINITION OF THE ELEMENTS OF THE MOTIVATING
 POTENTIAL SCORE (MPS)*

Elements of MPS	Definition
Skill variety	The degree to which a job requires a variety of different activities in carrying out the work, which involves the use of a number of different skills and talents of the employee
Task identity	The degree to which the job requires completion of a "whole" and identifiable piece of work--that is, doing a job from beginning to end with a visible outcome
Task significance	The degree to which the job has a substantial impact on the lives or work of other people--whether in the immediate organization or in the external environment
Autonomy	The degree to which a job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out
Feedback	The degree to which carrying out the activities required by a job results in the individual obtaining direct and clear information about the effectiveness of his or her performance

*Source: Hackman and Oldham (11).

(1, 4). Additionally, it has been shown to be internally consistent by Hackman and Oldham (11). The "job choice" subscale provides an index of strength of higher order needs relative to lower order needs. This index is viewed as a "malleable" individual difference characteristic, which is then used to predict how an employee will respond to the characteristics of a job--job scope. Specifically, some researchers have shown that an appropriate match between job and individual characteristics conduces to high levels of performance and satisfaction.

Recapitulation: the "job choice" index is incorporated in the present research to measure the preference of specific job characteristics--growth need strength. It has twelve items and is part of a subscale of the Job Diagnostic Survey.

Organizational Communication

Organizational communication has been classified as a very "elusive and pervasive" organizational concept (22, 29). It is argued that the very extensiveness of communication in today's social world is at the root of the problem involved in studying, analyzing, and understanding it. Porter and Roberts indicate that "since communication is everywhere in organizations, it is consequently very hard to find, in the sense of trying to separate it out as a phenomenon for investigation" (29, p. 1554). They also concede that organizational communication is frequently

confounded with other topical areas. The organizational communication identity crisis has also been recognized by other scholars.

Roberts, O'Neilly, Bretton, and Porter (32) state that researchers have confounded communication in organizations with a host of other phenomena such as leadership, control, authority, and motivation. However, they argue that these phenomena "are clearly not aspects of communication but are expressed through communication" (32, p. 503). A system view of organizations may help one to conceive the relationship of the organizational communication concept with other constructs while retaining its uniqueness.

The elusiveness and pervasiveness of the organizational communication construct is increased by the difficulty in identifying the elements of such a variable. Interpersonal communication theorists have not agreed on the elements of the concept communication. In a review of the literature concerning the definition of communication, Dance (6) found ninety-five different definitions. After being unable to integrate the somewhat disparate themes which emerged from those definitions into a cohesive definition, he was forced to conclude that "we are trying to make the concept communication do too much for us" (6, p. 210).

Organizational communication theorists have also failed in providing an agreeable definition of communication. These theorists have recognized the importance of communication in

organizations (e.g., 2, 3, 12), but have not provided an integrated approach to studying such a concept in organizations (8).

The difficulty in providing an agreeable definition of organizational communication has also resulted in a vast number of operationalizations--the actual dimensions or elements incorporated in the organizational communication construct. In their review of the literature, Daly and Korinek found "over 180 operationalizations of organizational communication" (5, p. 30). This situation poses a problem to the development of a sound theory of organizational communication. To confront this problem effectively, one thing seems necessary: agreement among organizational communication theorists concerning the way to operationalize and define the variable of organizational communication. Without this kind of agreement the order that is essential for the effective accumulation of knowledge may not be reached.

Although difficulties in defining organizational communication have been recognized, Roberts, O'Reilly, Bretton, and Porter report that almost all definitions of the terms "communication" and "organizational communication" have the concepts of information exchange and transfer of meaning in common (32, p. 501). Beyond this, not much similarity exists among the different definitions, according to these authors. They further indicate that communication

operates differently at different levels of organizational functioning, and that the level of investigation will impact the definition attached to organizational communication. They have identified three levels of analysis of organizational functioning: first, the interpersonal level; second, within and between organizational sub-units; and third, organizational-environment (32, p. 502).

The current investigation incorporates Roberts and O'Reilly's (30) operationalization of organizational communication which, although it is highly interpersonal oriented (21, p. 188), appears to be very comprehensive. In a review of the literature related to the communication facets frequently investigated, they identified eight broad communication dimensions. Roberts and O'Reilly also identified three respondent-oriented facets, which have been repeatedly shown to influence individual communication in organizations.

The organizational communication construct, as conceptualized by Roberts and O'Reilly, includes the following facets or dimensions: (1) directionality of information flow (upward, downward, and lateral), (2) accuracy of information, (3) mode of information transfer (written, face-to-face, telephone and other), (4) gatekeeping of information, (5) information overload, (6) satisfaction with communication, (7) desire for interaction with others, and (8) summarization. The three respondent-oriented dimensions included are: (1) trust in superior, (2)

perceived influence of the superior, and (3) mobility aspirations of the respondent.

In a follow-up of their investigation, Roberts and O'Reilly (31) expanded the list of communication facets within the organizational communication concept. The following dimensions were added: (1) information underload, (2) openness, (3) redundancy, and (4) withholding of information. With the addition of these new items, the list of fifteen facets within the instrument appears quite comprehensive.

Roberts and O'Reilly (30) reported that their instrument had desirable psychometric properties and in general proved to be a useful measure of organizational communication. A subsequent revision of the Roberts and O'Reilly communication questionnaire by Muchinsky (21) also yielded guarded support for the instrument.

In a series of supplementary notes concerning their own questionnaire, Roberts and O'Reilly (31) have suggested, among other things, that for research purposes it may be wise to select those communication facets of particular interest. It should be recalled that this study relies, at least in part, on two theories. First, the theory that indicates that variables which differently affect satisfaction and performance become potential moderators of satisfaction-performance relationships (33), and second, the theory which expects both job performance and job

satisfaction to result from a congruence among job design, growth need strength, and system structure. In this last theory, system structure, organic or mechanistic, is viewed as determined by the directionality of communication (17, 23, 28). These two theories serve as the basis for selecting the facets of communication that are investigated in this research.

The directionality dimension of communication is included in the current investigation because it has been shown to influence the individual job congruence relationship with performance and satisfaction (17, 23, 28). This selection is supplemented with those additional communication dimensions that have been found to be independently related to the target variables of job performance and job satisfaction. Trust in superiors, perceived influence, accuracy, desire for interaction with others, information load, and satisfaction with communication are facets of communication which have been shown to be related to job satisfaction (21, 26, 34). The same facets have also been shown to be related to job performance (16, 18, 26, 35, 45). Consequently, these last facets of communication are integrated with the directionality dimension--upward, downward, and lateral--to constitute the organizational communication construct as it is used throughout this investigation.

In sum, the current research studies the conceptually expected moderating influence of ten aspects of

organizational communication: (1) directionality of communication flow--upward, (2) directionality of communication flow--downward, (3) directionality of communication flow--lateral, (4) trust in superiors, (5) perceived influence, (6) accuracy of information, (7) desire for interaction with others, (8) information overload, (9) information underload, and (10) satisfaction with communication. These facets of communication are interpreted and defined in Table III. The conceptualization of the expected moderating influence of each one of the incorporated communication dimensions on each one of the two models that are investigated is elaborated in the next chapter.

Summary

The current research involves six dimensions of job satisfaction, three of job performance, and ten of communication. It also includes the variables of job scope and growth need strength. The measurement instruments selected are the Job Descriptive Index, Wanous' questionnaire of overall job satisfaction, a job performance rating scale prepared for this research, two subscales of the Job Diagnostic Survey, and the Roberts and O'Reilly questionnaire of organizational communication. Attention now turns to the reviewing of the pertinent literature and the conceptualization of the hypotheses that are investigated.

TABLE III
DEFINITION OF THE ADOPTED FACETS OF ORGANIZATIONAL COMMUNICATION*

Facet of Organizational Communication	Definition
Directionality of communication	
Upward	Perceived percentage of upward communication flow
Downward	Perceived percentage of downward communication flow
Lateral	Perceived percentage of lateral communication flow
Trust in superiors	Perceived trust in supervisors
Perceived influence	Perceived influence of supervisors
Accuracy	Perceived accuracy of communication
Desire for interaction	Respondent's desire for interaction with others
Information load	
Overload	Perceived degree to which too much information is received by the respondent
Underload	Respondent's preference for more information
Communication satisfaction	Perceived overall satisfaction with communication

*Source: Roberts and O'Reilly (30, 31).

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CHAPTER III

SYNTHESIS OF RELATED LITERATURE AND HYPOTHESES

Two models receive attention in the present literature, the job performance relationship with job satisfaction, the first model, and the individual-job congruence relationship with performance and satisfaction, the second model. And the conceptualized proposed moderating influence of organizational communication on each is investigated. The aim of the current chapter is to provide an overview of the literature that has prompted the development of the specific propositions that are evaluated. The literature pertaining to the rationale for expecting organizational communication to moderate the first model is discussed first. Related hypotheses are included along with the discussion. Then the literature pertaining to the rationale for expecting organizational communication to moderate the relationships embedded in the second model is reviewed. The expectations or hypotheses that are made are presented along with the review that is conducted. An effort has been made in both the first and the second models to delineate appropriate directional hypotheses. Stating directional hypotheses may reduce the possibility of reporting chance relationships (16).

In proposing directional hypotheses, three types of support are generally used. A review of these types of

support before beginning with the first section of the present chapter will prove to be beneficial. First, there are cases in which previous researchers have examined a particular variable for its influence on a given relationship. Findings from such studies offer the strongest reasons for predicting certain relationships in a new sample. Second, hypotheses may be proposed on the basis of existent "theoretical models." And third, there are occasions in which the plausibility of a hypothesis is bolstered by what is known concerning the nature of the relationship of the potential moderator with the different variables of the model being investigated (16).

The investigation being conducted depends heavily on the second and third alternatives above for developing directional hypotheses. Previous studies concerning the moderating impact of organizational communication on the job performance/job satisfaction relationship and the individual-job congruence/job performance/job satisfaction model are practically nonexistent. Consequently, the actual study relies more on "theoretical models" and previous findings concerning the relationship of organizational communication with the criterion variables of job performance and job satisfaction for conceptualizing specific directional hypotheses than in prior related research. These criteria are further discussed and implemented below along with the evaluating of the literature concerning the two models investigated.

First Model: Literature Review and Hypotheses

The empirical work concerning the relationship between job performance and job satisfaction is first reviewed and a reasonable hypothesis concerning such association is developed. This first hypothesis is followed by four more propositions. These propositions relate to the expected moderating influence of organizational communication on the first model--the relationship between performance and satisfaction. This expected moderating influence is substantiated through "theoretical models" and previous findings concerning the relationship of organizational communication with both job performance and satisfaction. The reason for this posture is that previous research directly related to the present one is virtually nonexistent. There is only one study that could be identified by the present researcher and which is indirectly related to the moderating influence of communication on the performance relationship with satisfaction. Including the job-related information concept as part of the definition of the facilitative/inhibiting situational variable, Peters, O'Connor, and Rudolf (41) encountered support for the facilitative/inhibiting construct as a moderator of the relationship between performance and satisfaction.

Because of the detected lack of previous empirical work pertaining to the moderating influence of organizational communication on the job performance/job satisfaction

relationship, the propositions that are made in the present investigation are conceptualized based on the literature concerning the organizational communication relationship with performance, first, and satisfaction, second. The rationale for this approach is twofold. First, it has been theorized and shown that variables which differentially affect performance and satisfaction become potential moderators of performance/satisfaction relationships (14, 26, 46). And second, it has been hypothesized and supported that variations in job performance are primarily responsible for variations in job satisfaction (43, 46).¹ Additionally, Gross (16) has pointed out that the plausibility of a hypothesis may be bolstered by what is known concerning the nature of the relationship of the potential moderator to the different variables of the model being investigated.

Therefore, a given proposition concerning the expected moderating influence of a particular dimension of communication on the first model emerges from what is known about the relationship of that particular communication dimension with performance, first, and satisfaction, second. This approach reflects the exploratory nature of the present investigation. It also shows the relatively limited conceptual understanding that organizational theorists have

¹Although causality between job performance and job satisfaction is implied in Porter and Lawler and Schwab and Cummings' argument, the present investigation deals with cross-sectional data and therefore questions of causality are not addressed.

concerning the impact of organizational communication in organizational functioning.

The procedure outlined above is implemented, and hypothesis two is stated. Hypothesis two pertains to the expected moderating influence of trust in superiors, influence of superiors, accuracy of information, desire for interaction, and satisfaction with communication on the relationship between performance and satisfaction. The dimensions in hypothesis two are conceptualized together because each one of them has shown the same general relationship with the target variables of performance and satisfaction. The focus then turns to the expected influence of the multidimensional facet of communication load--overload and underload communication--and hypothesis three. Finally, the literature concerning directionality of communication--upward, downward, and lateral--is reviewed and hypotheses four and five are delineated.

The Job Performance Relationship with Job Satisfaction

The empirical work concerning the relationship between the target variables of performance and satisfaction was synthesized in the first chapter of this dissertation. It should be recalled that literature reviews conducted by Brayfield and Crockett (2); Herzberg, Mausner, Peterson, and Capwell (22); Vroom (54); and others (11, 28) show that the relationship between the target variables is highly

variable, but on the average the two factors appear to be weakly or moderately related in the positive direction. Consequently, the following hypothesis seems reasonable.

Hypothesis one--Job performance measures will be directly and moderately related to job satisfaction dimensions.

The reported highly variable relationship between performance and satisfaction (2, 22, 54) has prompted some organizational theorists to turn their attention toward the identification of situational variables that may be influencing the strength of such a relationship (46, 50). Researchers have already found that potential moderators of the performance/satisfaction association are self-esteem, rewards, job fit, organizational pressure for performance, experienced time pressure, organizational level, participation in decision making, initiating structure, and locus of control (1, 7, 16, 30, 51). The need for further investigation of other organizational dimensions that may also influence the relationship between job performance and job satisfaction has been established (1, 46). The next and subsequent subsections review literature which serves to substantiate specific propositions concerning the expected moderating impact of organizational communication on the job performance/job satisfaction relationship.

Trust in Superiors, Influence of Superiors, Accuracy, Desire for Interaction, Communication Satisfaction, and Their Expected Influence on the First Model

The determination of the expected moderating influence of trust in superiors, influence of superiors, accuracy, desire for interaction, and satisfaction with communication on the performance/satisfaction relationship is based on what is known about the specific relationship of each communication dimension with performance, first, and satisfaction, second. Consequently, the empirical work concerning such relationship is reviewed below. The relationship of the proposed communication moderators with performance is evaluated first and is followed by their relationship to job satisfaction.

Communication dimensions relationship with job performance.--Certain dimensions of communication not comparable to the ones presently researched and their relationship with job performance have been studied by some researchers (19, 20, 24, 29, 39). And among others, openness in communication, frankness, brevity, managerial communication, performance information, and task communication have been shown to be directly related to job performance. These findings increase the reasonableness for expecting organizational communication to moderate the performance/satisfaction association. However, they are not meaningful when intending to delineate directional hypotheses

in the present study. Consequently, attention turns to the studies dealing, partially or totally, with the dimensions being considered in the present subsection and their relationship with performance.

In general, researchers have shown that trust in superiors, influence of superiors, accuracy, desire for interaction, and satisfaction with communication have a direct relationship with job performance. Jenkins (26) found a correlation between supervisory communicative effectiveness--conceptualized in terms of perceived trust, perceived influence, accuracy of information, and desire for interaction--and worker performance. O'Reilly and Roberts (38), employing two sample populations of a military personnel, demonstrated empirically that desire for interaction was significantly and directly related to job performance. The same authors reported an insignificant, positive correlation between accuracy and performance in the first sample population and a significant, positive correlation in the second one. Additionally, in a survey conducted among graduates of an M.B.A. program of a state university, Caldwell and O'Reilly (6) investigated the relationship of accurate information to turnover (a measure of performance). Results for ninety-seven participants indicate that a two-year turnover was reduced for those individuals who had accurate job information. The communication satisfaction dimension has been shown to be directly

related to job performance by O'Reilly and Roberts (38); Roberts and O'Reilly (44); Goodnight, Crary, Balthrop, and Hazan (12); and Hazen and Balthrop (21).

The above reported empirical works support the existence of a consistent direct relationship of trust in superiors, perceived influence, accuracy, desire for interaction, and satisfaction with communication with job performance. So research concerning the relationship between organizational communication and job performance offers support for suggesting that high perceptions of organizational communication, as denoted by the above five facets of communication, will result in a stronger relationship between job performance and job satisfaction. The reasonableness for this proposition is strengthened by the fact that these same five facets of organizational communication have also been shown to be directly related to job satisfaction.

Communication dimensions relationship with job satisfaction.--Trust in superiors, perceived influence, accuracy of information, desire for interaction, and communication satisfaction have been shown to be directly related to job satisfaction. These relationships have been investigated by Muchinsky (32) and Sharbrough (47). First of all, in an exploratory study conducted among a random sample of 1,160 employees of a large public company, Muchinsky (32) found that trust in superiors, perceived influence, accuracy,

desire for interaction, and satisfaction with communication were significantly and positively related to job satisfaction.

Sharbrough (47), on the other hand, analyzed the data collected from a random sample of approximately 175 employees of a government agency in order to review the relationship of organizational communication to job satisfaction. The first canonical function showed trust in superiors and perceived influence to be positively related to job satisfaction. However, the other three facets, accuracy, desire for interaction, and satisfaction with communication, registered a negative association with job satisfaction. The second canonical function, on the other hand, showed positive correlations of trust in superiors, influence of superiors, and satisfaction with communication with job satisfaction. Accuracy and desire for interaction maintained their negative relationship to job satisfaction.

Sharbrough called attention to the fact that the more positively organizational communication was perceived, the lowest tended to be the levels of the different dimensions of job satisfaction. He noted that such a result could be a consequence of the statistical procedure used. He recognized that it was doubtful that positive communication could be related to low levels of satisfaction. Sharbrough's interpretation appears reasonable inasmuch as Green (13) and Nicholson (34) had found, separately, that communication satisfaction was positively related to job satisfaction.

Taken together, the direct relationship generally reported between the pertinent organizational communication dimensions and job performance, first, and job satisfaction, second, reasonably makes one to expect higher performance/satisfaction relationships when high perceived levels of trust in superiors, influence of superiors, accuracy, desire for interaction, and communication satisfaction are reported than when low perceived levels of the same dimensions are reported. Consequently, the following directional hypothesis appears reasonable.

Hypothesis two--Job performance dimensions will be directly and more strongly related to job satisfaction dimensions under conditions in which respondents report high perceived levels of trust in superiors, influence of superiors, accuracy, desire for interaction, and satisfaction with communication than when they report low perceived levels of the same facets of organizational communication.

Information Load and Its Expected Moderating
Influence on the First Model

Information load embraces two facets of communication, overload and underload communication. The empirical work concerning the association of these two facets with performance, first, and satisfaction, second, is reviewed and the reported findings are utilized for determining their expected moderating influence on the performance/satisfaction relationship.

Information load relationship with job performance.--The reported findings concerning the relationship of information load to performance show the existence of an inverse relationship between overload information and the target variable of job performance and a direct correlation between underload communication and the same target variable. In the two samples investigated by O'Reilly and Roberts (38), they found overload communication to have a significant and inverse relationship with job performance in the first group. No relationship between the two facets was encountered in the second group. On the other hand, underload communication was reported to have a significant, positive correlation with job performance for the first group, and a significant, negative association for the second group. In an experimental investigation, Evangelista (10) examined the association between amount of information (information load) and decision accuracy (performance). It was hypothesized that information load would have a curvilinear association with job performance. It was found that the hypothesis was not compatible with the empirical data.

O'Reilly (36) reported two other field studies conducted among the personnel assigned to three navy aviation units and respondents employed in four branch locations of a county welfare agency. The results of both studies showed that information underload was associated with high levels of performance.

Taken together, the above reported findings show a tendency. Overload communication tends to be inversely related to performance, while underload communication appears to be directly related to the same target variable. A revision of the association of communication load to satisfaction may improve the expectation of the moderating influence of communication load on the job performance relationship with job satisfaction.

Information load relationship with job satisfaction.--
The reported findings concerning the relationship of information load to satisfaction are very inconsistent. The field studies conducted by O'Reilly (36) showed that information overload was related to high levels of job satisfaction. Muchinsky (32) found that overload communication was not related to job satisfaction. Sharbrough (47), on the other hand, reported a positive correlation between underload communication and job satisfaction when the first canonical function was computed. The second canonical function showed a negative association between the two variables. On the other hand, a negative association between overload communication and satisfaction was reflected by the first canonical function, while a positive correlation was shown by the second one.

Although the relationship of information load to job satisfaction is plagued with a contradictory body of

research, it appears that a direct relationship between overload communication and satisfaction and an inverse correlation between underload information and job satisfaction receive some support. This conclusion, together with the reported positive correlation between underload communication and performance and the inverse association between overload information and job performance, provides the rationale for the following hypothesis.

Hypothesis three--Job performance measures will be inversely and more strongly related to job satisfaction dimensions under conditions in which respondents report high levels of perceived underload and overload communication than when they report low perceived levels of the same facets of organizational communication.

Directionality of Communication Flow and Its
Expected Moderating Effect on the
First Model

The directionality of communication involves three dimensions: upward, downward, and lateral communication. So the empirical literature regarding the relationship of these facets of directionality of communication to performance and satisfaction is reviewed below. The review conducted is used as a background for determining the expected moderating impact of the identified facets on the performance/satisfaction relationship.

Directionality of communication relationship with job performance.--The two sample populations of military personnel investigated by O'Reilly and Roberts (38) showed mixed results concerning the relationship of upward, downward, and lateral communication with job performance. The researchers found a positive, significant correlation between downward communication and job performance in one group and an insignificant, negative correlation in another one. They reported a negative, significant correlation of upward communication to job performance for the first group, and an insignificant, positive correlation for the second group. Finally, O'Reilly and Roberts encountered that lateral communication had an insignificant and negative correlation with job performance in both groups. Smith and Brown (49) found that both upward communication and downward and/or multidirectional communication were positively related to job performance.

The conflicting results above tend to support a positive correlation of upward and downward communication to performance and a negative relationship between lateral communication and job performance. A review of the limited literature concerning the relationship of communication directionality to job satisfaction may provide more light about the expected role of this multi-dimensional variable on the job performance/job satisfaction relationship.

Directionality of communication relationship with job satisfaction.--In an exploratory study, Muchinsky (32) reported that upward and downward communication were found to be directly related to job satisfaction. On the other hand, lateral communication was encountered to have a significant, negative association with job satisfaction. Sharbrough (47) reported insignificant, negative correlations between the various facets of communication directionality and job satisfaction. When Sharbrough's questioning of the appropriateness of the statistical procedures he used is taken into consideration, one finds that the tendency is for a positive relationship between job satisfaction and both upward and downward communication and a negative correlation between satisfaction and lateral communication. This conclusion is similar to the one made concerning the relationship of communication directionality and job performance. Therefore, the following directional hypotheses seem appropriate.

Hypothesis four--Job performance measures will be directly and more strongly related to job satisfaction dimensions under conditions in which respondents report high levels of perceived upward and downward communication than when they report low perceived levels of these same facets of organizational communication.

Hypothesis five--Job performance measures will be inversely and more strongly related to job satisfaction

dimensions under conditions in which respondents report high levels of perceived lateral communication than when they report low perceived levels of the same facet of communication.

In summary, directional hypotheses concerning the expected relationship between job performance and job satisfaction and the predicted moderating influence of organizational communication on such association have been formulated. Hypothesis one related to the predicted relationship of the target variables: performance and satisfaction. Hypothesis two concerns the conceptual, expected influence of trust in superiors, influence of superiors, accuracy of information, desire for interaction, and communication satisfaction on the relationship of the identified target variables. The predicted moderating impact of information load--overload and underload--is delineated in hypothesis three. Finally, hypotheses four and five formulate the expected moderating effect of communication flow--upward, downward, and lateral--on the job performance/job satisfaction relationship. The propositions concerning the proposed moderating influence of organizational communication on the first model are summarized in Table IV.

Column one of Table IV lists each hypothesis, and column two identifies the organizational communication dimension(s) included in the actual hypothesis. The subgroup of individuals predicted to show the strongest

TABLE IV

SUMMARY OF THE PROPOSED EFFECT OF ORGANIZATIONAL
COMMUNICATION ON THE JOB PERFORMANCE/JOB
SATISFACTION RELATIONSHIP*

Hypothesis (1)	Communication Facet (2)	Subgroup Predicted to Show a Stronger Job Performance/Job Satisfaction Rela- tionship (3)	Nature of the Rela- tionship Expected (4)
2	Trust in superiors	High	Positive
	Perceived influence of superiors	High	Positive
	Perceived accuracy	High	Positive
	Desire for inter- action	High	Positive
	Communication satisfaction	High	Positive
3	Underload communication	High	Negative
	Overload communication	High	Negative
4	Perceived upward communication	High	Positive
	Perceived downward communication	High	Positive
5	Perceived lateral communication	High	Negative

*Job performance dimensions were predicted to be directly and moderately related to job satisfaction measures (hypothesis one).

performance/satisfaction relationship is denoted in column three. The last column presents the nature of the expected relationship--positive or negative. The first line of the described table indicates that hypothesis two (column one) predicts that respondents scoring high (column three) in trust in superiors (column two) are expected to show a positive (column four) and higher correlation between the target variables of performance and satisfaction than those scoring low.

Second Model: Literature Review and Hypotheses

The present section begins reviewing the empirical work pertaining to the individual-job congruence relationship with job performance and job satisfaction, and a set of two related, appropriate directional hypotheses--hypotheses six and seven--are stated. It then turns to consider the literature which serves to substantiate the delineation of six propositions concerning the expected moderating influence of organizational communication on the second model--the individual-job congruence relationship with both job performance and job satisfaction. The different organizational communication dimensions and their conceptualized, expected moderating influence on the second model are presented in the same order in which they were reviewed while stating the various propositions concerning the first model.

Hypothesis eight presents the predicted moderating influence of trust in superiors, accuracy, and satisfaction with communication on the second model. These facets of communication are conceptualized together because of their similarity in their relationship with the outcome variables of job performance and job satisfaction. The nature of the relationship of these communication dimensions with both performance and satisfaction is used as a rationale for determining their expected moderating influence on the second investigated model. The predicted moderating impact of desire for interaction on the second model is delineated in hypotheses nine and ten. The reasonableness of the propositions are based on previous findings concerning social density (distance between offices) and its relationship with performance and satisfaction.

Hypotheses eleven and twelve include the proposed moderating influence of directionality of communication--upward, downward, and lateral--on the second model. The rationale for the expected influence of communication directionality emerges from a review of the theoretical and empirical literature pertaining to the impact of organizational structure on the investigated model. As will be discussed, organizational structure is characterized by certain elements of directionality of communication. Empirical work concerning the relationship of information load, both overload and underload, to performance and

satisfaction is used for stating its expected moderating impact on the individual-job congruence relationship with job performance and job satisfaction. The expected influence of information load is offered in hypotheses thirteen and fourteen.

The Individual-Job Congruence Relationship with
Job Performance and Job Satisfaction

As indicated in the first chapter of this dissertation, individual-job congruence refers to the extent to which the growth needs of the individual match the perceived motivational characteristics of the job being performed. This contingency/congruence model suggests that a correct match between the employee's needs and the characteristics of the job should result in high levels of performance and satisfaction. The same referenced chapter documents that some researchers have found support for the above proposition (e.g., 3, 17, 18, 37, 48, 55).

Significantly, however, it is reported that some investigators have encountered inconsistent results concerning the expected outcomes of the individual-job congruence approach (e.g., 9, 15, 31, 53, 56). For example, some of the findings have shown that the impact of the individual-job congruence approach is more influential on job satisfaction than on job performance (15, 53). The levels of job satisfaction for individuals in congruence situations appear to be higher than those for people in

incongruent conditions. The same cannot be said, however, about job performance. Therefore, the following two propositions are made.

Hypothesis six--Individuals' perception of job satisfaction will be higher under conditions of congruence than under conditions of incongruence.

Hypothesis seven--The rated level of job performance of employees under conditions of congruence will not differ from that of employees under conditions of incongruence.

The inconsistent reported results concerning the individual-job congruence relationship with performance and satisfaction have conduced some organizational theorists to call attention to the possibility that an individual's reaction to his or her job may be influenced not only by the properties of the job and his/her needs, aptitudes, and motives, but also by the nature of the work context of organizational "milieu" surrounding the job (4, 33, 43). As a result of this view, some studies investigating the moderating impact of various variables on the individual-job congruence/job performance/job satisfaction model have been conducted (8, 14, 35, 42). These studies have shown that the moderating approach to the study of the individual-job congruence/job performance/job satisfaction model may indeed increase the understanding and practicality of such a model. The present research contends that organizational communication may be another moderator of the proposed

contingency/congruence model. Therefore, as outlined in the introduction of the current subsection, attention now focuses on the literature review which serves to substantiate the specific expected influence of communication on the described model.

Trust in Superiors, Influence of Superiors, Accuracy of Information, Satisfaction with Communication, and Their Predicted Influence on the Second Model

The nature of the relationship of trust in superiors, influence of superiors, accuracy of information, and communication satisfaction with the outcome variables of performance and satisfaction is utilized to determine their expected moderating influence on the second model--the individual-job congruence relationship with job performance and job satisfaction. The general nature of the relationship of the above communication dimensions with the stated outcome variables is summarized below. The nature of this relationship was more fully discussed in the first part of the current chapter.

Favorable levels of trust in superiors, perceived influence of supervisors, perceived accuracy of information, and perceived satisfaction with communication have been shown to be positively related to both job performance and job satisfaction (26, 32, 37, 47). This evidence plus a little common sense suggest that favorable levels on these same communication dimensions may enhance the expected

outcomes, performance, and satisfaction, of the proposed contingency/congruence model, the individual-job congruence approach. So the following exploratory multiple hypothesis seems justifiable.

Hypothesis eight--Both high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs reporting high perceived levels of trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication will be rated with higher levels of job performance and will report higher levels of job satisfaction than when low perceived levels of the same facets of communication are reported.

Desire for Interaction and Its Expected Moderating Influence on the Second Model

Szilagyi and Holland's (52) work on social density (distance between offices) seems to provide some limited support for expecting the communication dimension of desire for interaction to moderate the proposed contingency/congruence model. Szilagyi and Holland found that with highly skilled professional employees of a divisional headquarters unit of a large petroleum related company, an increase in social density (reduced distance between offices) led to a significant decrease in role ambiguity, role conflict, and job autonomy, as well as significant increases in job feedback, friendship opportunities, work satisfaction,

information exchange, and task facilitation. The opposite results were found with social density decreases. Thus it seems that when highly skilled individuals with high levels of desire for interaction are placed in complex work situations, positive outcomes are enhanced. Of course, this positive reaction assumes that the need for interaction is satisfied. Based on this assumption, the following hypotheses concerning the communication dimension of desire for interaction appear reasonable.

Hypothesis nine--High growth need strength individuals in high scope jobs reporting high levels of desire for interaction will be rated as having higher levels of job performance and will report higher levels of job satisfaction than when low levels of the same facet of communication are reported.

Hypothesis ten--Low growth need strength individuals in low scope jobs reporting low levels of desire for interaction will be rated as having higher levels of job performance and will report higher levels of job satisfaction than when high levels of the same facet of communication are reported.

Information Load and Its Expected Moderating
Influence on the Second Model

The expected moderating effect of information load--underload and overload--on the job performance relationship with job satisfaction was stated on the assumption that

underload information enhances job performance while overload communication enhances job satisfaction. This assumption is substantiated by empirical data (36, 37). If the same assumption is retained, it then appears reasonable to state the following hypotheses concerning information load and its expected moderating effect on the outcomes of the proposed contingency/congruence model.

Hypothesis eleven--Both high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs perceiving high levels of underload communication will be rated as having higher levels of job performance than when low perceived levels of the same facet of communication are reported.

Hypothesis twelve--Both high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs perceiving high levels of overload communication will report higher levels of job satisfaction than when low perceived levels of the same facet of communication are reported.

Hypotheses eight through twelve concerning the expected moderating influence of organizational communication on the second model are of the same nature. The communication dimensions in these identified hypotheses are used for dichotomizing respondents into two groups: high and low. The dichotomization procedure is fully explained in the next chapter. This similarity facilitates the process of

synthesizing in table form the indicated hypotheses. Consequently, before considering the expected moderating impact of directionality of communication on the second model, Table V is presented. It synthesizes hypotheses eight through twelve concerning the expected moderating influence trust in superiors, influence of superiors, accuracy, satisfaction with communication, desire for interaction, and information load--underload and overload--on the individual-job congruence relationship with job performance and job satisfaction.

Column one identifies each hypothesis and the organizational communication dimension(s) that is (are) included in the actual proposition. The level of communication dimension that is expected to show the predicted outcome is presented in one of columns two through nine. Each prediction made is presented at the top of a pair of columns, beginning with columns two and three and ending with columns eight and nine. For instance, at the top of columns two and three appears the predicted level of job performance for high growth need strength individuals in high scope jobs. The first X-mark in column two means that the predicted high level of job performance from high growth need strength individuals in high job scope is expected to take place among individuals scoring high (H) (column two) in trust in superiors (column one).

TABLE V

PARTIAL PROPOSED EXPLORATORY HYPOTHESES CONCERNING THE EXPECTED
MODERATING EFFECT OF ORGANIZATIONAL COMMUNICATION ON THE
INDIVIDUAL-JOB CONGRUENCE/JOB PERFORMANCE/JOB
SATISFACTION MODEL*

Hypotheses and Related Row Communication Dimensions (1)	Level of Row Organizational Communication Dimension in Which Hypothesized Prediction Is Expected to Take Place							
	High Job Performance from High Growth Need Strength Individuals in High Scope Jobs		High Job Satisfaction from High Growth Need Strength Individuals in High Scope Jobs		High Job Performance from Low Growth Need Strength Individuals in Low Scope Jobs		High Job Satisfaction from Low Growth Need Strength Individuals in Low Scope Jobs	
	H** (2)	L*** (3)	H (4)	L (5)	H (6)	L (6)	H (7)	L (8)
Hypothesis 8 (A)								
Trust in superiors	X		X		X		X	
Influence of superiors	X		X		X		X	
Accuracy of information	X		X		X		X	
Communication satisfaction	X		X		X		X	
Hypothesis 9 (B)								
Desire for interaction	X		X					
Hypothesis 10 (C)								
Desire for interaction						X		X
Hypothesis 11 (D)								
Underload communication	X					X		
Hypothesis 12 (E)								
Overload communication			X				X	

*This table summarizes hypotheses eight through twelve. Job satisfaction was predicted to be higher for individuals under conditions of congruence than for those under conditions of incongruence. Job performance was predicted to be similar for employees under both congruent and incongruent conditions (hypotheses 6 and 7).

**High level of row communication dimension.

***Low level of row communication dimension.

Directionality of Communication and Its Expected
Moderating Influence on the Second Model

Contrary to the predicted moderating influence of the communication dimensions previously discussed, the expected moderating effect of directionality of communication on the individual-job congruence relationship with performance and satisfaction emerges from more direct theoretical and empirical work. So time and space are provided for reviewing the pertinent literature.

As indicated in the first chapter of the current thesis, organizational structure has been characterized by certain fashions of communication in organizations. It appears that a mechanistic structure results in formal task communication being essentially vertical in nature, between superiors and subordinates, while on the other hand, an organic system results in communication being principally lateral. This view was offered by Burns and Stalker (5) and more recently expressed by Schuler in the following manner.

Organization structure which is called organic is characterized here by high intergroup cooperation, frequent task feedback, open communication channels, low formalization of rules and procedures, and lack of adherence to the chain of command. The term mechanistic structure refers to an organization with communication primarily directed downward, high formalization of rules and procedures, adherence to the chain of command, low intergroup cooperation, and infrequent task feedback (45, p. 68).

Of significance to the present investigation is the fact that the dimensions of communication that have been reported to characterize mechanistic and organic systems have also been found to correlate with certain characteristics of job design. It is considered that a review of some of the theoretical and empirical literature concerning the specific dimensions of communication that have been reported to characterize different job designs may prove beneficial in enhancing the feasibility of expecting directionality of communication to moderate individual-job congruence/job performance/job satisfaction relationship.

Burns and Stalker (5) classified twenty Scottish and English firms into one of two types of structures: mechanistic or organic. Companies with mechanistic structure were found to have well defined rules, policies, procedures, and clear pyramidal communication lines. Companies with organic structures evidenced more loosely defined rules and were characterized by both horizontal and vertical communication. The most important finding of Burns and Stalker, at least for this study, was that mechanistic structures, characterized by written and vertical communication, were more effective for unchanging, simple tasks, while organic structures, characterized by both horizontal and vertical communication, were effective with changing, complex tasks. Burns and Stalker's findings were substantiated by Woodward (57). Woodward emphasized the concept that a firm's

effectiveness depends on the appropriate mesh between the certainty of its tasks and its communication network, or supporting structure.

More recently, Huseman and Alexander (23) have attempted to develop a model of the relationship between work technology and the patterning of organizational communication. According to Huseman and Alexander, work unit technology (operationally defined as task analyzability and task variability) determines the information processing demands on the work group. In turn, information processing demands dictate the patterning of communication. The model suggests that in routine technologies (high analyzability and low variability), information processing demands are low, and that downward communication is appropriate (a characteristic of mechanistic structures). On the other hand, the model postulates that as technology becomes less routine, information processing demands increase with more emphasis on vertical communication, and finally on lateral communication (a characteristic of organic structures).

Huseman and Alexander's (23) model was empirically evaluated by Penley and Alexander (40). These last researchers found some support for the following proposition: "as work group technology becomes less routine (higher variability and lower analyzability), emphasis shifts from downward to upward communication and finally to lateral communication" (40, p. 332).

Equating organizational structure, organic vs. mechanistic, with communication structure, lateral vs. vertical, and advocating a correlation between task characteristics and communication network, James (25) investigated the effects of vertical and lateral formal task information flow on the individual-job contingency/congruence model. Analyzing data from 128 undergraduate students who participated in an experiment, James found strong evidence in support of main effects of growth need strength and communication structure on measures of satisfaction.

The fact that James' study was a laboratory investigation and that Katz (27) had found that job characteristics may require as long as three months to have an impact on employee satisfaction may account for the lack of support of the effect of job scope on satisfaction. However, when all dependent measures were included in a canonical correlational analysis, the results provided some support for the contingency congruence model based on the independent measures of lateral communication, task complexity, and job related needs.

In conclusion, the above theoretical and empirical review gives support to the feasibility of expecting communication directionality to moderate the second model. It seems that individuals in complex jobs exposed to high levels of lateral and upward communication tend to show high levels of lateral and upward communication tend to

show high levels of the outcome variables of performance and satisfaction. The same high levels of the outcome variables appear to result from individuals who are performing routine jobs, and who are exposed to working environments characterized by high levels of downward communication. Hence, the following two directional hypotheses involving the multidimensional variable of directionality of communication appear reasonable.

Hypothesis thirteen--In the high congruence situation (high growth need strength individuals in high scope jobs), lateral and upward communication will be directly related to job performance and job satisfaction.

Hypothesis fourteen--In the low congruence situation (low growth need strength individuals in low scope jobs), downward communication will be directly related to job performance and job satisfaction.

The above two hypotheses, thirteen and fourteen, are summarized in Table VI. The hypotheses are listed in column one. Columns two, three, and four list the three facets of directionality of communication--lateral, upward, and downward. The X-mark in column two indicates that lateral communication is predicted to show a direct relationship with performance and satisfaction, separately, for high growth need strength individuals in high scope jobs (column one).

TABLE VI

PROPOSED EXPLORATORY HYPOTHESES OF THE EXPECTED MODERATING EFFECT OF DIRECTIONALITY OF COMMUNICATION ON THE INDIVIDUAL-JOB CONGRUENCE/JOB PERFORMANCE/JOB SATISFACTION MODEL*

Contingency/Congruence Condition (1)	Facet of Directionality of Communication Predicted to Show a Direct Relationship with Job Performance and Job Satisfaction Under Different Conditions of Congruence		
	Lateral (2)	Upward (3)	Downward (4)
Hypothesis 13 (A) High growth need strength individuals in high scope jobs	X	X	
Hypothesis 14 (B) Low growth need strength individuals in low scope jobs			X

*This table summarizes hypotheses thirteen and fourteen.

In synthesis, the current section of the present chapter has reviewed the appropriate literature for stating reasonable hypotheses concerning the individual-job congruence relationship with the outcome variables of job performance and job satisfaction--second model--as well as regarding the expected moderating influence of organizational communication on the same model. Specifically, hypotheses six and seven refer to the contingency/congruence model, the

individual-job congruence relationship with the investigated outcome variables. The different delineated propositions concerning the expected moderating influence of organizational communication on the second model appear in hypotheses eight through fourteen.

The expected moderating effect of trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication is stated in hypothesis eight. Hypotheses nine and ten present the proposed moderating impact of desire for interaction. Hypotheses eleven and twelve delineate the expected moderating effect of information load--overload and underload. Lastly, the predicted moderating influence of directionality of communication--upward, downward, and lateral--appears in hypotheses thirteen and fourteen. Hypotheses six through twelve are summarized in Table V and hypotheses thirteen and fourteen in Table VI. Procedures for interpreting these two tables were presented at the time they were introduced.

Summary

Divided into two main sections, the finalized chapter reviews literature concerning the job performance relationship with job satisfaction, first, and the individual-job congruence association with performance and satisfaction, second. The first section presents the current research propositions regarding the expected relationship between

the target variables of performance and satisfaction and the predicted moderating influence of organizational communication on the relationship of the same target variables. The related propositions are present in hypotheses one through five.

On the other hand, propositions concerning the individual-job congruence relationship with the outcome variables of performance and satisfaction and the expected moderating influence of organizational communication on the same relationship appear in the second section. These last propositions are shown in hypotheses six through fourteen.

Having delineated the different hypotheses that are investigated in the present study, it is now reasonable to focus on the methodology that is used to assess each one of them. The presentation of such methodology is the aim of the next chapter.

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CHAPTER IV

METHODOLOGY AND DESCRIPTIVE STATISTICS

Two sections constitute the current chapter. The first one discusses the procedures used to collect the data. It describes the sample and the specific steps which were implemented for collecting the research data as well as some of the sample related descriptive statistics. The second section presents the procedures utilized for analyzing the data collected. It provides a synthesis of the research design implemented in the present study and a description of the general statistical procedures used. It also presents the specific techniques employed to test each hypothesis.

Procedures for Collection of Data

The Sample

The sample of this study consisted of a total of 629 employees from two different firms. All twenty-seven employees working at the headquarters of Company A, and 602 out of 657 workers of Company B formed the sample [27 + (657 - 55) = 629].

There were fifty-five employees from Company B who were not included in the sample because they had an eighth grade education or less. This elimination took place

because Hackman and Oldham (7), authors of the Job Diagnostic Survey (JDS), recommend that those who respond to their instrument must be moderately literate. They specifically indicate that "the use of the JDS is not recommended for individuals with an eighth grade education or less" (7, p. 308). It should be recalled that two subscales of the JDS were used to measure two of the variables included in the present investigation, growth need strength and job scope. Therefore, Hackman and Oldham's observation was implemented.

The nature of the firms for which the members of the sample work is as follows. Company A manufactures and markets a comprehensive line of heavy duty premium quality lubricants. These lubricants are widely used by industrial, commercial, government, institutional, and agricultural customers throughout the United States and in many other nations. Company B, on the other hand, is a division of a multinational firm. It deals with the research, design, engineering, and manufacturing of rotary blast hole bits, downhole percussion bits, hammers, raise reaming heads, and cutters. These products are used in mining, quarrying, water well drilling, and shallow oil and gas well drilling. Both organizations, A and B, are situated within a diameter of no more than forty miles in a large metropolitan area of the southern section of the United States.

Steps to Get the Data and Characteristics of
Actual Respondents

The research variables as well as the measurement instruments utilized were introduced, for logical reasons, in the second chapter of the current dissertation. The investigated variables are job satisfaction, job performance, job scope, growth need strength, and organizational communication. And the measurement instruments are the Job Descriptive Index, Wanous' questionnaire of overall job satisfaction, a job performance rating scale developed for the purpose of this investigation, two subscales of the Job Diagnostic Survey, and the Roberts and O'Reilly's questionnaire of organizational communication. These measurement instruments together with the assessed variables are presented in summary form in Table VII. The right section of the table presents the instruments utilized to measure the variables listed on the left side.

For research purposes the described instruments and six demographic items were integrated into a unified questionnaire. The readability of the whole instrument was tested by administering ten copies of it to an equal number of graduate students in a statistics class. Seven questionnaires were completed, returned, and evaluated.

After securing copies of the lists of employees of the participating firms, a specific copy of the research instrument was assigned to each member of the sample.

TABLE VII
RESEARCH VARIABLES AND MEASUREMENT INSTRUMENTS

Research Variable	Measurement Instrument(s)
Job Satisfaction	Job Descriptive Index and Wanous' questionnaire
Job Performance	Rating scale prepared by the researcher
Job scope	Subscale of the Job Diagnostic Survey
Growth need strength	Subscale of the Job Diagnostic Survey
Organizational communication . . .	Roberts and O'Reilly's questionnaire

This was achieved by assigning a number to each individual. The number was in turn written on the back of the first page of the questionnaire. Each participating individual was told that the number on his/her questionnaire would be used only as a mean for matching statistical data, and that no one else would see the number except the investigator. In fact, this number was later used to identify each respondent's supervisor. Supervisors were later asked to rate the performance of their subordinates--those who had completed and returned the research questionnaire.

The internal mail system of each one of the participating organizations was used to deliver the research instrument and related materials. Each employee of Company A received an envelope including the research questionnaire, an introductory letter signed by the researcher and his

academic adviser, and a stamped pre-addressed envelope. The enclosed letter explained the scope of the study being conducted, assured participants' confidentiality, and requested their participation. The stamped, pre-addressed envelope was to be returned with the completed questionnaire. The completed questionnaire would be received by the Department of Management of the College of Business of North Texas State University.

Besides the documents sent to the employees of Company A, the employees of Company B received a letter from the Personnel Manager of the firm. In it, he indicated that the researcher had been granted permission to conduct his study in the organization and encouraged employee participation. A copy of the research questionnaire and related materials appears in Appendix A.

Employees were given two weeks to respond. The researcher picked up returned questionnaires from the Department of Management as they arrived and began the scoring and coding procedures. After two weeks, 247 questionnaires had been received. An extension of one more week, communicated through notes placed on bulletin boards of both companies and signed by their respective personnel directors, resulted in sixty-nine more responses. So a total of 316 (247 + 69) employees completed and returned their questionnaires. Seventeen questionnaires were not delivered because of business trips, sickness, and/or

vacations. This reduced the actual sample to 612 individuals (629 - 17).

Of the 316 returned questionnaires, there were seven whose identification numbers had been cut or erased. Two others were improperly answered. Consequently, 307 usable questionnaires (316 - 9) were left. The task then was to request supervisors to rate respondents' performance.

With the assistance of the Director of Personnel of each participating firm, the immediate supervisors of the respondents were identified using the number assigned to each returned questionnaire. Seventy-nine supervisors were found to be associated with the respondents. And again, the internal mail systems of the participating organizations were used to deliver the performance scale to the supervisors. Each supervisor of Company A received an envelope including an introductory letter from the researcher and his dissertation adviser, the performance scale including the name(s) of the participating subordinate(s) whose performance was to be evaluated, and a stamped, pre-addressed envelope for returning the completed scale. Supervisors of Company B received the materials sent to those of Company A and a letter by the firm's Director of Personnel. A copy of the performance scale along with the related letters appears in Appendix B.

The performance scales returned by the supervisors followed the same pattern originally followed by the

questionnaires returned by the employees. They were received in the Department of Management and picked up by the researcher for proper matching, scoring, and coding procedures.

Supervisors were given one week to respond. By the end of the week, fifty-eight scales, involving 215 employees, had been returned. An extension of one more week, communicated through telephone calls made from the personnel offices of the participating companies, resulted in nineteen more responses. Only one supervisor involving three individual respondents did not return the performance scale. It was also found that one of the original respondents had resigned his post, while another one had been dismissed. So these last two cases were dropped from the list of actual respondents. No performance evaluations were provided by their supervisors. Therefore, there were 302 (307 - 5) cases included in this study. They represented usable questionnaires returned by employees for whom supervisors provided performance evaluations. This group of cases, hereafter referred to as respondents or participants, represents an overall rate of return of 49.35 per cent (302 ÷ 612). This rate of return is considered acceptable. In a subjective manner, Babbie says that "a response rate of at least 50 per cent is adequate for analysis and reporting" (1, p. 165).

Company B classifies its employees into four general categories: (1) executives, (2) exempted (research and middle management people), (3) non-exempted (office workers), and (4) hourly workers (manufacturing individuals). Using this categorization and treating Company A as a unit in itself, it is then possible to summarize the sample and the respondents of the current research as shown in Table VIII. Column one identifies the groups of employees, and column two shows the actual number of individuals in each group at the time of conducting the investigation. The number of workers in column three, representing workers with an eighth grade education or less, is deducted from the number in column two, and the initial group sample emerges as indicated in column four. The number of individuals who did not receive the research instrument because of business trips, sickness, and/or vacation is shown in column five. These individuals are deducted from the initial sample (column four) and the net sample is attained and noted in column six. The actual number of individuals that responded, per group, is shown in column seven, while the related rate of return is presented in the last column. Column totals appear at the bottom of the table.

Some of the characteristics of the respondents were obtained through the demographic section of the research questionnaire. Information was requested concerning respondents' sex, age, education, years in the organization,

TABLE VIII
THE SAMPLE AND THE RATE OF RESPONSE

Group (1)	No. of Workers (2)	Less Workers with less than 9th Grade (3)	Initial Sample (4)	Instruments Not Delivered (5)	Net Sample (6)	Actual Respond- ents (7)	Rate of Return % (8)
Company A	27	0	27	0	27	23	85.19
Company B	17	1	16	1	15	12	80.00
Executives	154	2	152	0	152	106	69.74
Exempted	110	1	109	0	109	56	51.38
Nonexempted	376	51	325	16	309	105	33.98
Hourly							
Total	684	55	629	17	612	302	49.35

years in present position, and whether their positions were or were not managerial. Respondents' characteristics are summarized in Table IX. The frequency percentage and cummulated percentage of the different categories of each demographic characteristic are presented in columns two, three, and four, respectively. The demographic characteristics with their different categories are delineated in column one and presented vertically. It is shown that 249 of the respondents were male and 53 were female. Only one respondent indicated that he/she was twenty years old or less; thirty-five participants said they were fifty-five years old or more. One hundred twenty participants reported that they had completed between nine and twelve years of school; only thirty-two reported having more than seventeen years of formal education. When individuals were asked about the length of time they had been working for their actual employer, fifteen respondents indicated a period of less than one year; one hundred participants marked sixteen years or more. Thirty-eight employees indicated being in the same job for one year or less and seventy-two participants for ten years or more. Sixty-one respondents classified themselves as managerial employees and 241 as non-managerial workers.

Descriptive Statistics

As previously discussed, five variables were included in the present research. They were job satisfaction, job

TABLE IX
 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS
 (n = 302)

Demographic Characteristic (1)	Frequency (2)	Percentage (3)	Cummulated Percentage (4)
Sex			
Males	249	82.5	82.5
Females	53	17.5	100.0
Age			
Less than 20 years	1	.3	.3
20-24 years	19	6.3	6.6
25-29 years	41	13.6	20.2
30-34 years	36	11.9	32.1
35-39 years	48	15.9	48.0
40-44 years	43	14.2	62.3
45-49 years	38	12.6	74.8
50-54 years	41	13.6	88.4
55 years or more	35	11.6	100.0
Education			
9-12 years of school	120	39.7	39.7
13-16 years	150	49.7	89.4
17 years or more	32	10.6	100.0

TABLE IX--Continued

Demographic Characteristic (1)	Frequency (2)	Percentage (3)	Cummulated Percentage (4)
Time in organization			
Less than one year	15	5.0	5.0
1-3 years	27	8.9	13.9
4-6 years	50	16.6	30.5
7-9 years	43	14.2	44.7
10-12 years	35	11.6	56.3
13-15 years	32	10.6	66.9
16 years or more	100	35.1	100.0
Time in present job			
Less than one year	38	12.6	12.6
1-3 years	75	24.8	37.4
4-6 years	73	24.2	61.6
7-9 years	44	14.6	76.2
10 years or more	72	23.8	100.0
Type of job held			
Managerial	61	20.2	20.2
Nonmanagerial	241	79.8	100.0

performance, job scope, growth need strength, and organizational communication. These variables in turn involved twenty-one different dimensions. The identified variables and their respective dimensions together with four different descriptive statistics are presented in Table X. The research variables and their dimensions are presented in sections A through D of column one, in vertical form. Column two offers the range value of the scales used to measure each variable. Finally, columns three, four, five, and six present the descriptive measures of mean, standard deviation, median, and mode, respectively. Some of the descriptive statistics concerning the mean and standard deviation are reviewed as follows.

The mean of the overall measure of job satisfaction was 4.84 and the related standard deviation was 1.31. Of the other five measures of job satisfaction, satisfaction with supervision showed the highest mean (40.43) with a standard deviation of 10.88. The lowest mean (18.40) was reflected by the measure of satisfaction with promotions with a standard deviation of 16.16.

The quality of performance mean was higher (5.39) than the quantity mean (5.21). The standard deviations were .79 and .81, respectively. The mean of the job scope variable was 148.53, and the related standard deviation was 73.90. Growth need strength had a mean of 4.25 and a standard deviation of .81.

TABLE X
RESEARCH VARIABLES AND DESCRIPTIVE STATISTICS
(n = 302)

Research Variables and Dimensions (1)	Scale (2)	Mean (3)	S.D. (4)	Median (5)	Mode (6)
Job satisfaction (A)					
Satisfaction with work	0-54	34.42	11.11	36.00	42.00
Satisfaction with supervision	0-54	40.43	10.88	43.00	54.00
Satisfaction with pay	0-54	29.88	13.12	32.00	36.00
Satisfaction with promotions	0-54	18.40	16.16	13.00	00.00
Satisfaction with co-workers	0-54	39.41	11.42	42.00	54.00
Overall job satisfaction	1-7	4.84	1.31	4.75	5.50
Job performance (B)					
Quality	1-7	5.39	.79	5.50	6.00
Quantity	1-7	5.21	.81	5.25	5.50
Overall job performance	1-7	5.30	.72	5.37	5.50
Job scope and growth need strength (C)					
Job scope	1-343	148.53	73.90	151.96	172.76
Growth need strength	1-7	4.25	.81	4.25	4.13

TABLE X--Continued

Research Variables and Dimensions (1)	Scale (2)	Mean (3)	S.D. (4)	Median (5)	Mode (6)
Organizational communication (D)					
Upward communication	*	34.06	21.90	32.17	10.00
Downward communication	*	25.99	24.08	20.00	00.00
Lateral communication	*	39.92	24.09	36.67	50.00
Trust in superiors	1-7	5.04	1.49	5.33	5.67
Perceived influence	1-7	4.68	1.45	4.67	5.67
Accuracy	1-7	4.99	1.07	5.00	6.00
Desire for inter- action	1-7	5.02	1.26	5.00	4.00
Information overload	1-7	2.34	1.19	2.00	1.00
Information underload	1-7	3.22	1.22	3.00	2.33
Satisfaction with communication	1-7	4.91	1.26	5.00	5.00

*All communication in which a respondent was involved (100%) was distributed among upward, downward, and lateral communication.

Of the facets of directionality of communication, lateral communication showed the highest mean (39.92); the lowest one was reflected by downward communication (25.99). The related standard deviations were 24.09 and 24.08, respectively. The highest mean level (5.04) among the other seven measures of organizational communication was

shown by trust in superiors with a standard deviation of 1.49. The lowest mean level encountered (2.34) was computed on information overload; the associated standard deviation was 1.19. The median and mode figures in Table X are presented to supplement the information concerning the mean and standard deviation of the different research variables' dimensions.

Although not included in the descriptive statistics presented in the table reviewed, it should be indicated that the collected data concerning the self rated performance and the supervisory rated performance are very discrepant. The data analyzed yielded a moderate, significant ($p < .01$) relationship between the self rating of quality of performance and the supervisory rating of the same facet of performance ($r = .32$). An even more moderate but still significant ($p < .01$) relationship was also found between the two measures of quantity attained in the same fashion--one provided by supervisors and another by respondents themselves ($r = .19$).

In a study conducted by Clayton (3), she found a moderate, significant ($p < .01$) relationship between a measure of a self rated performance and a supervisory rated performance ($r = .34$). The discrepancy between the two measures of performance and the need for more objective measures of performance made Clayton utilize the supervisory

ratings of performance and not a combination of both supervisory and self-rating of performance (3, p. 117).

The present researcher does not share Clayton's view. Instead, he adopts Brayfield and Crockett's assessment. These last researchers indicate that "performance . . . is less easily disguised by the individual and less readily distorted by the observer than are attitudes" (2, p. 396). Hence, the integration of both self rated performance and supervisory rated performance may represent a more objective measure of performance. Therefore, such integration, as originally planned, was implemented in the current investigation. The data of the present study reflected a significant ($p < .01$) correlation between the performance dimensions of quality and quantity ($r = .62$)--of course, after the integration of supervisory and self-ratings of performance took place.

Up to this point, the current chapter has reviewed some of the methodology utilized in the present investigation. Such revision has included descriptions of the sample, the steps implemented to collect the research data, and some of the sample related descriptive statistics. Now, the matter of delineating the statistical procedures adopted for the analysis of the data will be presented.

Procedures for Analysis of Data

Logically, the aim of this section is to describe the statistical procedures used to test the different

propositions investigated in the current research. In pursuing this goal, the research design adopted is discussed first. Then the general statistical techniques selected for data analysis are identified and described. Finally, the specific procedures used for testing the proposed research hypotheses are presented. This last subsection begins reviewing the statistical procedures utilized to test the hypotheses related to the proposed effect of organizational communication on the performance/satisfaction relationship. It concludes with a description of the steps followed to test the hypotheses concerning the suggested impact of organizational communication on the individual-job congruence/job performance/job satisfaction model.

Research Design

The investigation conducted was essentially an exploratory research. It involved comparison of correlations, while searching for the proposed effect of organizational communication on the relationship between job performance and job satisfaction. Also, it included comparison of means as well as correlation coefficients, while searching for the proposed moderating effect of organizational communication on the individual-job congruence/job performance/job satisfaction relationship. Appropriate moderated regression analyses to cross-validate the results attained through comparison of correlations and

means were also conducted. The Statistical Package for the Social Sciences or SPSS (11) was utilized to execute the required statistical computations.

Statistical Procedures Used

Three different statistical techniques for detecting and quantifying moderator influences have been delineated by Zedeck (12). These techniques are as follows: (1) differential validity, (2) moderated regression, and (3) differential predictability. These approaches have in common the basic concept that a moderator is a variable which influences the relationship between two or more variables.

Zedeck's taxonomy is rooted in predictor-criterion terminology because moderator techniques are usually employed in cases in which one of the variables is the criterion or dependent, the variance of which is to be explicated or predicted in terms of other variable(s). Although causality was not investigated while studying the relationship between job performance and job satisfaction, job satisfaction was treated, for the purpose of this investigation, as the dependent variable. The objective in doing so was only to assess the degree to which potential communication dimensions did, in fact, moderate the job performance/job satisfaction relationship. Concerning the individual-job congruence/job performance/job satisfaction

model, and as indicated in the second chapter, job scope and growth need strength were considered as independent variables, and job performance and job satisfaction were treated as dependent variables. So Zedeck's taxonomy, rooted in predictor-criterion terminology, seems appropriate for the research conducted.

Differential validity is the most frequently used approach in moderator research. The moderator in this technique is usually treated as a subgrouping variable. "A subgrouping variable is the basis for splitting a sample into subgroups with the result that the validity coefficient of the predictor variable for one subgroup is significantly different from the coefficient of the other group" (12, p. 296). The other two moderator approaches, moderated regression analysis and predictability, are used less often.

Moderated regression analysis, introduced by Saunders (10), is applied by regressing the dependent variable on a linear combination of predictors, moderators, and predictor-moderator interactions. It is obvious that this last technique assumes the presence of a linear relationship among the variables. A true moderator effect is said to exist only in situations in which a predictor-moderator interaction term accounts for a significant amount of criterion variance after both predictor and moderator variables have entered the regression equation and explained that criterion variance which they can explain as separate

independent variables. More specifically, this assessment is attained by examining three regression equations.

1. $Y = a + bX$

2. $Y = a + b_1X + b_2Z$

3. $Y = a + b_1X + b_2Z + b_3XZ$

Zedeck states that "if Equations 2 and 3 are significantly different from Equation 1, but not from each other, then the variable (the suggested moderator), is an independent predictor and not a moderator variable" (12, p. 304).

The differential predictability technique is comparable to subgroup analysis except that research participants are differentiated in terms of predictability rather than in terms of moderator scores (5). In differential predictability, the researchers would first group research participants on the basis of predictability, the strength of the target relationship, and then search for variables (moderators) which predicted the predictability group (6).

Zedeck (12) has warned of the pitfalls of conducting moderator variable investigations based on separate correlational analyses of subgroups determined by position on continuously distributed moderator variables. Because of possible distortions caused by abnormal distributions, non-linear relationships, and other factors, Zedeck suggested that results obtained in this way should be cross-validated. Consequently, this research uses regression analysis (10) as a way of cross-validating the results attained through

subgroup analysis (differential validity and/or differential predictability). Thus, the three statistical techniques delineated by Zedeck (12) were utilized as appropriate. The appropriateness of each technique is introduced below, while describing the actual procedures utilized for testing the hypotheses investigated.

Procedures for Testing Hypotheses

The statistical procedures used for testing the actual research hypotheses are presented as follows. The statistical procedures which constitute the means for testing the proposed moderating influence of organizational communication on the first model, the job performance/job satisfaction relationship, are considered first. Then the statistical procedures are presented that are used for testing the proposed moderating impact of organizational communication on the second model, the individual-job congruence/job performance/job satisfaction model.

Before offering the statistical testing procedures concerning the first model, it should be indicated that the P value of each significant test is to be reported. "The P value gives the probability of obtaining a value of the test statistic 'at least' as unfavorable to H_0 as the observed value" (9, p. 28). Levels of significance of .10, .05, and .01 are reported on all tests conducted.

Testing the hypotheses related to the proposed effect of organizational communication on the job performance/job satisfaction relationship.--Hypothesis one was tested by simply noting whether the correlation between job performance and job satisfaction for the whole sample was positive and significant (8, p. 483). Hypotheses two through five, on the other hand, were primarily tested using the statistical technique of differential validity. This technique was used because the proposed moderator, organizational communication, was treated as a subgrouping variable. For cross-validating purposes, and as a secondary technique, moderator regression technique was applied to these same hypotheses. The secondary statistical procedure provided a means for assessing the relative strength of the various moderators' influences tested. Thus, hypotheses two through five were evaluated using the specific procedures outlined below.

First, all respondents were dichotomized on the basis of moderators (each organizational communication dimension) scores into high and low groups; the median was used for distinguishing participants scoring high from those scoring low. Specifically, respondents whose scores were equal or greater than the median constituted the group classified as high, while those whose scores were below it were identified as the low group.

Second, correlations between job performance and job satisfaction for each subgroup were computed. Third, the job performance/job satisfaction correlations for the high and low subgroups were compared using Fisher's Z transformation (9, pp. 106-108). The Z values were computed utilizing the following mathematical equation:

$$Z = \frac{1/2 \log \frac{1 + r_a}{1 - r_a} - 1/2 \log \frac{1 + r_b}{1 - r_b}}{\sqrt{\frac{1}{n_a - 3} + \frac{1}{n_b - 3}}}$$

where r_a and r_b denoted the correlation coefficients for the high and low subgroups, respectively, and n_a and n_b referred to the number of respondents in each subgroup, high and low, respectively. Since all hypotheses were directional, one-tailed significance tests were conducted (9, p. 107). Fourth, step three was repeated for the three dimensions of performance and the six facets of satisfaction researched to detect organizational communication moderating effects that might be peculiar to a particular type of relationship between performance and satisfaction.

Fifth, the same hypotheses tested using steps one through four above were also tested utilizing the secondary technique of moderated regression analysis. This secondary analysis served to assess the results previously attained. Satisfaction scores were regressed on performance, the proposed moderator, and the performance-moderator interaction, in that order. The performance-moderator

interaction was the simple product of performance and moderator scores. Since a moderator exists only in situations in which a predictor-moderator interaction term accounts for a significant amount of criterion variance after both predictor and moderator variables have entered the regression equation, the interaction term becomes a measure of the proposed moderator influence. The significance of its influence was assessed by considering whether or not the change in R square (R^2) after including such interaction was zero. The F value concerning the increase in R^2 was used to make this evaluation (9, p. 164).

Finally, the appropriateness of the regression models developed in step six was evaluated through graphical analyses of residuals (9, pp. 235-240). Some specific assumptions are made when performing a regression analysis. The usual assumptions which are made are that the errors (the discrepancy between observed and predicted values) are independent, have zero mean, have a common variance, and follow a normal distribution (9, p. 236). If a model developed through regression analysis is appropriate for the data under analysis, it is reasonable to expect that the observed residuals exhibit properties not at odds with the stated assumptions.

Testing hypotheses related to the proposed impact of organizational communication on the individual-job congruence/job performance/job satisfaction model.-- Respondents who

scored either low in both job scope and growth need strength, or high on both of these same variables were considered for testing the hypotheses concerning the proposed moderating effect of organizational communication on the individual-job congruence/job performance/job satisfaction model (8, p. 21). The median was used for dichotomizing respondents into high and low groups based on their scores on job scope and growth need strength. Individuals whose scores were equal or greater than the medians of job scope and growth need strength, respectively, constituted the high-congruent group. The low-congruent group, likewise, was formed by those whose scores were less than the medians of the same variables.

Hypothesis six was tested by considering whether the computed mean level of job satisfaction of individuals in congruent situations was significantly higher than that of employees in incongruent situations. This assessment took place using the t statistic for inferences concerning two independent means. Since hypothesis six was a directional proposition, a one-tailed test was used (8, p. 353). Hypothesis seven predicting no difference between the job performance level of individuals in congruence situations and that of employees in incongruent situations was subject to a two-tailed t-test.

Hypotheses eight through twelve were tested mainly by using the differential validity statistical method. This

method was used because the hypothesized moderator, organizational communication, was treated as a subgrouping variable. In essence, the following steps delineate the procedures used for testing hypotheses eight through twelve.

First, respondents of the two congruent situations were classified in terms of either high growth need strength individuals in high scope jobs or low growth need strength individuals in low scope jobs. Again, the median was used for distinguishing respondents scoring low from those scoring high on these two variables, growth need strength and job scope. Second, selected participants were further dichotomized on the basis of organizational communication scores into high and low groups. Third, job satisfaction and job performance means were computed for each subgroup in congruence situations, as appropriate. Fourth, the job satisfaction and job performance means of the high and low subgroups within appropriate congruence situations were compared using the *t* statistic for inferences concerning two independent means (7, p. 353). Since propositions eight through twelve represented directional hypotheses, one-tailed tests were undertaken. Step four was repeated for the different facets of job satisfaction and job performance in order to detect organizational communication moderating effects that might be peculiar to particular measures of these last two variables.

Hypotheses thirteen and fourteen were primarily tested using the differential predictability statistical technique. This technique was utilized because research respondents were differentiated in terms of predictability rather than in terms of moderator scores. The results attained through differential predictability were later cross-validated using the secondary technique of moderated regression analysis. More specifically, hypotheses thirteen and fourteen were tested as follows.

First of all, respondents of the two congruent situations were identified. This is, high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs were selected and properly classified. The median was used, as previously indicated, as the criterion for making this categorization. Secondly, the significance as well as the direction of the correlation of lateral and upward communication with job performance and job satisfaction dimensions for individuals in the high congruence group were assessed. Also, the significance and the direction of the correlation of downward communication with performance and satisfaction measures for individuals in the low congruence group were reviewed. Since the directionality of these relationships had been proposed, one-tailed tests were conducted (8, p. 483).

Finally, after testing hypotheses eight through fourteen with the primary statistical techniques described,

these same propositions were also evaluated, for cross-validation purposes, using the secondary procedure of moderated regression analysis. This analysis constituted a means for assessing the relative strength of the various communication moderators' influences tested. Job satisfaction and job performance scores were regressed, separately, on growth need strength and job scope, the proposed moderator and the growth need strength-moderator and job scope-moderator interactions, in that order. The interaction terms were considered a measure of the moderator influence and their significance was assessed by evaluating the change in R^2 resulting by adding the interaction terms to the equation. The F value was used to determine whether the change in R^2 was equal to zero (9, p. 164). The residuals related to the different regression equations developed and assessed were graphically evaluated. The evaluation served to determine the appropriateness of the regression models developed.

The present investigation also intended to observe the intercorrelations among the research variables. This was accomplished by checking if the correlation coefficients encountered were significantly different from zero. Special attention was given to the relationship of organizational communication to each one of the other variables investigated.

In essence, the primary statistical technique used for assessing the proposed moderating impact of organizational communication on the relationship between job performance and job satisfaction was differential validity. Both the differential predictability statistical technique and the differential validity statistical method, on the other hand, were the primary approaches utilized when evaluating the proposed impact of organizational communication on the individual-job congruence/job performance/job satisfaction model. The secondary statistical technique of moderated regression analysis was also applied in order to assess the strength of the moderator influences evaluated on both of the investigated models.

An important interpretative concept concerning the term "moderator" variable should be restated. For the purpose of this investigation, the term "moderator" variable refers to "a variable v which interacts with another so as to enhance predictability of criterion" (4, p. 295). The interactions investigated were developed through moderated regression analysis, the secondary statistical technique. The significance of a particular interaction term was evaluated by assessing the change in R^2 after adding such an interaction term to the appropriate regression equation. Nevertheless, for a proposed moderator to be classified as a true moderator, the proposed moderator had to receive support from both the primary statistical technique,

differential validity or differential predictability, and the secondary statistical analysis, moderated regression analysis. If it received support from only one of the statistical methods, it was then said that the proposed moderator received partial support.

Summary

The methodology implemented in the current investigation has been delineated. The sample, the procedures employed for collecting the data, and some of the sample related descriptive statistics have been reviewed. This researcher has identified both the primary statistical techniques, either differential validity or differential predictability, and the secondary statistical technique, moderated regression analysis. They have been employed for assessing the proposed moderating influence of organizational communication on the performance/satisfaction relationship, which is considered as the first model, and on the individual-job congruence relationship with performance and satisfaction, which is considered as the second model. The specific steps performed while applying the appropriate statistical techniques have also been reviewed. The focus now turns to the actual results of this investigation. Results pertaining to the first model are presented in the next chapter, and findings concerning the second model appear in Chapter VI.

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CHAPTER V

RESULTS CONCERNING THE EXPECTED MODERATING IMPACT OF ORGANIZATIONAL COMMUNICATION ON THE RELATIONSHIP BETWEEN JOB PERFORMANCE AND JOB SATISFACTION

Hypotheses one through five refer to the expected relationship between job performance and job satisfaction and the proposed moderating influence of organizational communication on the same relationship. Results concerning these five hypotheses are introduced below. However, before presenting such results, the relationship between organizational communication dimensions and each of the other research variables is briefly reviewed. This revision corresponds to the secondary purpose of the current research. Results concerning hypotheses six through fourteen regarding the expected effect of organizational communication on the individual-job congruence model will be reported in the next chapter.

Relationship Between Organizational Communication and Other Research Variables

Besides the proposed moderator of organizational communication, four other variables were investigated: job satisfaction, job performance, growth need strength, and job scope. Results pertaining to the relationship between the proposed moderator and job satisfaction are presented

first, and are followed by those concerning the relationship between organizational communication and job performance. Lastly, findings regarding the organizational communication relationship to both growth need strength and job scope are introduced. Whenever possible, current findings are interpreted in terms of results formerly reported.

Relationship Between Organizational Communication
and Job Satisfaction: Findings

In general, the data analyzed showed that organizational communication and job satisfaction are related. The data in Table XI indicate that forty-four out of the sixty computed correlation coefficients were significant. Thirty-two of the forty-four significant coefficients were in the positive direction. Specifically, trust in superiors, perceived influence, accuracy of information, desire for interaction, and communication satisfaction were found to be directly and significantly related to each of the six dimensions of job satisfaction. These findings are similar to those previously reported by Muchinsky (5) and are also very similar to those found by Sharbrough (11), Green (2), and Nicholson (6).

The correlation analysis also reflected an inverse relationship between the two facets of information load--overload and underload--and the six measures of satisfaction. All of these last correlations were significant except those concerning the relationship of information overload with

TABLE XI
RELATIONSHIP BETWEEN ORGANIZATIONAL COMMUNICATION AND JOB SATISFACTION DIMENSIONS

Communication Dimension (1)	Job Satisfaction Dimensions						
	Satisfaction with Work (2)	Satisfaction with Supervision (3)	Satisfaction with Pay (4)	Satisfaction with Promotions (5)	Satisfaction with Co-workers (6)	Overall Job Satisfaction (7)	
Upward communication	-.10*	.06	-.08	-.04	.00	-.04	
Downward communication	.12**	-.03	-.01	.19***	-.04	.04	
Lateral communication	-.03	-.02	.09	-.15***	.04	.00	
Trust in superiors	.35***	.72***	.20***	.39***	.32***	.40***	
Perceived influence	.35***	.45***	.17***	.45***	.29***	.37***	
Accuracy of information	.17***	.23***	.17***	.11**	.25***	.19***	
Desire for interaction	.33***	.23***	.21***	.26***	.20***	.21***	
Information overload	-.10*	-.11**	-.11*	-.05	-.16***	-.03	
Information underload	-.10*	-.27***	-.11*	-.14**	-.27***	-.27***	
Communication satisfaction	.39***	.38***	.25***	.25***	.39***	.40***	

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

satisfaction with promotions and overall job satisfaction. The results involving the communication dimension of information underload have some similarity with those reported by Muchinsky (5). However, the inverse relationship between information overload and job satisfaction is contrary to that reported by O'Reilly (8).

Results regarding directionality of communication indicate that downward communication reflected a direct and significant relationship with two dimensions of satisfaction, satisfaction with work and satisfaction with promotions. The relationships between upward communication and satisfaction with work and lateral communication with satisfaction with promotions were inverse and significant. Of these last relationships, those involving lateral and downward communication were as previously found by Muchinsky (5). The current finding reflecting an inverse relationship between upward communication and satisfaction with work is contrary to that reported by the same researcher.

In synthesis, current results concerning the relationship between organizational communication and job satisfaction tend to corroborate earlier findings: the two constructs are related. The overall nature of this relationship is positive.

Relationship Between Organizational Communication
and Job Performance: Findings

Overall, the sample data gave evidence of a favorable relationship between organizational communication and job

performance. Table XII summarizes the computed correlation coefficients. It shows that eighteen of the thirty calculated coefficients were significant. More specifically, trust in superiors, perceived influence, accuracy of information, desire for interaction, and satisfaction with communication yielded a significant, positive relationship with the three measures of performance, quality, quantity, and overall job performance. Prior empirical work by Jenkins (3) and O'Reilly and Roberts (9) had shown similar results.

The facet of downward communication was the only dimension of directionality of communication to show a significant association with performance. This communication dimension was found to have a significant, direct relationship with both quantity and overall job performance. This finding somewhat resembles that of O'Reilly and Roberts (9), as well as that of Smith and Brown (12). The present investigation also showed an inverse relationship between information overload and the three measures of performance. However, the association between information overload and quality was the only significant correlation detected. But even so, the overall negative relationship that was found is consistent with previous reported findings (9).

Overall, the preceding data indicate that organizational communication and job performance are related. Favorable levels of communication dimensions seem to be related to favorable levels of job performance measures.

TABLE XII
 RELATIONSHIP BETWEEN ORGANIZATIONAL COMMUNICATION
 DIMENSIONS AND JOB PERFORMANCE MEASURES

Communication Dimension	Job Performance Measures		
	Quality	Quantity	Overall Job Performance
Upward communication	.01	-.03	-.01
Downward communication	.06	.11*	.10*
Lateral communication	-.07	-.08	-.09
Trust in superiors	.24***	.14**	.21***
Perceived influence	.20***	.18***	.22***
Accuracy of information	.16***	.11*	.15***
Desire for interaction	.27***	.14**	.22***
Information overload	-.13**	-.04	-.09
Information underload	-.02	-.05	-.04
Communication satisfaction	.12**	.10*	.12**

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

Relationship Between Organizational Communication and
 Growth Need Strength and Job Scope: Findings

Organizational communication relationship with job scope was stronger than with growth need strength. Six dimensions of communication were found to be significantly related to job scope and four to growth need strength, as shown in Table XIII. Downward communication, desire for interaction, and information underload were found to have a significant, direct relationship with growth need strength. This last variable was also found to be inversely and significantly related to upward communication.

TABLE XIII

RELATIONSHIP BETWEEN ORGANIZATIONAL COMMUNICATION
DIMENSIONS AND GROWTH NEED STRENGTH AND
JOB SCOPE

Communication Dimension	Growth Need Strength	Job Scope
Upward communication	-.10*	-.14**
Downward communication	.11*	.22***
Lateral communication	-.02	-.09
Trust in superiors	.04	.19***
Perceived influence	.07	.26***
Accuracy of information	.06	.08
Desire for interaction	.15***	.25***
Information overload	-.06	-.06
Information underload	.23***	-.05
Communication satisfaction	.00	.22***

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

Upward communication also showed a significant, inverse relationship with job scope. Six other communication dimensions, downward communication, trust in superiors, perceived influence, desire for interaction, and communication satisfaction, reflected a significant, positive association with job scope. It should be noted that the relationship found between the three dimensions of directionality of communication and job scope did not resemble prior findings by Burns and Stalker (1) and Woodward (14). Lateral and upward communication were expected to show a direct relationship with job scope, while downward communication was supposed to reflect an inverse association with the same variable

of job scope. The opposite results in the present sample investigated may be due to a lack of congruence between actual perceived job designs and expected communication networks. However, the overall current results indicate that facilitative communication conditions are more strongly related to job scope than to growth need strength.

The foregoing findings indicate that organizational communication has shown an overall relationship with job satisfaction, job performance, growth need strength, and job scope. In general, the communication dimensions more strongly related to the above variables have been trust in superiors, perceived influence, accuracy of information, desire for interaction, and satisfaction with communication. Growth need strength showed the weakest relationship with organizational communication. This finding appears logical inasmuch as an individual's growth need strength represents needs which may be basically determined by factors that are external to the organization where he/she works.

Before concluding the present section, it should be indicated that the intercorrelations among the different research variables were also computed. The actual correlation coefficients appear in Table XIV. As it can be noted, the highest direct relationship ($r = .90$, $p < .01$) encountered was between quantity of performance and overall job performance. The highest inverse association ($r = -.58$, $p < .01$) was between downward and lateral communication.

TABLE XIV
INTERCORRELATIONS AMONG RESEARCH VARIABLES

Research Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Upward communication	1.00	-.45***	-.46***	.13**	.05	-.10*	-.01	-.04	-.09	.15**	-.10*	.06	-.08	-.04	.00	-.04	-.10*	-.14**	.01	-.03	-.01
2. Downward communication	1.00	1.00	-.50***	-.02	.14**	.08	-.03	.07	.10*	-.11*	-.12**	-.03	-.01	.19***	-.04	.04	.11*	.22***	.06	.11*	.10*
3. Lateral communication	1.00	1.00	1.00	-.10*	-.18***	-.01	-.03	-.03	-.02	-.03	-.03	-.02	.09	-.15***	.04	.00	-.02	-.09	-.07	-.08	-.08
4. Trust in superiors	1.00	1.00	1.00	1.00	-.56***	.20**	.37***	-.17**	-.23**	.40***	.35***	.72***	.20**	.39***	.32***	.40***	.04	.19***	.24***	.14**	.21***
5. Influence of superiors	1.00	1.00	1.00	1.00	1.00	.28**	.26***	-.06	-.23**	.27***	.35***	.46***	.17**	.45***	.29**	.36***	.07	.20**	.20**	.18**	.22***
6. Accuracy of information	1.00	1.00	1.00	1.00	1.00	1.00	.26***	-.21**	-.23**	.31***	.17**	.23**	.17**	.11*	.25**	.19**	.06	.09	.16**	.11*	.15**
7. Desire for interaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-.20**	-.02	.22***	.33**	.23**	.21**	.26**	.20**	.21**	-.06	.25**	.27**	.34**	.22***
8. Information overload	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.06	-.03	-.10*	-.11*	-.11*	-.05	-.16**	-.04	-.06	-.06	-.13*	-.04	-.09
9. Information underload	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-.42***	-.10*	-.27**	-.11*	-.14**	-.27**	-.27**	.23**	-.05	-.02	-.05	-.04
10. Communic. satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.39**	.38**	.34**	.25**	.39**	.40**	.00	.22**	.12**	.10*	.12**
11. Work satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.39**	.34**	.43**	.56**	.40**	.03	.24**	.16**	.09	.15**
12. Supervision satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.20**	.33**	.47**	.41**	.20**	.25**	.12*	.05	.10*
13. Pay satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.36**	.41**	.17**	.29**	.15**	.15**	.17**
14. Promotion satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.01	.01	.26**	.10*	.06	.09
15. Co-workers satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.05	.18**	.18**	.17**	.19**
16. Overall job satisfaction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.15**	.15**	.15**	.17**
17. Growth need strength	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.32**	.15**	.08	.13*
18. Job scope	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.23**	.22**	.25**
19. Quality of performance	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.61**	.89**
20. Quantity of performance	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.90**
21. Overall job performance	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

The remaining data in the same table are not further reviewed because they lack significance for the purpose of the present investigation. Instead, attention turns to the results related to the first model--hypotheses one through five, as previously planned.

The Relationship Between Job Performance and Job
Satisfaction and the Influence of Organiza-
tional Communication: Results

Results concerning hypothesis one are first presented and interpreted. The interpretation takes place in terms of the actual proposition and earlier findings by some other researchers. Findings pertaining to hypotheses two, three, four, and five, in this order, are then shown and evaluated. These hypotheses relate to the expected moderating influence of organizational communication on the job performance relationship with job satisfaction. Due to the lack of previous empirical work directly related to the propositions embraced by these last hypotheses, results are only evaluated in terms of the conceptualized expectations, as denoted by each hypothesis.

Hypothesis One

The predicted moderate and direct relationship between job performance and job satisfaction received strong support. Eighteen correlation coefficients were computed, as presented in Table XV, and all of them were in the expected direction.

Sixteen out of the eighteen computed coefficients were significant. All six dimensions of job satisfaction were significantly related to the measures of quality (abbreviated form for "quality of performance") and overall job performance; and four of the same dimensions, satisfaction with work, with supervision, with promotions, and overall job satisfaction, were significantly associated with quantity (abbreviated form for "quantity of performance").

TABLE XV
CORRELATION COEFFICIENTS OF THE RELATIONSHIP
BETWEEN MEASURES OF JOB PERFORMANCE AND JOB
SATISFACTION DIMENSIONS
(n = 302)

Job Satisfaction Dimension	Job Performance Dimension		
	Quality	Quantity	Overall Job Performance
Satisfaction with work	.26***	.18***	.24***
Satisfaction with supervision	.18***	.09*	.15***
Satisfaction with pay	.13**	.05	.10**
Satisfaction with promotions	.15***	.15***	.17***
Satisfaction with co-workers	.10**	.06	.09*
Overall job satisfaction	.18***	.17***	.19***

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

It is interesting to note that the median as well as the mean of all eighteen computed correlations concerning

the relationship between performance measures and satisfaction dimensions were equal to .15. This finding is very similar to the median correlation ($r = .14$) reported by Vroom (13) and the average correlation ($r = .14$) more recently detected, through meta-analysis, a statistical technique used to cumulate research findings across studies, by Petty, McGee, and Cavender (10). In addition, the highest correlation found in the present investigation was between quality and satisfaction with work ($r = .26, p < .01$), while the lowest one was between quantity and satisfaction with pay ($r = .05$). Taken together, the preceding findings indicate that job performance and job satisfaction are directly related.

Hypothesis Two

The findings concerning hypothesis two are presented in Tables XVI and XVII, which offer results by subgroup and moderated regression analyses, respectively. Because the statistical computations concerning hypotheses three through five are identical to those related to hypothesis two, results pertaining to these last hypotheses are also summarized in the same identified tables. Consequently, before reviewing results concerning hypothesis two, a brief explication about how to read the content of these tables appears justifiable.

As stated earlier, the primary statistical procedure utilized to test hypotheses two through five was moderator

subgroup analysis. Results from this procedure are presented in Table XVI. Each correlation coefficient (r) represents the strength of association between a particular measure of performance and a particular dimension of job satisfaction for respondents in a unique proposed moderator subgroup, low or high (columns two, three, five, six, eight, and nine). The difference between correlation coefficients of low and high subgroups is assessed, and the associated standard error of difference between two independent correlations in terms of Fisher Z scores (\bar{z}) is reported (columns four, seven, and ten). For instance, the first correlation coefficient reported ($r = .23$) in column two refers to the association between quality and satisfaction with work for the 139 respondents with low scores in trust in superiors. The first correlation coefficient in column three ($r = .18$), on the other hand, refers to the same association for the 163 respondents with high scores in the same proposed moderator. The Fisher \bar{z} score ($\bar{z} = -.45$) concerning the difference of the two identified correlation coefficients appears in column four.

The secondary statistical technique used to test hypotheses two through five was moderated regression analysis. Results from this technique are presented in Table XVII. Each dimension of job satisfaction in column eight was regressed on each performance measure in columns two through seven, separately, the moderator in column one,

TABLE XVI
 SUBGROUP ANALYSIS OF THE IMPACT OF ORGANIZATIONAL COMMUNICATION ON THE
 RELATIONSHIP BETWEEN JOB PERFORMANCE AND JOB SATISFACTION

	Performance Measure									
	Quality				Quantity				Overall Job Performance	
	r^a		\bar{z}^b	r		\bar{z}	r		\bar{z}	
	LowC (2)	Highd (3)	(4)	Low (5)	High (6)	(7)	Low (8)	High (9)	(10)	
Proposed Communication Moderator and Satisfaction Dimension (1)										
Trust in superiors (A) (Low, n = 139; high, n = 163)	.23	.18	-.45	.16	.14	-.18	.22	.18	-.36	
Satisfaction with work	.04	.04	.00	-.05	.08	1.12	.00	.07	.60	
Satisfaction with supervision	.09	.09	.00	.04	.02	-.17	.07	.06	-.09	
Satisfaction with pay	.04	.10	.52	.10	.11	.09	.07	.12	.43	
Satisfaction with promotions	.04	.03	-.09	-.03	.07	.86	.00	.06	.51	
Satisfaction with co-workers	.11	.11	.00	.17	.10	-.61	.15	.12	-.26	
Overall job satisfaction										
Influence of superiors (B) (Low, n = 128; high, n = 174)										
Satisfaction with work	.15	.26	.98	.12	.17	.43	.15	.23	.71	

TABLE XVI--Continued

	Performance Measure									
	Quality				Quantity				Overall Job Performance	
	ra		zb	r		z	r		z	
	Low ^c (2)	High ^d (3)		Low (5)	High (6)		Low (8)	High (9)		
Proposed Communication Moderator and Satisfaction Moderator (1)			(4)		(7)			(10)		
Satisfaction with supervision	.08	.15	.60	-.02	.11	1.11	.03	.14	.94	
Satisfaction with pay	.05	.14	.77	.02	.04	.17	.04	.10	.51	
Satisfaction with promotions	.01	.12	.94	.14	.09	-.43	.08	.11	.26	
Satisfaction with co-workers	.07	.02	-.43	.03	.02	-.08	.06	.03	-.26	
Overall job satisfaction	.09	.15	.52	.14	.12	-.17	.13	.15	.17	
Accuracy (C)										
(Low, n = 115; high, n = 187)										
Satisfaction with work	.08	.36	2.48***	.02	.27	2.14**	.06	.35	2.55***	
Satisfaction with supervision	.10	.20	.85	-.04	.17	1.77**	.03	.20	1.44*	
Satisfaction with pay	.03	.17	1.18	.04	.04	.00	.04	.11	.59	

TABLE XVI--Continued

	Performance Measure									
	Quality			Quantity				Overall Job Performance		
	ra		zb	r		z	r		z	
	Low ^c (2)	High ^d (3)	(4)	Low (5)	High (6)	(7)	Low (8)	High (9)	(10)	
Proposed Communication Moderator and Satisfaction Moderator (1)	.07	.18	.93	.12	.16	.34	.11	.19	.68	
Satisfaction with promotions	.03	.11	.67	-.09	.14	1.93**	-.04	.14	1.51*	
Satisfaction with co-workers	.17	.15	-.17	.14	.17	.26	.17	.18	.09	
Overall job satisfaction										
Desire for inter-action (D) (Low, n = 124; high, n = 178)										
Satisfaction with work	.09	.29	1.76**	.05	.22	1.47*	.08	.28	1.76**	
Satisfaction with supervision	.10	.17	.60	.07	.07	.00	.10	.13	.26	
Satisfaction with pay	.13	.03	-.85	.17	-.07	-2.05**	.16	-.03	-1.62*	
Satisfaction with promotions	.04	.11	.60	.18	.09	-.78	.12	.12	.00	

TABLE XVI--Continued

	Performance Measure									
	Quality			Quantity			Overall Job Performance			
	ra		zb	r		z	r		z	
	Low ^c (2)	High ^d (3)	(4)	Low (5)	High (6)	(7)	Low (8)	High (9)	Low (10)	High (10)
Proposed Communication Moderator and Satisfaction Moderator (1)										
Satisfaction with co-workers	.04	.09	.42	.07	.02	-.42	.06	.06	.00	
Overall job satisfaction	.09	.20	.95	.05	.23	1.56*	.08	.24	1.39*	
Communication satisfaction (E) (Low, n = 102; high, n = 200)										
Satisfaction with work	.17	.30	1.12	.09	.22	1.08	.14	.29	1.28*	
Satisfaction with supervision	.18	.17	-.08	.04	.10	.49	.12	.15	.25	
Satisfaction with pay	.14	.11	-.25	.08	.02	-.49	.12	.07	-.41	
Satisfaction with promotions	.17	.13	-.33	.21	.11	-.83	.21	.13	-.67	
Satisfaction with co-workers	.13	.06	-.57	.09	.01	-.65	.12	.04	-.65	

TABLE XVI--Continued

	Performance Measure									
	Quality			$\bar{z}b$	Quantity			Overall Job Performance		
	ra		Highd (3)		r		\bar{z}	r		\bar{z}
	LowC (2)	HighC (3)			Low (5)	High (6)		Low (8)	High (9)	
Proposed Communication Moderator and Satisfaction Moderator (1)	.20	.15	(4)	.20	.13	(7)	.22	.15	(10)	-.59
Overall job satisfaction			-.42							
Underload communication (F) (Low, n = 130; high, n = 172)										
Satisfaction with work	.23	.27	.36	.24	.13	-.97	.26	.23	-.27	
Satisfaction with supervision	.14	.21	.62	.13	.06	-.60	.15	.15	.00	
Satisfaction with pay	.27	.02	-2.19**	.16	-.04	-1.72**	.24	-.01	-2.17**	
Satisfaction with promotions	.17	.14	-.26	.23	.09	-1.23	.22	.13	-.79	
Satisfaction with co-workers	.07	.12	.43	.07	.04	-.26	.08	.09	.09	
Overall job satisfaction	.13	.21	.70	.15	.17	.18	.16	.21	.44	

TABLE XVI--Continued

	Performance Measure											
	Quality				Quantity						Overall Job Performance	
	ra		zb	r		zb	r		r		z	
	Low ^c (2)	High ^d (3)		Low (5)	High (6)		Low (8)	High (9)				
Proposed Communication Moderator and Satisfaction Moderator (1)			(4)			(7)				(10)		
Overload communication (G) (Low, n = 113; high, n = 189)												
Satisfaction with work	.23	.27	.35	.16	.19	.26	.21	.26	.44			
Satisfaction with supervision	.10	.23	1.11	.02	.14	1.00	.06	.20	1.19			
Satisfaction with pay	.16	.11	-.42	.08	.04	-.33	.13	.08	-.42			
Satisfaction with promotions	.10	.18	.68	.08	.19	.93	.10	.20	.85			
Satisfaction with co-workers	.10	.10	.00	.11	.03	-.67	.12	.07	-.42			
Overall job satisfaction	.12	.21	.77	.15	.18	.26	.15	.22	.60			

TABLE XVI--Continued

	Performance Measure									
	Quality			\bar{z}_b	Quantity			Overall Job Performance		
	r_a		\bar{z}		r		r		\bar{z}	
	Low ^c (2)	High ^d (3)		Low (5)	High (6)	Low (8)	High (9)			
Proposed Communication Moderator and Satisfaction Moderator (1)			(4)			(7)			(10)	
Satisfaction with work	.20	.32	1.11	.13	.24	.98	.18	.31	1.19	
Satisfaction with supervision	.19	.19	.00	.09	.10	.09	.16	.16	.00	
Satisfaction with pay	.18	.09	-.79	.18	-.08	-2.26**	.20	.00	-1.74**	
Satisfaction with promotions	.10	.19	.79	.08	.22	1.23	.10	.23	1.15	
Satisfaction with co-workers	.10	.13	.26	.03	.12	.78	.07	.14	.61	
Overall job satisfaction	.19	.18	-.09	.13	.21	.71	.17	.22	.45	

^aCorrelation coefficients.

^bStandard error of difference between independent r_s (low and high subgroups); all r_s transformed to Fisher Z_s .

^cCorrelation coefficient for individuals scoring low in the row communication dimension.

TABLE XVI--Continued

^dCorrelation coefficient for individuals scoring high in the row communication dimension.

*Difference between correlation coefficients of low and high subgroups significant at .10 level.

**Difference between correlation coefficients of low and high subgroups significant at .05 level.

***Difference between correlation coefficients of low and high subgroups significant at .01 level.

and the performance-moderator interaction term. The critical value was the increase in R^2 by adding the interaction term to the regression model already containing the other two variables--performance and moderator. The significance of this increase in R^2 was evaluated using the F value. For example, the first value in Table XVII ($R^2 = .065$) refers to the change in R^2 after including the independent variable (quality of performance) into the model (column two). When the moderator is added, the change is denoted by the second value ($R^2 = .008$) in the second column. Finally, when the interaction is integrated, the change is indicated by the third value ($R^2 = .002$) in the same column. The F value ($F = .55$) associated with the increase in R^2 as a result of adding the interaction term appears in column three.

A final note involving two procedural aspects should be reviewed before turning to the findings concerning hypothesis two. First of all, for the purpose of the present investigation, a true moderator was one that received support from both the primary statistical technique, subgroup analysis, and the secondary statistical method, moderated regression analysis. The evaluation of the results from this last statistical technique was conducted by using Zedeck's indication. He explains that if the regression equation involving the proposed moderator and the original predictor and the regression model including the interaction

TABLE XVII

MODERATED REGRESSION ANALYSIS OF THE IMPACT OF ORGANIZATIONAL COMMUNICATION
ON THE RELATIONSHIP BETWEEN JOB PERFORMANCE AND JOB SATISFACTION
(n = 302)

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimensionc (8)
	Quality		Quantity		Overall Job Performance			
	R2d (2)	Fe (3)	R2 (4)	F (5)	R2 (6)	F (7)		
Trust in superiors (A)								
I	.065		.032f		.059			
M	.088f		.107f		.093f			
I x M ⁹	.002	.55	.000	.01	.000	.11		Satisfaction with work
I	.033		.009		.023			
M	.485f		.510		.495f			
I x M	.000	.26	.005	3.17*	.002	1.55		Satisfaction with supervision
I	.016		.003		.010			
M	.032f		.040f		.035f			
I x M	.000	.02	.000	.13	.000	.09		Satisfaction with pay
I	.022		.023		.028			
M	.135f		.141f		.134f			
I x M	.000	.01	.000	.04	.000	.00		Satisfaction with promotions

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^C (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	F _e (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I M	.011		.004		.009			
I x M	.090 ^f	1.37	.096	.13	.092 ^f	.70	Satisfaction with co-workers	
	.004		.000		.002			
I M	.031		.029		.037			
I x M	.137 ^f	.96	.146 ^f	2.22	.137 ^f	1.65	Overall job satis- faction	
	.003		.006		.005			
Influence of superiors (B)								
I M	.065		.032		.059			
I x M	.093 ^f	.80	.104 ^f	.10	.093 ^f	.33	Satisfaction with work	
	.002		.000		.000			
I M	.033		.009		.023			
I x M	.176	.90	.192	1.03	.181 ^f	1.06	Satisfaction with supervision	
	.002		.003		.003			
I M	.016		.003		.010			
I x M	.022 ^f	.34	.026 ^f	.66	.023 ^f	.04	Satisfaction with pay	
	.001		.002		.000			

TABLE XVII--Continued

Communication Dimension--M ^a (1)	Performance Measure--I ^b							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	F _e (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.022		.023		.028			Satisfaction with promotions
M	.184 ^f		.184 ^f		.180 ^f			
I x M	.000	.11	.001	.41	.000	.04		
I	.011		.004		.009			Satisfaction with co-workers
M	.074 ^f		.079 ^f		.075 ^f			
I x M	.001	.36	.003	.84	.002	.79		
I	.031		.029		.037			Overall job satisfaction
M	.113 ^f		.115 ^f		.110 ^f			
I x M	.002	.58	.001	.24	.000	.01		
Accuracy (C)								Satisfaction with work
I	.065		.032		.059			
M	.017		.023		.018			
I x M	.018	5.98**	.013	4.12**	.018	6.05**		
I	.033		.009		.023			Satisfaction with supervision
M	.041 ^f		.048		.043 ^f			
I x M	.003	.97	.009	2.73*	.007	2.10		

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	Fe (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.016		.003		.010		Satisfaction with pay	
M	.024 ^f		.028 ^f		.025 ^f			
I x M	.000	.04	.002	.47	.000	.30		
I	.022		.023		.028		Satisfaction with promotions	
M	.007		.008		.007	1.28		
I x M	.007	2.13	.001	.42	.004			
I	.011		.004		.009		Satisfaction with co-workers	
M	.054 ^f		.058		.055 ^f	2.59		
I x M	.002	.62	.013	4.26**	.008			
I	.031		.029		.037		Overall job satisfaction	
M	.027 ^f		.039 ^f		.026 ^f	.07		
I x M	.000	.04	.000	.01	.000			
Desire for inter-action (D)								
I	.065		.032		.059		Satisfaction with work	
M	.075 ^f		.097 ^f		.081 ^f	1.45		
I x M	.005	1.70	.002	.81	.004			

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	Fe (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.033		.009		.023			Satisfaction with supervision
M	.034 ^f		.046 ^f		.039 ^f			
I x M	.000	.17	.000	.02	.000	.01		
I	.016		.003		.010			Satisfaction with pay
M	.034 ^f		.043		.038 ^f			
I x M	.000	.03	.010	3.05*	.004	1.27		
I	.022		.023		.028			Satisfaction with promotions
M	.052 ^f		.058 ^f		.052 ^f			
I x M	.002	.57	.000	.03	.000	.13		
I	.011		.004		.009			Satisfaction with co-workers
M	.031 ^f		.037 ^f		.033 ^f			
I x M	.001	.20	.001	.26	.000	.00		
I	.031		.029		.037			Overall job satis- faction
M	.028 ^f		.036 ^f		.029 ^f			
I x M	.004	1.11	.006	2.07	.006	2.02		

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	Fe (3)	R ² (4)	F (5)	R ² (6)	F (7)		
Communication satisfaction (E)								
I	.065		.032		.059			
M	.133 ^f		.142 ^f		.134 ^f			Satisfaction with work
I x M	.000	.00	.004	1.28	.001	.45		
I	.033		.009		.023			
M	.128 ^f		.136 ^f		.130 ^f			Satisfaction with supervision
I x M	.000	.00	.001	.48	.000	.17		
I	.016		.003		.010			
M	.056 ^f		.060 ^f		.057 ^f			Satisfaction with pay
I x M	.004	1.25	.003	.89	.004	1.32		
I	.022		.023		.028			
M	.053 ^f		.054 ^f		.052 ^f			Satisfaction with promotions
I x M	.000	.09	.000	.00	.000	.01		
I	.011		.004		.008			
M	.143 ^f		.147 ^f		.144 ^f			Satisfaction with co-workers
I x M	.000	.01	.000	.02	.000	.00		

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	F _e (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.031		.029		.037			Overall job satisfaction
M	.149		.152		.148			
I x M	.007	2.69*	.011	3.69**	.011	4.23**		
Underload communication (F)								
I	.065		.032		.059			Satisfaction with work
M	.009 ^f		.008		.008			
I x M	.000	.00	.001	.20	.000	.01		
I	.033		.009		.023			Satisfaction with supervision
M	.070 ^f		.070 ^f		.070 ^f			
I x M	.000	.11	.000	.00	.000	.07		
I	.016		.003		.010			Satisfaction with pay
M	.011 ^f		.011 ^f		.011 ^f			
I x M	.002	.66	.000	.00	.000	.12		
I	.022		.023		.028 ^f			Satisfaction with promotions
M	.018 ^f		.017 ^f		.018 ^f			
I x M	.000	.00	.001	.34	.000	.04		

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	F _e (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.011 ^f		.004		.009			Satisfaction with co-workers
M	.072 ^f		.072 ^f		.071 ^f			
I x M	.001	.20	.000	.07	.001	.22		
I	.031		.029		.037			Overall job satisfaction
M	.070 ^f		.069 ^f		.069 ^f			
I x M	.001	.27	.004	1.48	.004	1.29		
Overload communication (G)								
I	.065		.032		.059			Satisfaction with work
M	.004		.008		.006			
I x M	.000	.00	.004	1.14	.001	.42		
I	.033		.009		.023			Satisfaction with supervision
M	.008		.012 ^f		.010 ^f			
I x M	.014	4.56**	.001	.63	.007	2.10		
I	.016		.003		.010			Satisfaction with pay
M	.009 ^f		.011 ^f		.010 ^f			
I x M	.000	.01	.000	.00	.000	.00		

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	Fe (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.022		.023		.028			Satisfaction with promotions
M	.001		.002		.001			
I x M	.000	.01	.000	.12	.000		.06	
I	.011		.004		.009			Satisfaction with co-workers
M	.021 ^f		.023 ^f		.022 ^f			
I x M	.000	.15	.002	.57	.000		.05	
I	.031		.029		.037			Overall job satisfaction
M	.000		.001		.000			
I x M	.002	.46	.001	.34	.002		.49	
Upward communication (H)								
I	.065		.032		.059			Satisfaction with work
M	.010		.009 ^f		.009 ^f			
I x M	.018	6.02**	.000	.10	.006		1.95	
I	.033		.009		.023			Satisfaction with supervision
M	.003		.004		.004			
I x M	.004	1.34	.000	.09	.002		.55	

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^C (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	Fe (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.016		.003		.010			Satisfaction with pay
M	.007		.007		.007			
I x M	.000	.00	.023	6.94***	.009		2.65*	
I	.022		.023		.028			Satisfaction with promotions
M	.002		.001		.002			
I x M	.014	4.26**	.000	.08	.005		1.42	
I	.011		.004		.009			Satisfaction with co-workers
M	.000		.000		.000			
I x M	.010	3.19*	.000	.89	.002		.72	
I	.031		.029		.037			Overall job satisfaction
M	.002		.001		.001			
I x M	.009	2.88*	.001	.26	.004		1.28	
Downward communication (I)								Satisfaction with work
I	.065		.032		.059			
M	.011		.010 ^f		.010 ^f			
I x M	.012	3.97**	.002	.60	.001		.22	

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	F _e (3)	R ² (4)	F (5)	R ² (6)	F (7)		
I	.033		.009		.023			Satisfaction with supervision
M	.002		.002		.002		.51	
I x M	.004	1.37	.000	.12	.002			
I	.016		.003		.010			Satisfaction with pay
M	.000		.000		.000		.50	
I x M	.010	3.07*	.000	.11	.002			
I	.022		.023		.028			Satisfaction with promotions
M	.033 ^f		.031 ^f		.031 ^f		.16	
I x M	.006	1.92	.001	.19	.000			
I	.011		.004		.009			Satisfaction with co-workers
M	.002		.002		.002		.77	
I x M	.006	1.72	.001	.16	.003			
I	.031		.029		.037			Overall job satis- faction
M	.001		.000		.000		1.04	
I x M	.015	4.54**	.000	.00	.003			

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib							Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance			
	R ² d (2)	Fe (3)	R ² (4)	F (5)	R ² (6)	F (7)		
Lateral communication (J)								
I	.065		.032		.059			
M	.000		.000		.000			Satisfaction with work
I x M	.000	.05	.003	.90	.002	.58		
I	.033		.009		.023			
M	.000		.000		.000			Satisfaction with supervision
I x M	.000	.04	.000	.00	.000	.00		
I	.016		.003		.010			
M	.011		.010		.011			Satisfaction with pay
I x M	.009	2.64*	.015	4.52**	.014	4.32**		
I	.022		.023		.028			
M	.020 ^f		.020 ^f		.019 ^f			Satisfaction with promotions
I x M	.001	.21	.001	.26	.001	.35		
I	.011		.004		.009			
M	.003		.002		.003			Satisfaction with co-workers
I x M	.000	.09	.001	.21	.000	.00		

TABLE XVII--Continued

Communication Dimension--Ma (1)	Performance Measure--Ib						Job Satisfaction Dimension ^c (8)
	Quality		Quantity		Overall Job Performance		
	R ² d (2)	F _e (3)	R ² (4)	F (5)	R ² (6)	F (7)	
I	.031		.029		.037		Overall job satisfaction
M	.000		.000		.000		
I x M	.001	.37	.001	.24	.000	.00	

aM: each of the facets of organizational communication as a moderator.

bI: each measure of job performance as an independent variable.

cEach one of the facets of job satisfaction as a dependent variable.

dR²: the change in R square (R²) that results by adding the row term in column one to the regression equation.

eF: the significant test value which resulted by adding the interaction term (M x I) after the other two terms, independent and moderator variables, were already in the model.

fSuggested moderator supported as an independent predictor.

gI x M: the interaction term (the product of the independent variable and the moderator investigated).

TABLE XVII--Continued

*Addition of interaction term significant at .10 level.

**Addition of interaction term significant at .05 level.

***Addition of interaction term significant at .01 level.

term, the proposed moderator, and the predictor are different from the equation including only the predictor, but if they are not different from each other, then the proposed moderator is an independent predictor and not a moderator variable. Secondly, the three measures of job performance and the six dimensions of job satisfaction investigated provided eighteen different relationships to be assessed. Therefore, the proposed moderating influence of each one of the ten investigated dimensions of communication on each one of the eighteen different relationships between measures of performance and satisfaction was evaluated. Each one of these different relationships is referred to as a unique relationship.

Having presented both the guidelines for interpreting Tables XVI and XVII and the terms true moderator and unique relationship, it is now time to identify the results associated with hypothesis two. This hypothesis predicted that job performance measures would be directly and more strongly related to job satisfaction dimensions under conditions in which respondents reported high perceived levels of trust in superiors, influence of superiors, accuracy, desire for interaction, and satisfaction with communication than when they reported low perceived levels of the same facets of organizational communication. Clearly, this hypothesis involved five dimensions of communication.

All of them were expected to moderate the relationship between job performance and job satisfaction in the same fashion. With the purpose of enhancing readability, the findings concerning the moderating influence on each one of these dimensions on such relationship are reviewed separately.

Trust in superiors.--The proposed moderator received no support as a true moderator of the relationship between job performance and job satisfaction; it only received a very weak and partial support. Section A of Table XVI shows that the primary statistical technique of subgroup analysis provided no support for trust in superiors as a moderator of the investigated relationship. No one difference between the eighteen pairs of correlations compared was statistically significant. It was only the secondary statistical technique of moderated regression analysis which gave some weak support to trust in superiors as a moderator. As shown in Table XVII, the proposed moderator reflected a significant ($p < .10$) influence on the unique relationship of quantity and satisfaction with supervision ($R^2 = .005$). So it was only one of the eighteen different evaluated relationships between performance measures and satisfaction dimensions that showed significant moderating effects from the proposed moderator, as reflected by moderated regression analysis. This finding represented only a very weak and

partial support to trust in superiors as a moderator. Significantly, however, the same statistical technique showed that trust in superiors operated as a main predictor of all the other seventeen assessed relationships, as indicated in Table XVII. Therefore, while trust in superiors received no support as a true moderator of the performance/satisfaction relationship, it was strongly supported as a main predictor of the same relationship.

Influence of superiors.---The sample investigated gave no support to influence of superiors as a moderator of the association between performance and satisfaction. Subgroup analysis showed, as presented in Table XVI, that the largest insignificant difference ($r = .13$) between group correlations had to do with the relationship of quantity with satisfaction with supervision. The proposed moderator received no support from moderated regression analysis either. However, Table XVII shows that the expected moderator acted as a main predictor of the investigated relationship; all eighteen unique performance/satisfaction relationships evidenced the presence of main effects. Consequently, perceived influence of superiors received no support as a moderator of the job performance relationship with job satisfaction; however, it received complete support as a predictor of the same relationship.

Information accuracy.--Both statistical techniques employed, subgroup and moderated regression analyses, provided moderate support to accuracy of information as a moderator of the relationship between performance and satisfaction. Subgroup analysis revealed, as shown in Table XVI, that seven out of the eighteen pairs of correlation coefficients compared were significantly different and in the predicted direction. In these significant differences, the correlation coefficients computed on respondents scoring high on accuracy of information were higher than those computed on those individuals who scored low on the same variable. More specifically, accuracy was found to be a strong moderator of the relationship between the three measures of performance, quality, quantity and overall job performance, and satisfaction with work ($r_s = .08$ and $.36$, $p < .01$; $r_s = .02$ and $.27$, $p < .05$; and $r_s = .06$ and $.35$, $p < .01$, respectively). It was also shown to be a moderator of the relationship between the performance measures of quantity and overall job performance with satisfaction with supervisors and satisfaction with co-workers ($r_s = -.04$ and $.17$, $p < .05$; $r_s = .03$ and $.20$, $p < .10$; $r_s = -.09$ and $.14$, $p < .05$; and $r_s = -.04$ and $.14$, $p < .10$, respectively).

The preceding data give support to accuracy of information as a true moderator of five of the eighteen unique relationships assessed. Specifically, accuracy was shown

to be a moderator of the relationship between the three measures of performance, quality, quantity, and overall job performance, and satisfaction with work. It also received support as a moderator of quantity relationship with two dimensions of job satisfaction, satisfaction with supervisors and satisfaction with co-workers. It should also be noted that results from moderated regression analysis showed the proposed moderator functioning as a main predictor in ten of the eighteen unique relationships evaluated. As a consequence, although accuracy of information received some support as a moderator of the performance/satisfaction relationship, it received a stronger support as a predictor.

Desire for interaction.--The expected moderating influence of desire for interaction on the relationship between performance and satisfaction received only weak support. The primary statistical technique of subgroup analysis detected some moderate, partial influences that were later shown to represent main effects by the secondary method of moderated regression analysis.

As detected by subgroup analysis and shown in Table XVI, six of the eighteen pairs of correlations evaluated were significantly different. The difference between correlations in four of these situations was in the predicted direction while in the other two it was contrary to the expectation. Desire for interaction received support

as a moderator of the relationship between the investigated dimensions of performance, quality, quantity and overall performance, and satisfaction with work ($r_s = .09$ and $.29$, $p < .05$; $r_s = .05$ and $.22$, $p < .10$; and $r_s = .08$ and $.28$, $p < .05$, respectively). It also received support as a moderator of the relationship of quantity and overall job performance with overall job satisfaction ($r_s = .05$ and $.23$, $p < .10$; and $r_s = .08$ and $.24$, $p < .10$, respectively).

Opposite to the original predicted direction, subgroup analysis also provided support for the same dimension, desire for interaction, as a moderator of the relationship of quantity and overall job performance with satisfaction with pay ($r_s = .17$ and $-.07$, $p < .05$; and $r_s = .16$ and $-.03$, $p < .10$, respectively). When the results through moderated regression analysis in Table XVII are assessed, one finds that the expected moderator received support only as a moderator of one of the eighteen relationships investigated: the relationship between quantity and satisfaction with pay ($R^2 = .010$, $p < .10$).

The preceding analysis indicates that only one of the eighteen unique relationships between measures of performance and dimensions of satisfaction was truly moderated by desire for interaction. That particular moderated relationship was between quantity and satisfaction with pay. However, the data in Table XVII show that desire for

interaction acted as a main predictor on the other seventeen evaluated unique relationships. Hence, the actual findings indicate that desire for interaction received very weak support as a moderator and very strong support as a main predictor of the performance/satisfaction relationship.

Satisfaction with communication.--Communication satisfaction was only weakly and partially supported as a moderator of the performance/satisfaction relationship. It received no support as a true moderator. Results attained through subgroup analysis, as highlighted in Table XVI, denote that there was only one pair of coefficients whose difference was significant and in the expected direction. The correlation between overall performance and satisfaction with pay was somewhat stronger ($p < .10$) for respondents who manifested higher levels of satisfaction with communication ($r = .29$) than for participants who reported lower levels of satisfaction with communication ($r = .14$). This specific finding was not supported by moderated regression analysis, as shown in Table XVII. However, this last analysis gave support to the proposed moderating effect of communication satisfaction on the relationship between job performance dimensions, quality, quantity, and overall job performance, and overall job satisfaction ($R^2 = .007, p < .10; R^2 = .011, p < .05; R^2 = .011, p < .05$, respectively), as denoted by the

increase in R^2 after adding the interaction term to the different regression equations. Evidently, each statistical technique employed supported unique moderating effects.

Findings shown in Table XVII indicate that communication satisfaction acted as a predictor of fifteen of the investigated unique relationships in the sample researched. Thus, although satisfaction with communication received no support as a true moderator, it received strong support as a predictor of the relationship between the target variables of performance and satisfaction.

In synthesis, and in general, hypothesis two proposing that trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication would act as moderators of the relationship between job performance and job satisfaction received only weak support. In fact, only accuracy of information and desire for interaction received support as true moderators of unique performance/satisfaction relationships.

Accuracy was found to act as a moderator between the relationship of job performance measures, quality, quantity, and overall job performance, and satisfaction with work. The same moderator was also shown to influence the relationship of quality with both satisfaction with supervisors and satisfaction with co-workers. Desire for interaction, on the other hand, was shown to moderate the relationship between quantity and satisfaction with pay. Apart from

these six unique relationships showing the presence of moderating effects concurrently substantiated by subgroup analysis and moderated regression procedures, no other moderating influences received complete support. However, the proposed moderators received strong support as main predictors. Seventy-six of the ninety unique relationships evaluated while assessing the results concerning hypothesis two showed different proposed moderators acting as independent predictors.

Hypothesis Three

Performance measures were expected to be inversely and more strongly related to job satisfaction dimensions under conditions in which respondents reported high levels of perceived underload and overload communication than when they reported low perceived levels of the same facets of organizational communication. Results of the analyses undertaken to test this proposition are reviewed below.

Underload communication.--The proposed moderating influence of underload communication on the relationship between job performance and job satisfaction received no support. However, in the unexpected direction, the predicted moderator received weak, partial support; it was supported by only one of the two applied statistical techniques. The support found was detected by subgroup analysis. As denoted in Table XVI, the relationship

between the three measures of performance, quality, quantity, and overall job performance, and satisfaction with pay was significantly higher for the 130 individuals scoring low in underload communication than for the 172 respondents scoring high on the same communication dimension. Although moderated regression analysis did not substantiate the above finding, it showed the proposed moderator, as indicated in Table XVII, functioning as a predictor in sixteen of the eighteen unique relationships evaluated. Therefore, underload communication was mainly supported as a predictor of the investigated relationship. The same communication dimension received only weak, partial support as a moderator, in the unexpected direction, of the performance/satisfaction relationship.

Overload communication.--Overload communication received very weak, partial support as a moderator of the relationship researched. Thus, in essence, the proposed moderator received no support as a true moderator. The primary statistical technique of subgroup analysis detected no moderating effects from the expected moderator, as data in Table XVI indicate. It was only the secondary method, moderated regression analysis, which provided support to overload communication, as shown in Table XVII, as a moderator of one of the eighteen unique relationships assessed; the relationship between quality and satisfaction

with supervision ($R^2 = .014$, $p < .05$). This last statistical technique showed the proposed moderator acting as a main predictor in eight of the eighteen relationships evaluated. Hence, overload communication was not supported as a true moderator; however, it was moderately supported as a main predictor.

In summary, hypothesis three, proposing that underload and overload communication would moderate the relationship between performance and satisfaction, received very weak, partial support. No true moderating influences by either one of these proposed moderators were detected. However, the moderated regression analysis conducted showed the two expected moderators functioning as main predictors in twenty-four of the thirty-six evaluated unique relationships between measures of performance and satisfaction.

Hypothesis Four

Hypothesis four predicted that job performance measures would be directly and more strongly related to job satisfaction dimensions under conditions in which respondents reported high levels of perceived upward and downward communication than when they reported low perceived levels of these same facets of organizational communication. The findings associated with the moderating influences of upward and downward communication as proposed in this hypothesis are considered below.

Upward communication.--The proposed directional moderating influence of upward communication on the relationship between performance and satisfaction received very weak support. However, in the unpredicted direction, it received moderate support as a moderator of the same relationship.

Results from subgroup analysis in Table XVI show that upward communication acted as expected in two of the eighteen unique relationships evaluated. The relationship of two measures of performance, quantity and overall job performance, with satisfaction with pay was found to be significantly higher for the 151 respondents scoring high in upward communication than that reflected by the 151 participants scoring low ($r_S = -.10$ and $.19$, $p < .01$; and $r_S = .00$ and $.18$, $p < .10$, respectively), as predicted.

It is important to note that six of the fifteen pairs of correlations that did not yield the expected direction in their internal differences were statistically significant. Therefore, although not in the expected direction, upward communication received support as a moderator of the relationship between quality and four of the six investigated dimensions of job satisfaction, satisfaction with work, satisfaction with supervision, satisfaction with promotions, and satisfaction with co-workers ($r_S = .37$ and $.14$, $p < .05$; $r_S = .29$ and $.08$, $p < .05$; $r_S = .25$ and $.04$, $p < .05$; and $r_S = .20$ and $.00$, $p < .05$, respectively). Also, this same

moderator received support in the same unexpected fashion on the relationship of overall performance with satisfaction with work and satisfaction with supervision ($r_s = .33$ and $.15$, $p < .05$; and $r_s = .23$ and $.08$, $p < .10$, respectively).

Findings through moderated regression analysis in Table XVII offered support to upward communication as a moderator of the relationship of quantity and overall performance with satisfaction with pay ($R^2 = .023$, $p < .01$; and $R^2 = .009$, $p < .10$, respectively). They also supported the moderating influence of this same communication dimension on the relationship between quality and four different dimensions of satisfaction, satisfaction with work, satisfaction with promotions, satisfaction with co-workers, and overall job satisfaction ($R^2 = .018$, $p < .05$; $R^2 = .014$, $p < .05$; $R^2 = .010$, $p < .10$; and $R^2 = .009$, $p < .10$, respectively).

In sum, upward communication received support as a true moderator of five of the eighteen unique performance/satisfaction relationships assessed. It received support as a moderator of the relationship between two measures of performance, quality and overall job performance, and satisfaction with pay. It was also found to be a moderator of quality of performance relationship with three dimensions of job satisfaction: satisfaction with work, satisfaction with promotions, and satisfaction with co-workers. Only two unique relationships, as seen in Table XVII, showed

the proposed moderator acting as a main predictor. Therefore, upward communication received moderate support as a moderator of the relationship between the target variables of job performance and job satisfaction.

Downward communication.--The analyses conducted provided moderate support to downward communication as a moderator of the relationship of the two target variables investigated. Results from subgroup analysis in Table XVI show that the internal difference of four of the eighteen pairs of coefficients compared were significant and in the predicted direction. Quality was found to be significantly influenced by downward communication on its relationship with satisfaction with work, satisfaction with pay, satisfaction with promotions, and overall job satisfaction ($r_s = .13$ and $.37$, $p < .05$; $r_s = .05$ and $.20$, $p < .10$; $r_s = .04$ and $.22$, $p < .10$; and $r_s = .05$ and $.28$, $p < .05$, respectively).

The above results through subgroup analysis were virtually substantiated through moderated regression analysis. Table XVII shows that this second technique provided support for three of the four associations previously found to be moderated by downward communication. The relationship of quality with satisfaction with work, satisfaction with pay, and overall job satisfaction was found to be moderated by the present dimension of

communication ($R^2 = .012$, $p < .05$; $R^2 = .010$, $p < .10$; and $R^2 = .015$, $p < .05$, respectively).

The foregoing analysis indicates that three of the eighteen unique relationships evaluated showed that the proposed moderator was indeed functioning as one. Downward communication was found to act as a moderator of the relationship between quality and three dimensions of job satisfaction: satisfaction with work, satisfaction with pay, and overall job satisfaction. Five other unique relationships, as indicated in Table XVII, showed the proposed moderator operating as a main predictor. Consequently, although downward communication was moderately supported as a moderator of the performance/satisfaction relationship, it received a stronger support as a predictor of the same association.

In conclusion, hypothesis four, predicting that upward and downward communication would moderate the relationship between job performance and job satisfaction, received moderate support. The proposed moderators received support as true moderators of eight of the thirty-six unique relationships assessed. More specifically, upward communication was found to moderate the relationship of two measures of performance, quantity and overall job performance, with satisfaction with pay. The same proposed moderator was also shown to influence the relationship of quality with satisfaction with work, satisfaction with

promotions, and satisfaction with co-workers. Downward communication, on the other hand, was shown moderating the relationship of quality and three measures of satisfaction: satisfaction with work, satisfaction with pay, and overall job satisfaction. The proposed moderators also received support as main predictors of seven other unique associations between performance and satisfaction.

Hypothesis Five

Hypothesis five received no support. It predicted that job performance measures would be inversely and more strongly related to job satisfaction dimensions in situations in which respondents reported high levels of perceived lateral communication than in situations in which they reported low perceived levels of the same facet of organizational communication. Lateral communication, however, did receive some support, although in the unexpected fashion, as a moderator of the relationship investigated. Two of the eighteen pairs of correlations compared through subgroup analysis were found to be significantly different and in the unpredicted direction. More specifically, the relationship of quantity and overall performance with satisfaction with pay was significantly influenced by lateral communication ($r_s = .18$ and $-.08$, $p < .05$; and $r_s = .20$ and $.00$, $p < .05$, respectively) in the unexpected fashion. This finding was fully supported

by moderated regression analysis as shown in Table XVII. Actually, the relationship of the three measures of performance, quality, quantity, and overall performance, with satisfaction with pay was found to be moderated by lateral communication, as evidenced by the increase in R^2 ($R^2 = .009$, $p < .10$; $R^2 = .015$, $p < .05$; and $R^2 = .014$, $p < .05$, respectively). So although the predicted direction of the proposed moderating influence of lateral communication on the performance/satisfaction relationship was not supported, the proposed moderator did receive some support, in the unpredicted fashion. It received support as a true moderator of the relationship of two measures of performance, quantity and overall job performance, with satisfaction with pay. Three other unique relationships showed the expected moderator operating as a main predictor.

Graphical Analysis of Residuals

Five hundred and forty moderated regression equations were developed and analyzed in the search for the proposed moderating influence of organizational communication on the relationship between job performance and job satisfaction. This analysis was undertaken with the presumption that the assumptions of multiple regression analysis were not violated. In an attempt to discern if such presumption was appropriate, a graphical analysis of residuals was conducted.

The usual assumptions made about the residuals (errors) when performing regression analysis are that the errors are independent, have zero mean, have a common variance, and follow a normal distribution. So for a regression model to be considered appropriate, the observed residuals should exhibit properties not at odds with the previous assumptions. The graphical analysis performed for assessing the appropriateness of the moderated regression models developed included constructing plots of the standardized residuals versus the values of each independent variable investigated and reviewing the pattern of the points on each plot. A horizontal band of points similar to the one in Figure 5 is expected, with no hint of the presence of any systematic trend, when all basic assumptions hold (4, p. 239).

A revision of the graphs plotted suggested that the pattern of points on each one mimicked the expected horizontal line. No marked departures from the assumptions were perceived. Of course, these statements are necessarily qualitative in nature, and they should be interpreted as such. A randomly selected sample of fifteen of the graphs can be reviewed in Appendix C.

A last observation concerning the analysis of residuals undertaken should be made. The plotting of the standardized residuals and the values of the various independent variables gave evidence of the existence of few outliers (see Appendix C). An outlier among a set of residuals is one that is much

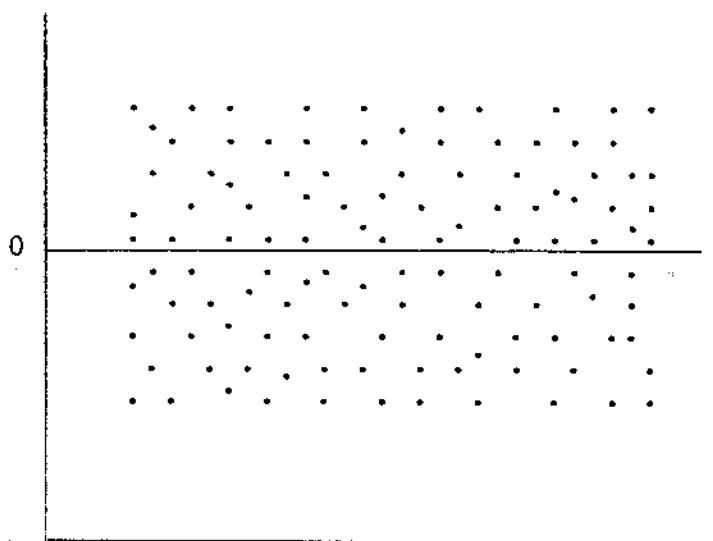


Fig. 5--Expected pattern of residuals when basic regression assumptions hold.

larger than the rest in absolute value, perhaps lying as many as three or more standard deviations away from the mean of the residuals (4, p. 24). Obviously, an outlier may affect the least-squares fitting model. Consequently, it was important to consider whether the few outliers detected could be discarded.

Since there was no evidence indicating that the actual outliers resulted from mistakes (e.g., errors in data collecting) or from some other cause independent of the process under study (e.g., malfunctioning of instruments), the elimination of the few outliers was not immediately warranted. It was hoped that the existence of few outliers in a relatively high sample size, like the one investigated in this study, would not significantly affect the least-square fittings of the different models developed. Of

course, further statistical analyses of these outliers could conduce to more refined models (4, p. 241). This last venture was not pursued.

Summary of Hypotheses One Through Five

Before beginning to synthesize results concerning hypotheses one through five, a brief summary is presented of the findings regarding the relationship of organizational communication with the other research constructs. These findings relate to the secondary purpose of the present study.

While reviewing the relationship of organizational communication with both performance and satisfaction, it was found that trust in superiors, perceived influence, accuracy of information, desire for interaction, and satisfaction with communication were significantly and directly related to the investigated measures of job performance and job satisfaction, separately. This finding resembled prior findings by Muchinsky (5), Green (2), Jenkins (3), O'Reilly and Roberts (9), and others. Communication load--overload and underload--was found to be inversely associated with all researched measures of performance and satisfaction. The negative relationships of overload communication with performance measures and of underload communication with job satisfaction dimensions resembled previous empirical work (5, 7). However, the

inverse associations of underload communication with performance and of overload communication with satisfaction were contrary to prior research (5, 7). Directionality of communication--upward, downward, and lateral--related differently to performance and satisfaction dimensions. Downward communication replicated previous findings by O'Reilly and Roberts (9), Smith and Brown (12), and Muchinsky (5) by showing a significant, direct relationship with quantity and overall job performance and also with satisfaction with work and satisfaction with promotions. The relationships of upward communication with satisfaction with work and of lateral communication with satisfaction with promotions were inverse and significant. The inverse association involving lateral communication was identical to that found in previous empirical work; however, the one including upward communication was not comparable to prior research (5).

When considering the relationship of organizational communication with both growth need strength and job scope, upward communication was found to be inversely and significantly associated with both of them. Three dimensions of communication, underload communication, desire for interaction, and downward communication, were directly and significantly related to the variable of growth need strength. And five dimensions were shown to be significantly and directly associated to job scope: downward communication,

trust in superiors, perceived influence, desire for interaction, and communication satisfaction. Significantly, however, it should be observed that the relationship of directionality of communication--upward, downward, and lateral--to job scope did not resemble the expected relationship based on prior theoretical and empirical work by Burns and Stalker (1) and Woodward (14). Lateral and upward communication were expected to reflect a direct relationship with job scope, and downward communication was expected to reflect an inverse association. However, the contrary was found in the present study. This finding may be an indication of a lack of agreement between perceived job designs and appropriate communication networks in the sample investigated.

The proposed moderate and direct relationship between job performance measures and job satisfaction dimensions received strong support. All performance measures were found to be directly and moderately related to satisfaction dimensions. Sixteen out of the eighteen correlation coefficients were significant. The highest coefficient computed resulted from the relationship between quality of performance and satisfaction with work ($r = .28, p < .01$). The lowest one was the insignificant relationship between quantity and satisfaction with pay ($r = .05$). The median and the mean of the eighteen unique correlations between performance and satisfaction were equal to .15. This last

finding was similar to the median correlation ($r = .14$) reported by Vroom (13) and the average coefficient ($r = .14$) more recently reported by Petty, McGee, and Cavender (10).

Five of the ten communication dimensions investigated received support as true moderators of particular performance/satisfaction relationships. These five communication dimensions, which received support as moderators from subgroup and moderated regression analyses, were accuracy, upward communication, downward communication, lateral communication, and desire for interaction. The specific performance/satisfaction relationships influenced by each of these five moderators are as follows.

Accuracy of information was shown to moderate the relationship of the three measures of performance, quality, quantity and overall job performance with satisfaction with work. It also received support as a moderator of the relationship between quality and two other dimensions of satisfaction, satisfaction with supervisors and satisfaction with co-workers. Upward communication, on the other hand, was supported as a moderator of the relationship between quality and three facets of job satisfaction: satisfaction with work, satisfaction with promotions, and satisfaction with co-workers. The same communication dimension also received support as a moderator of the relationship of two measures of performance, quality and overall performance, with satisfaction with pay.

The relationship of quality of performance with satisfaction with work, satisfaction with pay, and overall job satisfaction was found to be influenced by downward communication. Lateral communication was shown to influence the relationship of quantity and overall performance with satisfaction with pay. Finally, desire for interaction was shown to be a moderator of the association between quality of performance and satisfaction with pay.

Only 16 of the 180 investigated unique relationships showed the presence of moderating influences. Obviously, one question arises. Why did the general moderating impact of organizational communication dimensions on performance/satisfaction relationships appear so weak? The fact that such dimensions received strong support as independent predictors may represent a sound explication to this question. One hundred eleven of the 180 unique associations researched showed that the integrated communication dimensions acted as predictors. This finding indicates that moderator dimensions performed very well as independent predictors. Zedeck (15) suggested that moderators are very difficult to find when the change in R^2 after adding the proposed moderator to the regression equation is high to start with. Occasionally, the change in R^2 resulting from the addition of the proposed moderator to a particular model was higher than .40.

From the foregoing summary of the results concerning the relationship between job performance and job satisfaction and the expected moderating influence of organizational communication on such relationship, the following three findings appear evident.

1. Job performance and job satisfaction were found to be moderately and directly related.

2. Organizational communication received weak support as a moderator of the job performance/job satisfaction relationship.

3. Organizational communication received strong support as an independent predictor of the relationship between job performance and job satisfaction.

Having presented the results concerning the first model, the focus of the present investigation now turns to the results of the investigated impact of organizational communication on the second model--the individual-job congruence relationship with the outcome variables of performance and satisfaction.

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CHAPTER VI

RESULTS CONCERNING THE PROPOSED MODERATING INFLUENCE OF ORGANIZATIONAL COMMUNICATION ON THE INDIVIDUAL-JOB CONGRUENCE MODEL

It should be recalled that the individual-job congruence model embraces two different features or submodels concerning the prediction of performance and satisfaction. The first submodel is the high individual-job congruence condition and the second one is the low individual-job congruence situation. This conceptualization is used as a justification for presenting the findings concerning the proposed impact of organizational communication on the individual-job congruence model in two different sections. One section will show the findings concerning the moderating effect of communication dimensions on the prediction of both performance and satisfaction for individuals scoring high on both job scope and growth need strength (n = 96)--the high individual-job congruence submodel. Another section will present the results regarding the expected influence of organizational communication on the prediction of the same outcomes, performance and satisfaction, for respondents scoring low on the same matching variables, job scope and growth need strength (n = 19)--the low individual-job congruence submodel.

In order to facilitate the presentation of the results concerning the influence of communication on the individual-job congruence model as outlined above, some background considerations need to be reviewed. These considerations include the structure of the hypotheses investigated, the structure of the dependent and proposed moderator variables, the statistical methods utilized, the criterion for determining a moderator, the interpretation of results, and the results related to hypotheses six and seven, which did not consider the proposed moderating effect of communication. These background considerations are reviewed before the presentation of the results concerning the proposed moderating impact of organizational communication on the first submodel of the individual-job congruence approach.

Interpretative Background and Findings Related to Hypotheses Six and Seven

A word of caution should be presented regarding the structure of the hypotheses related to the expected impact of communication on the individual-job congruence model. Most of these hypotheses--hypotheses eight through fourteen--referred to the high as well as to the low individual-job congruence submodel. Consequently, virtually the same hypotheses reviewed while highlighting the results of the impact of communication on the first submodel, the high congruence feature, are also considered when presenting the findings of the same moderator on the second submodel.

For instance, hypothesis twelve predicted that both high growth need strength individuals in high scope jobs (high congruence submodel) and low growth need individuals in low scope jobs (low congruence submodel) perceiving high levels of underload communication would be rated as having higher levels of job performance than when low perceived levels of the same facet of communication were reported. Clearly, this hypothesis related separately to the two submodels identified. Therefore, this same hypothesis is referred to when presenting the findings of the impact of underload communication on each of the two submodels described.

Another aspect concerning the structure of the hypotheses needs to be clarified. Not all hypotheses related to the two submodels of the individual-job congruence feature. Consequently, each submodel related propositions were evaluated separately. For instance, hypothesis thirteen proposed that lateral communication would moderate the high congruence submodel relationship with the outcome variables of performance and satisfaction, while hypothesis fourteen expected downward communication to moderate the association between the low congruence submodel with the same outcome variables. Hence, results regarding hypothesis thirteen are reviewed while presenting findings concerning the high congruence submodel; however, results pertaining to hypothesis fourteen are not considered. These last results

are presented when highlighting findings concerning the low congruence submodel.

The current research multidimensional approach to the study of the dependent and the proposed moderator variables should be recalled before initiating the presentation of the results concerning the second model investigated. Three measures of performance and six of satisfaction--the dependent variables--and ten of organizational communication--the proposed moderator--were assessed. Therefore, the proposed moderating influence of a particular dimension of communication on either the high or low congruence submodel relationship with job satisfaction was evaluated six times--one for each dimension of satisfaction or unique relationship. When the expected moderating impact of a facet of communication on either the high or low congruence submodel relationship with job performance was considered, the evaluation took place three times--one for each measure of performance or unique relationship.

It should be also understood that the three statistical procedures for detecting and quantifying moderator influences, as described in the fourth chapter, were utilized, as appropriate, while assessing the influence of organizational communication on the individual-job congruence model. These statistical techniques were differential predictability and differential validity--primary statistical procedures--and moderated regression analysis--a secondary statistical model. When the differential

predictability method was implemented, correlation coefficients were computed and their significance assessed (6, p. 483). Results in Tables XXI, XXV, XXIX, and XXXIII, in the present chapter, correspond to the application of the differential predictability procedure. The actual tables are presented along the hypotheses they are intended to support.

The application of differential validity or moderator subgroup analysis required the computation of performance and satisfaction means for low and high subgroups as related to a particular proposed moderator. The significance of the difference of these means was then assessed using the t statistic for inferences concerning two independent means (6, p. 353). The data in Table XIX illustrate the implementation of this last statistical procedure. The first mean level reported ($\bar{X} = 42.41$) is the mean of satisfaction with work for fifty-one respondents on the high congruence situation scoring high on the proposed moderator, desire for interaction. The mean value at the right side of the previous one ($\bar{X} = 40.07$) corresponds to the level of satisfaction with work for the forty-five respondents scoring low on the same moderator. The difference between these two means (2.34) is in column four; and the t value ($t = 1.57$) concerning this difference is in the last column. Results from the same statistical technique also appear in

Tables XXIII, XXVII, and XXXI. They should be interpreted in the same manner.

The third statistical procedure, moderated regression analysis, required that performance and satisfaction were regressed, separately, on job scope and growth need strength, the moderator, and the job scope-moderator growth need strength-moderator interaction terms, in this order. The critical value was the increase in R^2 that resulted from adding the interaction terms to the regression model already containing the other three variables: job scope, growth need strength, and moderator. The significance of this increase in R^2 was assessed using the related F value (7, p. 164). The results in Table XX correspond to this type of analysis. The first value on this table ($R^2 = .109$) refers to the change in R^2 after including the independent variables, job scope and growth need strength, into the model. When the suggested moderator is integrated, the change in R^2 is denoted by the first value ($R^2 = .000$) in column three. The inclusion of the interaction terms yields the increase at the top of the fourth column ($R^2 = .002$). Lastly, the F value ($F = .08$) associated with the increase in R^2 after adding the interaction terms appears in column five. The data in Tables XX, XXIV, XXVI, XXVIII, XXX, XXXII, and XXXIV also resulted from moderated regression analysis and should be interpreted as indicated above.

While determining if a dimension of the proposed moderator, organizational communication, actually operated as a moderator in the sample investigated, results from the primary and the secondary applied statistical procedures were evaluated. Specifically, a communication dimension is classified as a true moderator only if it has been supported as such by both the primary statistical method implemented, differential predictability or differential validity, and the secondary statistical technique, moderated regression analysis. The assessment of the results from this last statistical method, moderated regression analysis, was made following Zedeck's observation. He indicates that if the regression model containing the proposed moderator and the predictors and the equation containing the interaction terms, the proposed moderator and the predictors are different from the equation including only the predictors, but if they are not different from each other, then the proposed moderator is an independent predictor and not an actual moderator (11, p. 304).

Whenever possible, the interpretation of the results concerning a given hypothesis is enriched with prior reported research findings. However, it should be remembered that the current study is essentially an exploratory type of research. Previous empirical work directly related to the present one is almost nonexistent. Hence, most interpretations are only in terms of the original predictions made.

Finally, before turning the attention to the findings related to the influence of communication on the high congruence submodel, it seems appropriate to check the results concerning hypotheses six and seven. Data in Table XVIII relate to these two hypotheses, which deal with the individual-job congruence relationship with performance and satisfaction. The prediction of hypothesis six, that individuals' perception of job satisfaction would be higher under conditions of congruence than under conditions of incongruence, received moderate support. Section A of Table XVIII shows that the differences encountered in three of the dimensions of job satisfaction, satisfaction with pay, satisfaction with promotions, and overall job satisfaction, were significant ($\bar{X}_S = 31.48$ and 27.27 , $p < .01$; $\bar{X}_S = 20.51$ and 14.96 , $p < .01$ and $\bar{X}_S = 4.98$ and 4.62 , $p < .05$, respectively) and in the expected fashion. Hypothesis seven, on the other hand, predicted that the rated level of job performance of employees under conditions of congruence would not differ from that of individuals under conditions of incongruence. This prediction received only weak support. In fact, two measures of performance--quality and overall job performance--as shown in Table XVIII, yielded unexpected significant differences ($\bar{X}_S = 5.47$ and 5.25 , $p < .05$; and $\bar{X}_S = 5.36$ and 5.20 , $p < .05$, respectively). The rated levels of these last two measures of

TABLE XVIII

COMPARISON OF JOB SATISFACTION AND JOB PERFORMANCE LEVELS OF INDIVIDUALS IN CONGRUENT AND INCONGRUENT SITUATIONS^a

Variable (1)	Mean (\bar{X}) in Congruent Situations n = 187 (2)	Mean (\bar{X}) in Incongruent Situations n = 115 (3)	Difference between Columns two and Three (4)	T Value ^b (5)
Job satisfaction dimensions (A)				
Satisfaction with work	34.85	33.85	1.12	.86
Satisfaction with supervision	40.42	40.44	.02	-.02
Satisfaction with pay	31.48	27.27	4.21	2.73***
Satisfaction with promotions	20.51	14.96	5.55	3.08***
Satisfaction with co-workers	39.88	38.65	1.23	.89
Overall job satisfaction	4.98	4.62	.36	2.27**
Job performance measures (B)				
Quality	5.47	5.25	.22	2.25**
Quantity	5.25	5.14	.11	1.08
Overall job performance	5.36	5.20	.16	1.86**

^aHigh growth need strength individuals in high job scope and low growth need strength persons in low scope jobs constituted the congruent condition. Other respondents formed the incongruent situation.

^bOne-tailed test conducted when comparing job satisfaction levels and two-tailed test when comparing performance levels.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

performance were higher for individuals under congruence conditions than for those under incongruent situations.

The above results concerning hypotheses six and seven indicate that both performance and job satisfaction tend to be higher for individuals in congruent situations than for individuals in incongruent conditions. This finding gives support to previous research suggesting that a match between individual and job characteristics promotes high levels of performance and satisfaction (3, 4). It also suggests high correlation levels between performance and satisfaction measures for individuals in congruent conditions. This last aspect offers some support to job fit as a moderator of the performance/satisfaction relationship (2). Another important aspect should be noted. The major impact of job fit was on quality and not on quantity of performance. This finding substantiates previous work by Hackman and Lawler (4) and Umstot, Bell, and Mitchell (9). Organizational theorists and practitioners need to identify other organizational variables that may enhance quantity of performance as well as quality. The present investigation procured, at least in part, such identification. It studied the moderating impact of organizational communication on the individual-job congruence relationship with performance as well as with satisfaction. Thus, attention now turns to the findings concerning such proposed moderating influence on the high

individual-job congruence submodel--high growth need strength individuals in high scope jobs.

Findings of the Impact of Organizational Communication on the High Individual-Job Congruence Submodel

In presenting the results involving the moderating impact of organizational communication on the high individual-job congruence relationship with the dependent variables of job satisfaction and job performance, the findings concerning the relationship with job satisfaction are reviewed first. Then the effect of communication on the high congruence relationship with job performance follows. The intention of this further subdivision is to enhance clarity and readability.

Impact of Communication on the High Individual-Job Congruence Relationship with Job Satisfaction:
Results

Hypotheses eight, nine, twelve, and thirteen related to the expected influence of organizational communication on the relationship between the high individual-job congruence submodel and job satisfaction. These four hypotheses summarized the expected influence of eight communication dimensions on the described relationship. Data concerning hypotheses eight, nine, and twelve appear in Tables XIX (subgroup analysis data) and XX (moderated regression analysis data). On the other hand, results in Table XXI, which deals with correlation coefficients, and Table XXII,

which deals with moderated regression data, relate to hypothesis thirteen. The proposed moderators were trust in superiors, influence of superiors, accuracy, satisfaction with communication, desire for interaction, overload communication, and lateral and upward communication. Therefore, the findings implicating the above hypotheses, or at least portions of each one of them, as appropriate, are reviewed below.

Hypothesis eight.--It was predicted that individuals in the high congruence submodel reporting high perceived levels of trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication would report higher levels of job satisfaction than when low perceived levels of the same facets of communication were reported. The detected moderating influence of each one of the four communication dimensions included in hypothesis eight is discussed, separately, as follows.

First of all, trust in superiors received no support as a true moderator of the high congruence relationship with job satisfaction. The proposed moderator only received partial support from subgroup analysis, as shown in Table XIX. The primary statistical technique of subgroup analysis showed that the levels of satisfaction with work, satisfaction with supervision, satisfaction with promotion, satisfaction with co-workers, and overall job satisfaction

TABLE XIX
 SUBGROUP ANALYSIS OF THE MODERATING INFLUENCE OF SELECTED COMMUNICATION
 DIMENSIONS ON THE HIGH CONGRUENCE SUBMODEL^a RELATIONSHIP
 WITH JOB SATISFACTION

Moderator Subgroup and Satisfaction Dimension (1)	Satisfaction Dimension Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Satisfaction Dimension Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Trust in superiors (A) (High, n = 46; low, n = 50) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	42.35 48.15 36.87 32.17 43.78 5.62	40.36 37.24 34.72 20.18 40.58 5.07	1.99 10.91 2.15 11.37 3.20 .55	1.35* 5.69*** .97 3.33*** 1.48* 2.60***
Influence of superiors (B) (High, n = 54; low, n = 42) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	42.93 45.46 37.41 32.74 43.76 5.56	39.24 38.62 33.62 17.90 40.00 5.04	3.69 6.84 3.79 14.84 3.76 .52	2.45*** 3.11*** 1.67*** 4.49*** 1.71** 2.35***

TABLE XIX--Continued

Moderator Subgroup and Satisfaction Dimension (1)	Satisfaction Dimension Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Satisfaction Dimension Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	Value ^b (5)
Accuracy of communication (C) (High, n = 48; low, n = 48) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	42.73 44.35 37.67 29.75 44.90 5.38	39.90 40.58 33.83 22.75 39.33 5.28	2.83 3.77 3.84 7.00 5.57 .10	1.94** 1.70** 1.74** 1.98** 2.64*** .46
Communication satisfaction (D) (High, n = 70; low, n = 26) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	42.29 44.03 36.71 27.23 44.36 5.56	38.69 38.27 33.15 23.62 36.08 4.72	3.60 5.76 3.56 3.61 8.28 .84	2.27** 2.10** 1.47* .88 3.12*** 3.37***
Desire for interaction (E) (High, n = 51; low, n = 45) Satisfaction with work Satisfaction with supervision	42.41 43.80	40.07 40.96	2.34 2.84	1.57* 1.25

TABLE XIX--Continued

Moderator Subgroup and Satisfaction Dimension (1)	Satisfaction Dimension Mean (X) of Respondents Scoring High in Row Moderator (2)	Satisfaction Dimension Mean (X) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	Value ^b (5)
Satisfaction with pay	35.76	35.73	.03	.01
Satisfaction with promotions	29.49	22.58	6.91	1.95**
Satisfaction with co-workers	43.27	40.80	2.47	1.13
Overall job satisfaction	5.31	5.36	.05	-.22
Overload communication (F) (High, n = 61; low, n = 35)				
Satisfaction with work	41.98	40.14	1.84	1.10
Satisfaction with supervision	42.41	42.57	.16	-.07
Satisfaction with pay	34.66	37.66	3.00	-3.00*
Satisfaction with promotions	26.26	26.23	.03	.01
Satisfaction with co-workers	40.44	45.03	4.59	-2.28**
Overall job satisfaction	5.31	5.37	.06	-.27

^aHigh growth need strength individuals in high scope jobs.

^bOne-tailed test conducted.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

were significantly higher for individuals scoring high on the proposed moderator than for those scoring low ($\bar{X}_S = 42.35$ and 40.36 , $p < .10$; $\bar{X}_S = 48.15$ and 37.24 , $p < .01$; $\bar{X}_S = 32.17$ and 20.80 , $p < .01$; $\bar{X}_S = 43.78$ and 40.58 , $p < .10$; and $\bar{X}_S = 5.62$ and 5.07 , $p < .01$, respectively).

Significantly, neither one of these findings received support by the moderated regression data in Table XX. However, the secondary statistical method of moderated regression analysis showed that the above five moderating effects detected by primary analysis were actually main predicting influences. Consequently, trust in superiors received no support as a moderator of the relationship between the high individual-job congruence relationship with satisfaction. Instead, it received strong support as a main predictor of the investigated relationship.

Secondly, influence of superiors was weakly supported as a moderator of the high submodel relationship with satisfaction. Subgroup analysis detected significant predicted differences in all six satisfaction dimensions: satisfaction with work, with supervision, with pay, with promotions, with co-workers, and overall job satisfaction ($\bar{X}_S = 42.93$ and 39.24 , $p < .01$, $\bar{X}_S = 45.46$ and 38.62 , $p < .01$; $\bar{X}_S = 37.41$ and 33.62 , $p < .05$; $\bar{X}_S = 32.74$ and 17.90 , $p < .01$; $\bar{X}_S = 43.76$ and 40.00 , $p < .05$; and $\bar{X}_S = 5.56$ and 5.04 , $p < .01$, respectively). As shown in Table XIX, the levels of these satisfaction dimensions were significantly

higher for respondents scoring high on perceived influence of superiors than for those scoring low. Two of the described findings also received support by the secondary statistical technique used, moderated regression analysis, as indicated in Table XX. The relationship of the high submodel with two dimensions of the outcome variable, satisfaction with co-workers and overall job satisfaction, was found to be significantly moderated by influence of superiors ($R^2 = .061$, $p < .05$; and $R^2 = .055$, $p < .10$, respectively). Three other unique relationships reflected that the proposed moderator was operating as a main predictor.

The foregoing data give weak support to influence of superiors as a moderator of the relationship between job satisfaction and the high congruence submodel. The proposed moderator was specifically supported as a moderator of the high submodel association with two dimensions of satisfaction, satisfaction with co-workers and overall job satisfaction. The expected moderator acted as a main predictor in three unique relationships.

Thirdly, the investigated submodel relationship with job satisfaction was found to be very weakly moderated by accuracy of information, despite the strong, partial support given by subgroup analysis to accuracy as a moderator. Most findings through the primary statistical technique were not cross-validated through moderated regression

analysis. Specifically, data from subgroup analysis in Table XIX show that accuracy was supported as a moderator of the relationship between the high congruence condition and five dimensions of satisfaction: satisfaction with work, satisfaction with supervision, satisfaction with pay, satisfaction with promotion, and satisfaction with co-workers ($\bar{X}_S = 43.72$ and 39.90 , $p < .05$; $\bar{X}_S = 44.35$ and 40.58 , $p < .05$; $\bar{X}_S = 37.67$ and 33.83 , $p < .05$; $\bar{X}_S = 29.75$ and 22.75 , $p < .05$; and $\bar{X}_S = 44.90$ and 39.33 , $p < .01$, respectively). However, only one of these findings through subgroup analysis was supported by moderated regression computations as shown in Table XX. It can be noted that accuracy of information showed a significant impact on the prediction of satisfaction with promotion ($R^2 = .052$, $p < .10$). Additionally, the data of the same table indicate that accuracy was found to be operating as a main predictor in three different relationships. Therefore, the proposed moderator received very weak support as such; it was only found to be a moderator of one of the six different unique relationships between the high submodel and job satisfaction. Specifically, it was shown to be a moderator of the submodel relationship with satisfaction with promotions. However, accuracy received moderate support as an independent predictor of the high subgroup relationship with job satisfaction.

TABLE XX

REGRESSION ANALYSIS OF THE MODERATING IMPACT OF SELECTED COMMUNICATION DIMENSIONS ON THE HIGH CONGRUENCE SUBMODEL^a RELATIONSHIP WITH JOB SATISFACTION
(n = 96)

Row Moderator and Predicted Satisfaction Dimension (1)	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	
			R ² (4)	F ^d (5)
Trust in superiors (A)				
Satisfaction with work	.109	.057e	.018	.98
Satisfaction with supervision	.003	.510e	.022	2.09
Satisfaction with pay	.005	.006	.000	.01
Satisfaction with promotions	.001	.183e	.004	.22
Satisfaction with co-workers	.041	.064e	.017	.88
Overall job satisfaction	.038	.148e	.037	2.12
Influence of superiors (B)				
Satisfaction with work	.109	.105e	.017	.99
Satisfaction with supervision	.003	.297e	.033	2.25
Satisfaction with pay	.005	.008	.006	.29
Satisfaction with promotions	.001	.256e	.002	.11
Satisfaction with co-workers	.041	.093e	.061	3.38**
Overall job satisfaction	.038	.103	.055	3.07*
Accuracy of communication (C)				
Satisfaction with work	.109	.037e	.000	.01
Satisfaction with supervision	.003	.024	.009	.41

TABLE XX--Continued

Row Moderator and Predicted Satisfaction Dimension (1)	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	
			R ² (4)	F ^d (5)
Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	.005	.011	.045	2.14
	.001	.028	.052	2.54*
	.041	.060 ^e	.000	.01
	.038	.028	.045	2.27
Communication satisfaction (D) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	.109	.057 ^e	.004	.20
	.003	.024	.009	.41
	.005	.011	.021	.99
	.001	.016	.012	.58
	.041	.056 ^e	.001	.05
	.038	.129 ^e	.027	1.53
Desire for interaction (E) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	.109	.013	.001	.06
	.003	.020	.009	.40
	.005	.000	.005	.23
	.001	.050	.068	3.48**
	.041	.002	.017	.83
Overall job satisfaction	.038	.002	.008	.39

TABLE XX--Continued

Row Moderator and Predicted Satisfaction Dimension (1)	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	
			R ² (4)	F ^d (5)
Overload communication (F)	.109	.015	.005	.06
Satisfaction with work	.003	.002	.006	.26
Satisfaction with supervision	.005	.007	.017	.79
Satisfaction with pay	.001	.000	.003	.15
Satisfaction with promotions	.041	.024	.041	2.06
Satisfaction with co-workers	.038	.000	.011	.53
Overall job satisfaction				

^aHigh growth need strength individuals in high scope jobs.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with the row moderator.

^dThe significant test value associated with the addition of the interaction terms to the regression equation.

^eRow communication dimension supported as a predictor.

*Addition of interaction terms significant at .10 level.

**Addition of interaction terms significant at .05 level.

Lastly, satisfaction with communication was not supported as a moderator of the high congruence feature relationship with job satisfaction, in spite of the strong, partial support provided to it by subgroup analysis. But such strong support was not substantiated by regression analysis. Data from the primary statistical procedure in Table XIX indicate that the proposed moderator influenced the high submodel relationship with five of the six dimensions of satisfaction. More specifically, the levels of satisfaction with work, satisfaction with supervision, satisfaction with pay, satisfaction with co-workers, and overall job satisfaction were significantly higher ($\bar{X}_S = 42.29$ and 38.69 , $p < .05$; $\bar{X}_S = 44.03$ and 38.27 , $p < .05$; $\bar{X}_S = 36.71$ and 33.15 , $p < .10$; $\bar{X}_S = 44.36$ and 36.08 , $p < .01$; and $\bar{X}_S = 5.56$ and 4.72 , $p < .01$, respectively) for respondents scoring high on the proposed moderator than for those scoring low. However, none of these findings was supported by data from regression analysis, as shown in Table XX. These data do show that communication satisfaction acted as a predictor in three of the relationships evaluated.

The foregoing analysis shows that satisfaction with communication received no support as a true moderator of the high congruence submodel association with job satisfaction. However, it received moderate support as an independent predictor.

In synthesis, one of the four dimensions of communication included in hypothesis eight received weak support as a moderator of the high congruence submodel relationship with job satisfaction; another received very weak support. They were influence of superiors and accuracy of information, respectively. Influence of superiors moderated the submodel relationship with satisfaction with co-workers and overall job satisfaction. The submodel relationship with satisfaction with promotions was found to be moderated by accuracy of information. The other proposed moderators in the same hypothesis--trust in superiors and satisfaction with communication--received no support as moderators. It should be noted, however, that sixteen of the twenty-four unique relationships evaluated showed the above four proposed moderators acting, differently, as independent predictors.

Hypothesis nine--Desire for interaction received very weak support as a moderator. The proposed moderator was found, by subgroup analysis, to impact two of the six relationships between the high submodel and the dimensions of job satisfaction. Only one of these two relationships was later cross-validated through moderated regression analysis. Data from the primary analysis in Table XIX show that satisfaction with work and satisfaction with promotions were significantly higher for the fifty-one individuals

scoring high on the proposed moderator than for the forty-five scoring low ($\bar{X}_S = 42.41$ and 40.07 , $p < .10$; and $\bar{X}_S = 29.49$ and 22.58 , $p < .05$, respectively). The moderating impact of desire for interaction on the high congruence submodel relationship with satisfaction with promotions ($R^2 = .068$, $p < .05$) was substantiated by moderated regression procedures, as denoted in Table XX. Hence, desire for interaction received very weak support as a moderator. It was shown to be a true moderator of only one of the six relationships evaluated: the relationship between the high submodel and satisfaction with promotions. The proposed moderator was not detected operating as an independent predictor.

Hypothesis twelve.--The proposed moderating impact of overload communication on the evaluated high submodel relationship with job satisfaction received no support. The proposition was that high growth need strength individuals in high scope jobs perceiving high levels of overload communication would report higher levels of job satisfaction than those perceiving low levels of the same facet of communication. Neither one of the statistical techniques utilized, subgroup and moderated regression analyses, provided support for this proposition as denoted in Tables XIX and XX. Contrary to this prediction, however, subgroup analysis gave overload communication some partial

support as a moderator of the relationship between the investigated submodel and satisfaction with pay and satisfaction with co-workers ($\bar{X}_S = 34.66$ and 37.66 , $p < .10$; and $\bar{X}_S = 40.40$ and 45.03 , $p < .05$, respectively). This unexpected finding was not supported by moderated regression analysis. Consequently, the proposed moderator of overload communication was not supported as a true moderator of any of the six relationships assessed between the high congruence submodel and job satisfaction. Nor did it show evidence of acting as a main predictor.

Hypothesis thirteen.--Neither lateral nor upward communication received support as a moderator. The expected direct relationship between the dimensions of lateral and upward communication with job satisfaction received no support. However, data in Table XXI show that nine of the twelve computed correlations among individuals in the high congruence submodel were negative; and two of those nine inverse correlates were significant. These significant correlations corresponded to the relationship between upward communication and both satisfaction with pay and satisfaction with promotions ($r = -.31$, $p < .01$; and $r = -.23$, $p < .05$, respectively). This moderating influence of upward communication, in the unpredicted fashion, was not substantiated by moderated regression analysis. Data from this last analysis in Table XXII show that the previously identified

TABLE XXI
 RELATIONSHIP OF LATERAL AND UPWARD COMMUNICATION
 WITH JOB SATISFACTION DIMENSIONS FOR INDIVIDUALS IN THE HIGH CONGRUENCE SUBMODEL^a
 (n = 96)

Job Satisfaction Dimension (1)	Upward Communication (2)	Lateral Communication (3)
Satisfaction with work	-.01	-.07
Satisfaction with supervision	-.01	-.04
Satisfaction with pay	-.31***	.16
Satisfaction with promotions	-.23**	-.07
Satisfaction with co-workers	-.16	.15
Overall job satisfaction	-.04	.02

^aHigh growth need strength individuals in high scope jobs.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

moderating effects were actually main effects. Upward communication was found to be an independent predictor of the high submodel relationship with both satisfaction with pay and satisfaction with promotions. Therefore, as moderators of the high congruence submodel relationship with satisfaction, both lateral and upward communication lacked support.

The foregoing finding is contrary to the conceptualization made that was based on prior theory and empirical work. Theory and empirical work by Burns and Stalker (1), Woodward

TABLE XXII

REGRESSION ANALYSIS OF THE MODERATING IMPACT OF UPWARD AND LATERAL
 COMMUNICATION DIMENSIONS ON THE HIGH CONGRUENCE/JOB
 SATISFACTION SUBMODEL^a
 (n = 96)

	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	F ^d (5)
Row Moderator and Predicted Satisfaction Dimension (1)			R ² (4)	
Upward communication (A)				
Satisfaction with work	.109	.000	.002	.08
Satisfaction with supervision	.003	.000	.036	1.70
Satisfaction with pay	.005	.102e	.021	1.12
Satisfaction with promotions	.001	.053e	.012	.59
Satisfaction with co-workers	.041	.020	.016	.79
Overall job satisfaction	.038	.000	.022	1.05
Lateral communication (B)				
Satisfaction with work	.109	.009	.022	1.17
Satisfaction with supervision	.003	.001	.021	.95
Satisfaction with pay	.005	.025	.001	.03
Satisfaction with promotions	.001	.005	.017	.80

TABLE XXII--continued

	Changes in R ²		
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value
Row Moderator and Predicted Satisfaction Dimension (1)			R ² (4)
Satisfaction with co-workers	.041	.020	1.26
Overall job satisfaction	.038	.000	.84

^aJob satisfaction prediction of respondents scoring high on both job scope and growth need strength.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with the row moderator.

^dThe significant test value which resulted after adding the interaction terms to the regression line.

^eRow communication dimension found to act as a predictor.

(10), Huseman and Alexander (5), and Penley and Alexander (8) suggest that high scope jobs are characterized by lateral and upward communication networks. This background was used for predicting high levels of job satisfaction when the high individual-job congruence was characterized by the expected communication networks--lateral and upward. Clearly, this expectation received no support in the present study. If there was any support, it was in the unpredicted fashion, as denoted by the nine negative computed correlations between the high submodel and job satisfaction (see Table XXI).

Summary of the moderating impact of communication on the relationship between the high congruence condition and satisfaction.--Eight of the ten facets of communication studied were predicted to moderate the relationship between the high congruence situation and the six investigated dimensions of job satisfaction. These eight communication dimensions were trust in superiors, influence of superiors, accuracy, satisfaction with communication, desire for interaction, overload communication, and lateral and upward communication. Three of these dimensions were found to be true moderators of four of the forty-eight assessed unique relationships between the high congruence submodel and job satisfaction. These dimensions were desire for interaction, accuracy of information, and influence of superiors. Their

moderating influences were as follows: perceived influence of superiors was shown to be a moderator of the relationship between the identified high submodel and two dimensions of satisfaction, satisfaction with co-workers and overall job satisfaction; and the association between the submodel and satisfaction with promotions was found to be influenced by both accuracy of information and desire for interaction.

Impact of Communication on the High Individual-Job
Congruence Relationship with Job Performance:
Results

Eight of the ten investigated dimensions of communication were expected to moderate the relationship between the high congruence submodel, high growth need strength individuals in high scope jobs, and the outcome variable of job performance. These eight dimensions were trust in superiors, perceived influence of superiors, accuracy of information, satisfaction with communication, desire for interaction, underload communication, and lateral and upward communication. The proposed moderating effects of these facets of communication were included in at least portions of hypotheses eight, nine, eleven, and thirteen. The results concerning these propositions are revealed below.

Hypothesis eight.--The section of hypothesis eight related to the high congruence submodel relationship with job performance predicted that individuals in the high congruence condition scoring high in trust in superiors,

perceived influence of superiors, accuracy of information, and satisfaction with communication would reflect higher levels of performance than those scoring low on the same facets of communication. Results concerning the expected influence of each proposed moderator are reviewed as follows.

Trust in superiors received no support as a moderator of the high individual-job congruence relationship with job performance. Subgroup analysis showed some moderate, partial support to trust in superiors as a moderator; however, such support was not cross-validated by moderated regression analysis. Specifically, data in Table XXIII indicate that subgroup analysis showed the proposed moderator influencing the relationship of the high submodel with two of the three measures of performance, quality and overall job performance ($\bar{X}_S = 5.84$ and 5.53 , $p < .01$; and $\bar{X}_S = 5.65$ and 5.42 , $p < .05$, respectively). This finding, however, was not supported by regression analysis, as highlighted in Table XXIV. Consequently, trust in superiors received no support as a true moderator of the high submodel association with job performance. But it was supported as a main predictor of one of the three unique relationships assessed.

The proposed moderating impact of influence of superiors and accuracy of information was not supported. Data from subgroup analysis in Table XXIII indicate that the two proposed moderators, influence of superiors and

TABLE XXIII

SUBGROUP ANALYSIS OF THE MODERATING INFLUENCE OF SELECTED COMMUNICATION DIMENSIONS ON THE HIGH CONGRUENCE SUBMODEL^a RELATIONSHIP WITH JOB PERFORMANCE

Moderator Subgroup and Performance Measure (1)	Performance Measure Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Performance Measure Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Trust in superiors (A) (High, n = 46; low, n = 50) Quality Quantity Overall job performance	5.84 5.46 5.65	5.53 5.33 5.42	.31 .13 .23	2.39*** .89 1.76**
Influence of superiors (B) (High, n = 54; low, n = 42) Quality Quantity Overall job performance	5.77 5.42 5.59	5.55 5.35 5.45	.22 .07 .14	1.60* .44 1.10
Accuracy of communication (C) (high, n = 48; low, n = 48) Quality Quantity	5.81 5.40	5.54 5.38	.27 .02	2.10** .11

TABLE XXIII--Continued

Moderator Subgroup and Performance Measure (1)	Performance Measure Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Performance Measure Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Overall job performance	5.60	5.46	.14	1.15
Communication satisfaction (D) (High, n = 70; low, n = 26)	5.67	5.68	.01	-.09
Quality	5.37	5.43	.06	-.44
Quantity	5.52	5.56	.04	-.31
Desire for Interaction (E) (High, n = 51; low, n = 45)	5.74	5.61	.13	.97
Quality	5.34	5.44	.10	-.65
Quantity	5.54	5.52	.02	.14
Underload communication (F) (High, n = 49; low, n = 47)				

TABLE XXIII--Continued

Moderator Subgroup and Performance Measure (1)	Performance Measure Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Performance Measure Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Quality	5.70	5.64	.06	.45
Quantity	5.31	5.47	.16	-1.06
Overall job performance	5.51	5.55	.04	-.38

^aHigh growth need strength individuals in high scope jobs.

^bOne-tailed test conducted.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

accuracy, initially received weak, partial support as influencers of the high submodel relationship with quality of performance ($\bar{X}_S = 5.77$ and 5.55 , $p < .10$; and $\bar{X}_S = 5.81$ and 5.54 , $p < .05$, respectively). However, these findings were not supported by moderated regression analysis, as shown in Table XXIV. What this last statistical technique detected was that the previously reported moderating effect of accuracy of information on the high submodel association with quality was actually a main effect. Therefore, neither influence of superiors nor accuracy received support as a moderator of the relationship between the high congruence submodel relationship and job performance.

Lastly, satisfaction with communication received no support as a moderator, either. None of the three assessed unique relationships between the high congruence submodel and job performance was detected as being moderated by the proposed communication moderator despite the fact that moderated regression analysis showed that communication satisfaction, as indicated in Table XXIV, moderated the high submodel relationship with two measures of performance, quality and overall job performance ($R^2 = .071$, $p < .05$; and $R^2 = .065$, $p < .05$, respectively). These detected effects had not been supported by subgroup analysis. Therefore, communication satisfaction received no support as a true moderator of the relationship between performance and the high congruence feature. However, a word of caution

TABLE XXIV

REGRESSION ANALYSIS OF THE MODERATING IMPACT OF SELECTED COMMUNICATION DIMENSIONS ON THE HIGH CONGRUENCE SUBMODEL^a RELATIONSHIP WITH JOB PERFORMANCE
(n = 96)

	Changes in R ²			F ^d (5)
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	
Row Moderator and Predicted Performance Measure (1)				
Trust in superiors (A) Quality Quantity Overall job performance	.085 .087 .105	.045 ^e .006 .025	.019 .003 .011	1.02 .16 .55
Influence of superiors (B) Quality Quantity Overall job performance	.085 .087 .105	.019 .001 .008	.011 .000 .003	.58 .02 .17
Accuracy of communication (C) Quality	.085	.031 ^e	.009	.44

TABLE XXIV--Continued

	Changes in R ²			Addition of Interaction Terms ^c to Model and F Value	
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	R ² (4)	F ^d (5)	
Row Moderator and Predicted Performance Measure (1)					
Quantity Overall job performance	.087 .105	.000 .008	.023 .008	1.16 .41	
Communication with satisfaction (D)					
Quantity Overall job performance	.085 .087 .105	.004 .000 .001	.071 .039 .065	3.79** 2.02 3.52**	
Desire for interaction (E)					
Quantity Overall job performance	.085 .087 .105	.031 ^e .000 .007	.018 .019 .001	.92 .98 .03	
Underload communication (F)					
Quantity Overall job performance	.085 .087	.000 .008	.015 .005	.76 .23	

TABLE XXIV--Continued

	Changes in R ²			F ^d (5)
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	
Row Moderator and Predicted Performance Measure (1)				
Overall job performance	.105	.002	.008	.39

^aHigh growth need strength individuals in high scope jobs.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with the row moderator.

^dThe significant test value associated with the addition of the interaction terms to the regression model.

^eRow communication dimension shown to be a predictor.

*Addition of interaction terms significant at .10 level.

**Addition of interaction terms significant at .05 level.

should be noted. There were seventy respondents scoring high on the proposed moderator and only twenty-six scoring low. This discrepancy between the numerical composition of the high and the low subgroups may have accounted for the lack of moderating influence detected by subgroup analysis.

In sum, however, hypothesis eight received no support. Trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication lacked support as moderators of the high congruence submodel relationship with job performance. Trust in superiors, and accuracy received support as main predictors of the high submodel relationship with the measure of quality of performance.

Hypothesis nine.--Desire for interaction was not supported as a moderator of the high submodel association with performance. The prediction was that high growth need strength individuals in high scope jobs reporting high levels of desire for interaction would be rated as having higher levels of performance than those reporting low levels of the same communication facet. This expectation was supported neither by subgroup analysis nor by moderated regression computations as indicated in Tables XXIII and XXIV, respectively. By subgroup analysis, desire for interaction showed its greatest insignificant influence on the prediction of quality ($\bar{X}_S = 5.74$ and 5.61). This

insignificant moderating impact was later shown to represent a significant main effect by moderated regression analysis. Hence, desire for interaction received no support as a true moderator of the high congruence relationship with the outcome variable of job performance.

Hypothesis eleven.--The expected moderating influence of overload communication received no support. Individuals in the high congruence submodel perceiving high levels of underload communication were expected to reflect higher levels of performance than those perceiving low levels of the same facet of communication. Data from subgroup analysis in Table XXIII show that the performance measure levels of the forty-nine respondents scoring high on underload communication were not different from those obtained from the forty-seven participants scoring low on the same dimension. The highest insignificant difference was in quantity of performance ($\bar{X}_S = 5.31$ and 5.47). The highest insignificant R^2 resulting from the addition of the interaction terms to the regression models was shown in the relationship between the high congruence relationship with quality ($R^2 = .015$). Consequently, because of the insignificant findings, underload communication was left without support as a moderator of the high submodel association with job performance.

Hypothesis thirteen.--Neither lateral nor upward communication received support as a moderator of the high congruence feature association with job performance. Lateral and upward communication were hypothesized to moderate the high congruence-job performance relationship so that both communication variables would be directly related to performance measures. Contrary to the expectation, data in Table XXV show that although insignificant, five of the six computed correlations were negative. The lack of the moderating effect detected through the differential predictability statistical technique was also substantiated through moderated regression analysis, as shown in Table XXVI. However, this last technique did show lateral communication acting as a predictor of the investigated submodel relationship with two measures of performance, quantity and overall job performance.

The above data provide no support to lateral and upward communication as moderators of the relationship between the high submodel and job performance. And as indicated in the previous subsection when discussing the findings concerning the moderating influence of the same communication dimensions on the prediction of job satisfaction, the current results do not support the conceptualization made based in prior theoretical and empirical research. Theoretical and empirical work by Burns and Stalker (1), Woodward (3), and Huseman and Alexander (5)

TABLE XXV

RELATIONSHIP OF LATERAL AND UPWARD COMMUNICATION WITH JOB
PERFORMANCE MEASURES FOR INDIVIDUALS IN THE HIGH
CONGRUENCE SUBMODEL^a

(n = 96)

Communication Dimension ^b (1)	Job Performance Measure		
	Quality (2)	Quantity (3)	Overall Job Performance (4)
Lateral communication	-.13	-.17	-.17
Upward communication	-.05	.03	-.01

^aIndividuals scoring high on both job scope and growth need strength.

^bNo significant correlation found between communication and performance dimensions.

characterizing organic systems with lateral and upward communication prompted the current researcher to delineate the proposition evaluated above. But it seems, from the current results, that high levels of lateral and upward communication are not determinant of high levels of performance for high growth need strength individuals in high scope jobs--organic situations.

Summary of the moderating impact of communication on the relationship between the high congruence submodel and job performance.--The communication dimensions of trust of superiors, influence of superiors, accuracy of information,

TABLE XXVI

REGRESSION ANALYSIS OF THE MODERATING IMPACT OF UPWARD AND LATERAL COMMUNICATION DIMENSIONS ON THE HIGH CONGRUENCE/JOB PERFORMANCE SUBMODEL^a
(n = 96)

	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	F ^d (5)
Row Moderator and Predicted Satisfaction Dimension (1)			R ² (4)	
Lateral communication (A) Quality Quantity Overall job performance	.085 .087 .105	.022 .035e .034e	.013 .000 .003	.68 .01 .17
Upward communication (B) Quality Quantity Overall job performance	.085 .087 .105	.003 .001 .000	.015 .032 .010	.78 1.61 .52

^aJob performance prediction of individuals scoring high on both job scope and growth need strength.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with the row moderator.

^dThe significant test value which resulted after adding the interaction terms to the regression model.

^eRow communication dimension found to be a predictor.

communication satisfaction, desire for interaction, underload communication, and lateral and upward communication were expected to moderate the high congruence relationship with job performance. This expectation received no support. None of the above communication dimensions was found to be a true moderator of one of the twenty-four unique relationships evaluated. However, trust in superiors, accuracy of information, desire for interaction, and lateral communication were shown operating as main predictors on five unique relationships between the high submodel and the measures of performance.

Findings of the Impact of Organizational
Communication on the Low Individual-Job
Congruence Submodel

The moderating influence of organizational communication on the low congruence submodel relationship with both job satisfaction and job performance was researched. Results concerning the expected moderating influence of communication on the low submodel relationship with job satisfaction are offered first. Then, findings concerning the proposed moderating influence on the relationship of the same submodel and job performance are presented. Again, the purpose of this further subdivision is to improve the clarity and readability of the results.

Impact of Communication on the Low Individual-Job
Congruence Relationship with Job
Satisfaction: Results

The low congruence submodel relationship with job satisfaction was expected to be moderated by seven of the ten facets of communication studied. These proposed communication moderators were trust in superiors, influence of superiors, accuracy, communication satisfaction, desire for interaction, overload communication, and downward communication. The expected moderating effects of these communication dimensions were delineated in hypotheses eight, ten, twelve, and fourteen. Findings involving these hypotheses, or the appropriate portions of them, are shown below.

Hypothesis eight.--Respondents in the low congruence feature scoring high in trust in superiors, perceived influence of superiors, accuracy of information, and satisfaction with communication were predicted to report higher levels of satisfaction than those scoring low on the same four communication facets. Findings pertaining to each of these proposed moderators are presented as follows.

First, trust in superiors received no support as a moderator of the low congruence submodel relationship with job satisfaction. The proposed moderator received some partial support from both subgroup and moderated regression analyses, separately. However, the two statistical

techniques did not substantiate similar moderating effects, leaving the expected moderator without support by the criterion of the present study.

The partial support offered by subgroup analysis to trust in superiors is reflected in Table XXVII. The thirty-nine participants scoring high on the proposed moderator showed significantly higher levels of satisfaction with supervision and satisfaction with promotions than the fifty-two respondents scoring low ($\bar{X}_S = 45.13$ and 33.10 , $p < .01$; and $\bar{X}_S = 17.79$ and 11.96 , $p < .05$, respectively). These findings, however, were not supported by moderated regression computations. But this last statistical technique yielded support for trust in superiors as a moderator of the submodel association with overall job satisfaction ($R^2 = .090$, $p < .05$), as reflected in Table XXVIII. Obviously, each one of the statistical procedures utilized supported different moderator effects. Consequently, trust of superiors was left without support as a true moderator of the low submodel relationship with job satisfaction. Interestingly, however, the proposed moderator was detected operating as a main predictor in five of the six unique relationships assessed.

Second, influence of superiors received weak support as a moderator of the low congruence feature association with the outcome variable of job satisfaction. Subgroup analysis showed the proposed moderator acting as such in

TABLE XXVII
 SUBGROUP ANALYSIS OF THE MODERATING INFLUENCE OF SELECTED COMMUNICATION
 DIMENSIONS ON THE LOW CONGRUENCE SUBMODEL^a RELATIONSHIP
 WITH JOB SATISFACTION

Moderator Subgroup and Satisfaction Dimension (1)	Satisfaction Dimension Mean (X) of Respondents Scoring High in Row Moderator (2)	Satisfaction Dimension Mean (X) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Trust in superiors (A) (High, n = 39; low, n = 52)	28.15	27.94	.21	.09
Satisfaction with work	45.13	33.10	12.03	6.72***
Satisfaction with supervision	28.69	25.69	3.00	1.05
Satisfaction with pay	17.79	11.96	5.83	1.89**
Satisfaction with promotions	39.08	36.35	2.73	1.19
Satisfaction with co-workers	4.71	4.52	.19	.68
Overall job satisfaction				
Influence of superiors (B) (High, n = 51; low, n = 40)	30.24	25.23	5.01	2.27**
Satisfaction with work	42.47	32.88	9.59	4.53***
Satisfaction with supervision	28.14	25.20	2.64	.94
Satisfaction with pay	19.49	8.05	11.44	4.34***
Satisfaction with promotions	38.88	35.78	3.10	1.34*
Satisfaction with co-workers				

TABLE XXVII--Continued

Moderator Subgroup and Satisfaction Dimension (1)	Satisfaction Dimension Mean (X) of Respondents Scoring High in Row Moderator (2)	Satisfaction Dimension Mean (X) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Overall job satisfaction	4.81	4.34	.47	1.74**
Accuracy of communication (C) (High, n = 49; low, n = 42)	28.73	27.21	1.52	.66
Satisfaction with work	40.20	35.98	4.22	1.84*
Satisfaction with supervision	27.59	26.26	1.33	.47
Satisfaction with pay	13.88	15.14	1.26	-.42
Satisfaction with promotions	38.67	36.17	2.50	1.06
Satisfaction with co-workers	4.60	4.61	.01	-.04
Overall job satisfaction	31.65	22.76	8.89	4.05***
Communication satisfaction (D) (High, n = 54; low, n = 37)	42.19	32.51	9.68	4.38***
Satisfaction with work	29.81	22.84	6.97	2.53***
Satisfaction with supervision	18.04	9.24	8.80	3.22***
Satisfaction with pay	41.33	31.95	9.38	4.28***
Satisfaction with promotions	5.01	4.00	1.01	3.78***
Satisfaction with co-workers				
Overall job satisfaction				

TABLE XXVII--Continued

Moderator Subgroup and Satisfaction Dimension (1)	Satisfaction Dimension Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Satisfaction Dimension Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Desire for interaction (E) (High, n = 50; low, n = 41) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	28.62 38.36 28.22 12.52 37.62 4.63	27.32 38.12 25.46 16.83 37.39 4.57	1.30 .24 2.76 4.31 .23 .06	.57 .11 .98 -1.41* .10 .22
Overload communication (F) (High, n = 50; low, n = 41) Satisfaction with work Satisfaction with supervision Satisfaction with pay Satisfaction with promotions Satisfaction with co-workers Overall job satisfaction	28.16 38.22 26.12 14.20 37.00 4.60	27.88 38.29 28.02 14.78 38.15 4.60	.28 .07 1.90 .58 1.15 .00	.13 -.03 -.69 -.19 -.50 -.01

^aThe low congruence submodel was formed by individuals scoring low on both job scope and growth need strength.

TABLE XXVII--Continued

- bOne-tailed test conducted.
- *Significant at the .10 level.
- **Significant at the .05 level.
- ***Significant at the .01 level.

all six unique relationships between the submodel and satisfaction dimensions. But only two of these moderating effects were cross-validated through moderated regression analysis. More specifically, perceived influence of superiors received support as a moderator, from subgroup analysis, of the low submodel relationships with satisfaction with work, satisfaction with supervision, satisfaction with promotions, satisfaction with co-workers, and overall job satisfaction ($\bar{X}_S = 30.24$ and 25.23 , $p < .05$; $\bar{X}_S = 42.47$ and 32.88 , $p < .01$; $\bar{X}_S = 19.49$ and 8.05 , $p < .01$; $\bar{X}_S = 38.88$ and 35.78 , $p < .10$; and $\bar{X}_S = 4.81$ and 4.34 , $p < .05$, respectively), as indicated in Table XXVII. The preceding significant moderating impact of influence of superiors on the relationship of the submodel with satisfaction with supervision and satisfaction with co-workers was cross-validated by moderated regression analysis ($R^2 = .064$, $p < .05$; and $R^2 = .063$, $p < .10$, respectively), as shown in Table XXVIII. To recapitulate: influence of superiors received weak support as a moderator of the low congruence feature relationship with job satisfaction. It was supported specifically as a moderator of the low submodel association with two of the six measures of satisfaction, satisfaction with supervision and satisfaction with co-workers. The expected moderator was also shown to operate as a main predictor of three of the unique relationships evaluated.

TABLE XXVIII
 REGRESSION ANALYSIS OF THE MODERATING IMPACT OF SELECTED COMMUNICATION
 DIMENSIONS ON THE LOW CONGRUENCE SUBMODELA RELATIONSHIP WITH
 JOB SATISFACTION
 (n = 91)

	Changes in R ²			F _d (5)
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	
Row Moderator and Predicted Satisfaction Dimension (1)				
Trust in superiors (A)				
Satisfaction with work	.236	.037e	.001	.08
Satisfaction with supervision	.093	.552e	.015	1.89
Satisfaction with pay	.005	.040e	.008	.37
Satisfaction with promotions	.112	.092e	.034	1.91
Satisfaction with co-workers	.014	.078e	.013	.60
Overall job satisfaction	.058	.038	.090	4.72**
Influence of superiors (B)				
Satisfaction with work	.236	.043e	.009	.52
Satisfaction with supervision	.093	.185	.064	4.14**
Satisfaction with pay	.005	.009	.016	.71
Satisfaction with promotions	.112	.058e	.005	.25
Satisfaction with co-workers	.014	.003	.063	2.90*

TABLE XXVIII--Continued

Row Moderator and Predicted Satisfaction Dimension (1)	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	F ^d (5)
Overall job satisfaction	.058	.044 ^e	.003	.15
Accuracy of communication (C)				5.19***
Satisfaction with work	.236	.020	.081	1.10
Satisfaction with supervision	.093	.025	.022	1.15
Satisfaction with pay	.005	.028	.025	1.38
Satisfaction with promotions	.112	.000	.028	5.56***
Satisfaction with co-workers	.014	.015	.112	.27
Overall job satisfaction	.058	.025	.006	
Communication satisfaction (D)				
Satisfaction with work	.236	.162 ^e	.007	.49
Satisfaction with supervision	.093	.128 ^e	.008	.45
Satisfaction with pay	.005	.120 ^e	.015	.76
Satisfaction with promotions	.112	.033 ^e	.001	.07
Satisfaction with co-workers	.014	.235 ^e	.001	.05
Overall job satisfaction	.058	.090 ^e	.031	1.62

TABLE XXVIII--Continued

Row Moderator and Predicted Satisfaction Dimension (1)	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms to Model ^c and F Value	F ^d (5)
Desire for interaction (E)				
Satisfaction with work	.236	.047 ^e	.007	.44
Satisfaction with supervision	.093	.003	.001	.05
Satisfaction with pay	.005	.014	.028	1.24
Satisfaction with promotions	.112	.000	.034	1.70
Satisfaction with co-workers	.014	.001	.018	.78
Overall job satisfaction	.058	.015	.028	1.31
Overload communication (F)				
Satisfaction with work	.236	.011	.033	1.92
Satisfaction with supervision	.093	.001	.059	2.97*
Satisfaction with pay	.005	.016	.026	1.16
Satisfaction with promotions	.112	.005	.021	1.03
Satisfaction with co-workers	.014	.003	.014	.62
Overall job satisfaction	.058	.001	.018	.84

^aIndividuals scoring low on both job scope and growth need strength.

^bJob scope and growth need strength.

TABLE XXVIII--Continued

cThe products of job scope and growth need strength with the row moderator.

dThe significant test value associated with the addition of the interaction terms to the regression equation.

eRow communication dimension found to act as a predictor.

*Addition of interaction terms significant at .10 level.

**Addition of interaction terms significant at .05 level.

***Addition of interaction terms significant at .01 level.

Third, accuracy of information, on the other hand, was not supported as a moderator. Each statistical technique, subgroup and moderated regression analysis, showed the expected moderator influencing different relationships. This disparity left the proposed moderator without true support. Data in Table XXVII indicate that subgroup analysis supported the investigated communication dimension of accuracy as a moderator of the low submodel relationship with only one dimension of satisfaction, satisfaction with supervision. Specifically, the level of satisfaction with supervision of the forty-nine individuals scoring high in accuracy of information was significantly higher than that of the forty-two participants scoring low on the same dimension ($\bar{X}_S = 40.20$ and 35.98 , $p < .05$). This finding by subgroup analysis received no support from moderated regression analysis. However, this last technique supported different moderating effects, as shown in Table XXVIII. Accuracy was found to moderate significantly the submodel relationship with satisfaction with work and satisfaction with co-workers ($R^2 = .081$, $p < .01$; and $R^2 = .112$, $p < .01$, respectively). Consequently, accuracy of information lacked support as a true moderator of the low congruence relationship with job satisfaction. Accuracy of information also lacked support as a main predictor, as can be noted in Table XXVIII.

Finally, satisfaction with communication received no support as a moderator of the low submodel association with job satisfaction, even though the subgroup analysis showed the proposed moderator influencing all six assessed unique relationships. Moderated regression analysis later showed that the identified influences were actually main effects. Data from subgroup analysis, in Table XXVII indicate that the levels of satisfaction with work, satisfaction with supervision, satisfaction with pay, satisfaction with promotion, satisfaction with co-workers, and overall job satisfaction were significantly higher for the fifty-four individuals scoring high on the proposed moderator than those of the thirty-seven persons scoring low ($\bar{X}_S = 31.65$ and 22.76 , $p < .01$; $\bar{X}_S = 42.19$ and 32.51 , $p < .01$; $\bar{X}_S = 29.81$ and 22.84 , $p < .01$; $\bar{X}_S = 18.04$ and 9.24 , $p < .01$; $\bar{X}_S = 41.33$ and 31.95 , $p < .01$; and $\bar{X}_S = 5.01$ and 4.00 , $p < .01$, respectively). None of these findings received support from moderated regression analysis, as shown in Table XXVIII. Significantly, however, this last technique gave support to satisfaction with communication as a predictor of all six unique relationships between the low submodel and job satisfaction. Therefore, communication satisfaction was left without support as a true moderator of the investigated low submodel association with job satisfaction.

In conclusion, of the four proposed moderators in hypothesis eight, only influence of superiors received some weak support. This communication dimension was found to moderate the low congruence submodel relationship with two satisfaction dimensions, satisfaction with supervision and satisfaction with co-workers. Trust in superiors, accuracy of information, and communication satisfaction lacked support as moderators of the investigated relationship. Significantly, however, trust in superiors, influence of superiors, and satisfaction with communication acted as main predictors, but differently, in fourteen of the twenty-four evaluated relationships in hypothesis eight.

Hypothesis ten.--The expected moderating influence of desire for interaction lacked support. Individuals in the low congruence submodel scoring low in desire for interaction did not report higher levels of job satisfaction than those scoring high, as predicted. Subgroup analysis did provide some very weak, partial support to the proposed moderator, as shown in Table XXVII, as an influencer of the low submodel relationship with one of the six dimensions of satisfaction, satisfaction with promotions ($\bar{X}_S = 12.52$ and 16.83 , $p < .10$). However, this finding was not cross-validated by moderated regression analysis. Results from this last technique, in Table XXVII, showed the proposed moderator operating as a main predictor in one of the six

unique relationships assessed. Nevertheless, desire for interaction was left without support as a true moderator of the low submodel association with job satisfaction.

Hypothesis twelve.--Overload communication was not supported as a moderator of the low congruence feature relationship with job satisfaction. As expected, low growth need strength individuals in low scope jobs perceiving high levels of overload information did not report higher levels of job satisfaction than those perceiving low levels of the same facet of communication. In fact, although insignificant, results from subgroup analysis presented in Table XXVII indicate that individuals scoring low in the proposed moderator reported higher levels of five satisfaction dimensions than individuals scoring high. Moderated regression analysis showed overload communication acting as a moderator in the low submodel association with satisfaction with supervision ($R^2 = .059$, $p < .10$). However, this finding had not been supported by subgroup analysis. Consequently, overload information received no support as a true moderator of the low congruence submodel relationship with job satisfaction.

Hypothesis fourteen.--The predicted moderating influence of downward communication was not substantiated. The expectation that under conditions of low congruence, downward communication would be directly related to job

satisfaction received no support. Significantly, however, all six computed correlations, as shown in Table XIX, were negative. Those related to satisfaction with work, satisfaction with pay, and satisfaction with co-workers were significant ($r = -.22, p < .05$; $r = -.19, p < .10$; and $r = -.29, p < .01$, respectively). These three moderating effects by the proposed moderator were later shown to represent main effects by moderated regression analysis, as indicated in Table XXX. This last statistical procedure also showed downward communication moderating the low submodel relationship with overall job satisfaction. However, this detection was not supported by subgroup analysis. As

TABLE XXIX

RELATIONSHIP BETWEEN DOWNWARD COMMUNICATION AND JOB
SATISFACTION FOR RESPONDENTS IN THE LOW
CONGRUENCE SUBMODEL^a
($n = 91$)

Job Satisfaction Dimension	Downward Communication Dimension
Satisfaction with work	-.22**
Satisfaction with supervision	-.09
Satisfaction with pay	-.19*
Satisfaction with promotions	-.06
Satisfaction with co-workers	-.29***
Overall job satisfaction	-.11

^aThe low congruence situation was formed by respondents scoring low on both job scope and growth need strength.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

TABLE XXX

REGRESSION ANALYSIS OF THE MODERATING EFFECT OF DOWNWARD COMMUNICATION
ON THE LOW CONGRUENCE/JOB SATISFACTION SUBMODEL^a
(n = 91)

	Predictors in Model ^b (2)	Changes in R ²		
		Predicted Job Satisfaction Measure (1)	Addition of Proposed Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value
			R ² (4)	F ^d (5)
Satisfaction with work	.236		.008	.48
Satisfaction with supervision	.093	.036 ^e	.011	.54
Satisfaction with pay	.005	.010	.045	2.06
Satisfaction with promotions	.116	.033 ^e	.003	.13
Satisfaction with co-workers	.014	.001	.026	1.28
Overall job satisfaction	.058	.083 ^e	.051	2.46*

^aJob satisfaction prediction of respondents scoring low on both job scope and growth need strength.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with downward communication.

^dThe significant test value which resulted after adding the interaction terms to the regression model.

^eRow communication dimension supported as a predictor.

*Addition of interaction terms significant at .10 level.

a consequence, downward communication was left without support as a true moderator of the low congruence association with satisfaction.

Again, the preceding finding is contrary to the conceptualized influence of directionality of communication on the individual-job congruence relationship with job satisfaction. Prior theory and research suggest that the environment of high scope jobs is characterized by lateral and upward communication networks, while that of low scope jobs is characterized by downward communication (1, 3, 5). A match between individual-job characteristics and communication networks, were expected to enhance job satisfaction. Results from the current investigation did not support the expectation. Actually, the desired communication networks impacted the levels of job satisfaction inversely.

Summary of the moderating impact of communication on the relationship between the low congruence submodel and job satisfaction.--Seven facets of communication were expected to moderate the low congruence submodel relationship with job satisfaction. These communication dimensions were trust in superiors, influence of superiors, accuracy of information, satisfaction with communication, desire for interaction, overload communication, and downward communication. Only influence of superiors received some weak support as a moderator. This last communication dimension

was shown to moderate the low submodel relationship with two of the six dimensions of satisfaction, satisfaction with supervision and satisfaction with co-workers. However, five of the seven communication dimensions--trust in superiors, influence of superiors, communication satisfaction, desire for interaction, and downward communication--were detected operating as independent predictors, differently, in eighteen of the forty-two evaluated relationships between the low submodel and the six dimensions of job satisfaction.

Impact of Communication on the Low Individual-Job
Congruence Relationship with Job Performance:
Results

The communication dimensions of trust in superiors, influence of superiors, accuracy of information, communication satisfaction, desire for interaction, underload communication, and downward communication were proposed to moderate the relationship between job performance and the low congruence condition. The theoretical expectation concerning the moderating influence of these communication facets on such a relationship was expressed in hypotheses eight, ten, eleven, and fourteen. Results pertaining to these propositions, or portions of them, as appropriate, are presented below.

Hypothesis eight.--Trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication were predicted to moderate the low congruence

submodel relationship with job performance. It was hypothesized that individuals scoring high in these four communication dimensions, separately, would be rated with higher levels of performance than those scoring low. Findings concerning the influence of each one of these four proposed moderators are highlighted as follows.

First of all, trust in superiors received moderate support as a moderator. Two of the three evaluated relationships between the low submodel and job performance were found to be moderated by the proposed moderator. Data from subgroup analysis in Table XXXI indicate that thirty-nine participants scoring high in trust in superiors showed significant, higher levels of quality, quantity, and overall job performance than the fifty-two respondents scoring low ($\bar{X}_S = 5.53$ and 5.05 , $p < .01$; $\bar{X}_S = 5.29$ and 4.96 , $p < .05$; and $\bar{X}_S = 5.41$ and 5.00 , $p < .01$, respectively). Results from regression analysis in Table XXXII cross-validated two of the preceding moderating effects. The low congruence submodel relationship with quantity and overall job satisfaction was found to be significantly moderated by trust in superiors ($R^2 = .066$, $p < .05$; and $R^2 = .060$, $p < .10$, respectively) as determined by the increase in R^2 after adding the interaction terms to the appropriate regression equations. The moderating effect involving the impact of the proposed moderator on the prediction of quality was shown to be a main effect by the same technique of moderated

TABLE XXXI

SUBGROUP ANALYSIS OF THE MODERATING INFLUENCE OF SELECTED COMMUNICATION
DIMENSIONS ON THE LOW CONGRUENCE SUBMODELA RELATIONSHIP
WITH JOB PERFORMANCE

Moderator Subgroup and Performance Measure (1)	Performance Measure Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Performance Measure Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Trust in superiors (A) (High, n = 39; low, n = 52) Quality Quantity Overall job performance	5.53 5.29 5.41	5.05 4.96 5.00	.48 .33 .41	3.04*** 1.95** 2.77***
Influence of superiors (B) (High, n = 51; low, n = 40) Quality Quantity Overall job performance	5.35 5.22 5.28	5.13 4.96 5.04	.22 .26 .24	1.27 1.55* 1.57*
Accuracy of communication (C) (High, n = 49; low, n = 42) Quality	5.33	5.17	.16	.95

TABLE XXXI--Continued

Moderator Subgroup and Performance Measure (1)	Performance Measure Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Performance Measure Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Quantity Overall job performance	5.16 5.24	5.04 5.10	.12 .14	.73 .93
Communication satisfaction (D) (High, n = 54; low, n = 37) Quantity Overall job performance	5.29 5.10 5.19	5.20 5.11 5.16	.09 .01 .03	.48 -.10 .21
Desire for interaction (E) (High, n = 50; low, n = 41) Quantity Overall job performance	5.23 5.27 5.40	4.92 4.90 4.91	.61 .37 .49	3.89*** 2.20** 3.40***
Underload communication (F) (High, n = 50; low, n = 41) Quantity	5.24	5.27	.03	-.24

TABLE XXXI--Continued

Moderator Subgroup and Performance Measure (1)	Performance Measure Mean (\bar{X}) of Respondents Scoring High in Row Moderator (2)	Performance Measure Mean (\bar{X}) of Respondents Scoring Low in Row Moderator (3)	Difference Between Columns Two and Three (4)	t Value ^b (5)
Quantity Overall job performance	5.18 5.21	5.01 5.14	.17 .07	.98 .43

^aThe low congruence submodel is composed by individuals scoring low on both job scope and growth need strength.

^bOne-tailed test conducted.

*Significant at the .10 level.

**Significant at the .05 level.

***Significant at the .01 level.

regression analysis. In sum, however, trust in superiors received moderate support as a moderator of the low congruence submodel association with job performance. It specifically was substantiated as a moderator on the predictions of quantity and overall job performance.

Secondly, influence of superiors was not supported as a moderator of the low submodel relationship with job performance, in spite of detecting some partial support through subgroup analysis. This statistical technique, as indicated in Table XXXI, showed that individuals scoring high on the proposed moderator had significant higher levels of quantity and overall job performance than those scoring low ($\bar{X}_S = 5.22$ and 4.96 , $p < .10$; $\bar{X}_S = 5.28$ and 5.04 , $p < .10$, respectively). These findings, however, were not supported by moderated regression analysis as reflected by the data in Table XXXII. But this secondary statistical technique showed the proposed moderator acting as a main predictor in two of the three evaluated relationships. Yet, influence of superiors was left without support as a moderator of the low submodel association with performance.

Thirdly, accuracy of information also lacked support as a moderator. Neither the primary statistical technique of subgroup analysis, as shown in Table XXXI, nor the secondary method of moderated regression analysis, as indicated in Table XXXII, provided any evidence of accuracy

TABLE XXXII
 REGRESSION ANALYSIS OF THE MODERATING IMPACT OF SELECTED COMMUNICATION
 DIMENSIONS ON THE LOW CONGRUENCE SUBMODEL^a RELATIONSHIP WITH
 JOB PERFORMANCE
 (n = 91)

	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	F ^d (5)
Row Moderator and Predicted Performance Measure (1)				
Trust in superiors (A)				
Quality	.031	.064 ^e	.040	1.99
Quantity	.031	.033	.066	3.23**
Overall job performance	.035	.058	.060	3.04*
Influence of superiors (B)				
Quality	.031	.057 ^e	.031	1.52
Quantity	.031	.021	.012	.55
Overall job performance	.035	.045 ^e	.024	1.16
Accuracy of communication (C)				
Quality	.031	.013	.008	.36

TABLE XXXII--Continued

	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value	F ^d (5)
Row Moderator and Predicted Performance Measure (1)				
Quantity	.031	.004	.030	1.34
Overall job performance	.035	.010	.017	.76
Communication satisfaction (D)				
Quality	.031	.010	.015	.69
Quantity	.031	.001	.048	2.23
Overall job performance	.035	.001	.037	1.68
Desire for interaction (E)				
Quality	.031	.090 ^e	.004	.17
Quantity	.031	.023	.028	1.30
Overall job performance	.035	.063 ^e	.016	.74
Underload communication (F)				
Quality	.031	.002	.029	1.31
Quantity	.031	.008	.019	.88

TABLE XXXII--Continued

	Changes in R ²			
	Predictors in Model ^b (2)	Addition of Row Moderator to Model (3)	Addition of Interaction Terms to Model ^c and F Value	
			R ² (4)	F ^d (5)
Row Moderator and Predicted Performance Measure (1)				
Overall job performance	.035	.001	.029	1.33

^aIndividuals scoring low on both job scope and growth need strength.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with the row moderator.

^dThe significant test value associated with the addition of the interaction terms to the regression equation.

^eRow communication dimension found to act as a predictor.

*Addition of interaction terms significant at .10 level.

**Addition of interaction terms significant at .05 level.

as a moderator of the low submodel association with performance. The expectation was that individuals scoring high on the proposed moderator would be rated with higher levels of performance than those scoring low. Subgroup analysis showed, as indicated in Table XXXI, that the highest insignificant difference encountered was in quality of performance ($\bar{X}_S = 5.33$ and 5.17). However, the highest, insignificant R^2 shown by moderated regression analysis after adding the interaction terms to the different equations was on the prediction of quantity ($R^2 = .030$). Nevertheless, accuracy of information lacked support as a significant moderator of the low individual-job congruence relationship with job performance.

Lastly, the proposed moderating effect of communication satisfaction received no support, either. No significant differences were detected between the levels of performance of individuals scoring high on the proposed moderator and those of individuals scoring low. Data in Table XXXI indicate that subgroup analysis showed quality of performance reflecting the highest insignificant difference ($\bar{X}_S = 5.29$ and 5.20). Results in Table XXXII show that moderated regression analysis detected the strongest, insignificant moderating influence on the prediction of quantity ($R^2 = .048$). Notwithstanding, satisfaction with communication received no support as a moderator of the low submodel relationship with job performance.

In summary, only one of the four proposed moderators in hypothesis eight received some support as a moderator of the low congruence submodel relationship with job performance. Trust in superiors received moderate support as a moderator on the prediction of two of the three measures of performance, quantity and overall job performance. Influence of superiors, accuracy of information, and communication satisfaction were left without support as moderators. Influence of superiors and trust in superiors were also shown to be main predictors, differently, of three of twelve evaluated unique relationships.

Hypothesis ten.--The predicted moderating influence of desire for interaction on the low submodel relationship with performance received no support. Individuals in the low congruence condition scoring low in desire for interaction were expected to reflect higher levels of performance than those scoring high. Data from subgroup analysis in Table XXXI indicate that the differences detected were all contrary to the expectation. The fifty individuals scoring high on the proposed moderator had significantly higher levels of quality, quantity, and overall job performance than the forty-one employees scoring low ($\bar{X}_S = 5.53$ and 4.92 , $p < .01$; $X_S = 5.27$ and 4.90 , $p < .05$; and $X_S = 5.40$ and 4.91 , $p < .01$, respectively). Moderated regression analysis, however, did not support these findings, as shown

in Table XXXII. Two of the preceding detected moderating effects were later shown to represent main influences. Consequently, desire for interaction lacked support as a true moderator of the low submodel relationship with job performance.

Hypothesis eleven.--Underload communication showed no moderating influence on the low congruence feature association with performance as expected. The proposition that low growth need strength individuals in low scope jobs perceiving high levels of the proposed moderator would be rated with higher levels of performance than those perceiving low levels received no support either by subgroup analysis or by moderated regression computations, as shown in Tables XXXI and XXXII. The highest insignificant differences detected by subgroup analysis concerned the measure of quantity ($\bar{X}_S = 5.18$ and 5.01). The strongest insignificant moderating impact of underload information as detected by regression analysis was on the prediction of overall job performance ($R^2 = .029$). But in spite of the above findings, the proposed moderator lacked significant support as an influencer of the low submodel association with job performance.

Hypothesis fourteen.--The predicted moderating impact of downward communication on the low submodel association with job performance received no support. It was expected

that under the low congruence condition, downward communication would be directly related to job performance. The results in Table XXXIII indicate that, although insignificant, there was only one correlation as predicted--positive; it was the correlation between the proposed moderator and quantity ($r = .06$). The other two correlations, also insignificant, involving the measures of quality and overall job performance, were unexpectedly negative ($r_s = -.16$ and $-.06$, respectively).

On the other hand, regression analysis gave downward communication some partial support as a moderator of the low congruence feature relationship with quantity and overall job performance ($R^2 = .051$, $p < .10$; and $R^2 = .052$, $p < .10$, respectively), as shown in Table XXXIV. But these findings had not been detected by correlation analysis. As a consequence, downward communication was left without support as a true moderator of the low submodel relationship with job performance. Of importance, however, it should be noted that the insignificant moderating influences detected by correlation analysis were contrary to the conceptualization made. Downward communication tended to maintain an inverse rather than a positive relationship with performance in the low congruence condition.

Summary of the moderating impact of communication on the relationship between the low congruence submodel and job performance.--Trust in superiors, perceived influence of

TABLE XXXIII

RELATIONSHIP BETWEEN DOWNWARD COMMUNICATION AND JOB
 PERFORMANCE FOR RESPONDENTS IN THE LOW
 CONGRUENCE SITUATION*
 (n = 91)

Measures of Job Performance	Downward Communication Dimension**
Quality	-.16
Quantity06
Overall job performance	-.06

*The low congruence situation was composed by respondents scoring low on both job scope and growth need strength.

**No significant correlation encountered between downward communication and job performance dimensions.

superiors, accuracy of information, satisfaction with communication, desire for interaction, underload communication, and downward communication were predicted to moderate the low congruence submodel relationship with job performance. Only the first proposed communication dimension on the preceding list, trust in superiors, received some support as a moderator. It was shown to moderate the low submodel relationship with two of the three measures of performance, quantity and overall job performance. Additionally, trust in superiors, influence of superiors, and desire for interaction were shown to operate differently as main predictors of five of the twenty-one assessed unique relationships.

TABLE XXXIV
 REGRESSION ANALYSIS OF THE MODERATING IMPACT OF DOWNWARD COMMUNICATION
 ON THE LOW CONGRUENCE/JOB PERFORMANCE SUBMODEL^a
 (n = 91)

	Changes in R ²			F ^d (5)	
	Predictors in Model ^b (2)	Addition of Proposed Moderator to Model (3)	Addition of Interaction Terms ^c to Model and F Value		
			R ² (4)		
Predicted Job Performance Measure (1)					
Quality Quantity	.031 .031	.025 .006	.035 .051	1.61 2.37*	
Overall job performance	.035	.002	.052	2.41*	

^aJob performance prediction of participants scoring low on both job scope and growth need strength.

^bJob scope and growth need strength.

^cThe products of job scope and growth need strength with downward communication.

^dF: the significant test value which resulted after adding the interaction terms to the regression model.

*Addition of interaction terms significant at .10 level.

Graphical Analysis of Residuals

The secondary statistical approach implemented for identifying and cross-validating the presence of communication moderating effects on the individual-job congruence relationship with job satisfaction and job performance was moderated regression analysis. This statistical approach resulted in the analysis of four hundred and five different multivariable regression equations. The analysis conducted assumed that the characteristics of the multiple regression models developed conformed to the expected characteristics of suitable regression equations. These characteristics include independence of errors, zero mean, common variance, and normal distribution. A graphical analysis of residuals (errors) was undertaken to determine if the actual regression lines analyzed resembled the expected characteristics.

The graphical analysis conducted involved constructing plots of the standardized residuals versus the values of each independent variable of each model developed. The pattern of the points on each plot was then analyzed. A horizontal band of points is expected as stated and illustrated in the previous chapter, with no hint of the presence of any systematic trend, when all basic characteristics are present.

The general finding of the analysis conducted was similar to the one previously reported when reviewing the appropriateness of the regression models developed while

considering the impact of communication on the first model--the relationship between job performance and job satisfaction. The graphs plotted showed that the pattern of points on each one tended to conform to the expected horizontal line. So the desired regression characteristics appeared to be present. A sample of sixteen of the graphs plotted appears in Appendix D.

The graphs in Appendix D still show the existence of very few outliers--an outlier is a residual or error larger than the rest in absolute value. However, because of the reasons discussed in the preceding chapter when evaluating the outliers on the graphs of the regression lines of the first model, these apparent extreme values were not eliminated from the data analyzed. It was hoped that the existence of these few outliers would not significantly affect the least-squares fittings of the different equations developed.

Summary of Hypotheses Six Through Fourteen

Individuals in congruent conditions were predicted to show higher levels of job satisfaction dimensions than those in incongruent situations. All six assessed dimensions of satisfaction but satisfaction with supervision yielded differences as expected. And three of these expected differences, involving the dimensions of satisfaction with pay, satisfaction with promotions, and overall job

satisfaction, were significant. Because some prior research had indicated that conditions of congruence were more influential on job satisfaction than on job performance, the current researcher hypothesized that levels of job performance between individuals under conditions of congruence and persons under incongruent situations would not differ. This proposition received weak support. The levels of quantity were somewhat as expected. However, the levels of quality and overall job performance were found to be significantly higher for the 187 respondents in congruent situations than for the 115 participants in incongruent conditions. These last findings, although contrary to the current research expectation, do provide support to the individual-job congruence model. A match between individual and job characteristics may result in high levels of job performance as well as in high levels of job satisfaction (3, 4). These findings involving levels of satisfaction and performance related to hypotheses six and seven. Results concerning hypotheses eight through fourteen are synthesized as follows.

Four communication dimensions received support as true moderators of particular individual-job congruence relationships with job performance and satisfaction. These communication moderators were accuracy of information, desire for interaction, trust in superiors, and perceived influence of superiors. These four communication dimensions

acted as moderators in eight of the 135 unique relationships evaluated. The moderating effects of these communication dimensions included the following influences. Influence of superiors was found to moderate the high individual-job congruence relationship with satisfaction with co-workers and overall job satisfaction. It also moderated the relationship of the low congruence submodel with satisfaction with supervision and satisfaction with co-workers. The low submodel relationship with quantity and overall job performance was shown, on the other hand, to be impacted by trust in superiors. Finally, both desire for interaction and accuracy of information received support as moderators of the high congruence association with satisfaction with promotions. It should be mentioned that thirty-five of the 135 unique relationships assessed showed the proposed moderator, organizational communication, operating as a main predictor.

From the preceding synthesis of the findings concerning the individual-job congruence relationship with both job performance and job satisfaction and the proposed moderating influence of organizational communication on such relationship, the following three conclusions appear reasonable.

1. Overall, the individual-job congruence/job performance/job satisfaction model received support. The levels of the outcome variables of performance and

satisfaction were higher for individuals in congruent situations than for individuals in incongruent conditions.

2. Organizational communication received very weak support as a moderator of the individual-job congruence relationship with job performance and job satisfaction.

3. Organizational communication received moderate support as a main predictor of individual-job congruence/job performance/job satisfaction relationships. Its main predicting influences were on the prediction of job satisfaction dimensions. (This finding will be more evident in the discussion of the results in the next chapter.)

This synthesis of the findings concerning hypotheses six through fourteen, which included the expected moderating impact of communication on the second model investigated, concludes the presentation of the results of the current study. Chapter VII now becomes the focus of attention. It provides an overall summary of the present research and analyzes and discusses some of its findings. Some of the implications for management practice and research are also explored.

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CHAPTER VII

SUMMARY, CONCLUSIONS, AND INTERPRETATIONS

One of the characteristics of this investigation is its comprehensiveness. The proposed moderating influence of ten facets of organizational communication on two different models characterized by multidimensional variables has been studied. Thus, in order to facilitate the discussion of the current research findings and their interpretation, an abbreviated and schematic background of the investigation is presented first. This abbreviated summary is followed by research findings and interpretations, implications for management practitioners and researchers, and concluding remarks, in that order.

Abbreviated Background of Present Study

Some of the most important aspects concerning the background of the study conducted are presented here. Six subsections cover these important factors. They are the research problem and its significance, purpose and questions, limitations and scope, related literature, the sample, and statistical methodology. These subsections are introduced in the order that they have been presented.

Research Problem and Its Significance

Although the importance of communication in organizations is well recognized, there remains a noticeable need for relating organizational communication measures to other organizational concepts. The correlates of organizational communication to other organizational constructs have been scarcely researched. Thus, the problem of the investigation conducted was to assess the moderating impact of organizational communication on the relationship between job performance and satisfaction and on the individual-job congruence association with the outcome variables of performance and satisfaction. Hopefully, the study of the problem delineated would enhance the understanding of the impact of communication in organizational functioning. It would also improve the understanding of the two models included in the investigation.

Purpose and Questions

As implicated in the statement of the problem above, the primary purpose of the study was twofold. First of all, it explored the moderating influence of organizational communication on the performance/satisfaction association. And secondly, it investigated the moderating impact of the same proposed moderator--organizational communication--on the individual-job congruence relationship with job performance and job satisfaction. The secondary purpose

was to assess the relationship of organizational communication with the other research variables: job performance, job satisfaction, growth need strength, and job scope.

The foregoing research purpose had the aim of responding to three posed questions: (1) Does organizational communication moderate the job performance/job satisfaction relationship?, (2) Does organizational communication moderate the individual-job congruence relationship with job performance?, and (3) Does organizational communication moderate the individual-job congruence association with job satisfaction?

Limitations and Scope

Two of the limitations of the current study were determined by the use of perceptual data and the selected instruments to assess the various research variables. The use of perceptual data constituted a limitation because not all individuals are aware or able to identify their feelings and not all people interpret a given item in the same way. The selected instruments became a problem because for most of the current research variables, there is little agreement among researchers as to the one best way to measure the constructs.

The scope of the investigation conducted was determined, among other things, by the five variables adopted. Three of these variables were characterized by their multidimensional

nature. Organizational communication included a set of ten facets; there were three measures of performance and six dimensions of satisfaction. The other two variables were growth need strength and job scope. While exploring the moderating impact of communication on the individual-job congruence model, only congruent conditions were evaluated. These were high growth need strength individuals in high scope jobs, and low growth need strength individuals in low scope jobs. In dealing with the conceptualized influence of communication on the job performance relationship with job satisfaction, the direction of this relationship was not considered. Finally, the present research was essentially an exploratory type of study.

Related Literature

Because of a scarcity in prior empirical work directly related to the current study, the literature selected and reviewed was based on two theories. The first theory indicates that variables which differentially affect performance and satisfaction become potential moderators of performance/satisfaction associations. The second theoretical view suggests that variations in job performance are primarily responsible for variations in job satisfaction. Consequently, prior empirical work concerning the relationship of organizational communication with job performance and job satisfaction was assessed and used for conceptualizing the different hypotheses stated and evaluated.

The Sample

The sample of the current research consisted of a total of 612 employees from two different firms situated in a large metropolitan area of the southern section of the United States. Employees--executives, research and middle management people, office workers, and manufacturing individuals--representing the various hierarchical levels of the participating firms formed the sample investigated. Three hundred and two members of the sample (49 per cent) completed and returned the research instrument. Two hundred and forty-nine respondents were male and fifty-three were female. Sixty-one participants indicated that their jobs were managerial; and two hundred forty-one individuals said their jobs were nonmanagerial.

Statistical Methodology

There were two evaluations for four hypotheses dealing with the proposed moderating influence of organizational communication on the job performance relationship with job satisfaction, and two evaluations, likewise, on seven hypotheses dealing with the proposed moderating influence of organizational communication on the individual-job congruence association with job performance and job satisfaction. First, a particular proposed moderating influence was assessed through the appropriate primary statistical method, differential validity or differential predictability.

Second, moderated regression analysis was conducted as a cross-validating technique. A particular communication dimension became a true moderator only if its expected moderating influence was substantiated by both primary and secondary analyses.

Zedeck's guidelines were implemented for assessing the results from moderated regression analysis. He explains that if the regression equation including the proposed moderator and the predictor(s) and the regression model involving the interaction term(s), the proposed moderator, and the predictor(s) are different from the regression line including only the predictor(s), but if they are not different from each other, then the proposed moderator is an independent predictor and not a moderator variable (22, p. 304). When only predicting effects were detected, they were also reported. This information could enhance the understanding of the impact of communication on the two models investigated as well as in organizational functioning.

Research Findings and Interpretation

In discussing the results of the current investigation, findings concerning the first model, the proposed moderating effect of organizational communication on the relationship between performance and satisfaction, are presented and interpreted first. Then results pertaining to the second model, the moderating influence of the same proposed

moderator on the individual-job congruence association with both performance and satisfaction, are highlighted and discussed.

First Model: Findings and Interpretation

The presentation of the findings concerning the proposed moderating impact of organizational communication on the performance/satisfaction relationship takes place in three stages. The findings placed first are those involving the communication dimensions of trust in superiors, influence of superiors, accuracy of information, desire for interaction, and communication satisfaction. These facets of communication are considered together because they were conceptualized, based on theoretical and empirical work, to similarly moderate the performance/satisfaction association. Then the discussion turns to the findings concerning the expected moderating influence of communication load--underload and overload. Results involving the dimension of directionality of communication--upward, downward, and lateral--are presented in third place.

The reported findings concerning the proposed moderating impact of organizational communication, involving the ten investigated communication dimensions, are then interpreted in relation to the question posed in the first chapter: Does organizational communication moderate the job performance/job satisfaction relationship? The overall

findings are also interpreted in terms of the theoretical work that served as a basis for originally proposing particular moderating influences.

Before beginning the discussion of the findings concerning the proposed moderating influence of organizational communication on the relationship between job performance and satisfaction as outlined above, two aspects need attention. First, findings pertaining to the performance/satisfaction relationship should be reviewed; and second, Tables XXXV and XXXVI, which include data to be referred to while pursuing the purpose of the current subsection, need to be described.

The present study showed that job performance is directly and moderately, and sometimes weakly, related to job satisfaction. Eighteen unique relationships between three measures of job performance and six of job satisfaction were assessed, and all correlations were positive. Also sixteen of the eighteen computed correlation coefficients were significant. The highest correlation computed in the sample investigated was between quality of performance and satisfaction with work ($r = .26$), and the lowest one was between quantity of performance and satisfaction with pay ($r = .05$). Both the median and the mean of all eighteen calculated correlations were equal to .15. This dual finding is virtually parallel to the median correlation ($r = .14$) reported by Vroom (20) and the average

correlation ($r = .14$) more currently found, through meta-analysis--a statistical method used to accumulate research findings across studies--by Petty, McGee, and Cavender (14).

Current findings concerning the relationship between performance and satisfaction resemble the general tendency of prior empirical work. Major literature reviews have shown that, on the average, job performance and job satisfaction are weakly or moderately associated in the positive direction (1, 4, 7, 10, 18, 20). Thus, prior and current findings suggest that changes in one of the two variables--performance or satisfaction--may only weakly or moderately impact the other.

Tables XXXV and XXXVI summarize data pertaining to the moderating influence of organizational communication on the performance/satisfaction relationship. The first table presents, numerically, the moderating and predicting effects that were detected while assessing the proposed moderating influence of organizational communication on the relationship of the target variables of performance and satisfaction. The dimensions of the proposed moderator are listed in the first column, and the number of unique relationships between performance and satisfaction measures (from a total of 18) on which a particular communication dimension acted as a moderator is shown in column two. The number of occasions in which the same communication dimension operated as a main predictor is offered in the

TABLE XXXV

NUMERICAL SUMMARY OF MODERATING AND PREDICTING INFLUENCES
OF ORGANIZATIONAL COMMUNICATION ON PERFORMANCE/
SATISFACTION RELATIONSHIPS*

Proposed Communication Moderator (1)	Number of Performance/ Satisfaction Relationships in Which Moderating Effects Were Detected (2)	Number of Performance/ Satisfaction Relationships in Which Main Effects Were Detected (3)
Trust in superiors	0	17
Influence of superiors	0	18
Accuracy of information	5	10
Desire for interaction	1	17
Communication satisfaction	0	15
Underload communication	0	16
Overload communication	0	8
Upward communication	5	2
Downward communication	3	5
Lateral communication	2	3
Total**	16	111

*Based on three measures of job performance and six of job satisfaction, there were eighteen relationships investigated.

**The integration of the ten investigated dimensions of communication into performance/satisfaction relationships provided 180 (18 x 10) unique relationships for evaluation purposes.

last column. For example, the first line of the table indicates that while trust in superiors (column one) did not moderate any one of the described unique relationships (column two), it acted as a predictor in seventeen (column

three) of the eighteen evaluated relationships between performance and satisfaction.

Table XXXVI, on the other hand, summarizes the communication dimensions which received support, in the investigation conducted, as moderators of particular relationships between performance and satisfaction dimensions. Column one lists each one of the six researched dimensions of job satisfaction, and column two presents and repeats the three measures of performance in such a way as to resemble their relationship to the satisfaction dimension listed in the previous column. The third column of the same table shows the identified moderators of the relationships represented by columns one and two. For instance, the first line of the described table indicates that the relationship between satisfaction with work (column one) and quality of performance (column two) was shown to be moderated by accuracy of information (column three).

Inasmuch as the current research findings concerning the performance/satisfaction relationship have been interpreted, and inasmuch as Tables XXXV and XXXVI have been described, attention returns to the proposed presentation and interpretation of the findings pertaining to the moderating impact of organizational communication on the first model, as outlined earlier. Data in these two tables serve to support the discussion and interpretation to be presented.

TABLE XXXVI

ENCOUNTERED MODERATING IMPACT OF ORGANIZATIONAL
COMMUNICATION ON THE JOB PERFORMANCE
RELATIONSHIP WITH JOB SATISFACTION

Type of Relationship		Moderator(s) Identified* (3)
Dimension of Satisfaction (1)	Measure of Performance (2)	
Satisfaction with work (A)	Quality of performance	Accuracy of information Upward communication Downward communication
	Quantity of performance	Accuracy of information
	Overall job performance	Accuracy of information
Satisfaction with supervision (B)	Quality of performance	None
	Quantity of performance	Accuracy of information
	Overall job performance	None
Satisfaction with pay (C)	Quality of performance	Downward communication
	Quantity of performance	Desire for interaction Upward communication Lateral communication
	Overall job performance	Upward communication Lateral communication

TABLE XXXVI--Continued

Type of Relationship		Moderator(s) Identified* (3)
Dimension of Satisfaction (1)	Measure of Performance (2)	
Satisfaction with promotion (D)	Quality of performance	Upward communication
	Quantity of performance	None
	Overall job performance	None
Satisfaction with co-workers (E)	Quality of performance	Upward communication
	Quantity of performance	Accuracy of information
	Overall job performance	None
Overall job satis- faction (F)	Quality of performance	Downward communication
	Quantity of performance	None
	Overall job performance	None

*To be classified as a moderator, a communication dimension had to be supported by both subgroup and moderated regression analyses.

Trust in superiors, influence of superiors, accuracy of information, desire for interaction, and communication satisfaction.--Of the five proposed communication dimensions included in the current subsection, only accuracy of information and desire for interaction received some support as moderators of the job performance relationship with job satisfaction. Accuracy of information received a somewhat moderate support and desire for interaction received a very weak support. Specifically, accuracy was shown to moderate five of the eighteen assessed unique relationships between the target variables, as indicated in Table XXXV. And as shown in Table XXXVI, these five moderating effects of accuracy had to do with the relationship between the three measures of performance--quality, quantity, and overall job performance--and satisfaction with work, first, and, second, the association between quantity and two dimensions of job satisfaction--satisfaction with supervision and satisfaction with co-workers.

Data in Table XXXV show that desire for interaction moderated only one of the eighteen relationships evaluated. It was the association between quantity of performance and satisfaction with pay. All detected moderating effects from accuracy and desire for interaction were as predicted. Job performance dimensions were directly and more strongly related to job satisfaction dimensions under conditions in which respondents reported high perceived levels of accuracy

of information and desire for interaction than when they reported low perceived levels of the same two facets of communication.

Of significance for this research, Table XXXV shows that the five proposed communication moderators did very well as independent predictors. Each trust in superiors and desire for interaction appeared as a main predictor of seventeen of the eighteen evaluated relationships between performance and satisfaction dimensions. Influence of superiors acted as a predictor of all eighteen associations. Accuracy of information operated as a main predictor in ten relationships and satisfaction with communication in fifteen. Obviously, trust in superiors, influence of superiors, accuracy of information, desire for interaction, and satisfaction with communication did better as predictors than as moderators of the association between performance and satisfaction.

Communication load.--The expected moderating influence of communication load on the performance/satisfaction relationship received no support. There are two subfacets of communication load: underload and overload communication. Neither one of these two subfacets received support as a moderator of the relationship between the target variables of performance and satisfaction, as indicated in Table XXXV. Significantly, however, the same table shows that underload

communication acted as a main predictor of sixteen of the eighteen evaluated unique relationships between the target variables. On the other hand, eight of the eighteen relationships were moderated by overload communication. Thus, communication load was strongly supported as a main predictor of the job performance relationship with job satisfaction. However, it lacked support as a moderator of the same relationship.

Directionality of communication.--The proposed moderating influence of directionality of communication on the performance association with satisfaction received some support. Table XXXV shows that the three subfacets of directionality of communication--upward, downward, and lateral--received weak support as moderators of the performance/satisfaction relationship. As the data in Table XXXVI indicate, downward communication was shown moderating five of the eighteen relationships between performance and satisfaction measure. More specifically, this last proposed moderator was found to moderate the relationship between two measures of performance, quantity and overall job performance, and satisfaction with pay. The same subfacet of communication was also found moderating the relationship between quality of performance and three measures of satisfaction, satisfaction with work, satisfaction with promotions, and satisfaction with co-workers.

Downward communication, on the other hand, was shown moderating the relationship of quality and three measures of satisfaction: satisfaction with work, satisfaction with pay, and overall job satisfaction. Finally, lateral communication was detected operating as a moderator of the association of two measures of performance, quantity and overall job performance, with satisfaction with pay.

Directionality of communication also received support as a main predictor of some of the relationships investigated between performance and satisfaction dimensions. As shown in Table XXXV, upward communication operated as a main predictor in two of the eighteen evaluated unique relationships, downward communication in five, and lateral communication in three. Altogether, directionality of communication received similar support as moderator and predictor; it operated as a moderator in ten performance/satisfaction relationships and acted as a main predictor in an equivalent number of associations.

Interpretation.--Does organizational communication moderate the job performance/job satisfaction relationship? This research sought a response to this question. Consequently, the preceding findings are first interpreted in relation to such a question, and are followed by a discussion in terms of the theoretical viewpoint that was adopted for expecting organizational communication to moderate the relationship investigated.

The results summarized in the preceding subsection indicate that organizational communication received very weak support as a moderator of the relationship of the target variables of performance and satisfaction. This finding was not because the investigated construct lacked support as an influencer of the association of the target variables, but because such influence was mainly through independent predicting effects.

Five communication dimensions were detected moderating particular performance/satisfaction relationships. These communication dimensions were accuracy of information, desire for interaction, and upward, downward, and lateral communication. The integration of the different communication, performance, and satisfaction dimensions provided a total of 180 unique performance/satisfaction relationships to be evaluated. Only sixteen (9 per cent) of the total number of unique relationships showed the presence of moderating influences. These moderating influences were exerted by accuracy of information, desire for interaction, and upward, downward, and lateral communication. Accuracy of information and upward communication received the strongest support as moderators. Each of these two communication dimensions moderated five performance/satisfaction relationships, from a maximum of eighteen.

The investigated proposed moderator, organizational communication, received strong support as a main predictor.

The different investigated communication dimensions acted as main predictors in 111 (63 per cent) of the 180 unique relationships assessed. The communication dimensions with the strongest support as main predictors were trust in superiors, influence of superiors, accuracy of information, desire for interaction, satisfaction with communication, and underload communication. These communication dimensions acted as main predictors in seventeen, eighteen, ten, seventeen, fifteen, and sixteen unique performance/satisfaction associations, respectively.

Does organizational communication moderate the performance/satisfaction relationship? The preceding analysis indicates that the detected overall moderating impact of organizational communication on the relationship between job performance and satisfaction was practically nonexistent. The detected moderating influence appeared to be very weak, and it seemed to be exerted by basically two communication dimensions, accuracy of information and upward communication. Thus, the answer to the question raised tends to be negative. Organizational communication appears not to be an important moderator of the association between performance and satisfaction.

The strong support that organizational communication received as an independent predictor may constitute the reason why the same construct received such weak support as a moderator. Zedeck (22) explained that moderators are

very difficult to find when the change in R^2 is high to start with--after adding the proposed moderator, as a predictor, to the regression equation. As reported in Chapter V, on some occasions, the change in R^2 resulting from the addition of the proposed moderator to particular regression equations was higher than .40. These high values in R^2 , on the other hand, increased the possibility of detecting main effects from the proposed moderator. Zedeck indicated that if the regression lines including the proposed moderator and the original predictor and the regression equation involving the interaction term, the proposed moderator, and the predictor are different from the model including only the predictor, but if they are not different from each other, then the proposed moderator is an independent predictor and not a moderator variable (22). Evidently, the application of Zedeck's view to the data investigated provided the proposed moderator with a strong support as a main predictor. Therefore, as a predictor of the job performance relationship with job satisfaction, organizational communication deserves appropriate attention from management practitioners and researchers.

It should be recalled that because of the lack of prior empirical work pertaining to the moderating influence of organizational communication on the performance/satisfaction association, most of the propositions that were assessed in the current investigation were basically conceptualized in

relation to previous work concerning the organizational communication association with performance and satisfaction. The theoretical view that prompted this approach was that which indicates that variables which differentially affect performance and satisfaction become potential moderators of performance/satisfaction relationships (5, 9, 16). The fact that most of the communication dimensions investigated under this theory were shown to be strong predictors of the relationship researched may constitute the basis for a new postulate. Variables which differentially affect performance and satisfaction become potential predictors of the relationship between these last two constructs. Of course, this postulate raises the question of causality between performance and satisfaction.

Although the causality of the association between performance and satisfaction was not investigated in the current study, an important fact should be stated. This study showed that the relationship of organizational communication and job performance was similar to the relationship of organizational communication and job satisfaction. If the measures of overall job performance and overall job satisfaction are used, this similarity can be illustrated as follows. The communication dimensions of trust in superiors, perceived influence, accuracy of information, desire for interaction, and communication were found to be significantly and directly related to both

overall job performance and satisfaction. Communication load--underload and overload--was shown to be inversely related to the same two constructs. Upward communication and downward communication showed inverse and direct relationships with the same target variables, respectively. Only lateral communication provided different associations. It had an inverse correlation with overall job performance and showed no correlation with overall job satisfaction. Yet, the described relationships between organizational communication and the two constructs investigated reflected parallel patterns. Virtually each dimension of communication investigated related to both job performance and job satisfaction in the same manner.

What the above similarity may indicate, among other things, is that the detected organizational communication main effects are compatible with the three main theories concerning the causal relationship between performance and satisfaction: (1) job performance \rightarrow job satisfaction, (2) job satisfaction \rightarrow job performance, and (3) mutual causality. For example, high levels of accuracy of information may lead to high levels of performance, and successful performance may facilitate job satisfaction. The sequence may also function the other way around. High levels of accuracy of communication may lead to high levels of job satisfaction, and favorable perception of satisfaction may enhance job performance. Also, it may be that the above two causal

mechanisms operate simultaneously, in which case, performance and satisfaction foster each other; in other words, there is mutual causality. Of course, the above comments are subjective in nature. What appears evident from the current research is that no matter what the direction of the relation, organizational communication is an important predictor of the job performance relationship with job satisfaction.

Taken together, the findings and interpretations conducted concerning the proposed moderating impact of organizational communication on the job performance relationship with job satisfaction provide the background for the following conclusions.

1. Organizational communication received very weak support as a moderator of the performance/satisfaction relationship. The communication dimensions with the strongest support as moderators were accuracy of information and directionality of communication--upward, downward, and lateral.

2. Organizational communication received strong support as a main predictor of the job performance association with job satisfaction. Each one of the ten communication dimensions constituting the construct of organizational communication as used in the present research received some support as a predictor. The communication dimensions with the strongest support were trust in

superiors, influence of superiors, accuracy of information, desire for interaction, communication satisfaction, and underload communication.

3. The detected predicting influences of organizational communication on the relationship between performance and satisfaction are compatible with the performance→satisfaction, the satisfaction→performance, and the mutual causality viewpoints concerning the causal association of the two constructs. Organizational communication correlates with measures of performance and dimensions of satisfaction were virtually alike.

Second Model: Findings and Interpretation

Findings concerning the proposed moderating impact of organizational communication on the individual-job congruence relationship with the outcome variables of performance and satisfaction are discussed in four different stages. The results pertaining to the proposed moderating influence of trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication are presented and interpreted first, and are followed by the moderating results from desire for interaction. This grouping of variables is based on the similarity of the expected moderating influences. The findings regarding the expected moderating effect of communication load are discussed later, followed by those concerning directionality of communication.

In addition to the interpretation embedded in the presentation of the findings, as outlined above, the overall results regarding the expected moderating effect of organizational communication on the individual-job congruence relationships with performance and satisfaction are also interpreted in relation to two pertaining questions posed in the first chapter. These two questions are: (1) Does organizational communication moderate the individual-job congruence/job performance relationship? and (2) Does organizational communication moderate the individual-job congruence/job satisfaction relationship?

Before focusing in the discussion of the findings concerning the expected moderating influence of organizational communication on the second model, two factors need to be considered. First, the results pertaining to the individual-job congruence relationship with job performance and satisfaction should be presented and interpreted; and second, Tables XXXVII and XXXVIII, which show data to be referenced while pursuing the aim of the present subsection, should be described.

Five of the six investigated dimensions of job satisfaction and the three researched measures of job performance were found to be higher for individuals in congruent conditions than for individuals in incongruent situations. The levels of satisfaction with work, with pay, with promotions, with co-workers, and overall job satisfaction, and the levels

of quality, quantity, and overall job performance were higher for the 187 respondents in congruent conditions than those for the 115 participants in incongruent situations. Three satisfaction dimensions, satisfaction with pay, satisfaction with promotions, and overall job satisfaction, and two measures of performance, quality and overall job performance, reflected significant differences. These significant findings increase the reasonableness of the individual-job congruence approach.

Clearly, the preceding findings give support to the contingency/congruence model. This contingency model postulates that an appropriate match between employees' needs and job characteristics should result in high levels of performance and satisfaction (5, 6). Current research results also suggest the presence of high correlation levels between performance and satisfaction dimensions for individuals in congruent conditions. In such a case, the findings also offer support to job fit as a moderator of the job performance relationship with job satisfaction (3). Another important finding should be noted. The most significant impact of the individual-job congruence approach was on quality of performance. This finding substantiates previous work by Hackman and Lawler (6) and Umstot, Bell, and Mitchell (19). It also encourages the need for exploring organizational variables that may foster quantity of performance as well as quality.

Data in Tables XXXVII and XXXVIII relate to the findings concerning the proposed moderating influence of organizational communication on the individual-job congruence relationship with job performance and job satisfaction. Before discussing the data in these two tables, the task of indicating how to read them is first undertaken.

Table XXXVII presents some statistics concerning the actual moderating and predicting influences detected. Column one lists the investigated relationship and the proposed moderator dimensions. The number of unique relationships researched is presented in column two, and is followed by the number of unique relationships shown to be moderated by a particular proposed moderator. Column four offers the number of unique relationships in which a particular proposed moderator acted as a main predictor. The number of unique detected influences is shown by particular relationships. For instance, the first data line in the table described relates to trust in superiors, as a moderator of the high individual-job congruence association with job satisfaction (column one) and its influences on the six unique relationships evaluated (column two). It is shown that none of the unique relationships was moderated by the proposed moderator (column three); however, the expected moderator operated as a main predictor of five of the six investigated dimensions (column four).

TABLE XXXVII

NUMERICAL SUMMARY OF MODERATING AND PREDICTING INFLUENCES
OF ORGANIZATIONAL COMMUNICATION ON THE INDIVIDUAL-JOB
CONGRUENCE RELATIONSHIP WITH JOB PERFORMANCE
AND JOB SATISFACTION

Type of Relationships and Proposed Moderators (1)	Dimensions in Predicted Variable (2)	Number of Relationships in Which Moderating Effects Were Detected (3)	Number of Relationships in Which Main Effects Were Detected (4)
High individual-job congruence* relationship with job satisfaction dimensions (A)			
Trust in superiors	6	0	5
Influence of superiors	6	2	3
Accuracy of information	6	1	3
Satisfaction with communication	6	0	3
Desire for interaction	6	1	0
Overload communication	6	0	0
Lateral communication	6	0	0
Upward communication	6	0	2
First Subtotal	48	4	16
Low individual-job congruence** relationship with job satisfaction dimensions (B)			

TABLE XXXVII--Continued

Type of Relationships and Proposed Moderators (1)	Dimensions in Predicted Variable (2)	Number of Relationships in Which Moderating Effects Were Detected (3)	Number of Relationships in Which Main Effects Were Detected (4)
Trust in superiors	6	0	5
Influence of superiors	6	2	3
Accuracy of information	6	0	0
Satisfaction with communication	6	0	6
Desire for interaction	6	0	1
Overload communication	6	0	0
Downward communication	6	0	3
Second Subtotal	42	2	18
Total of First and Second Subtotals	90	6	34
High individual-job congruence relationship with job performance dimensions (C)			
Trust in superiors	3	0	1
Influence of superiors	3	0	0
Accuracy of information	3	0	1

TABLE XXXVII--Continued

Type of Relationships and Proposed Moderators (1)	Dimensions in Predicted Variable (2)	Number of Relationships in Which Moderating Effects Were Detected (3)	Number of Relationships in Which Main Effects Were Detected (4)
Satisfaction with communication	3	0	0
Desire for interaction	3	0	1
Underload communication	3	0	0
Lateral communication	3	0	2
Upward communication	3	0	0
Third Subtotal	24	0	5
Low individual-job congruence relationship with job performance dimensions (D)			
Trust in superiors	3	2	1
Influence of superiors	3	0	2
Accuracy of information	3	0	0
Satisfaction with communication	3	0	0
Desire for interaction	3	0	2
Underload communication	3	0	0
Downward communication	3	0	0

TABLE XXXVII--Continued

Type of Relationships and Proposed Moderators (1)	Dimensions in Predicted Variable (2)	Number of Relationships in Which Moderating Effects Were Detected (3)	Number of Relationships in Which Main Effects Were Detected (4)
Fourth Subtotal	21	2	5
Total of Third and Fourth Subtotals	45	2	10
Grand Total	135	8	44

*High growth need strength individuals in high scope jobs.

**Low growth need strength individuals in low scope jobs.

Communication dimensions found to moderate particular individual-job congruence relationships are highlighted in Table XXXVIII. Column one identifies the nature of each congruence condition, followed by the predicted outcome variables in column two. Column three presents the communication dimension(s) shown to moderate the relationship represented by columns one and two. For example, the first line indicates that the high individual-job congruence (first column) relationship with satisfaction with work (column two) was found not to be moderated by any one of the proposed communication moderators (column three).

The findings concerning the individual-job congruence relationship with job performance and satisfaction have been presented and evaluated, and Tables XXXVII and XXXVIII have been introduced. Having accomplished these last two aspects, attention now refocuses on the proposed presentation and interpretation of the results regarding the moderating influence of organizational communication on the second model, as outlined at the beginning of this subsection.

Trust in superiors, influence of superiors, accuracy of information, and communication satisfaction.--Three of the current communication dimensions received some very weak support as moderators; they were trust in superiors, influence of superiors, and accuracy of information. The strongest detected moderating effects of these three communication dimensions were exerted on the prediction of job satisfaction. Trust in superiors appeared, as shown in Table XXXVIII, moderating the relationship between the low congruence submodel and two measures of performance, quantity and overall job performance. These were the only detected moderating effects on associations involving the prediction of performance. Influence of superiors, on the other hand, was shown moderating the high submodel relationship with two of the six dimensions of satisfaction, satisfaction with co-workers and overall job satisfaction. The same related communication dimension was found to

TABLE XXXVIII

DETECTED MODERATING IMPACT OF ORGANIZATIONAL COMMUNICATION
ON THE INDIVIDUAL-JOB CONGRUENCE RELATIONSHIP WITH
JOB PERFORMANCE AND JOB SATISFACTION

Type of Relationship		
Congruence Condition (1)	Outcome Variable Dimensions (2)	Moderator(s) Identified (3)
High individual-job congruence* (A)	Satisfaction with work	None
	Satisfaction with supervision	None
	Satisfaction with pay	None
	Satisfaction with promotions	Desire for interaction Accuracy of information
	Satisfaction with co-workers	Influence of superiors
	Overall job satisfaction	Influence of superiors
Low individual-job congruence** (B)	Satisfaction with work	None
	Satisfaction with supervision	Influence of superiors
	Satisfaction with pay	None
	Satisfaction with promotions	None

TABLE XXXVIII--Continued

Type of Relationship		Moderator(s) Identified (3)
Congruence Condition (1)	Outcome Variable Dimensions (2)	
	Satisfaction with promotions Satisfaction with co-workers Overall job satis- faction	None Influence of superiors None
High individual-job congruence (C)	Quality of performance Quantity of performance Overall job performance	None None None
Low individual-job congruence (D)	Quality of performance Quantity of performance Overall job performance	None Trust in superiors Trust in superiors

*High growth need strength individuals in high scope jobs.

**Low growth need strength individuals in low scope jobs.

moderate the association between the low individual-job congruence and both satisfaction with supervision and satisfaction with co-workers. Finally, accuracy of information received support as a moderator of the high individual-job congruence relationship with satisfaction with promotion. Therefore, the encountered moderating effects of trust in superiors, influence of superiors, and accuracy of information on the individual-job congruence model were more influential on the prediction of job satisfaction than on the prediction of job performance.

Trust in superiors, influence of superiors, accuracy, and communication satisfaction received more support as predictors than as moderators of the individual-job congruence relationship with job performance and satisfaction. The detected main effects were also more influential on the prediction of job satisfaction than on the prediction of job performance. When the proposed moderating impact of the four described communication dimensions on the individual-job congruence association with both the three measures of performance and the six dimensions of satisfaction was assessed, seventy-two unique relationships were evaluated. It is important to note that only seven of them, 9 per cent, showed the presence of moderating influences. However, a total of thirty-three unique relationships, 47 per cent, showed particular proposed moderators operating as main predictors, as highlighted in Table XXXVII. And even more

interestingly, of the thirty-three detected predicting effects, twenty-eight were on the prediction of job satisfaction, 58 per cent of the forty-eight evaluated relationships including the prediction of job satisfaction, and five on the prediction of job performance, 21 per cent of the twenty-four assessed associations involving the prediction of performance. Thus, trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication received more support as predictors than as moderators. As predictors, they exerted their strongest influence on the prediction of job satisfaction.

The above results show that either through moderating or predicting effects, the proposed communication moderators somewhat influenced the individual-job congruence approach relationship with the outcome variables of performance and satisfaction. Consequently, trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication become important factors in the prediction of such outcomes.

The proposed expected impact of the current communication dimensions on the contingency/congruence model emerged from previous empirical work concerning the relationship of the investigated facets of communication with performance and satisfaction. Favorable levels of trust in superiors, perceived influence of superiors, accuracy of

information, and satisfaction with communication had been shown to be directly related to high levels of job performance and job satisfaction (9, 11, 12, 17). These reported empirical findings were utilized for proposing that favorable levels of the same communication dimensions might foster the investigated outcomes of the individual-job congruence model, performance and satisfaction. Forty, 56 per cent, of the seventy unique relationships assessed while evaluating the delineated proposition showed that either through moderating or predicting influences, high levels of trust in superiors, influence of superiors, accuracy of information, and communication satisfaction enhanced the contingency/congruence association with performance and satisfaction. The strongest influence of these communication dimensions was on the prediction of job satisfaction, as presented above. Yet, in sum, the conceptualization made concerning the impact of high levels of the described facets of communication on the second model received reasonable support. Favorable levels of trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication seem to promote high levels of satisfaction and performance for individuals in congruent conditions.

Desire for interaction.--The proposed moderating influence of desire for interaction on the individual-job

congruence association with performance and satisfaction received very weak support. The expected moderating effect of the present communication dimension was investigated in eighteen unique relationships, and only one of them showed the proposed moderator acting as predicted. Data in Table XXXVIII indicate that the proposed moderator operated as expected on the high individual-job association with satisfaction with promotion. High growth need strength individuals in high scope jobs scoring high in desire for interaction were associated with high levels of satisfaction with promotion. The same proposed moderator was also associated with high levels of four other satisfaction and performance dimensions, but as a predictor, as reflected in Table XXXVII. It acted as an independent predictor of job performance in three of the six assessed relationships, 50 per cent, involving this outcome variable. Desire for interaction operated as a main predictor of only one of twelve evaluated associations, 8 per cent, including the job satisfaction construct.

The proposed moderating influence of desire for interaction on the second model was based on the assumption that when high growth need strength individuals with high levels of desire for interaction were placed in high scope jobs, the outcomes of performance and satisfaction would be enhanced. Low growth need strength individuals with low levels of desire for interaction in low scope jobs were

expected to have high levels of the same outcomes. The results above indicate that in both the high and the low congruence submodels, performance and satisfaction were only sometimes fostered by high levels of desire for interaction. The strongest impact of desire for interaction was on the prediction of job performance. It may be that the desirability for interacting with co-workers may enhance or restrain performance.

Communication load.--Neither overload nor underload communication received support as a moderator. The load of communication appeared not to moderate the individual-job congruence relationship with job performance and satisfaction. Also, the same proposed moderator did lack support as a predictor.

O'Reilly and Roberts (13) had reported direct relationships between overload communication and job satisfaction and between underload communication and job performance. These findings prompted the proposition that high levels of overload communication would enhance the individual-job congruence relationship with job satisfaction, while high levels of underload communication would foster the model association with performance. Obviously, the foregoing findings did not support the expectations made. The expectations were that overload communication would promote job satisfaction while underload communication would enhance job performance.

Directionality of communication.--Neither one of the three subdimensions of directionality of communication-- upward, downward, and lateral--was supported as a moderator of the individual-job congruence relationship with performance and satisfaction, as shown in Table XXXVII. Upward and lateral communication were predicted to moderate the high congruence submodel relationship with the outcomes of performance and satisfaction. Downward communication, on the other hand, was expected to moderate the low individual-job congruence submodel association with the same outcome variables. As indicated, these expectations received no support.

However, as denoted in Table XXXVII, downward communication received support as a predictor of the low individual-job congruence relationship with three measures of satisfaction, 50 per cent of the six assessed relationships involving the prediction of job satisfaction. Upward communication was shown to act as a main predictor of the high congruence submodel association with two measures of satisfaction, 33 per cent of the six evaluated relationships including the outcome variable of satisfaction. Lateral communication, on the other hand, received support as a predictor of the high congruence feature relationship with two measures of performance, 66 per cent of the three assessed relationships involving the prediction of performance.

Another important finding in relation to directionality of communication should be noted. The proposed high levels of upward, downward, and lateral communication for particular individual-job congruence features did not seem to be associated with high levels of performance and satisfaction. Upward and lateral communication, which were expected to foster the levels of performance and satisfaction of high growth need strength individuals in high scope jobs, showed a general inverse relationship with both outcome variables. More specifically, upward communication was found to be inversely related with all the six investigated measures of satisfaction and with two of the three dimensions of job performance. Lateral communication, on the other hand, was shown to be negatively related with the three assessed measures of performance and with three of the six dimensions of job satisfaction. Finally, downward communication was expected to enhance the levels of performance and satisfaction of low growth need strength individuals in low scope jobs. However, the proposed moderator had a negative association with all six measures of satisfaction and with two of the three measures of performance. This last analysis suggests that the detected main effects of directionality of communication on the individual-job congruence relationship with performance and satisfaction, as reported above, do not relate to high levels of the outcome variables. On the contrary, the nature of the

relationships reviewed indicate that directionality of communication may actually restrain favorable levels of the investigated outcomes.

The preceding interpretation is contrary to the proposition originally made. Upward and lateral communication were expected to be related to favorable levels of performance and satisfaction of high growth need strength individuals in high scope jobs. High levels of downward communication were expected, on the other hand, to be associated with high levels of the same outcome variables of performance and satisfaction of low growth need strength individuals in low scope jobs. These conceptualizations originated from prior theoretical and empirical work by Burns and Stalker (2), Woodward (21), and Huseman and Alexander (8). These researchers have shown that organic structures (expected to include high scope jobs) are characterized by upward and lateral communication networks, while mechanistic systems (expected to involve low scope jobs) are distinguished by downward communication network. The current research has revealed that a match between job characteristics and expected communication networks does not necessarily relate to high levels of performance and satisfaction. It appears that the described communication networks serve only to characterize particular organizational structures and lack a direct impact on the furtherance of

performance and satisfaction of individuals in congruent conditions.

Interpretation.--The present investigation was intended to generate information for responding appropriately to two questions concerning organizational communication and the individual-job congruence model. The two questions, originally stated in the first chapter, are as follows:

(1) Does organizational communication moderate the individual-job congruence/job performance relationship? and (2) Does organizational communication moderate the individual-job congruence/job satisfaction relationship? Thus, the findings and interpretations presented above are enhanced by an interpretation in relation to the two stated questions.

The findings reviewed in the preceding subsections show that organizational communication was virtually not supported as a moderator of the individual-job congruence relationship with job performance. There were forty-five unique relationships involving the prediction of job performance on which the moderating effects of eight communication dimensions were investigated. However, only two of those unique relationships, 4 per cent, showed the presence of certain moderating influences, and the moderating influences detected were exerted by the same communication dimension. Trust in superiors was found to moderate the low individual-job congruence relationship with both quantity of performance

and overall job performance. If trust in superiors is considered a dimension only indirectly related to organizational communication, as indicated by Roberts and O'Reilly (15), then one can actually conclude that organizational communication lacked support as a moderator of the contingency/congruence relationship with job performance. Yet, it should be indicated that there were four communication dimensions operating as main predictors in ten of the forty-five assessed unique relationships involving the prediction of job performance. These communication predictors were: trust in superiors, influence of superiors, accuracy of information, and desire for interaction.

In relation to its proposed moderating influence on the individual-job congruence relationship with job satisfaction, organizational communication received some support, but still, it was a very weak support. There were ninety unique relationships evaluated concerning the prediction of job satisfaction and only six, 6 per cent, of them reflected the presence of moderating effects. The six detected moderating effects were exerted by influence of superiors, accuracy of information, and desire for interaction. Influence of superiors was found to moderate the high individual-job congruence relationship with satisfaction with co-workers and overall job satisfaction. The same proposed moderator acted as such on the low individual-job congruence relationship with satisfaction with supervision

and satisfaction with co-workers. Finally, accuracy of information and desire for interaction received support as moderators of the high congruence submodel association with satisfaction with promotion. Thus the above results concede some very weak support to organizational communication as a moderator of the individual-job congruence association with job satisfaction. Additionally, seven of the ten investigated communication moderators of the relationship between the individual-job congruence and job satisfaction received support as independent predictors of thirty-four, 38 per cent, of the ninety unique relationships assessed. These independent predictors were trust in superiors, influence of superiors, accuracy of information, satisfaction with communication, desire for interaction, upward communication, and downward communication.

It should be noted that the very weak moderating influence of organizational communication on the individual-job relationship with both performance and satisfaction may be due, at least in part, to the somewhat moderate support that the proposed moderator received as a predictor. Zedeck (22) has indicated that moderators are very difficult to find when the change in R^2 is very high to start with, after adding the proposed moderator, as a predictor, to the regression model. As shown in Chapter VI, in some instances, the change in R^2 after adding the proposed moderator to

particular regression lines was .20 or more. In a couple of instances, the change in R^2 was over .50.

The above discussion also shows that the impact of organizational communication on the individual-job congruence relationship with job satisfaction was greater than its impact on the relationship of the same congruence model with job performance. When encountered moderating and main effects on the prediction of job satisfaction are added, one finds that forty, 44 per cent, of the ninety evaluated unique relationships involving the prediction of job satisfaction were somehow influenced by particular organizational communication dimensions. However, only twelve, 27 per cent, of the forty-five unique relationships involving the prediction of job performance were found to be either moderated or predicted by certain facets of communication. Hence, it appears that organizational communication was more influential on the prediction of satisfaction than on the prediction of performance.

From the foregoing findings and interpretations, the following three conclusions emerge.

1. Organizational communication was virtually not supported as a moderator of the individual-job congruence relationship with job performance. Only the dimension of trust in superiors received some weak support.

2. Organizational communication received very weak support as a moderator of the individual-job congruence

association with job satisfaction. Only the dimensions of influence of superiors, accuracy of information, and desire for interaction received weak support.

3. The proposed moderator--organizational communication--received moderate support as a predictor of the individual-job congruence association with performance and satisfaction. The strongest main effect was exerted on the prediction of job satisfaction; the dimensions with the strongest support as predictors were trust in superiors, influence of superiors, accuracy of information, and satisfaction with communication.

Having synthesized and interpreted the current research findings, their implications for management practitioners and researchers become the focus of interest.

Implications for Management Practitioners

In reviewing some of the current research implications for managers, pertinent recommendations relating to the performance/satisfaction relationship and the influence of organizational communication on such relationship are presented first. Implications connected to the individual-job congruence association with performance and satisfaction and the influence of organizational communication are presented next.

Implications Concerning the Relationship Between
Job Performance and Job Satisfaction

Managers should note that increases in either job performance or job satisfaction may not be compensated by comparable increases in the other construct. The sample investigated in the current research showed a consistent weak or moderate relationship between measures of performance and satisfaction. This finding was a replication of prior research endeavors. Yet, the present research also demonstrated that the relationship of the same two variables may be enhanced or restrained by other organizational construct. More specifically, certain dimensions of organizational communication were detected as exerting strong predicting influences on the relationship described. It appears that if particular organizational communication dimensions are stressed, managers are likely to positively influence the prediction of both job performance and job satisfaction.

Implications Concerning the Individual-Job
Congruence Relationship with Job
Performance and Job Satisfaction

Again, the sample investigated showed that individuals in congruent situations--high growth need strength individuals in high scope jobs and low growth need strength individuals in low scope jobs--had virtually higher levels of both job performance and job satisfaction than those in incongruent conditions. As a consequence, the individual-job congruence relationship with the outcome variables of

performance and satisfaction received support. Management practitioners may enhance the quality of organizational life and effectiveness by implementing the investigated contingency/congruence model.

In an investigation conducted by Griffin (5), he failed to find significant influences from leader behavior variables on the individual-job congruence relationship. His conclusion indicates that "there is little the leader can and/or should do to enhance (particularly) individual satisfaction" (5, p. 680). The current research shows that there is at least one thing leaders may do, and that is to administer communication in organizations properly. Certain organizational variables have been shown to be important influencers of the prediction of satisfaction. Consequently, if particular dimensions of communication are stressed in particular individual-job congruence situations, leaders are likely to positively influence job satisfaction and possibly performance, too. Communication is one of the avenues opened to leaders for them to enhance individuals' performance and satisfaction.

Implications for Management Researchers

Some research implications prompted by the present investigation are synthesized here. The current study was essentially an exploratory type of research. It explored the moderating influence of organizational communication on

two models, the performance/satisfaction relationship and the individual job congruence relationship with performance and satisfaction. In pursuing the aim of the research, a multidimensional approach to the study of job performance, job satisfaction, and organizational communication was adopted. It appears now appropriate to recommend that future investigations be conducted involving selected dimensions of particular variables. For instance, detected moderating or predicting influences of particular communication dimensions on the prediction of particular relationships between performance and satisfaction measures may be reevaluated.

The present research has shown that organizational communication is more influential on the prediction of job satisfaction than on the prediction of job performance. This finding not only signals the possibility of detecting other organizational constructs that may foster the individual-job congruence relationship with both performance and satisfaction, but it also points to the need of specifically detecting organizational constructs that may be favorable to the prediction of job performance, and especially quantity of performance. This last identified need emerges from the fact that the present researcher found the contingency/congruence model to be more influential on quality of performance than on quantity.

The present exploratory research utilized perceptive data. Future related investigations using hard data in at least some of the investigated variables, for example, job performance and job scope, should prove beneficial in furthering the understanding of the impact of organizational communication in organizational functioning. This type of investigation may also pave the way for augmenting the quality of organizational life and effectiveness. The expressed desired objectives may also be enhanced by conducting appropriate longitudinal studies and controlled experiments.

Concluding Remarks

The current research endeavor was prompted by a lack of comprehension concerning the impact of organizational communication in organizational functioning. There is a recognizable need for relating organizational communication to other individual and organizational constructs. This need combined with the necessity for improving the understanding of the job performance relationship with job satisfaction and the individual-job congruence association with job performance and satisfaction constituted the basis for the investigation undertaken.

Organizational communication was conceptualized as a feasible moderator and its expected moderating influence on both the performance/satisfaction relationship and the

individual-job congruence relationship with job performance and job satisfaction was investigated. Besides promoting the understanding of the influence of the proposed moderator in organizational functioning, the present research gives promise of the possibility of paving the way for improving the quality of organizational life and effectiveness. The key variables of the two investigated relationships are job performance and job satisfaction, and these two constructs are important determinants of the quality of organizational life and effectiveness. It has been argued that the quality of these two variables, performance and satisfaction, within an organization may determine the success or failure of it.

The aim of the present investigation was undertaken and its results have been reported in this dissertation. This thesis has taken an important step toward the comprehension of the impact of organizational communication in organizational functioning. As a field of study, improving the understanding of organizational functioning constitutes the main focus of organization theory.

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APPENDIX A

RESEARCH QUESTIONNAIRE AND RELATED MATERIALS



SECURITY DIVISION, DRESSER INDUSTRIES, INC. P. O. BOX 24647, DALLAS, TEXAS 75224 214/333-3211 TELEX 73-2623

October 22, 1984

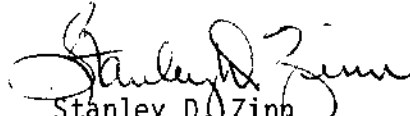
Security Division
Dresser Industries, Inc.

You have been selected to participate in a study being conducted by a doctoral student from North Texas State University. Please complete the questionnaire being attached and mail it in the stamped, self-addressed envelope provided for this purpose by November 2, 1984.

Follow the instructions while answering each question. If you have any questions, contact Margie Lee at extension 211. Your individual answers will be kept completely confidential. The data of the completed questionnaire will be summarized in statistical form so that an individual cannot be identified.

Please respond promptly. Thank you for your attention to this special request.

Sincerely yours,


Stanley D. Zinn
Personnel Manager

SDZ:m1

NORTH TEXAS STATE UNIVERSITY

P.O. Box 13677
DENTON, TEXAS 76203-3677

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DEPARTMENT OF MANAGEMENT
COLLEGE OF BUSINESS ADMINISTRATION

IMPORTANT!

Please read this introduction before completing this questionnaire.

INTRODUCTION

This questionnaire is part of a dissertation study being conducted in the College of Business of North Texas State University in conjunction with your organization. In essence, the study is investigating the relationships among communication, performance, and satisfaction. And we need your responses to complete the investigation.

You probably will complete the questionnaire in less than 25 minutes. A simple check (✓) will suffice for most answers.

Of course, if this study is to be helpful, it is important that you answer each question as thoughtfully and frankly as possible. Please remember that this questionnaire is not a test. Consequently, there are no right or wrong answers.

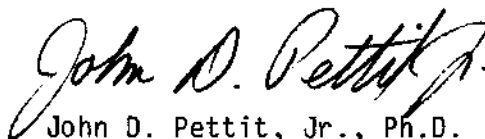
Your individual answers will be kept completely confidential, and you will not be identified with your responses. The data of the completed questionnaires will be summarized in statistical tables so that individuals cannot be identified. The number at the top of the second page will only be used as a mean for matching statistical data. No one else will see this number except us (the University researchers).

Please be sure to return the questionnaire in the enclosed paid envelope by November 2, 1984. Thank you for your participation in this study.

Sincerely yours,



Jose R. Goris
Ph.D. Candidate
North Texas State University
(817) 641-3554



John D. Pettit, Jr., Ph.D.
Professor of Business
North Texas State University
Graduate Student Advisor
(817) 565-3145

INSTRUCTIONS

SECTION ONE

This part of the questionnaire asks you to describe your job as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below.

- A. To what extent does your job require you to work with mechanical equipment?

1-----2-----3-----4-----5-----6-----7

Very little; the job requires almost no contact with mechanical equipment of any kind.

Moderately

Very much; the job requires almost constant work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time--but also requires some paperwork--you might circle the number six, as was done in the sample above.

Begin with question number one

1. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1-----2-----3-----4-----5-----6-----7

Very little; the job gives me almost no personal "say" about how and when the work is done.

Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.

Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

2. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1-----2-----3-----4-----5-----6-----7

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.

My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.

My job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.

3. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1-----2-----3-----4-----5-----6-----7

Very little; the job requires me to do the same routine things over and over again.

Moderate variety.

Very much; the job requires me to do many different things, using a number of different skills and talents.

4. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1-----2-----3-----4-----5-----6-----7

Not very significant; the outcomes of my work are not likely to have important effects on other people.

Moderately significant.

Highly significant; the outcomes of my work can affect other people in very important ways.

5. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing--aside from any "feedback" co-workers or supervisors provide?

1-----2-----3-----4-----5-----6-----7

Very little; the job itself is set up so I could work forever without finding out how well I am doing.

Moderately; sometimes doing the job provides "feedback" to me; sometimes it does not.

Very much; the job is set up so that I get almost constant "feedback" as I work about how well I am doing.

INSTRUCTIONS

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job--regardless of whether you like or dislike the job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in
describing your job?

1	2	3	4	5	6	7
Very	Mostly	Slightly	Uncertain	Slightly	Mostly	Very
Inaccurate	Inaccurate	Inaccurate		Accurate	Accurate	Accurate

- ___ 1. The job requires me to use a number of complex or high-level skills.
- ___ 2. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
- ___ 3. Just doing the work required by the job provides many chances for me to figure out how well I am doing.
- ___ 4. The job is quite simple and repetitive.
- ___ 5. This job is one where a lot of other people can be affected by how well the work gets done.
- ___ 6. The job denies me any chance to use my personal initiative or judgment in carrying out the work.
- ___ 7. The job provides me the chance to completely finish the pieces of work I begin.
- ___ 8. The job itself provides very few clues about whether or not I am performing well.

- ____ 9. The job gives me considerable opportunity for independence and freedom in how I do the work.
- ____ 10. The job itself is not very significant or important in the broader scheme of things.

INSTRUCTIONS

SECTION THREE

This part of the questionnaire has six subsections. Follow the instructions for each subsection as presented below.

Subsection 1

Think of your present work. What is it like most of the time? In the blank beside each word given below, write

Y for "Yes" if it describes your work

N for "No" if it does NOT describe it

? if you cannot decide

WORK ON PRESENT JOB

<u> </u> Fascinating	<u> </u> Challenging
<u> </u> Routine	<u> </u> On your feet
<u> </u> Satisfying	<u> </u> Frustrating
<u> </u> Boring	<u> </u> Simple
<u> </u> Good	<u> </u> Endless
<u> </u> Creative	<u> </u> Gives sense of accomplishment
<u> </u> Respected	
<u> </u> Hot	
<u> </u> Pleasant	
<u> </u> Useful	
<u> </u> Tiresome	
<u> </u> Healthful	

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Subsection 2

Think of the pay you get now. How well does each of the following words describe your present pay? In the blank beside each word, put

Y if it describes your pay

N if it does NOT describe it

? if you cannot decide

PRESENT PAY

<u> </u> Income adequate for normal expenses
<u> </u> Satisfactory profit sharing
<u> </u> Barely live on income
<u> </u> Bad
<u> </u> Income provides luxuries
<u> </u> Insecure
<u> </u> Less than I deserve
<u> </u> Highly paid
<u> </u> Underpaid

Subsection 3

Think of the majority of the people that you work with now or the people you meet in connection with your work. How well does each of the following words describe these people? In the blank beside each word below put

Y if it describes the people you work with

N if it does NOT describe them

? if you cannot decide

PEOPLE ON YOUR PRESENT JOB

 Stimulating Loyal
 Boring Hard to meet
 Slow
 Ambitious
 Stupid
 Responsible
 Fast
 Intelligent
 Easy to make enemies
 Talk too much
 Smart
 Lazy
 Unpleasant
 No Privacy
 Active
 Narrow Interests

Subsection 4

Think of the opportunities for promotion that you have now. How well does each of the following words describe these? In the blank beside each word put

Y for "Yes" if it describes your opportunities for promotion

N for "No" if it does NOT describe them

? if you cannot decide

OPPORTUNITIES FOR PROMOTION

 Good opportunity for advancement
 Opportunity somewhat limited
 Promotion on ability
 Dead-end job
 Good chance for promotion
 Unfair promotion policy
 Infrequent promotions
 Regular promotions
 Fairly good chance for promotion

Subsection 5

Think of the kind of supervision that you get on your job. How well does each of the following words describe this supervision? In the blank beside each word below, put

Y if it describes the supervision you get on your job

N if it does NOT describe it

? if you cannot decide

IMMEDIATE SUPERVISION ON PRESENT JOB

<u> </u> Asks my advice	<u> </u> Up-to-date	<u> </u> Knows job well
<u> </u> Hard to please	<u> </u> Doesn't supervise enough	<u> </u> Bad
<u> </u> Impolite	<u> </u> Quick tempered	<u> </u> Intelligent
<u> </u> Praises good work	<u> </u> Tells me where I stand	<u> </u> Leaves me on my own
<u> </u> Tactful	<u> </u> Annoying	<u> </u> Lazy
<u> </u> Influential	<u> </u> Stubborn	<u> </u> Around when needed

Subsection 6

Please select your best answer to the following statement.

How characteristic (or appropriate is this statement of you?: Taking everything into account, I am very satisfied with my job. (Circle your answer).

1-----2-----3-----4-----5

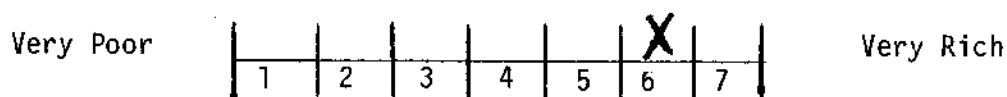
Very Inappropriate	Inappro- priate	Moderately Appropriate	Appropriate	Very Appropriate
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INSTRUCTIONS

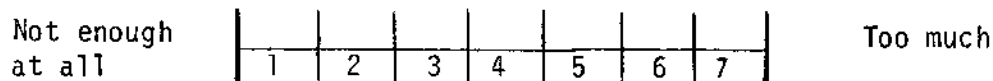
SECTION FOUR

This is a series of questions about how people communicate at work. Imagine a typical week at work on your current job, and answer the questions accordingly. Please attempt to answer all the questions.

Some questions ask you to fill in an answer. Others have seven point scales on which to answer. On these questions, please check the point that represents most closely how you feel. For instance, to the question, "How rich do you want to be?" you might answer



1. Is the total amount of information you receive in a typical work week enough to meet the information requirements of your job?



2. While working, what percentage of the time do you spend interacting with:

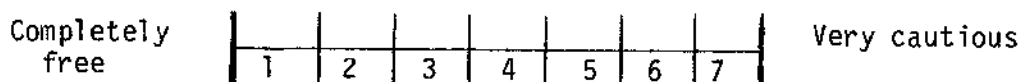
a) Immediate superiors _____ %

b) Subordinates _____ %

c) Peers (others at the same job level) _____ %

TOTAL 100% (the total must equal 100%)

3. How free do you feel to discuss with your immediate superior the problems and difficulties you have in your job without jeopardizing your position or having it "held against" you later?



4. Sometimes at work you may receive more information than you can efficiently use. Other times, however, you may feel that you are not receiving all the information you need. How often during a week would you say this lack of information arises?

Very often								Not often
	1	2	3	4	5	6	7	

5. How desirable do you feel it is in your organization to interact frequently with:

Immediate superiors

a) Very desirable								Completely undesirable
	1	2	3	4	5	6	7	

Subordinates

b) Very desirable								Completely undesirable
	1	2	3	4	5	6	7	

Peers (others at the same job level)

c) Very desirable								Completely undesirable
	1	2	3	4	5	6	7	

6. How often do you find the amount of available information hinders rather than helps your performance?

Almost never have too much information								Have too much information fairly often
	1	2	3	4	5	6	7	

7. Of the total time you spend sending information at work, what percentage goes to:

a) Immediate superiors _____ %

b) Subordinates _____ %

c) Peers (others at the same level) _____ %

TOTAL..... 100% (The total must equal 100%)

8. Do you ever feel that you receive more information than you can efficiently use?

Never | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Always

9. In a typical work week, approximately how often do you have less than the amount of information you could consistently handle for making the best possible work-related decisions?

Very often | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Not often

10. To what extent do you have confidence and trust in your immediate superior regarding his general fairness?

Have little confidence or trust | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Have complete confidence and trust

11. How often is your immediate superior successful in overcoming restrictions (such as regulations or quotes) in getting you the things you need in your job, such as equipment, personnel, etc.?

Always successful | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Never successful

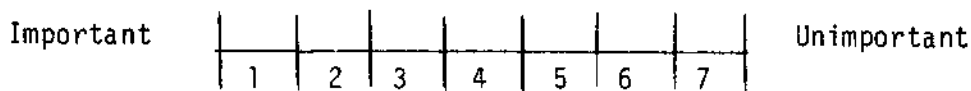
12. In general, how much do you feel that your immediate superior can do to further your career in the organization?

Much | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Little

13. Immediate superiors at times must make decisions which seem to be against the interests of their subordinates. When this happens to you as a subordinate, how much trust do you have that your immediate superior's decision was justified by other considerations?

Trust completely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Feel very distrustful

14. How much weight would your immediate superior's recommendation have in any decision which would affect your standing in the organization, such as promotions, transfers, etc.?



15. Of the total time you spend receiving information at work, what percentage comes from:

a) Immediate superiors _____ %

b) Subordinates _____ %

c) Peers (others at the same level) _____ %

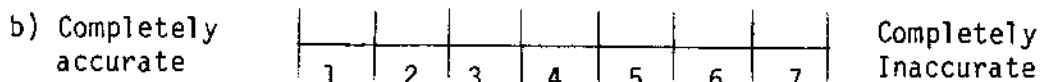
TOTAL..... 100% (the total must equal 100%)

16. When receiving information from the sources listed below, how accurate would you estimate it usually is:

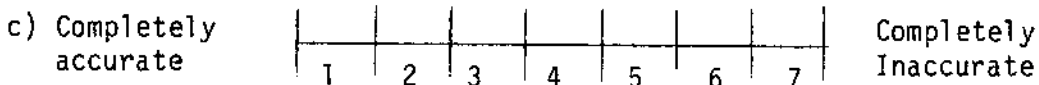
Immediate superiors



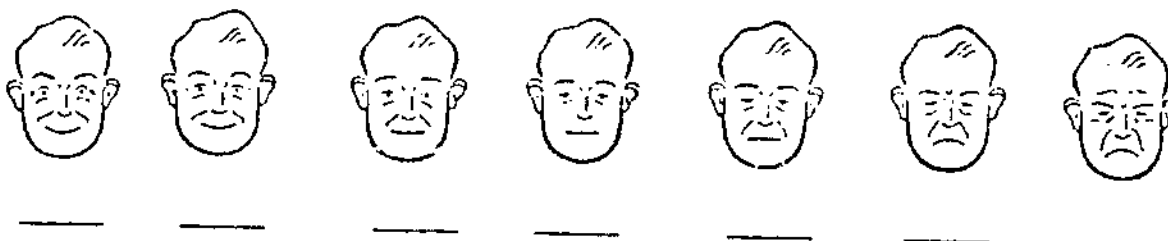
Subordinates



Peers-others at your job level



17. Put a check under the face that expresses how you feel about communication in general, including the amount of information you receive, contacts with your immediate superior and others, the accuracy of information available, etc.



INSTRUCTIONS

SECTION FIVE

People differ in the kinds of jobs they would most like to hold. The questions in this section gives you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer--if you had to make a choice.

In answering each question, assume that everything else about the jobs is the same.. Pay attention only to the characteristics actually listed.

First of all, review the two samples given below.

Example 1

JOB A

A job requiring work with mechanical equipment most of the day.

JOB B

A job requiring work with other people most of the day.

1-----2-----3-----4-----5
 Strongly Slightly Neutral Slightly Strongly
 Prefer A Prefer A Prefer B Prefer B

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in example 1.

Example 2

(This example asks for a harder choice--between two jobs which both have some undesirable features).

JOB A

A job requiring you to expose yourself to considerable physical danger.

JOB B

A job located 200 miles from your home and family.

1-----2-----3-----4-----5
 Strongly Slightly Neutral Slightly Strongly
 Prefer A Prefer A Prefer B Prefer B

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in example 2.

NOW IS YOUR TURN
CIRCLE YOUR ANSWERS

JOB A

JOB B

1. A job where the pay is very good.

A job where there is considerable opportunity to be creative and innovative.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B

JOB A

JOB B

2. A job where you are often required to make important decisions.

A job with many pleasant people to work with.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B

JOB A

JOB B

3. A job in which greater responsibility is given to those who do the best work.

A job in which greater responsibility is given to loyal employees who have the most seniority.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B

JOB A

JOB B

4. A job in an organization which is in financial trouble--and might have to close down within the year.

A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedure to be used in carrying it out.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B

- | | |
|---|--|
| <p>JOB A</p> <p>5. A very routine job.</p> | <p>JOB B</p> <p>A job where your co-workers are not very friendly.</p> |
| <p>1-----2-----3-----4-----5</p> <p>Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B</p> | |
| <p>JOB A</p> <p>6. A job with a supervisor who is often very critical of you and your work in front of other people</p> | <p>JOB B</p> <p>A job which prevents you from using a number of skills that you worked hard to develop.</p> |
| <p>1-----2-----3-----4-----5</p> <p>Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B</p> | |
| <p>JOB A</p> <p>7. A job with a supervisor who respects you and treats you fairly.</p> | <p>JOB B</p> <p>A job which provides constant opportunities for you to learn new and interesting things.</p> |
| <p>1-----2-----3-----4-----5</p> <p>Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B</p> | |
| <p>JOB A</p> <p>8. A job where there is a real chance you could be laid off.</p> | <p>JOB B</p> <p>A job with very little chance to do challenging work.</p> |
| <p>1-----2-----3-----4-----5</p> <p>Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B</p> | |
| <p>JOB A</p> <p>9. A job in which there is real chance for you to develop new skills and advance in the organization.</p> | <p>JOB B</p> <p>A job which provides lots of vacation time and an excellent fringe benefit package.</p> |
| <p>1-----2-----3-----4-----5</p> <p>Strongly Slightly Neutral Slightly Strongly
Prefer A Prefer A Prefer B Prefer B</p> | |

JOB A

JOB B

10. A job with little freedom and independence to do your work in the way you think best.

A job where the working conditions are poor.

1-----2-----3-----4-----5
 Strongly Slightly Neutral Slightly Strongly
 Prefer A Prefer A Prefer B Prefer B

JOB A

JOB B

11. A job with very satisfying teamwork.

A job which allows you to use your skills and abilities to the fullest extent.

1-----2-----3-----4-----5
 Strongly Slightly Neutral Slightly Strongly
 Prefer A Prefer A Prefer B Prefer B

JOB A

JOB B

12. A job which offers little or no challenge.

A job which requires you to be completely isolated from co-workers.

1-----2-----3-----4-----5
 Strongly Slightly Neutral Slightly Strongly
 Prefer A Prefer A Prefer B Prefer B

13. At this moment, think about your own job. Generally speaking, how satisfied are you with your job? (Circle your answer)

1-----2-----3-----4-----5
 Very Little Little Moderately Much Very much
 Satisfied

INSTRUCTIONS

SECTION SIX

Use this section to rate your own performance. Please try to be as objective as possible.

1. How would you rate the quality (think about quality only) of your own performance in your job? Circle your answer.

1-----2-----3-----4-----5-----6-----7
 Very Poor Fair Average Good Very Excellent
 Poor Good

2. In terms of the quantity (think about quantity only) of work being done by you in your job, how would you rate your own performance? Circle your answer.

1-----2-----3-----4-----5-----6-----7
 Very Poor Fair Average Good Very Excellent
 Poor Good

3. How do you think your supervisor would rate the quality of your performance? Circle your answer.

1-----2-----3-----4-----5-----6-----7
 Very Poor Fair Average Good Very Excellent
 Poor Good

4. How do you think your supervisor would rate the quantity of work being done by you in your job? Circle your answer.

1-----2-----3-----4-----5-----6-----7
 Very Poor Fair Average Good Very Excellent
 Poor Good

INSTRUCTIONS

SECTION SEVEN

Finally, the following information is requested in order to know how different types of people perceive the issues being examined. Please check (✓) the appropriate answer.

1. Sex: Male _____ Female _____
2. Age (Check one)

_____ under 20	_____ 30 - 34	_____ 45 - 49
_____ 20 - 24	_____ 35 - 39	_____ 50 - 54
_____ 25 - 29	_____ 40 - 44	_____ 55 or over
3. Education: Number of years of formal education (Check one)

_____ 0 - 8 years	_____ 13 - 16 years
_____ 9 - 12 years	_____ 17 or more years
4. How long have you worked for your present organization? (Check one)

_____ less than 1 year	_____ 4 - 6 years	_____ 10 - 12 years
_____ 1 - 3 years	_____ 7 - 9 years	_____ 13 - 15 years
		_____ 16 years or more
5. How long have you been in your present position? (Check one)

_____ less than 1 year	_____ 7 - 9 years
_____ 1 - 3 years	_____ 10 years or more
_____ 4 - 6 years	
6. The position you hold in your organization is (Check one)

_____ a managerial position	
_____ a non-managerial position	

APPENDIX B

PERFORMANCE SCALE AND RELATED MATERIALS



SECURITY DIVISION, DRESSER INDUSTRIES, INC. P. O. BOX 24647, DALLAS, TEXAS 75224 214/333-3211 TELEX 73-2623

November 26, 1984

As you may already know, Mr. Jose R. Goris and Dr. John Pettit from the College of Business of North Texas State University are conducting a dissertation study. They are researching the relationship among organizational communication, performance and satisfaction.

We have granted them permission to conduct their research in our organization. Consequently, a group of our employees have completed and returned their dissertation questionnaire. In order for Mr. Goris and Dr. Pettit to complete the data required for statistical analysis, they need a global rating of performance of each employee who completed the questionnaire. Since immediate supervisors are in a better position for providing more objective information concerning this evaluation, they are requesting that you rate the performance of your subordinates. Mr. Goris and Dr. Pettit will only use this information for statistical analysis in their study. The data provided will be kept completely confidential and will never be identified.

Your support will certainly be appreciated. Thank you for your cooperation.

Sincerely yours,

A handwritten signature in cursive script that reads 'Stanley D. Zinn'.

Stanley D. Zinn
Personnel Manager

SDZ:m1

NORTH TEXAS STATE UNIVERSITY

P.O. Box 13677
DENTON, TEXAS 76203-3677

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DEPARTMENT OF MANAGEMENT
COLLEGE OF BUSINESS ADMINISTRATION

November 26, 1984

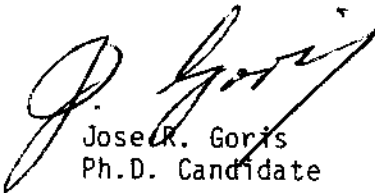
In order to complete the data that we need to finalize our dissertation study, we are respectfully requesting that you rate the performance of your subordinates: those who completed and returned the dissertation questionnaires that we previously distributed.


These data will only be used for statistical analysis related to our research, which investigates the relationship among communication, performance, and satisfaction. Your individual evaluations will be kept completely confidential and whatever relationships are found among communication, performance and satisfaction will be reported in the aggregate.

Your objectivity in providing us with a global rating of performance of your subordinates will certainly increase the validity and the reliability of our study, and we appreciate this.

Thank you for the continuing support you have shown us while we have been conducting this study.

Sincerely yours,


Jose R. Goris
Ph.D. Candidate


John D. Pettit, Jr. Ph.D.
Professor of Business

P.S.: Please return the attached performance scale in the stamped, self-addressed envelope provided for this purpose by November 30, 1984. Thank you.

INSTRUCTIONS: Please evaluate the performance of each of the following employees in terms of quality and quantity. Using the seven-point scale as shown, write in two numbers for each employee.

For Example: Employee Name: Trim Trial

QUALITY: 6
(enter number)

QUANTITY: 4
(enter number)

If you think that the Quality of the work performed by Trim Trial is Very Good, you would write the number 6 in the blank beside Quality. On the other hand, if you consider that the Quantity of work generated by this employee is Average, you would write 4 in the blank beside Quantity.

QUALITY and QUANTITY Performance Scale

1. Very Poor
2. Poor
3. Fair
4. Average
5. Good
6. Very Good
7. Excellent

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

QUALITY and QUANTITY Performance Scale

1. Very Poor
2. Poor
3. Fair
4. Average
5. Good
6. Very Good
7. Excellent

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

Employee Name: _____

QUALITY: _____
(enter number)

QUANTITY: _____
(enter number)

Employee Name: _____

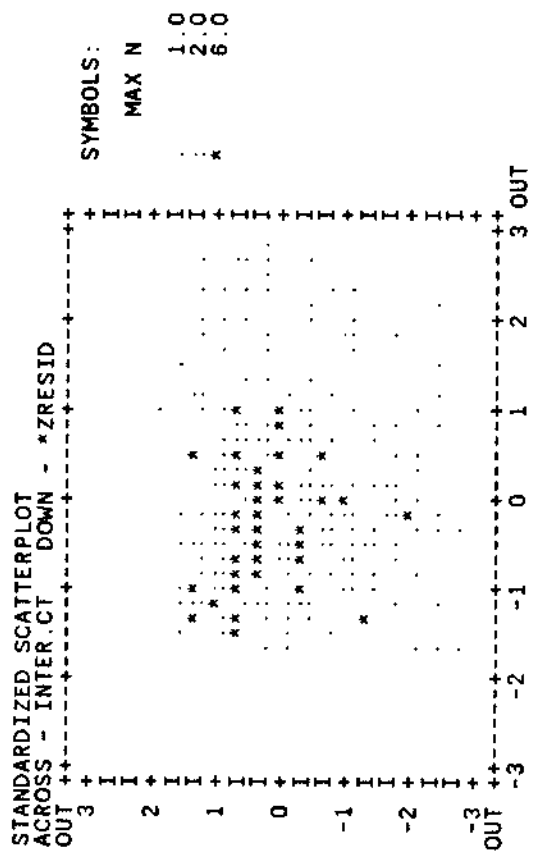
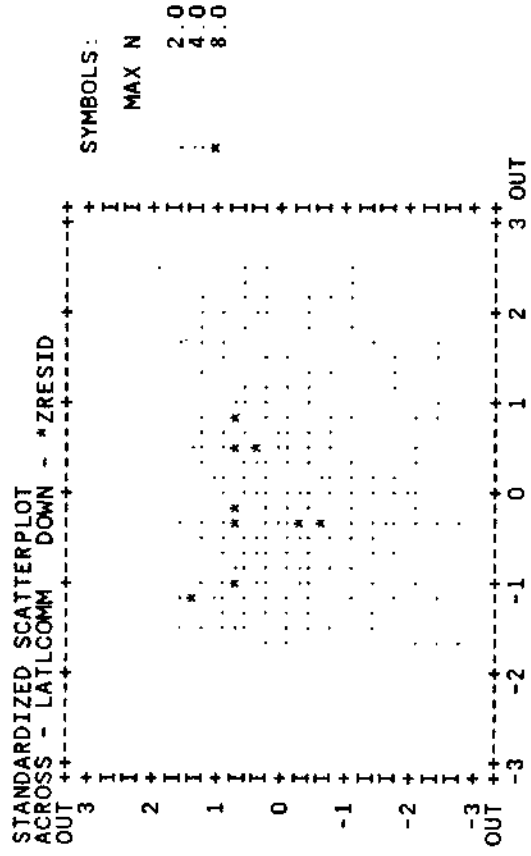
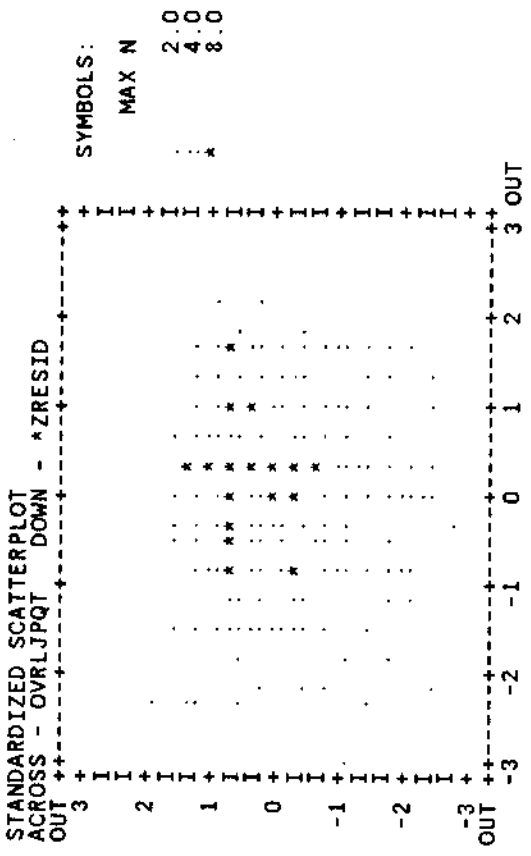
QUALITY: _____
(enter number)

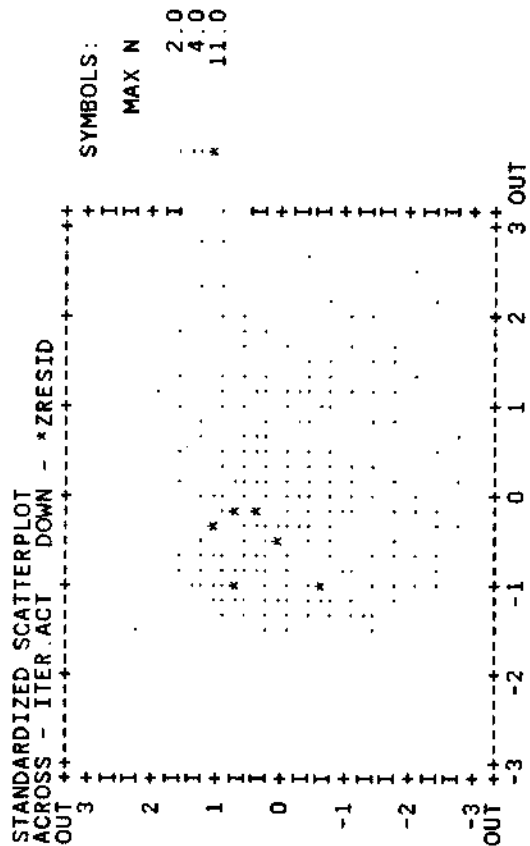
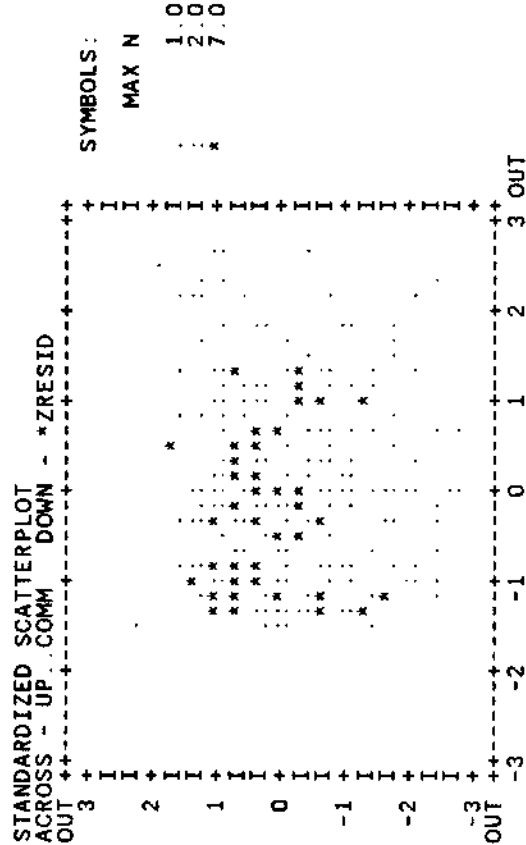
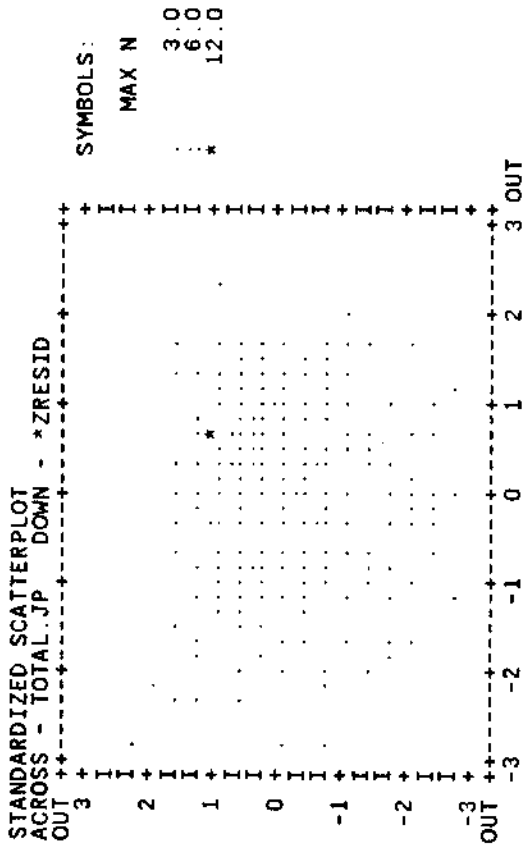
QUANTITY: _____
(enter number)

APPENDIX C

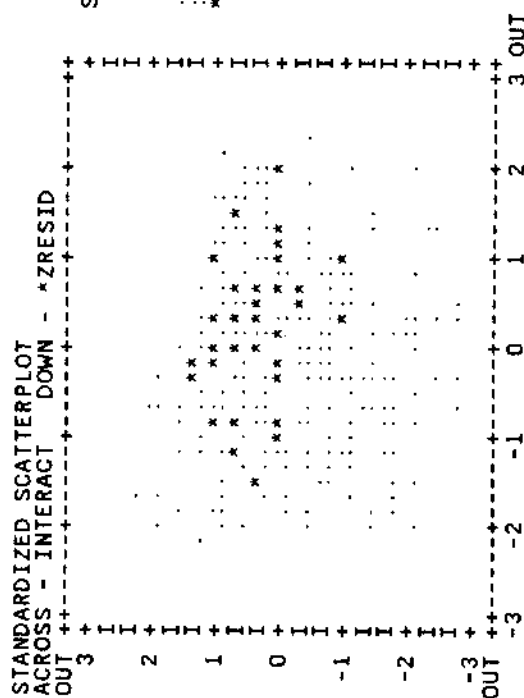
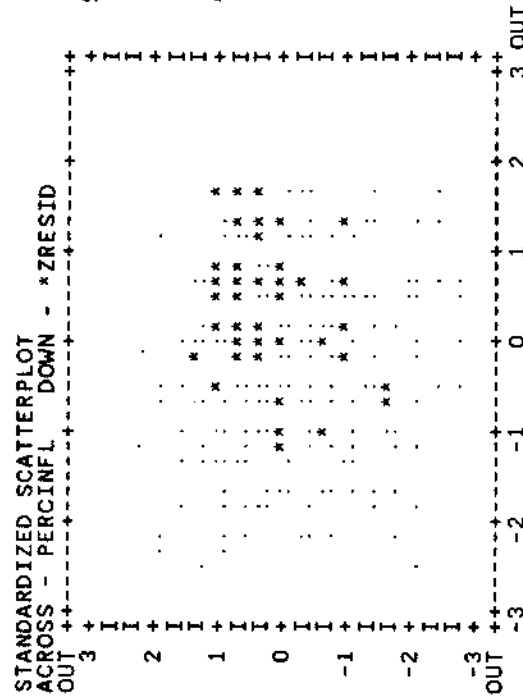
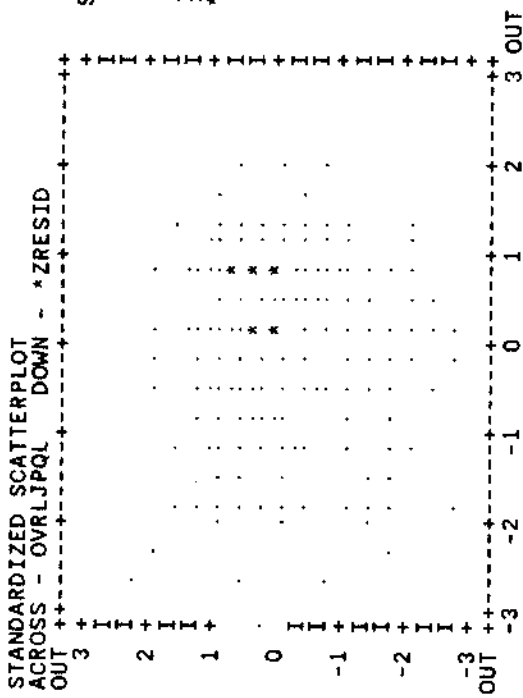
SCHEMES OF RESIDUALS: SAMPLE OF PLOTS RELATED
TO THE FIRST MODEL INVESTIGATED

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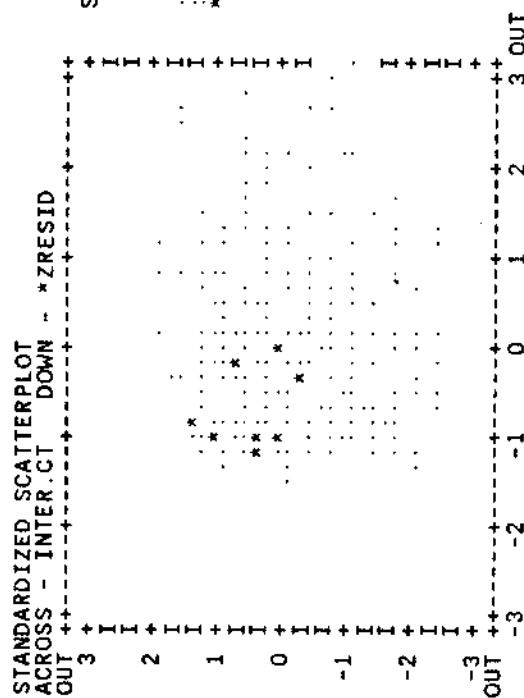
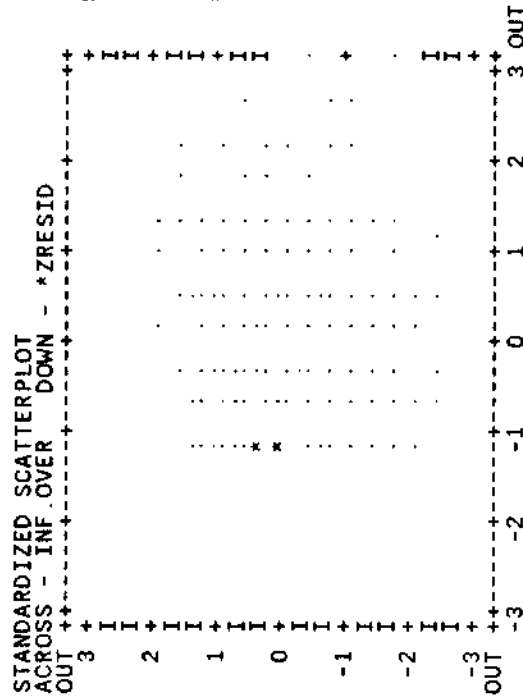
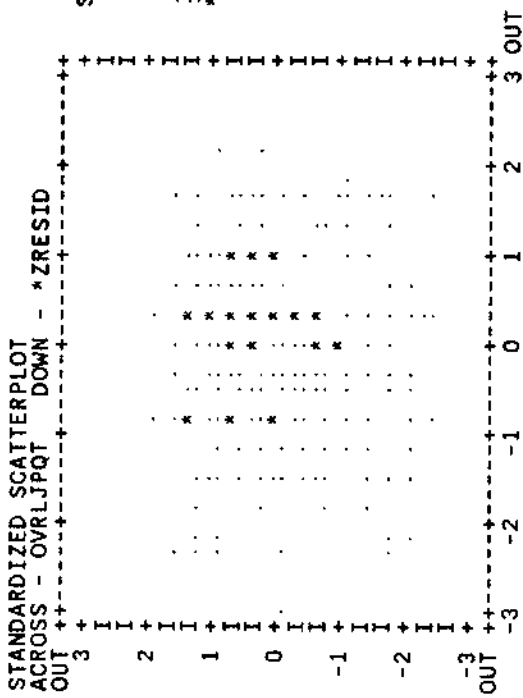




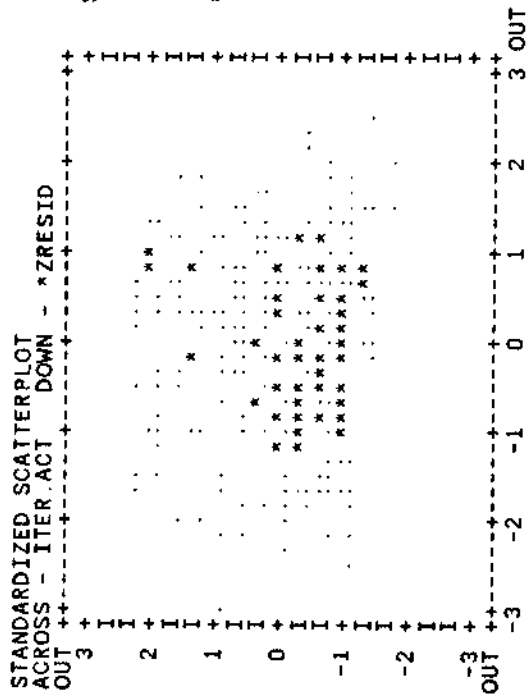
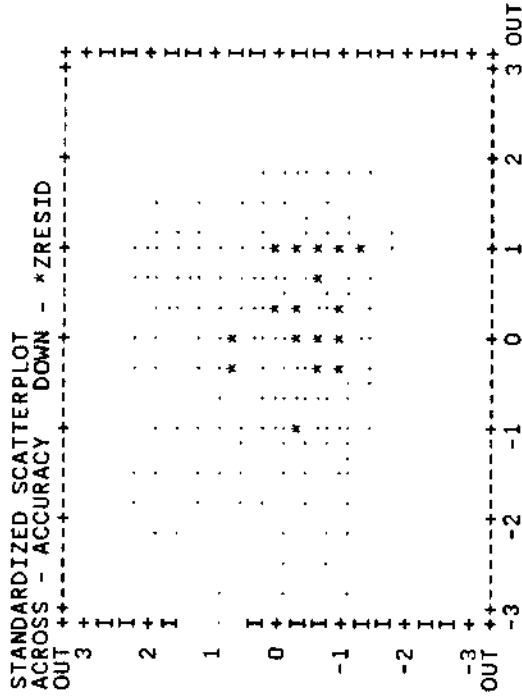
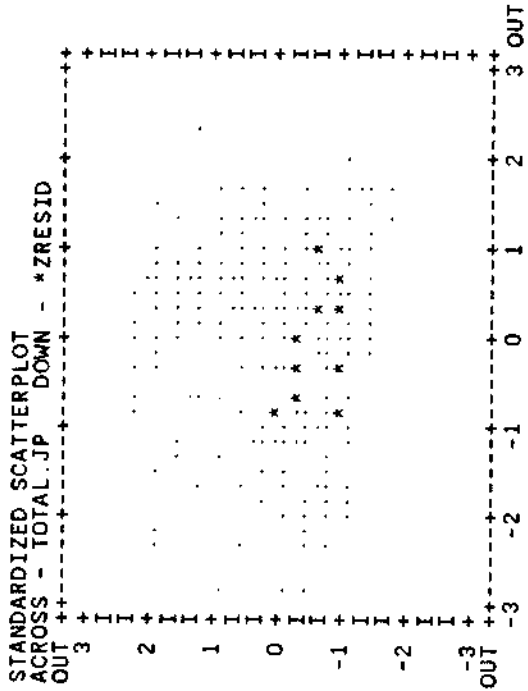
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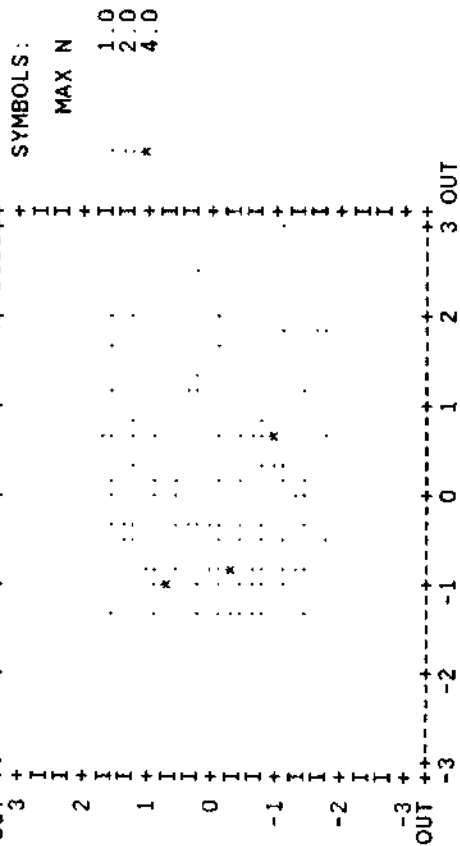
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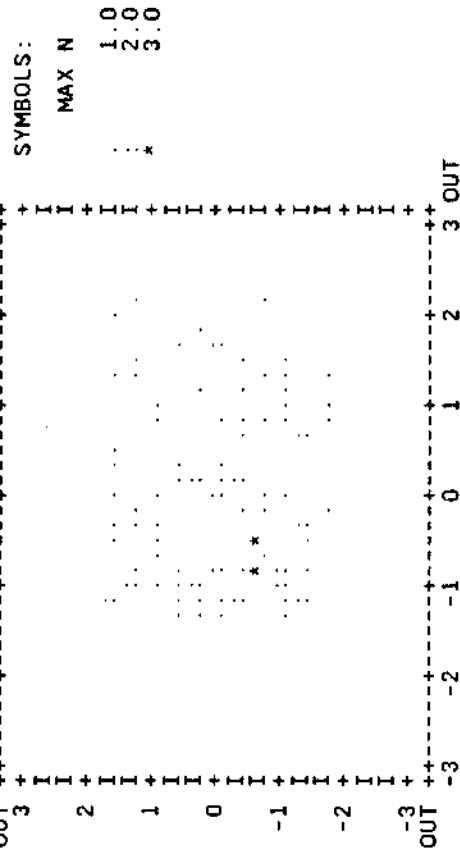
APPENDIX D

SCHEMES OF RESIDUALS: SAMPLE OF PLOTS RELATED
TO THE SECOND MODEL INVESTIGATED

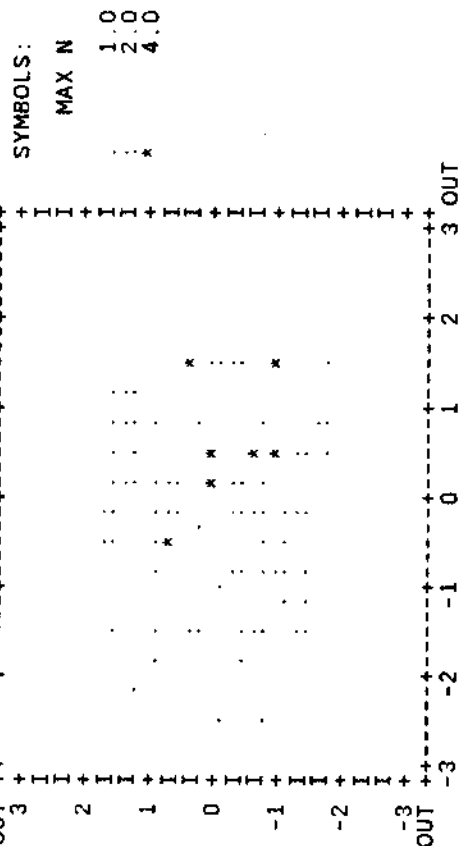
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ACROSS - GROTHED DOWN - *ZRESID



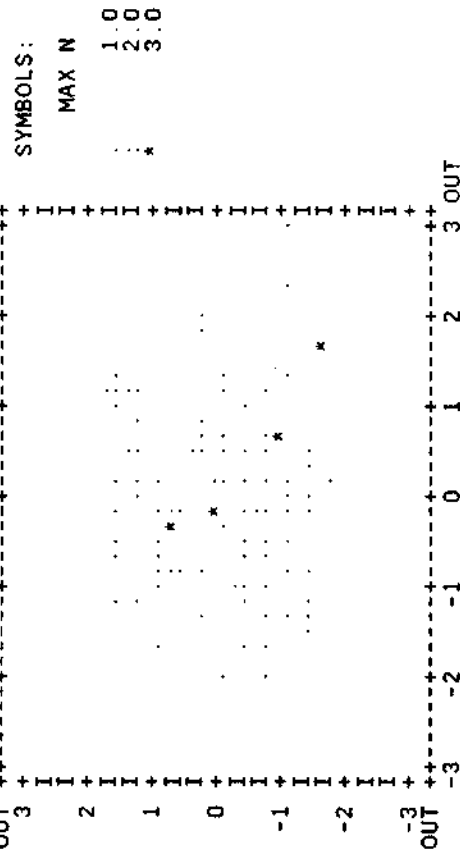
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STANDARDIZED SCATTERPLOT
ACROSS - DESI4INT DOWN - *ZRESID

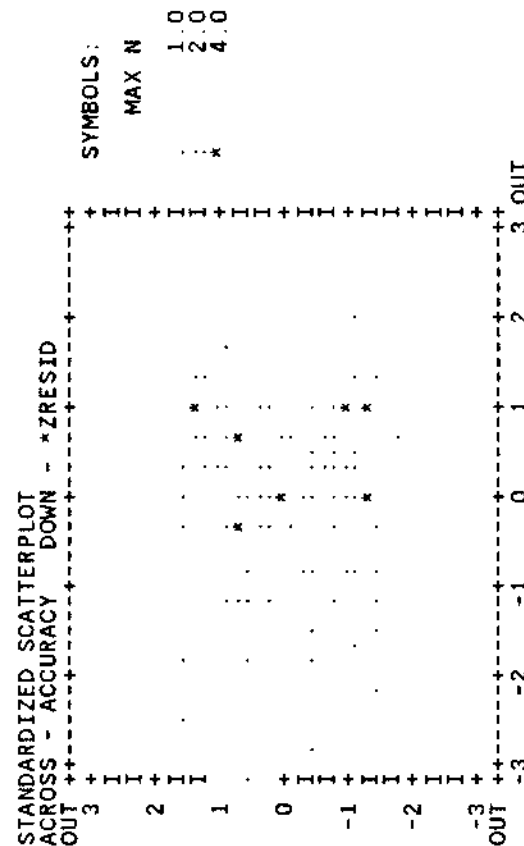
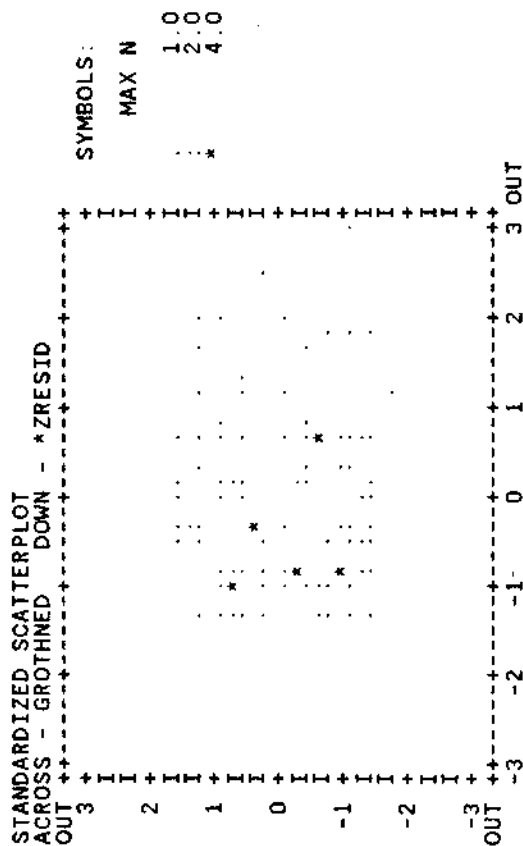
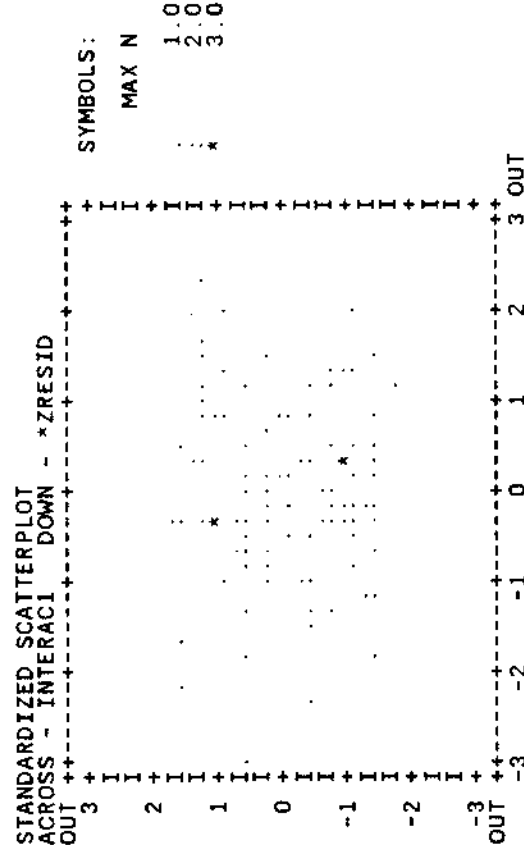
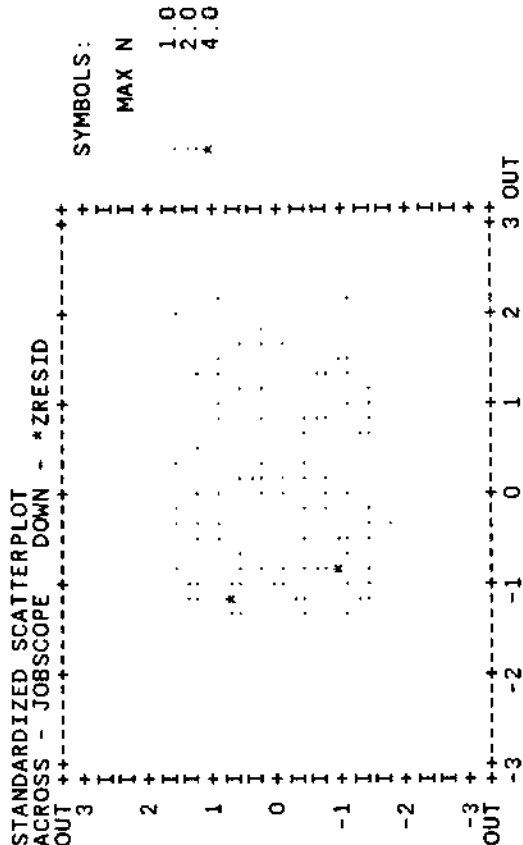


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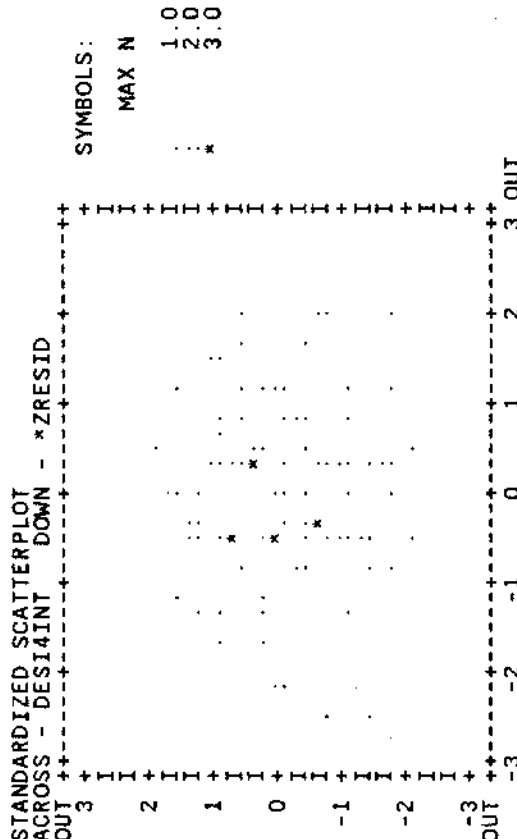
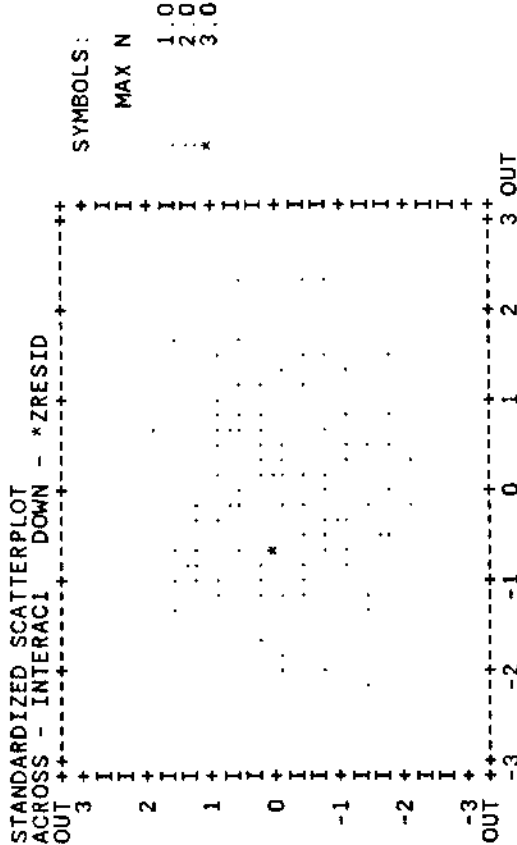
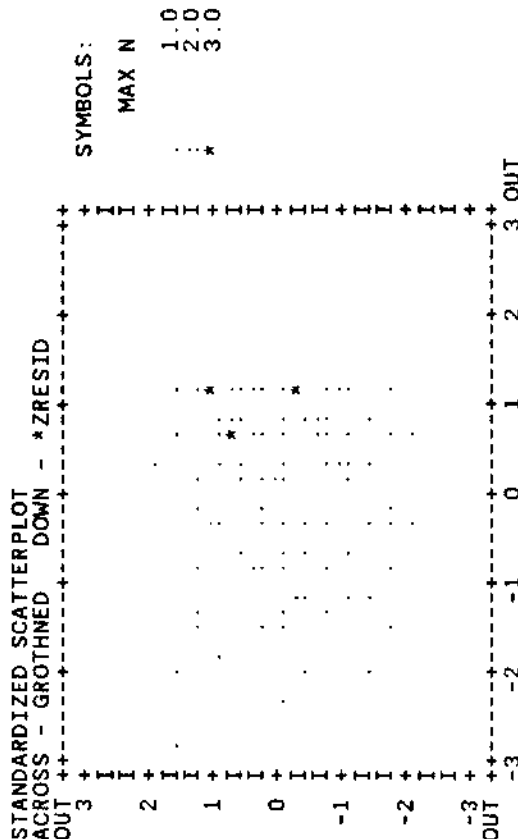
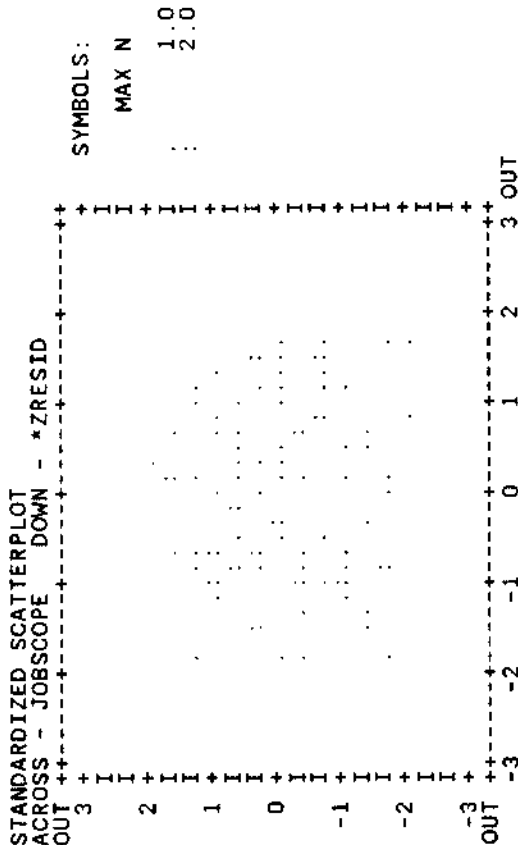
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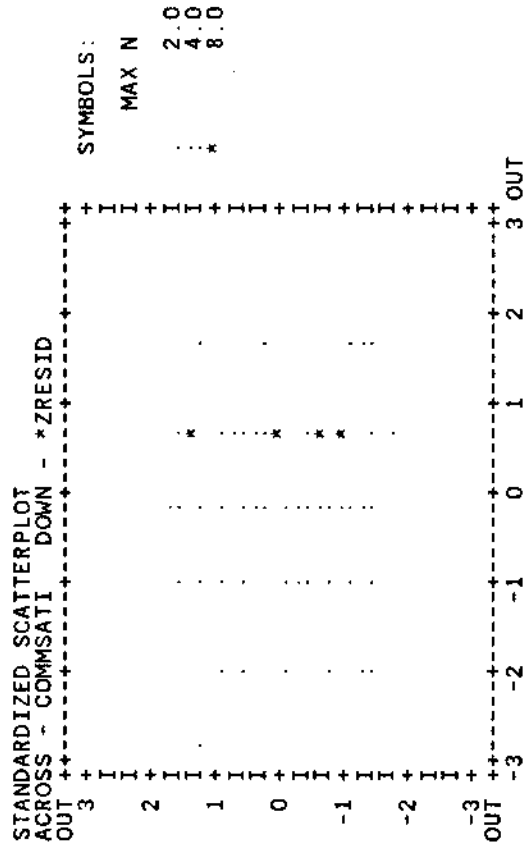
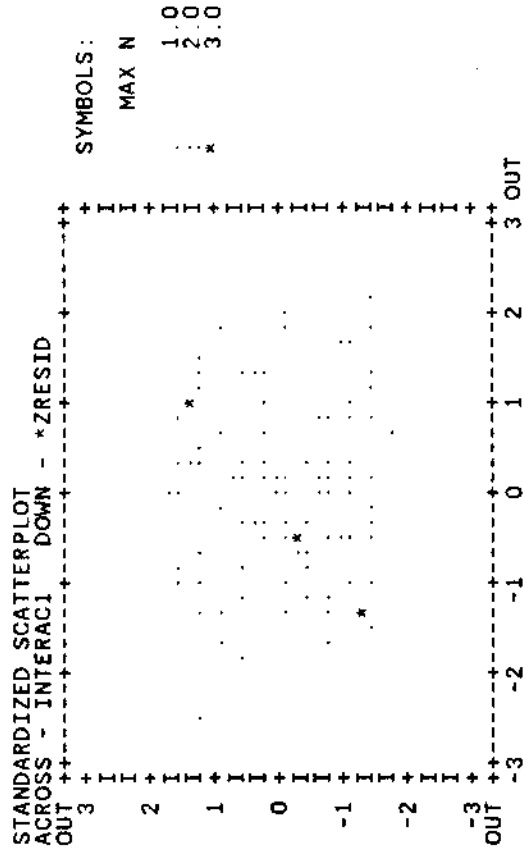
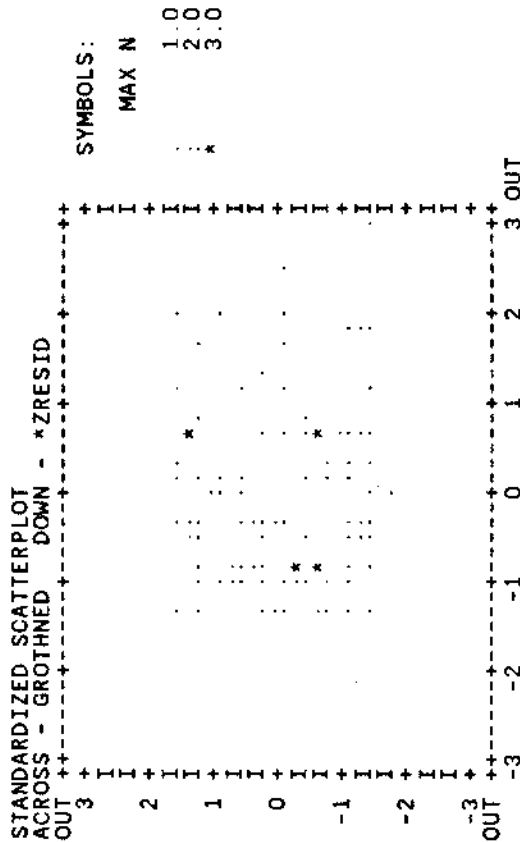
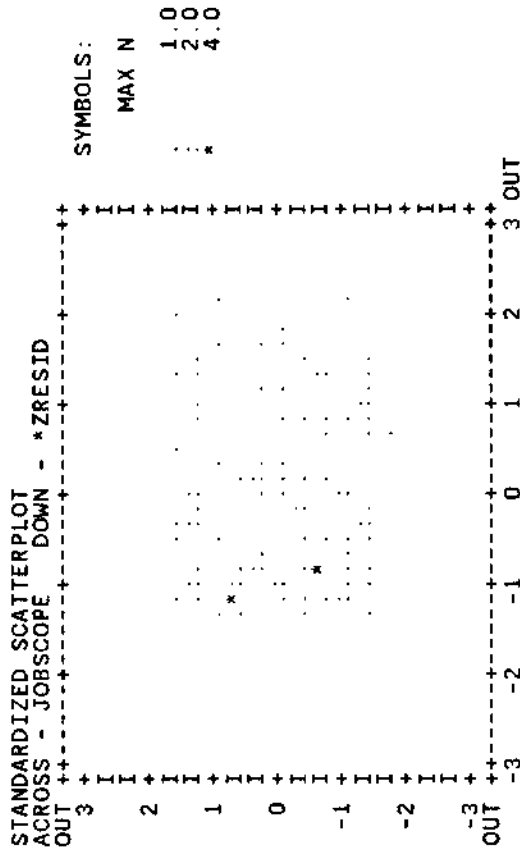
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