

COORIENTATIONAL SIMILARITY  
TOWARD PROCEDURAL ASPECTS  
OF COMMUNICATION:  
A STUDY OF COMMUNICATION  
BETWEEN EXTENSION AGENTS  
AND THEIR SUPERVISORS

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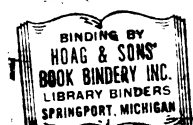


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## ABSTRACT

### COORIENTATIONAL SIMILARITY TOWARD PROCEDURAL ASPECTS OF COMMUNICATION: A STUDY OF COMMUNICATION BETWEEN EXTENSION AGENTS AND THEIR SUPERVISORS

By

Hamish Milton Russell

This research examined the association between interpersonal attraction between members of extension agent/supervisor dyads and their level of coorientational similarity toward the procedural aspects of their communication.

On the basis of extensions of Newcomb's coorientation model, predictions were made about the effect of two levels of similarity--agreement and accuracy.

Data were obtained separately from both members of one hundred supervisory dyads in the Michigan Cooperative Extension Service, through questionnaires completed in group situations. These data related to the members' background, their opinions of what would be ideal supervisory communication between field agents and their supervisors, how they saw their actual dyadic communication, their predictions of how the other member of their dyad

would perceive their communication, and their satisfaction with role achievement and their relationship.

Using a factor analysis of sixty items relating to ideal communication, four independent dimensions of procedural communication were identified. These dimensions focus on different aspects of sharing or interdependence in the dyad--new ideas, family and personal activities, the responsibility for seeing tasks through to completion, and the responsibility for seeing that the tasks are in fact undertaken.

In describing their communication, the supervisors saw the interaction as more interdependent than did their field staff. The supervisors also tended to be more skilled at recognizing divergent perceptions.

Both supervisors and field staff wanted more communication about new ideas; while supervisors alone wanted an overall increase in communication about all aspects of their interaction.

The most outstanding feature of the study was the high overall level of both agreement and accuracy with respect to communication procedures. This high level of coorientational similarity, combined with high levels of field agent role satisfaction and high supervisor ratings of field agents' performance, gives overall support to the notion of an association between similarity of orientation and interpersonal attraction.

Although a number of significant associations were found between measures of similarity of orientation toward communication procedures and measures of attraction, the degree of similarity did not account for a major part of the variance in the indicators of attraction.

General support is claimed for the usefulness of Newcomb's model, but the influence of many other variables as well as the procedural aspects of communication is recognized.

Based upon several trends in the data, explicit discussion between supervisors and field agents about how they view both their current and their ideal expectations for communication procedures is recommended as a way to increase the understanding between the dyad members.

Finally, taking a systems viewpoint, a number of suggestions are made for further research into the application of Newcomb's model to increase our understanding of communication within organizations. The focus on both the shared interaction and on the procedural rules that direct communication is seen as both useful and powerful for future research.

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ASPECTS OF COMMUNICATION:  
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By

Hamish Milton Russell

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To

Rosemary, Caroline and Jennifer

who have shared in this experience with me

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## CHAPTER I

### INTRODUCTION

In the last fifteen years or so, social scientists have been devoting increasing attention to the study of social systems. This approach has led to a focus on the interrelationship and interaction between components, and on factors that enhance or detract from the effectiveness of the bonds between them. An enduring problem for any social system is the socialization of new members and the continued integration of existing members. To a large degree this becomes a problem of developing and maintaining effective communication linkages. Therefore, communication is increasingly being seen by system theorists as having a crucial place in the understanding of the operation of a social system. Barnard (1938) predicted this development when he stated:

. . . in an exhaustive theory of organization, communication would occupy a central place, because the structure, extensiveness, and scope of an organization are almost entirely determined by communication techniques.

If human communication were simply a process like carrying a brick from one bucket to another, then there would be little need to do more than set up adequate links

or channels through which to transfer ideas from one person to another. The process is not as simple as this, however, and so we must consider the interaction in greater detail. Berlo (1970) proposes as a basic premise that human communication involves the transmission of symbolic information or pattern from one participant to another. However, the significance or meaning for that patterning is NOT transferred. Each one of us interprets symbolic information in our own unique way which is a result of our total previous experience. This basic communication proposition underpins the whole interest in the communication interaction within a system. Because the significance, or meaning, for a message rests with each individual participant and not in the message itself, so it follows that meanings are unique to each individual and inevitably will differ between the participants. Therefore, we can see that the probability of perfect communication (the transfer of an idea in exactly the same form from one person to another) is zero. If we assume that perfect consensus (similarity of orientation) requires two people to have exactly the same meaning for a message, then perfect consensus is impossible. However, we can seek maximum consensus (or synonymously, minimum dissensus)<sup>1</sup> if the benefits are sufficiently high.

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<sup>1</sup>If we define consensus (or similarity of orientation) as a continuous variable, then we can denote the two extremes as complete consensus (100% consensus) and complete dissensus (0% consensus), thus increasing dissensus is synonymous with decreasing consensus.

There is a close analogy between this search for a greater understanding of the processes involved in achieving acceptable levels of consensus and the engineer's search for ways to reduce frictional losses of energy in the flow of a liquid through a pipe. The laws of physics indicate that some friction is inevitable, but that good design and the choice of the right materials can minimize this loss. In considering any communication transaction, or series of transactions, we can liken the message to the liquid and dissensus to the frictional loss. In communication science we are at the stage in development where we need to establish the costs to a communication system caused by different levels of consensus (this is analogous to the establishment of coefficients of friction by the physicist). If empirical research can demonstrate sufficient benefits through increasing consensus in communication, then significant system-wide improvements can be sought by determining the factors in a communication interaction that enhance or detract from consensus. When the study of communication phenomena is placed in this type of system model, it becomes clear that the traditional approach of relating intrapersonal attributes of one of the participants in isolation to the system output will not help us to an understanding of the interactive process.

Despite the generally accepted viewpoint that Gordon Allport expressed in Lindzey and Aronson (1968--Vol. 1, p. 3):

. . . with few exceptions, social psychologists regard their discipline as an attempt to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, imagined, or implied presence of others.

Rogers and Bhowmik (1969) noted that in a review of over 1,000 empirical studies, the vast majority of publications on diffusion dealt with individual characteristics of one or other category of communication participants and NOT with the communication interrelationship involved in achieving the communication effects. This focus, that relates individual characteristics of one class of communication participant (source or receiver) to communication effects, implies perfect communication (zero dissensus between participants) and therefore effectively ignores any interaction effects. This failure to consider interaction clearly violates Berlo's basic proposition and Allport's viewpoint.

In the hope of developing a richer theory, this project is designed to yield some basic information about the levels of consensus in a relatively enduring dyadic relationship, and to measure the relationship between the levels of consensus among communication participants and various system output measures. To return to our earlier analogy, the proposed focus will be on the measurement of the effects of various degrees of dissensus, which corresponds to the establishment of coefficients of friction.

When we turn from the study of intrapersonal characteristics to the study of relationships as the basic unit of analysis, the simplest system that we can consider is a dyad (a two-person group). Mark (1970), Rogers (1971) and others have stressed the importance of the dyad as the basic unit in studying interpersonal communication. Each of us is a member of many relatively stable and enduring dyads. For example:

- husband/wife
- parent/child
- coworker/coworker
- subordinate/superior
- superior/subordinate
- student/instructor
- consultant/client.

We come to each of these dyads with different sets of expectations and with different norms (prescriptions for behavior) for communication behavior. Most of these norms, or rules, are not written down as formal procedures, but rather are a composite of folkways, mores and laws that the individual has acquired through a process of indoctrination and experience in his culture. As Davis notes, in Biddle and Thomas (1966, p. 110), regardless of whether a person obeys the norms completely, they are a major influence on his behavior and thinking.

There are two major implications of this situation. First, because most norms are not codified as formal procedures, they will be gradually acquired and will be constantly subject to minor or major modification as a result of interaction. Second, there will also be the

opportunity for interacting members of a system to have different sets of norms with which to develop and evaluate an interaction.

Of all the enduring human systems that can be distinguished, the formal organization has been the subject of by far the greatest amount of research. In any attempt to explain the accomplishment of an agency's objectives, Simon (1957) claims that:

. . . the operative employee must be at the focus of attention for the success of the structure will be judged by his performance within it. Insight into the structure and function of an organization can best be gained by analyzing the manner in which the decisions and behavior of such employees are influenced within and by the organization.

Most organizational theorists and researchers would seem to concur with Simon's viewpoint because the subordinate/supervisor relationship has long been viewed as a crucial one by organizational scholars, as the vast leadership literature will confirm. Some writers, as for example Likert (1961 and 1967), have given some explicit attention to communication aspects of this relationship; but in general, other psychological and sociological concepts have been developed and stressed in the attempts to explain and predict performance and satisfaction. Recently, in a study of a large business concern, Berlo et al., (1970 and 1971a) have demonstrated that communication practices between a line worker and his supervisor are associated with that worker's satisfaction and also with his progress

in the organization--as indicated by turnover, absenteeism, tardiness and promotion.

The line worker or operative in a business concern generally has his role so defined that he has minimal communication with others as part of his task. He is seen as the end of a communication network and generally has little or no formal contact with personnel in other sections of the organization or with the clients or suppliers to the organization. Also, he usually has a readily quantifiable output--number of units produced, number of errors per 100, amount of type set, etc.

In contrast, the operative in a service organization is frequently a professionally trained staff member, with a prime function of handling communication, or ideas, rather than material things. As Kornhauser (1962), Torpey (1970) and others note, professional operatives in organizations have unique problems and contributions that would appear to offer a rich area for further elucidation.

Kornhauser (op. cit.) sums up the critical issue as follows:

. . . the work establishment faces the dilemma of seeking too much integration of its professionals into the organization and thereby losing their professional worth, versus granting them too much autonomy and thereby weakening their contribution to the organization.

Examples of professional operatives include the school or college teacher, the social worker and the extension agent. In each of these positions, the operative's

prime function is interpreting and communicating an agency's program to a client system.

The change agent in an extension agency presents a clear example of the problems alluded to by Kornhauser and others. Traditionally the change agent role has involved interpreting and diffusing new technical information from the agency to the clients in an effort to improve some aspect of their life, developing and managing informal educational programs, or assisting local personnel in reaching and involving others in educational programs. Clearly, the emphasis is on communication to the client system. However, as noted above, there are links with other systems as well. Three distinct systems can be identified, and to be successful the agent must maintain adequate links with each. The principal systems and the communication foci are:

1. The organization--the contact that the agent has with his supervisor and others in coordinative and control positions.
2. The client system--the communication that the agent has with the members of an identified client group.
3. The professional organization--involvement with other professionals in the sharing and development of relevant technical information.

Given these three systems, Kornhauser (op. cit.) proposes four basic orientations that a professional agent can have. These are:

. . . professional orientation--functional bureaucrat  
 organizational orientation--job bureaucrat  
 professional and organizational orientation--specialist  
 client orientation--service bureaucrat.

Depending on an individual's orientation, so he will tend to rate one or other orientation as the crucial one in his work.

In addition to these conflicting group memberships, there are a number of other differences in the role of a change agent as contrasted to that of a 'blue collar' worker. The one that is of prime concern is his output. The change agent's output is rarely quantifiable in the short term--because at least in part, it will usually involve communication strategies that may not be reflected in behavioral changes for a considerable period of time. Also, the agent is rarely the only source of this assistance or information.

These differences between the change agent and the 'blue collar' worker, suggest that the change agent will be extremely dependent on communication, and also that he will have to maintain membership in markedly different dyads in the execution of his work. To concentrate on one role to the exclusion of the others would be to court disaster and to destroy the basic function of this liaison or linking position.

Ascroft (1969), Havelock (1969), Jain (1970), Amend (1971) and Rogers and Shoemaker (1971) and others have

discussed this boundary role between systems in some detail. In general, these authors have focussed upon the communication between the agent and his client system, although Jain does consider the professional ties of extension specialists. These studies have tended to stress the crucial nature of the liaison role, homophily/heterophily between agent and clients, communication strategies and the impact of the client social system. The emphasis has clearly been on developing more effective strategies for the communication of technical information to the client system. With the limited exception of Preiss (1954), little attention has been directed to the integration of the change agent into his organization.

As Havelock (1969), Rogers and Shoemaker (1971), and others note, several authors<sup>2</sup> have observed role conflicts due to the change agent's boundary or interface position. There is a tendency for each system to define the agent's role in terms of that system's needs alone. This can lead to conflicting demands for his time and energy, and to his being viewed as marginal by both systems because of his inability to completely espouse one to the exclusion of the other.

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<sup>2</sup>Wilkening (1957), Bible and Brown (1963), Bible, Nolan and Brown (1961), and others.

The agent's professional task is to develop educational programs and to diffuse technical information to the client system. He is also frequently called upon to analyze and make suggestions about modification of existing practices. A strong commitment to this task may result in the agent becoming fully immersed in the client system (client orientation) and resenting or ignoring the constraints and requirements of the agency. The tasks of planning and reporting can tend to be viewed as an intrusion or an unnecessary distraction from the job of serving the clients.

It is this issue of the balance between forces that draw the agent away from the organization and those that work to integrate him into the organization, that Kaufman (1960) discusses. He made a very detailed case study of the role of the Forest Ranger in the United States Forest Service. The Forest Ranger position was filled by professionally trained personnel with the prime responsibility of converting policy into action, dealing with the general public on behalf of the Service and in general supervising the basic functions of national forest administration.

As the lowest ranking professional officers in the Service, the Forest Ranger was seen as the operative professional at the base of an administrative pyramid. This position has many similarities with that of an extension agent. Therefore, Kaufman's insights and conclusions offer a useful clarification of some of the complexities of this

type of organizational position. Kaufman noted that the rangers, in their interface position between the administration and the non-professional staff, were subject to opposing influences pulling and pushing them in different directions.

He identifies five forces that work toward the disintegration of the system:

1. The need for individual rangers to interpret general instructions in specific situations.
2. The social and geographic distance between the rangers and their supervisors.
3. The different behavioral norms that develop in different face-to-face groups.
4. The "capture" of the rangers by local populations--primary identification with the local community as compared to primary identification with the Forest Service.
5. Personal differences in preferred ways of doing things.

All these factors tend to draw the field agent away from his agency and therefore increase the likelihood that he will develop different norms and expectations to those of his supervisor. At the same time, Kaufman identifies a corresponding set of factors that encourage the agent's integration into the agency. These integrative factors include:

1. Procedural rules and devices for preforming decisions.
2. Sanctions, feedback and correction, movement of personnel to different centers, and other methods of discouraging deviation.

3. Inservice training, selection and building identification with the Service to develop a will to conform.

The minimal integration of the liaison role into the system, and the conflicting demands and pressures would all seem to indicate that the potential for dissensus will be high in this dyad. For these reasons, this relationship between an extension field agent and his supervisor would seem to offer an uniquely desirable setting for an empirical study of the effects of differing degrees of similarity in orientations.

Given this context, this study is directed toward increasing our understanding of the expectations and perceived communication between field and supervisory personnel in an extension agency.

Measures of similarity of orientation toward different aspects of communication are proposed and operationalized and related to measures of interpersonal attraction as it is reflected in various measures of the success of the dyad. The specification of the association between these differing aspects of a system should allow some estimate of what are acceptable levels of similarity of orientation in such a dyad.

Further, it may be possible to predict the benefits that might be expected to accrue through an increase in similarity. Because all systems have limited resources and therefore must make decisions about priorities, it is

hoped that this research will help administrators and others to assess the importance of members sharing a common understanding about communication. If a cost/benefit<sup>3</sup> analysis can be built up with this type of data, then we can return to our basic analogy and start to provide the social engineer with the social equivalent of coefficients of friction.

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<sup>3</sup>A cost/benefit analysis is an economist's tool for comparing the value of increased output with the costs that are incurred in achieving it.

## CHAPTER II

### THEORETICAL CONTEXT AND HYPOTHESES

#### Newcomb's Coorientation Model

Newcomb (1968), in Abelson et al., in introducing a comprehensive set of readings on the theories of cognitive consistency noted that:

. . . Often in the history of science, when the time is ripe, a large number of similar theories are put forward contemporaneously by researchers who have little if any direct contact with one another. So it was a decade or so ago when at least half a dozen of what we shall call "cognitive consistency" theories appeared more or less independently in the psychological literature. They were proposed under various names, such as balance, congruity, symmetry, dissonance, but all had in common the notion that the person behaves in a way that maximizes the internal consistency of his cognitive system; and by extension, that groups behave in ways that maximize the internal consistency of their interpersonal relations.

It is the latter focus on the internal consistency of dyads (as a special case of the class of groups) that would seem particularly suitable as a model for considering communication between supervisors and their subordinates. In tracing the development of the range of consistency theories, Newcomb goes on to note that the field owes a particular debt to the contributions of Heider (1958), with his introduction of the concept of balance and his

basic assumption that an imbalanced set of cognitions is associated with 'tension' and the arousal of forces that tend to restore, or to attain, balance. These basic notions underlie the principal propositions of each of the theories and are central to the whole interest in cognitive consistency.

Within this set of theoretical approaches, Newcomb's (1953) theory of coorientation offers a unique perspective for viewing the consequences of dyadic interaction. As noted by Cartwright and Harary (1956), Heider's intention was to describe the balance of cognitive units when the entities and relations are experienced by a single individual. This focus on cognitive consistency for the individual is also followed in the dissonance and congruity theories. Newcomb's particular contribution has been to take Heider's notions of balance and tension and apply them to social systems. Through this theoretical contribution, it becomes possible to focus on the achievement and consequences of similarity of orientations of members of a dyadic or larger system.

Newcomb (1953) proposes a concept of coorientation, which he defines as the simultaneous orientation of two persons toward each other and toward some common object. It is this focus that will be developed as the central framework for this study. In elaborating this focus on coorientation, Newcomb (1961) defines two sets of

orientations that can constitute a system. These are firstly, individual systems that focus on the balance of intrapersonal cognitions, and which are essentially individual measures of consistency; and secondly, collective systems that focus on the symmetry (or balance) of interpersonal cognitions.

While perhaps the majority of the applications of Newcomb's model have focussed on the balance of intrapersonal cognitions; Chaffee and McLeod (1968), Wackman and Beatty (1971) and others have stressed the importance of focussing on the coorientation of both persons, which is Newcomb's collective level. The distinction of which level is being considered is made by the selection of the particular cognitions to be contrasted in an analysis. The importance of this distinction lies in the fundamental issue of deciding to either focus on the collectivity and the actual coorientations of the members of the system; or instead, focussing on the perceptions of only one member of the system at a time. It would seem that Newcomb's theory only offers a unique perspective as contrasted to the other cognitive consistency theories, when the collective level is considered.

While there are clearly applications of both the individual and the collective perspectives, the social systems framework would seem to favor a stress on coorientation as it is defined at the collective level. In line

with the social psychological tradition, as it is traced and advocated by Scheff (1967), the inter-personal, collective model will be focussed upon as more precisely fitting the interactive perspective that is suggested in Chapter I.

If we consider Newcomb's basic dyadic model, it comprises three primary elements--two interacting persons (A,B), and their orientations toward each other and an object X.<sup>4</sup> This ABX model, as it has been described, is presented in Figure 1.

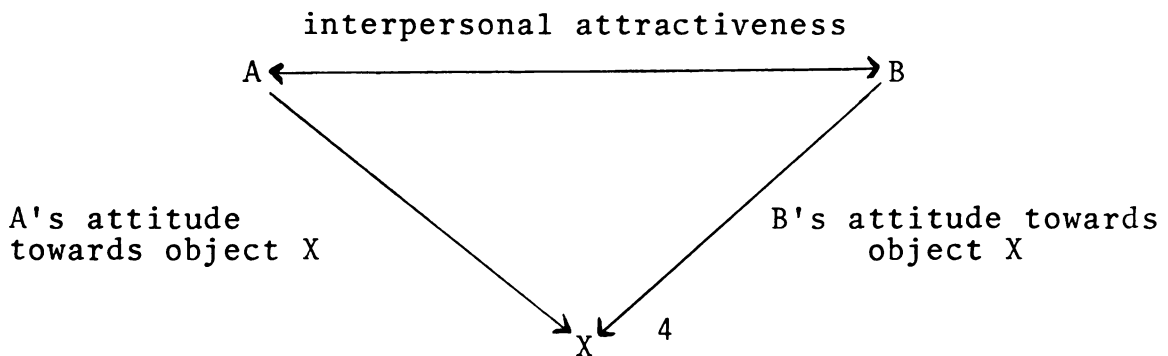


Figure 1. Newcomb's coorientation model.

If we direct our attention to the similarity of A's and B's orientations toward X, we can distinguish three basic sets of possible relations between the two intra-personal orientation systems:

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<sup>4</sup>The object X in this system can be any other person, object, norm or rule.

1. Agreement, which can be defined as the similarity between A's and B's individual orientations toward X.

2. Congruency, or perceived agreement, which can be defined as the similarity between A's orientation toward X and A's perception of B's orientation toward X; and vice versa for B.

3. Accuracy, which can be defined as the similarity between A's prediction of B's orientation toward X and B's own orientation toward X; and vice versa for B.

As noted by Chaffee and McLeod (1968), only agreement and accuracy are true coorientational concepts involving the similarity of inter-personal cognitions. For the reasons outlined earlier, only these dimensions of similarity will be considered. Monge and Farace (1972) present a more detailed discussion of the structure of a coorientation system.

Scheff (1967), Laing, Phillipson and Lee (1966), and others have developed a concept of levels of coorientation that offers a useful way to relate the concepts of agreement and accuracy together. They propose that it is possible to consider an infinite series of reciprocated levels of similarity or understanding in a dyad. Agreement is viewed as zero-order coorientation, while accuracy becomes first-order coorientation, and so on.

This formulation offers the opportunity to view similarity of orientation (consensus) as a double spiral,

with each turn representing another level of mutuality or understanding. Given this perspective, complete similarity of orientation would be impossible to achieve; however, it does allow recognition of the effect of each other's perceptions as a cumulative or hierarchical coorientation. For example, it is possible to appreciate the added strength in the statement of coorientation "he knows that I know that he agrees with rule X" as contrasted to "I know that he agrees with rule X" as contrasted with "he agrees with rule X." In considering agreement and accuracy as two measures of coorientational similarity, this perspective of them, as two levels of understanding, will be used. Taking a similar perspective, Monge and Farace (1972) add a useful discussion of the logic of the coorientation system in terms of possible states given changes in the basic intrapersonal orientations.

Once this perspective of agreement and accuracy, being two levels of coorientation, is accepted, then Scheff (1967) offers a particularly useful way of combining the two levels to produce four distinct types of understanding. Figure 2 represents a distinction between the four types of understanding, as applied to similarity of coorientation in a dyad.

|           |      | Accuracy             |                       |
|-----------|------|----------------------|-----------------------|
|           |      | High                 | Low                   |
| Agreement | High | Monolithic consensus | Pluralistic ignorance |
|           | Low  | Dissensus            | False consensus       |

Figure 2. Types of understanding in a dyad.

The interpretations that can be made for a dyad being placed in a particular cell in this 2 x 2 matrix, are as follows:

- a. Monolithic consensus--both members of the dyad share a similar orientation to the object X, and they correctly predict that the other member shares their orientation.
- b. Pluralistic ignorance--the two members share a similar orientation towards object X, but they predict that the other member has a different orientation to their own.
- c. Dissensus--the two members have differing orientations toward object X, and they understand this difference.
- d. False consensus--the two members have differing orientations toward object X, but they incorrectly attribute an orientation similar to their own to the other member of the dyad.<sup>5</sup> In this case the members disagree but think that they agree.

Using these notions of coorientational similarity, it is possible to generate a number of propositions about

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<sup>5</sup>This interpretation only follows if orientations are viewed dichotomously, as done by Scheff and Laing et al.

the relationship between the degree of similarity of orientation between two members of a dyad and their interpersonal relationship.

Newcomb (1953) in his original statement of the coorientation model, restricted the application of the model to intentional, face-to-face communication, between two members of a group, that is characterized by continued association. He also stated most of his propositions in terms of a strain or movement towards symmetry. However, it would seem useful to extend the application of the model to a consideration of equilibrium states as well as movement towards equilibrium.

Based on Heider's (1958) model of balance, the symmetry or balance of an ABX coorientational system can be assessed by considering the positive or negative sign of the relationship between the elements. While accepting this approach for ease of understanding at this point, it is worth mentioning that one of the extensions of Newcomb's model that will be advocated is the conceptualization of orientation as a continuous rather than a dichotomous variable. If we accept the dichotomy of positive versus negative orientation, then Heider and Newcomb assess a system as being balanced, or symmetrical, if the algebraic product of the three signs, of the relations between elements in Figure 1, is positive, and imbalanced if the product is negative.

Returning to the basic premise of all of the consistency theories, that imbalance creates tension and therefore movement towards increasing symmetry, it is possible to define a limited set of possible equilibrium states for any such dyadic system. These symmetrical states are presented in Figure 3.

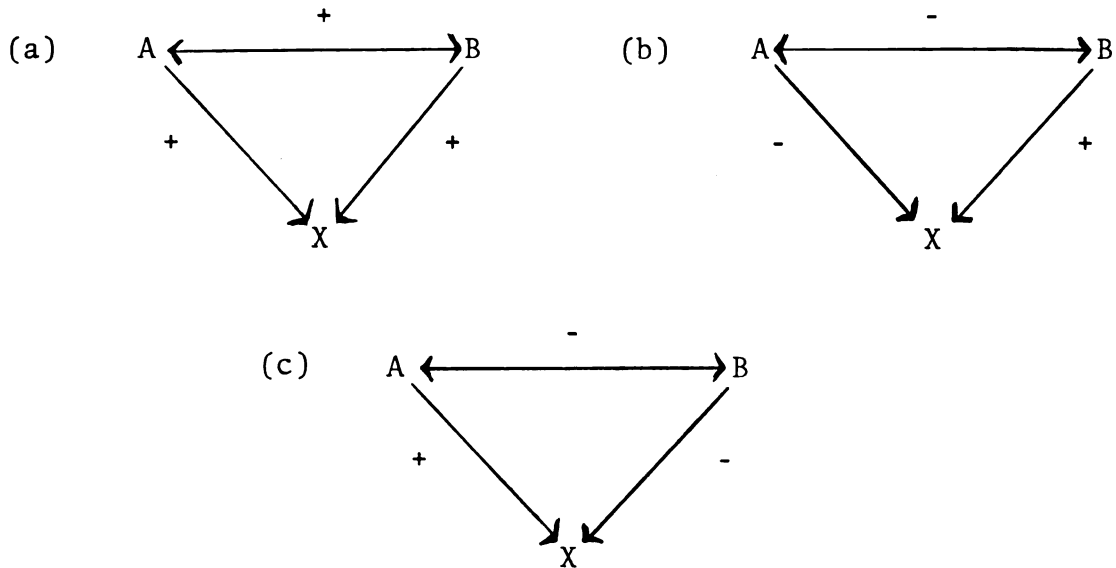


Figure 3. Symmetrical, or balanced, ABX systems.

Newcomb (1968) argues that any ABX system where the A/B relationship is negative is non-balanced. He develops this argument primarily on the notion that B is not only an object of A's attitude, but is also a source of attitude toward A. On this basis, he views the A/B relationship as not being strictly comparable to the A/X and B/X relationships. While concurring with Newcomb in

defining the A/B relationship as being essentially different to the A/X and B/X relationships; it is proposed that a fruitful way of viewing this difference is to imply causality and view the A/B relationship as a consequential relationship based upon the signs of the A/X and B/X relationships.

If we accept this approach to the issue of symmetry, then the system states represented by (b) and (c) above become balanced or symmetrical consequences of an initial imbalance between A/X and B/X. The theory that is proposed is that interpersonal attraction will be a consequence of coorientation rather than a component of coorientation.

Proposition 1: The greater the similarity of interpersonal orientations toward an object X, the greater the attraction between members of the dyadic system.

This proposition can be expressed mathematically as:

$$\text{ATTRACTION} = + f (\text{COORIENTATIONAL SIMILARITY})$$

To the extent that an A/B negative relationship engenders its own tension, that is independent of the notion of symmetry (or balance), so the symmetrical states represented by (b) and (c), in Figure 3 above, would be expected to have a lower probability of continuance than the system state depicted in (a).

The notion of symmetry is thus determined solely on the perceptions of the interactants. To the extent

that interactants view their interactive system as consistent, then for that system a symmetrical state does in fact occur.

Some simple examples may help clarify this issue. In the English language there are several proverbs that suggest that maintaining a negative A/B relationship does incur a psychological cost but that members do in fact weigh this cost against the potential costs incurred in severing the relationship. These include the sayings that "It is better the devil that you know than the devil you don't know" and "Out of the frying pan into the fire" and "Grin and bear it." Each of these proverbs would seem to advocate the acceptance of an equilibrium state characterized by a negative A/B relationship. Similarly, there is also considerable evidence that employee turnover is much greater in times of high employment when the probability of finding another job is high, than in times of low employment when the cost (in terms of risk of not finding another better position) of severance is much higher.

In considering enduring dyads, as contrasted to more transitory relationships, it seems reasonable to propose that symmetrical equilibrium states will be found with negative A/B relationships as well as positive A/B relationships; and more-over, that it should be possible to predict the direction and strength of interpersonal

relationships on the basis of the coorientational similarity of the interactants in their attitudes towards an object X.

So far, in considering the application of Newcomb's ABX model, we have not specified the object X in any detail. Newcomb (1961), Levinger and Breedlove (1966), and others have emphasized that object X should have common relevance as defined by a joint dependence of A and B on the object X. Levinger and Breedlove incorporate this constraint on the application of the model when they propose:

. . . there is a positive correlation between actual agreement and attraction, but only to the extent that such agreement promotes the achievement of the group's goals.

This stress on high instrumentality<sup>6</sup> of object X to the system, allows considerable latitude for differing A/X and B/X orientations without any necessary reflection in reduced attraction providing the objects are regarded as peripheral or of low instrumentality to the system. In taking this approach both Newcomb and Levinger and Breedlove seem to imply a critical threshold of instrumentality, below which coorientation will not be associated with the A/B relationship. An alternative approach, that is consistent with the proposition to treat orientations as continuous variables, is to view instrumentality as a modifier of the effect of level of coorientational similarity.

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<sup>6</sup>Instrumentality is viewed as a measure of the centrality of the object to the survival of the system.

Proposition 2: The greater the sum of the product of coorientational similarity and perceived instrumentality over the total range of objects to which coorientation is perceived, the greater the attraction between the members of the dyadic system.

This proposition can be expressed mathematically as:

$$\text{ATTRACTION} = f \sum (\text{COORIENTATIONAL SIMILARITY} \times \text{INSTRUMENTALITY})$$

This proposition extends Newcomb's basic proposition in two major ways. First, it views the A/B relationship as being determined by the arithmetic sum of all the perceived objects that are common to the dyad; and second, it views instrumentality as a continuous variable acting as a modifier on the effect of each coorientational measure of similarity. By rejecting the notion of only considering objects with a system instrumentality above a critical threshold level, this proposition equates the effect on attraction of dissimilarity on a large number of issues of low instrumentality, with dissimilarity on a few issues of high instrumentality.

If we accept this proposition then the possibility of completely predicting attraction will be impossible. However, from a systems viewpoint, the theory will be supported if attraction and coorientational similarity are positively associated in systems where a number of highly instrumental issues are considered.

One such set of issues (the object or X in the model) would appear to be the procedural aspects of communication.

### Procedural Aspects of Communication

All organizations inevitably will develop a set of norms and rules about who will have responsibility for various activities, who will report to whom, who will coordinate and control other's performance, and so on. The establishment of rules is thus fundamental to the very concept of organization.

Ascroft (1969) sums up a consideration of the opposing forces of organization and entropy by noting:

. . . that man's basic purpose is to maximize the chances of perpetuating his survival by inducing and sustaining a locally limited tendency for organization in his environment to increase and, thereby, reduce the characteristic tendency for entropy in his environment to increase.

This tendency to 'induce and sustain' organization is largely expressed in human behavior through rules or norms that delimit acceptable behavior. This restriction on the range of behaviors that are acceptable in a given situation clearly increases the probability that certain behaviors will occur and equally reduces the probability of other behaviors occurring. Rules through their effect

of establishing different probabilities of behavior<sup>7</sup> thus oppose the tendency for entropy.

One set of organizational rules, that would appear to be of particular concern to communication scientists, are the rules that govern the communication between members.

Cushman and Whiting (1971) argue for increased attention to communication rules, as a primary concern for communication theory, on the basis of the following propositions:

. . . (1) that the transfer of information requires the interaction of source, message and receivers, guided and governed by communication rules; and (2) that communication rules form general and specific patterns which provide the ground for the scientific explanation, and prediction of communication behavior.

They distinguish between two classes of communication rules--procedural and content. Procedural rules are defined as the rules that guide and govern the organization of symbols and participants within the boundaries of a communication system.<sup>8</sup> Such procedural rules have traditionally been referred to as social norms.

It is proposed that the procedural aspects of communication offer a particularly sensitive and appropriate

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<sup>7</sup>Entropy assumes equal probability for all possible outcomes, therefore any differences in probability represents some degree of organization. The greater the differences in probability the greater the organization (predictability).

<sup>8</sup>The following is an example of a communication procedural rule: "An extension agent should always confirm phone conversations with his supervisor with a written summary."

vehicle for investigating the complementary behavior of the incumbents of related positions. Figure 4 shows the relationship between this focus and the overall similarity between the members of such a dyad.

Before any communication can occur, some minimum degree of consensus is required about the procedural rules that will be followed. For this reason, it is only after the establishment of a set of procedural rules (ground rules) that content rules (that relate to how concepts will be used) can be developed and the process successfully linked together. The place of procedural rules in any communication transaction can be likened to the Theory of Limiting Factors. This theory states that the output of a system will be controlled by the component that is most limiting; once this component has been brought up to an acceptable level then another limiting factor will appear. However, until the first, or most limiting, factor is attended to, attention to other factors will not increase system output.

The procedural aspects of communication can be separated into two primary areas--(1) the procedural rules, and (2) their variable expression in actual communication behavior. While the actual<sup>9</sup> communication practices in

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<sup>9</sup>The communication behavior that occurs within a dyad can be reported by the participants as they perceive it, or by an observer. To distinguish between these, in this paper, participant reports will be referred to as perceived communication.

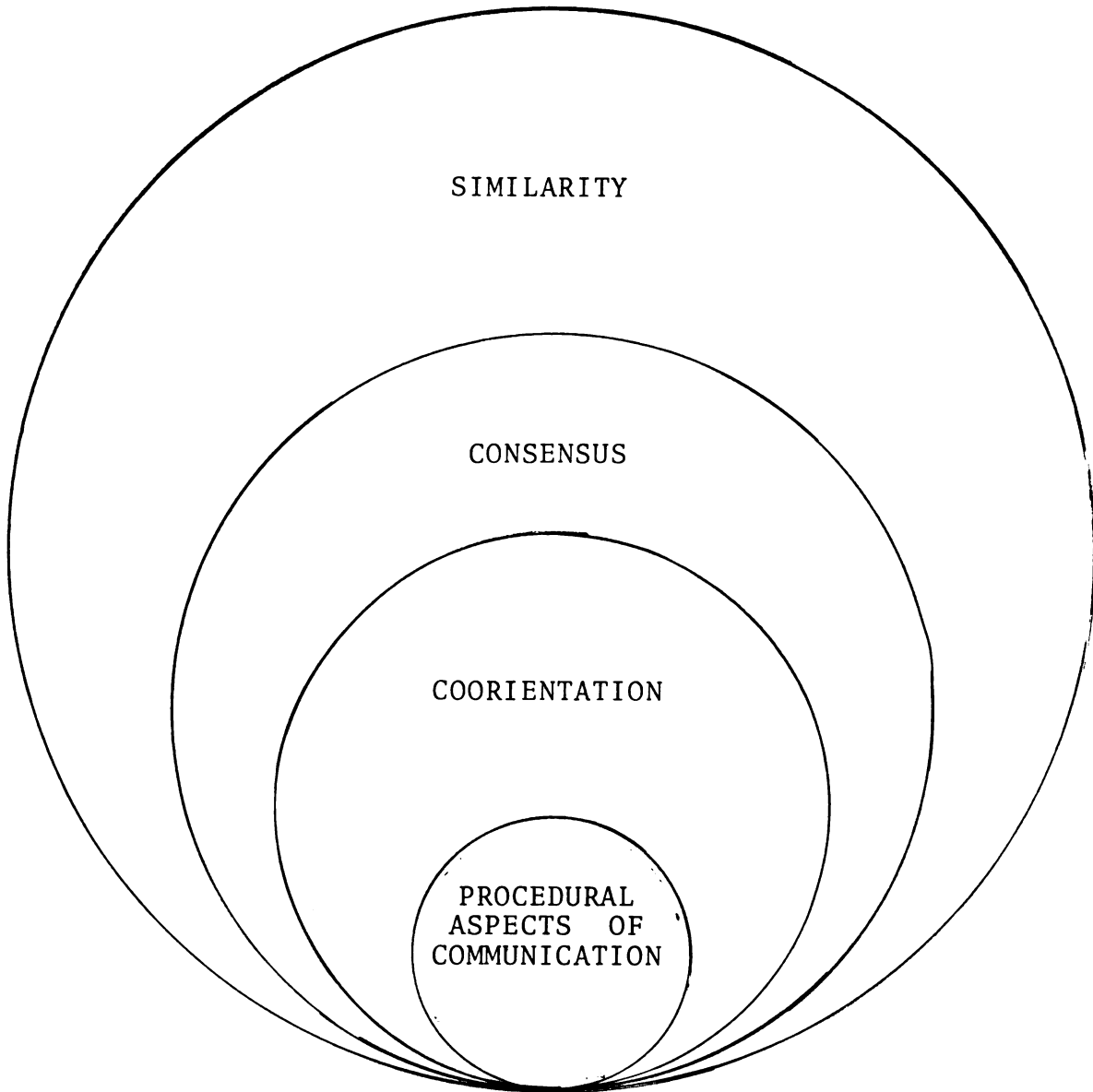


Figure 4. Relationship of coorientational similarity toward procedural aspects of communication to overall similarity between members of a dyad.

themselves may offer considerable predictive power in understanding the output of a superior/subordinate dyad, the rules, or limits, of acceptable behavior may be even more important. As French and Raven (1960) note, a person's social power is measured by his maximum possible influence and not the proportion of this that he chooses to exert at any particular point of time. Similarly, with communication, the important question may be whether the behavior falls within certain limits rather than what it specifically is. A superior may approve of a wide range of behaviors providing that they are within his range of acceptability.<sup>10</sup>

It is proposed that in this study both of these aspects should be considered. While much of the theoretical discussion will be restricted to the rules for simplicity, both aspects should be kept in mind.

In most organizations, many procedural rules develop to control the communication between members. Some of these rules are codified into formal written procedures that specify the precise communication behaviors that are required or permitted; but, most are informal social norms that are learned through experience in the organization. This learning process is frequently described as 'getting

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<sup>10</sup>For example, the rule may express optional behavior and then either the presence or absence of the behavior would be equally acceptable.

to know the ropes'. While it may constitute a minor problem for someone totally integrated into the system and with limited communication responsibilities, it may be a serious problem for a change agent whose role keeps him marginal to the system and who has a wide range of communication behaviors required by his position.

To the extent that there are different expectations (different sets of rules) for a given situation so there exists the opportunity for serious communication breakdown. If I expect that you will request my ideas if you want me to contribute to a task, and you expect me to show the initiative in contributing ideas without having to be asked, then we run the risk of applying vastly different measures to judge a situation. If the behavior falls outside the superior's range of acceptability then loss of confidence and dissatisfaction may result--not from lack of competence but from a lack of similar orientations toward the rules of the interaction.

As Berlo demonstrates very clearly in his film, "Avoiding Communication Breakdown,"<sup>11</sup> it is very easy for the participants in an unsuccessful communication dyad to blame the other member for intellectual failure rather than consider the possibility of a lack of agreement on

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<sup>11</sup>This film is distributed by BNA Films, Rockville, Maryland.

what was appropriate communication behavior. The change agent has to concentrate on and develop his communication with members of his client system to fulfill his prime professional task. In addition, he may be stationed in a center geographically separated from his supervisor, and therefore, have only restricted opportunities to communicate with him. This situation would appear particularly susceptible to communication breakdown, and where output is measured largely in terms of communication this would seem to leave the way open for negative performance reviews and dissatisfaction.

If we accept the importance of procedural aspects of communication, then the next task becomes one of identifying dimensions, or foci, that the rules relate to. It seems reasonable to expect that different dimensions will have differing instrumentality to the system.

#### Dimensions of Procedural Communication

One approach is to look to organizational theory for rules or norms of communication. Mouzelis (1967) aptly sums up the state of the literature on organizational theory when he notes that:

. . . the volume of the literature on this subject and its rate of increase is as impressive as the magnitude of the phenomena which it tries to analyze and explain. Moreover it is not only the sheer volume of studies which is enormous and bewildering but also the multiplicity of points of view from which organizational phenomena have been examined.

During the twentieth century, many theories have been presented as models for the effective management of organizations. As I have noted elsewhere, Russell (1971), each model has tended to stress one particular organizational output--usually either efficiency of production or employee satisfaction--and has focussed only on one particular system level. The importance of these theories for this study is expressed by Schein (1965) when he states:

. . . every manager makes assumptions about people. Whether he is aware of these assumptions or not, they operate as a theory in terms of which he decides how to deal with his superiors, peers, and subordinates. His effectiveness as a manager will depend upon the degree to which his assumptions fit empirical reality.

Our interest in organizational theory is directed to these assumptions which can be viewed as norms or rules for how people should relate to each other.

Russell (op. cit.), in an earlier analysis,<sup>12</sup> considered the communication implications of representative organizational theories. In making this analysis, a set of communication dimensions were used that were largely based on those proposed by Farace and Connelly (1970), and MacDonald and Farace (1970). Similar conceptualizations were used in the research reported by MacDonald (1970) and

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<sup>12</sup>The specific theories that were considered were: R. Likert, E. Mayo and Roethlisberger & Dickson, D. McGregor, H. A. Simon, F. W. Taylor, M. Weber and social systems theory as explicated by K. Berrien, J. G. Miller and E. H. Schein.

in two current research projects in the Department of Communication.<sup>13</sup> In particular, process and functional concepts were emphasized. Based primarily on the rationale presented by Russell (1971), a set of specific dimensions of communication, that would seem particularly appropriate to the study of dyadic communication, are presented in Table 1.<sup>14</sup>

Table 1. Dimensions of procedural communication.

| Dimension       | Conceptualization                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------------------------|
| Amount          | Expectation of volume of interaction between incumbents of particular positions                           |
| Function        | Expectation on functional purposes that messages can serve in the system                                  |
| Initiation      | Expectations on which member of a hierarchial dyad should initiate communication                          |
| Mode of contact | Implicit or explicit expectation in choice of linking channel                                             |
| Sequence        | Receiver pre-involvement in messages directed to him (distinguishing between sought and imposed messages) |

<sup>13</sup>Studies of communication patterns in a large banking organization and a federal agency. In particular, the questionnaire dealing with communication relationships and consensus between superior and subordinate was directly relevant.

<sup>14</sup>The set of dimensions are based on a set of general descriptors that could be applied to any process: what are the components, what is the direction and sequence of their linkage, how do the elements move through the system and what is the volume of elements that are processed? In this case, the process is the transfer of messages from extension agents to their supervisors.

These dimensions currently represent a 'common sense' classification of procedural aspects of communication. Their particular virtue lies in their system-neutral conceptualization, that allows them to be applied in a wide range of organizations or systems. The functional dimension is based on Berlo's (1970) conceptualization, in which he distinguishes between three major uses that people make of communication in an interdependent system. These three functions are:

- a. Production--getting the job done
- b. Innovation--exploring new behavioral alternatives
- c. Maintenance--keeping the system and its components functioning

No claim is made for the independence of these dimensions--in fact, empirical research will almost certainly suggest a more parsimonious set of dimensions with which to describe the procedural aspects of interaction.

#### Expression of Interdependence in Procedural Dimensions

Having established a set of dimensions that describe some of the major features of a dyadic communication process, it then becomes important to develop a basis for rating positions on these dimensions.

One such basis is an extension of the earlier analysis, Russell (1971), of the communication implications of the major organizational theories. As noted earlier,

most organizational theories can be viewed as providing a set of assumptions about how people should relate to each other--they thus provide sets of contrasting rules or norms for interactive behavior.

If we take the set of procedural dimensions of communication, that are outlined above, and apply these to the implications of the major theories of organization, then two broad sets of behavior emerge. These correspond closely to Barrett's (1970) distinction between the exchange model that stresses a basic independence between the individual and the organization; and his socialization and accommodation models that stress interdependence.

Table 2 represents the major expression of these two basic orientations.

Table 2. Interdependence of selected communication dimensions.

| Communication dimension | Expression  |                                           |
|-------------------------|-------------|-------------------------------------------|
|                         | Independent | Interdependent                            |
| Mode                    | Written     | Oral                                      |
| Amount                  | Low         | High                                      |
| Initiation              | Supervisor  | Subordinate or both                       |
| Sequence                | Imposed     | Sought                                    |
| Function                | Production  | Production,<br>Maintenance,<br>Innovation |

This basis for distinguishing or classifying various dimensions of communication bears considerable conceptual overlap with the commonly used notion of communication openness, as used for example by Berlo et al. (1971a). In general, more interdependent and more open communication would be synonymous. The notion of interdependence, or sharing, is advocated in this study because it more nearly describes the essential difference between the two types of behavior as they are expressed in a dyad.

### Hypotheses

Procedural aspects that are manifest in the amount, function, initiation, mode and sequencing of the communication between supervisors and their field staff in an extension agency, would seem to fill a highly instrumental and controlled influence on their interpersonal attraction.

Also, to the extent that their interaction will be highly restricted due to their lack of proximity and their particular role demands, it can be expected that there could be quite marked differences in the orientations of supervisors and field agents towards these aspects of communication. As noted in Chapter I, the role of the field agent requires that he interact in a number of groups, each of which may possess conflicting role expectations and demands. Given this potential for conflicting expectations and the lack of clearly quantifiable measures

of task performance; it is proposed that at least part of the field agent's role satisfaction, evaluation and satisfaction with his relationship with his supervisor will be a consequence of the influence of their coorientational similarity with respect to the procedural aspects of communication.

The theoretical model that would seem particularly appropriate for predicting and explaining such an influence is the collective level of Newcomb's (1953) coorientational theory, as expanded in propositions 1 and 2 (see earlier in this Chapter). Taking the dyad as a system, the model serves to relate coorientational similarity of the dyad members, toward an object (or set of objects), to their orientation toward each other. Both positive and negative interpersonal orientations are proposed in the extensions of Newcomb's formulation, and it is proposed that interpersonal orientations will serve a balancing function for the system. Having considered, in Chapter I, the particular dyadic relationship that might be expected to exist between field and supervisory staff in an extension agency, and introduced the procedural aspects of their interaction as a potentially highly salient or instrumental object of coorientation, it is now possible to specify two hypotheses based on the earlier propositions.

GENERAL HYPOTHESIS 1: The greater the degree of coorientational similarity toward (a) procedural rules of communication, or (b) the procedural expressions of their interaction, the greater the attraction between supervisors and field agents in an extension service.

GENERAL HYPOTHESIS 2: The greater the summative similarity of orientations between supervisors and field agents in an extension service, toward the procedural aspects of communication, the greater the attraction between them.

Specific hypotheses are detailed in Chapter III.

## CHAPTER III

### RESEARCH METHODOLOGY

As in virtually all current social research that is conducted in on-going organizations, this study has two basic aims. First, to provide the cooperating organization, the Michigan Cooperative Extension Service (MCES), with feedback on the operation of part of its system and possible recommendations on changes that might improve its operation or morale; and second, to obtain empirical data to test the theoretical hypotheses outlined in Chapter II.

While the focus of this report is almost exclusively centered on the empirical testing of the hypotheses derived from theory, there is still an overall cognizance of the obligation to the MCES.

#### The Sample

Data were collected from 100 field agents and 10 supervisors in the MCES during the period from November 15th 1971 to January 24th 1972. Each field agent completed a 209 item questionnaire relating to his<sup>15</sup> communication

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<sup>15</sup>Throughout this report only the masculine gender will be used for simplicity, although two of the supervisors and twenty-nine of the field agents were women.

with a nominated supervisor, while each supervisor completed ten such questionnaires dealing with his communication with each of ten of the selected field agents. This gave data on a total of 100 dyads.

### Research Setting and Method of Data Collection

There are a wide range of possible research settings that have been proposed and used in social science research. These range from virtually non-reactive observational methods as advocated by Webb et al. (1966), through case studies and extensive field surveys and more controlled field experiments to the tightly controlled laboratory research of such people as Leavitt (1951). There is no one 'right' way of collecting empirical data. The choice must ultimately depend on the weighing of relative advantages and disadvantages. The basic issue is one of relative control as contrasted to reactivity to the experimenter.

The general precedent seems to be to start with simple observation and increasingly introduce more and more control until true experimental conditions are achieved. In communication research most of the reported research has been of the observational or survey type, where control is achieved through randomization rather than elimination of extraneous factors.

Organizational communication research, such as that conducted in this study, faces two related restraints.

These are: first, a need to study intact relationships if we are to measure enduring behavioral implications of interaction; and second, the state of knowledge as mentioned earlier, is only at the exploratory stage. It was thus decided to make a field survey. To the extent that the results of this survey provide a clearer understanding of the implication of coorientational similarity in the dyad, then it will be possible to initiate the type of field experimentation proposed by Berlo et al. (1971a).

Given the survey setting, we were still left with a wide choice of actual methods of data collection. The main options would appear to be observation of interaction by a participant or non-participant observers,<sup>16</sup> interviewing, or mail or telephone questionnaires. Given the disadvantages of mail and telephone questionnaires as outlined by Moser (1958) and others,<sup>17</sup> and the need to obtain dyadic members' perceptions rather than their observed behavior, it was decided that the personal interview was the most appropriate method for this particular study. The actual technique that was used was the group

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<sup>16</sup>Observation can include such techniques as diary and log keeping as described by Axinn and Axinn (1969) and Farace et al. (1969).

<sup>17</sup>These disadvantages include low response rates and related response bias, no check on order or interpretation of questions, and no opportunity for supplementary observation.

technique, as described by MacDonald (1970), with groups of four to sixteen respondents completing the study instruments under the direction of a trained interviewer.<sup>18</sup> This method of data collection has been successfully used with groups in several organizations and it would appear to minimize experimenter bias or error and at the same time provide the advantages of control that accrue from having the researcher present. Finally, in terms of the major alternatives in selecting an appropriate method, we were left with the choice between a cross-sectional study at one point of time, and a longitudinal study over time. Given a population about which little was known in terms of their communication patterns, but who were expected to have had differential dyadic interaction due to differing length of administrative relationship, there would seem to have been real advantages in a longitudinal study where changes in similarity and their effects could have been observed and measured over time. However, against the increased precision that a longitudinal study would offer, there were the disadvantages of greater expense in re-interviewing, the influence of extraneous factors between repeated measures and reaction to the actual research

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<sup>18</sup>Eight field personnel were unable to attend group sessions and in these cases they were provided with a written explanation covering the points made in introducing the instruments in the group sessions.

procedure. It was thus concluded that provided the dyads had a history of over one year in length,<sup>19</sup> that they could be considered as at least approaching a dynamic equilibrium, with a sample presenting the range of equilibria. Given the exploratory nature of the study, the cross-sectional approach at one point of time was chosen as best fitting the circumstances.

### The Population and Sampling Method

The study was conducted with personnel in the Michigan Cooperative Extension Service (MCES). This organization has been described in some detail by Jain (1970) and Amend (1971), and in the pamphlet entitled 'A Career with the Cooperative Extension Service of Michigan State University'.

The following extensive quote from this pamphlet outlines the principal aspects of direct concern to this proposed study:

. . . program organization. The Director of Extension is in charge of all programs, personnel, finances, and operations of the Cooperative Extension Service. The staff consists of more than 400 professionals.

Five program directors are responsible for guiding programs in Agriculture, Natural Resources, Marketing, 4-H Youth, and Family Living Education. Some program areas have program leaders to assist the program directors.

Three assistant field operations directors are also responsible to the Director of Extension. They

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<sup>19</sup>This suggestion is based on Newcomb (1963), which would indicate some stability by that point of time.

counsel with county and district personnel, coordinate joint program efforts, meet with committees of county boards of supervisors, handle special problems, etc.

Supervisory teams are under the chairmanship of the extension program coordinator. Other team members consist of representatives of the five program areas. These teams are responsible for supervising all Extension personnel in their assigned geographical area.

Extension programs are carried to the people in Michigan's 83 counties through county Extension offices. A County Extension Director is in charge of each office. Agents are assigned on a county, multi-county, area or district basis.

Other functions at the state level include subject matter specialists who are grouped in departments on the MSU campus. Specialists are charged to provide current technical information for field agents. They also help plan and conduct county Extension programs.

The study focussed on the communication between a sample of the approximately 250 field personnel with members of the supervisory team. The field personnel represented all of the five program areas. The research population was defined as the total number of supervisory dyads that the ten designated members of the supervisory team had with field personnel. The population was thus defined by direct supervisory interaction. The population of supervisors was the five program directors, the three assistant field operations directors and two program leaders. While it is recognized that there were different demands in these different dyads, there was no clear hierarchy of supervision but rather there tended to be overlapping chains of responsibility. The aspect of multiple responsibility tends to be a feature of many extension organizations and is in sharp contrast to the strict

hierarchical structures in many business concerns. Given that our concern was with the development of similarity of orientation in supervisory dyads, the prime concern was only that the field personnel had some direct subordinate relationship with the designated supervisors. Therefore the fact that the supervisory population had different titles need not be of concern.<sup>20</sup>

Populations of supervisory-subordinate dyads were established, excluding any field personnel who had not had a direct subordinate relationship with a supervisor for at least one year, and any personnel working from the same center as their designated supervisor.<sup>21</sup> Where field personnel appear in more than one dyad, they were assigned at random to one or other dyad (no person should have had direct supervisory relationships with more than two of the supervisors). Once the ten populations were established, ten dyads were selected at random from each supervisory population, to yield a total of 100 dyads involving ten supervisors. The sample thus represented the total of field--one step supervisory dyads (after the exclusions referred to earlier).

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<sup>20</sup>The criterion was that a direct supervisory relationship be recognized by the MCES.

<sup>21</sup>As mentioned in Chapter I, we are concerned with communication under restricted interaction.

This design was neither a true random sample nor a precise stratified random sample. The procedures outlined above were selected as a way of sampling a range of relationships while at the same time ensuring that each supervisor only had to respond to ten dyadic interactions. To the extent that some supervisors were involved in many more dyads than are others, so the proposed sampling method under-represented these dyads. Given that the prime concern was with establishing as wide a range of dyadic relationships as possible, while at the same time providing some information about the organization as a whole, this would seem to have been an acceptable compromise.

In the case of sickness, transfer or resignation, or refusal causing a field agent to drop out of the sample, designated replacement personnel were identified for each supervisory population. In the actual data collection, two agents were in fact replaced--one because of a transfer to a different program area and the other because of a recent change in supervisor. Given that response to ten dyads would seem a maximum request to make to any one supervisor, the loss of a supervisor would have meant the reduction of the total sample of dyads by ten.<sup>22</sup>

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<sup>22</sup>Given the administrative set up of the MCES, it did not appear possible to replace a supervisor with another member of the supervisory staff. Informal discussions with the Extension Program Coordinator and others suggested that the ten designated supervisors in fact represented the current population of one-step supervisors.

### The Pretest

The field version of the research instrument was pretested with a small sample of agents. These agents were the complete professional staff in two counties adjacent to the state headquarters of the Michigan Cooperative Extension Service. Seven personnel were included in this pretest sample. The two prime purposes of this pretest were to check on the time needed to respond to the instrument, and to check on the clarity and meaningfulness of the instruction and items. Thus, in addition to completing the instruments, group debriefing sessions were conducted immediately afterwards. On the basis of this pretest the wording and order of several items were changed.

### Timing

The pretest interviews were conducted during the first half of November 1971, and the main field study was conducted between November 15th 1971 and January 3rd 1972. The supervisory staff were individually briefed about the task of responding to ten dyads and they completed the set of instruments at their individual convenience, between December 15th 1971 and January 24th 1972.

### Variables

The hypotheses, outlined at the end of Chapter II, relate supervisor-field agent coorientational similarity toward procedural aspects of communication to the attractiveness of their relationship. Three major categories of variables can be distinguished that need to be measured in any attempt to elucidate this hypothesized association--background, procedural communication, and system output measures.

#### Background variables

On the basis of Rogers' (1971) discussion of five dimensions along which dyads can vary, and Newcomb (1963), Kaufman (1960) and Nix and Bates (1962), it is possible to suggest a number of variables that would appear particularly relevant and applicable to this study.

These variables all relate to the shared background or barriers which might either enhance or detract from communication and system output. The following four background variables are proposed as being particularly likely to be associated both with communication and output measures:

1. Similarity of background--(Kaufman's social distance)

this variable is conceptualized as comprising the most important dimensions of similarity with respect to a professional work relationship. Age and previous extension experience are proposed as being most important.

2. Length of interaction--(Rogers' history)

the length of time that the dyad members have had in a work relationship to each other.

3. Spatial separation--(Kaufman's geographic distance)

the propinquity of the field agents' work centers to those of their designated supervisors.

4. Educational similarity--the similarity in level of

formal education between the members of each dyad.

Procedural communication variables

The basic communication variables will be measures of similarity of orientation toward the procedural aspects of communication. These measures should incorporate both the agreement and accuracy levels of coorientation as they relate to both the procedural rules and their expression in the actual dyadic communication.

Although it would be possible to generate a more comprehensive set of variables encompassing more facets of this coorientation, the following variables are proposed:

1. Supervisor/Field agent agreement about the procedural rules.
2. Supervisor/Field agent agreement about the expressed communication.
3. Field agent accuracy in predicting how his supervisor will view the expressed communication.
4. Supervisor accuracy in predicting how his field agent will view the expressed communication.

For each of these measures of coorientational similarity, it is possible to consider the independent action of each of the three functions and four other procedural dimensions of communication. This generates a set of 28 distinct measures of coorientational similarity as is shown in Table 3.

#### System output variables

It is not proposed to measure interpersonal attraction directly, but instead to measure a set of system output measures that would seem to have some conceptual overlap with attraction. On the basis of the research described by Newcomb (1963), the model proposed by Nix and Bates (1962) and the study by Berlo et al. (1971a), the following four measures of system output are proposed:

1. Field agent satisfaction with his role achievement.
2. The assessment by each member of the dyad of the formality of the relationship.
3. The evaluation by the supervisor of the field agent's performance.
4. Social control by the supervisor as it is indicated by the field agent's relative salary advancement.

If we take the two assessments of the relationship independently, this then gives us five output measures. When these are combined with the 28 measures of coorientational similarity, a set of 140 different specific hypotheses can be generated from the General Hypothesis 1

Table 3. Theoretical hypotheses derived from General Hypothesis 1.

| Coorientation<br>variables<br>(increased<br>similarity) | System output variables           |                                  |                         |                                    |                                   |
|---------------------------------------------------------|-----------------------------------|----------------------------------|-------------------------|------------------------------------|-----------------------------------|
|                                                         | Field<br>Agent<br>role<br>satis'n | Field<br>Agent<br>relat'<br>ship | %<br>salary<br>increase | Super-<br>visor<br>evalu-<br>ation | Super-<br>visor<br>relat'<br>ship |
| <u>Rule agreement</u>                                   |                                   |                                  |                         |                                    |                                   |
| amount                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| mode                                                    | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                | +                                 | +                                | +                       | +                                  | +                                 |
| production                                              | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                             | +                                 | +                                | +                       | +                                  | +                                 |
| innovation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| <u>Agreement re<br/>expressed</u>                       |                                   |                                  |                         |                                    |                                   |
| amount                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| mode                                                    | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                | +                                 | +                                | +                       | +                                  | +                                 |
| production                                              | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                             | +                                 | +                                | +                       | +                                  | +                                 |
| innovation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| <u>Field agent<br/>accuracy</u>                         |                                   |                                  |                         |                                    |                                   |
| amount                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| mode                                                    | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                | +                                 | +                                | +                       | +                                  | +                                 |
| production                                              | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                             | +                                 | +                                | +                       | +                                  | +                                 |
| innovation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| <u>Supervisor<br/>accuracy</u>                          |                                   |                                  |                         |                                    |                                   |
| amount                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| mode                                                    | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                              | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                | +                                 | +                                | +                       | +                                  | +                                 |
| production                                              | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                             | +                                 | +                                | +                       | +                                  | +                                 |
| innovation                                              | +                                 | +                                | +                       | +                                  | +                                 |

that was presented in the previous Chapter. These are shown in Table 3. The General Hypothesis 1 would suggest that each of these pairs of variables should be positively associated.

### Operationalization of the Variables

The instrument was prepared in two forms, Form A. for field staff and Form B. for Administrative staff, to allow the development of reciprocal measures for measuring the different types of similarity or orientation. Basically, each instrument was divided into six sections, the first dealing with control factors; the next four dealing with description and satisfaction with the communication relationship, the expectations for field agents' communication, perceptions of actual communication, and the predictions of other's rating of the field agent's communication; and the last section dealing with measures of relationship and evaluation of performance. The actual field agent instrument is included in the Appendix. Both versions of the instrument consisted entirely of multiple choice items based on those used by Bible (1959) and MacDonald (1970).

While these two sources were used extensively in determining the approach to operationalization, virtually no items or scales were directly appropriate to this proposed study, without extensive modification. Therefore, the operationalizations must be considered as untested.

In general, Likert type items were used, with four or five choice points in most cases. Where possible, the phrases of degree recommended by Dodd and Gerbrick (1960) were selected as the alternative choice points. The items were designed to operationalize the five dimensions of procedural communication that were presented in Table 1 and the control and output variables outlined above. Several items were included to measure each variable, with the intention of developing various indices. Only face validity was claimed for most items prior to the analysis. Table 4 below shows the various conceptual dimensions that the items were designed to relate to.

Table 4. Relationship of items to conceptual dimensions.

| Conceptual dimension           | Items                                   |
|--------------------------------|-----------------------------------------|
| <u>A. Background variables</u> |                                         |
| Similarity of background       | I.2,3,4                                 |
| Educational background         | I.5                                     |
| Length of interaction          | I.1                                     |
| Spatial separation             | (determined independently) <sup>1</sup> |

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<sup>1</sup>Spatial separation was determined from the in-state mileage chart in the Michigan State University Travel Regulations brochure.

Table 4.--Continued

| Conceptual dimension                                | Items                                                           |
|-----------------------------------------------------|-----------------------------------------------------------------|
| <b>B. <u>Procedural communication variables</u></b> |                                                                 |
| Mode of contact                                     | II.2, III.2,10,15,19,25,34, 38,46,47,49,51,52,54,57             |
| Amount                                              | II.3,10,13,16, III.5,7,12,16, 17,20,23,32,33,35,39,43,56        |
| Initiation                                          | II.1,9,12,15, III.4,8,11,13, 18,27,30,36,37,40,44,55,59         |
| Sequence                                            | II.5,6, III.1,3,9,14,21,22, 24,26,28,31,41,43,45,48,53,60       |
| Production function                                 | II.9,10, III.5,8,10,15,17,18, 24,28,32,35,36,44,46,48,49,53     |
| Maintenance function                                | II.12,13, III.2,7,9,11,14,19, 20,23,27,30,37,39,45,47,51,60     |
| Innovation function                                 | II.15,16 III.4,6,12,13,25,26, 31,33,38,40,42,43,52,56,57,59     |
| General interdependence                             | II.1,2,3,4,5,6,7,8, III.29, 50,58                               |
| <b>C. <u>System output variables</u></b>            |                                                                 |
| Role achievement                                    | II.4,11,14,17, VI.1,2,3 & 5 (for field staff)                   |
| Relationship                                        | VI.4,6,7 (for field staff)<br>VI.4,5,6 (for supervisors)        |
| Social control                                      | (Separate statement of relative salary increments) <sup>2</sup> |
| Evaluation                                          | VI.1,2,3 (for supervisors)                                      |

<sup>2</sup>Social control was determined on the basis of the agent's percentage salary increase from July 1968 to July 1971. Those with less than three years (11 agents) had their actual percentage increase adjusted by a factor based on the mean percentage increases granted to personnel in their program area over the other years.

It can be seen from Table 4 that each item related to at least one conceptual dimension<sup>23</sup> and that most items in Section II, III, IV and V related to both a function and another dimension. Given the lack of evidence about the relative importance and the relative independence of these conceptual dimensions of procedural communication, a systematic factorial approach was used in the generation of items. Given that it would appear probable that some of the dimensions would have strong pervasive effects, this design gives maximum replication of each dimension. However, by combining two dimensions in most items this actually works against the identification of clear, independent factors. The approach should thus yield a minimal core of orthogonal factors based only on the dimensions that are sufficiently instrumental to mask out the other dimension incorporated in each item.

### Coding

'A priori' each communication item in Sections II, III, IV and V of the instrument was rated along the interdependence dimension. Each item was designed to randomly favor one or other end of this dimension, so that any response set need not necessarily bias the results.

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<sup>23</sup>The items in Section IV and V correspond to those in Section III.

The items were coded from the completed instruments onto codesheets, at which stage they were transformed to represent a consistent direction on the interdependence dimension. Random checks on coding yielded an error rate of less than two errors per thousand questions coded.<sup>24</sup>

From the codesheets the responses were transferred to punch cards and the punching was independently verified. All of the subsequent index construction, transformation and analysis was made from the punch cards.

### Statistical Analysis

#### Index development

As discussed earlier, one of the principal aims of the initial analysis was to determine how well the individual items represent some underlying dimensions. There are two related aims in this activity: first, to identify and remove items that empirically do not correlate with the underlying dimensions, regardless of their face validity; and second, to evaluate how independent (orthogonal) the proposed dimensions of communication are. Inter-item correlations and a factor analysis were performed on the responses to all items in Section III of the instrument. A factor analysis was also performed on the items in Section VI relating to satisfaction and

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<sup>24</sup>Three errors in 2170 items.

interpersonal relationship, and the control items in Section I. Although it is recognized that the assumptions of factor analysis call for interval data and no evidence is presented to claim intervality for the items in these instruments, there is precedent in the writings of such persons as Vroom (1960) for treating Likert type scales as if they were in fact interval scales.

To the extent that we can reasonably assume random variation from linearity in perceptions, so we may choose to treat scales with equal-appearing intervals as if they were in fact interval measures. Caution, however, must be taken against too strict an interpretation of the precise magnitude of the correlations. In this case, we were not interested in determining the significance of the inter-item correlations; but rather, we were interested in identifying the underlying dimensions (or factors) that distinguish different groups of items, as discussed by Nunnally (1967, p. 364-365). Given this restriction, four independent indices were developed on the basis of inter-item correlations and factor analysis.

These orthogonal indices are assumed to represent basic underlying conceptual dimensions of procedural communication, and they are used in the subsequent descriptive and inferential analysis of the data. Items in the schedule that did not have a prime loading on one of these factors were not included in the subsequent analysis.

An initial factor analysis of the responses by the field agents to the sixty items relating to the procedural rules of supervisory communication (Section III of the instrument), yielded four factors that accounted for 24 percent of the variance. An inspection of the items with prime loadings<sup>25</sup> on each of these factors (see Tables 5 and 5a) showed that they closely corresponded to the conceptual dimensions of innovation function, maintenance function, sequencing and initiation. Further iterations of a varimax rotation failed to isolate any additional groupings of items that represented any of the remaining conceptual dimensions. However, while not isolating additional dimensions, the further iterations made it possible to check on the stability of prime loadings for the various items. No movement from one factor to another was found for any of the items which had a prime loading on one of the original four factors.

Having identified the four conceptual dimensions that proved to be essentially orthogonal to each other, inter-item correlational matrices were developed for all of the items that were identified in Table 4 as conceptually relating to one of these four dimensions. Within each of these matrices, the sum of inter-item correlations of more

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<sup>25</sup>A prime loading was defined as a correlation of  $\geq 0.40$  with the factor.

Table 5. Factor loadings for selected items relating to communication rules.

| Item<br>number | Factor loadings |                  |                 |                 |
|----------------|-----------------|------------------|-----------------|-----------------|
|                | 1<br>Innovation | 2<br>Maintenance | 3<br>Sequencing | 4<br>Initiation |
| 4              | <u>0.45</u>     | -0.09            | -0.14           | 0.00            |
| 6              | <u>0.55</u>     | -0.07            | -0.20           | 0.14            |
| 7              | 0.25            | <u>-0.58</u>     | -0.19           | 0.25            |
| 8              | 0.38            | 0.09             | -0.06           | <u>0.41</u>     |
| 9              | 0.25            | <u>-0.44</u>     | -0.03           | -0.10           |
| 11             | 0.20            | <u>-0.53</u>     | -0.01           | 0.15            |
| 13             | 0.12            | -0.16            | 0.08            | <u>0.59</u>     |
| 23             | -0.06           | <u>-0.52</u>     | 0.14            | -0.01           |
| 26             | <u>0.42</u>     | 0.00             | 0.09            | -0.16           |
| 27             | -0.22           | <u>-0.45</u>     | 0.08            | -0.19           |
| 31             | <u>0.43</u>     | 0.05             | 0.31            | -0.01           |
| 33             | <u>0.61</u>     | 0.02             | 0.09            | 0.00            |
| 36             | 0.27            | 0.09             | 0.09            | <u>0.56</u>     |
| 37             | -0.12           | 0.07             | 0.19            | <u>0.65</u>     |
| 38             | <u>0.57</u>     | -0.09            | 0.03            | -0.17           |
| 39             | 0.13            | <u>-0.62</u>     | 0.05            | -0.04           |
| 40             | <u>0.52</u>     | -0.09            | 0.28            | 0.02            |
| 41             | 0.25            | -0.09            | <u>0.40</u>     | -0.47           |
| 45             | -0.07           | <u>-0.17</u>     | <u>0.65</u>     | -0.17           |
| 47             | 0.03            | <u>-0.49</u>     | -0.07           | -0.07           |
| 48             | 0.23            | 0.03             | <u>0.46</u>     | 0.03            |
| 51             | 0.02            | <u>-0.50</u>     | 0.08            | 0.15            |
| 52             | <u>-0.40</u>    | -0.04            | -0.13           | -0.22           |
| 53             | 0.14            | 0.15             | <u>0.54</u>     | -0.06           |
| 60             | 0.18            | -0.04            | <u>0.46</u>     | 0.18            |

Table 5a. Communication questions selected for indices.

| Item number | Wording                                                                                                                    | Coding  |
|-------------|----------------------------------------------------------------------------------------------------------------------------|---------|
| 4.          | Share tentative new plans with supervisor.                                                                                 |         |
| 6.          | Develop new programs through frequent interaction with supervisor.                                                         |         |
| 7.          | Concern himself with the activities of his supervisor's family.                                                            |         |
| 8.          | Send in reports of current projects even when not requested.                                                               |         |
| 9.          | Offer suggestions about his supervisor's personal affairs.                                                                 |         |
| 11.         | Enquire about his supervisor's family when together.                                                                       |         |
| 13.         | Leave it to his supervisor to suggest new programs.                                                                        | Reverse |
| 23.         | Avoid bringing personal affairs into conversations with supervisor.                                                        | Reverse |
| 26.         | Consider modifying new programs to fit into local conditions.                                                              |         |
| 27.         | Make a point of introducing personal affairs into discussions.                                                             |         |
| 31.         | Seek involvement in setting priorities for new programs.                                                                   |         |
| 33.         | Contact his supervisor about new ideas whenever he comes across them.                                                      |         |
| 36.         | Wait for supervisor to request any reports that he wants.                                                                  | Reverse |
| 37.         | Leave it to his supervisor to suggest possible courses for personal advancement.                                           | Reverse |
| 38.         | Talk over new ideas with supervisor before submitting a proposal.                                                          |         |
| 39.         | Refer to his family's activities in conversations with his supervisor.                                                     |         |
| 40.         | Take the initiative to seek out new ideas to raise with his supervisor.                                                    |         |
| 41.         | Keep reminding his supervisor of unresolved issues.                                                                        |         |
| 45.         | Be prepared to offer criticism of his supervisor's ideas for the agent's advancement                                       |         |
| 47.         | Include personal news in memoranda to his supervisor.                                                                      |         |
| 48.         | Clarify ambiguous memoranda from his supervisor with him.                                                                  |         |
| 51.         | Feel free to discuss personal matters over the phone.                                                                      |         |
| 52.         | Submit new propositions or ideas in writing to his supervisor.                                                             | Reverse |
| 53.         | If he is not satisfied with the work that he has been assigned to, then 'grit his teeth and bear it' rather than complain. | Reverse |
| 60.         | Hesitate to question an assignment that is personally inconvenient.                                                        | Reverse |

than 0.20 was determined for each item, and only those items with more than three<sup>26</sup> such correlations were retained.

The inter-item correlations for these selected items are shown in Table 6. On the basis of these inter-item correlations it became evident that item 52 should be reversed before inclusion in an index of innovation, and that item 45 should be dropped from the set of items relating to the maintenance dimension.

Having selected these items (which are shown in Table 5a), their factor loadings were checked. As shown in Table 5, each item that was retained, had a prime loading on at least the factor that related to its conceptual dimension. Items 8, 31 and 41 show loadings of more than 0.30 on another factor as well, which indicates that they are not clearly independent. However, because of their high number of inter-item correlations, these items were retained, and four indices were constructed based on the simple sum of scores on each of the four sets of items. These four dimensions of procedural communication were the only communication dimensions that were included in the subsequent analysis. As a final check on the independence, or orthogonality, of these indices, interindex correlations

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<sup>26</sup>For the initiation dimension, the criterion was relaxed to  $> 3$ .

Table 6. Inter-item correlations for selected communication items.

| (a) <u>Innovation</u>                                |    |     |     |     |     |     |         |    |      | (b) <u>Maintenance</u>               |     |     |     |     |         |     |     |     |  |
|------------------------------------------------------|----|-----|-----|-----|-----|-----|---------|----|------|--------------------------------------|-----|-----|-----|-----|---------|-----|-----|-----|--|
| Item                                                 | 4  | 6   | 26  | 31  | 33  | 38  | 40      | 52 | Item | 7                                    | 9   | 11  | 23  | 27  | 39      | 45  | 47  | 51  |  |
| 4                                                    | .  | .38 | .20 | .18 | .32 | .32 | .11-.08 |    | 7    | .                                    | .26 | .51 | .16 | .18 | .38-.15 | .19 | .20 |     |  |
| 6                                                    |    | .   | .21 | .23 | .29 | .30 | .15-.29 |    | 9    |                                      | .   | .20 | .17 | .07 | .12-.02 | .20 | .23 |     |  |
| 26                                                   |    |     | .   | .14 | .18 | .23 | .14-.14 |    | 11   |                                      |     | .   | .21 | .07 | .32     | .04 | .14 | .15 |  |
| 31                                                   |    |     |     | .   | .28 | .21 | .37-.29 |    | 23   |                                      |     |     | .   | .21 | .39     | .30 | .27 | .24 |  |
| 33                                                   |    |     |     |     | .   | .24 | .42-.15 |    | 27   |                                      |     |     |     | .   | .33     | .10 | .34 | .08 |  |
| 38                                                   |    |     |     |     |     | .   | .33-.21 |    | 39   |                                      |     |     |     |     | .       | .12 | .40 | .25 |  |
| 40                                                   |    |     |     |     |     |     | -.20    |    | 45   |                                      |     |     |     |     |         | .   | .04 | .12 |  |
| 52                                                   |    |     |     |     |     |     | .       |    | 47   |                                      |     |     |     |     |         |     | .   | .19 |  |
|                                                      |    |     |     |     |     |     |         |    | 51   |                                      |     |     |     |     |         |     | .   | .   |  |
| Item 52 to be reversed before inclusion in the index |    |     |     |     |     |     |         |    |      | Item 45 to be dropped from the index |     |     |     |     |         |     |     |     |  |
| (c) <u>Sequencing</u>                                |    |     |     |     |     |     |         |    |      | (d) <u>Initiation</u>                |     |     |     |     |         |     |     |     |  |
| Item                                                 | 41 | 45  | 48  | 53  | 60  |     |         |    | Item | 8                                    | 13  | 36  | 37  |     |         |     |     |     |  |
| 41                                                   | .  | .25 | .26 | .21 | .21 |     |         |    | 8    | .                                    | .26 | .33 | .14 |     |         |     |     |     |  |
| 45                                                   |    | .   | .29 | .38 | .27 |     |         |    | 13   |                                      | .   | .41 | .35 |     |         |     |     |     |  |
| 48                                                   |    |     | .   | .15 | .33 |     |         |    | 36   |                                      |     | .   | .30 |     |         |     |     |     |  |
| 53                                                   |    |     |     | .   | .25 |     |         |    | 37   |                                      |     |     | .   |     |         |     |     |     |  |
| 60                                                   |    |     |     |     | .   |     |         |    |      |                                      |     |     |     |     |         |     |     |     |  |

were determined. These are shown in Table 7 below, none are statistically significantly different from zero at the  $p < .05$  level.

Table 7. Inter-index correlations.

| Index       | Innovation | Maintenance | Sequencing | Initiation |
|-------------|------------|-------------|------------|------------|
| Innovation  | .          | 0.11        | 0.18       | 0.16       |
| Maintenance |            | .           | 0.06       | 0.05       |
| Sequencing  |            |             | .          | 0.00       |
| Initiation  |            |             |            | .          |

NS. two tailed test

As a further check on the use of these indices at different coorientational levels, a similar factor analysis was made of the field agent responses about how the procedural aspects of their supervisory communication were expressed in their actual communication. This analysis relates to Section IV of the instrument (see Appendix) and includes the same items as Section III, but with a different set of foils.

The same four factors were identified using a varimax rotation, with the same order as was found for the items relating to the procedural rules. The four factors

(representing the conceptual dimensions of innovation, maintenance, sequencing and initiation) accounted for 29 percent of the variance.

Table 8 shows the factor loadings for the selected set of 25 items that were chosen on the basis of the analysis at the rule level. The factor loading on the assigned index is underlined in each case. Twenty out of the 25 selected items prime load on their assigned index; while 2 prime load on another factor and 3 do not clearly prime load on any of the factors.

On the basis of the strong overlap, it was decided to use the indices that were chosen on the basis of the original analysis at the rule level.

A similar procedure was used to analyse the responses by the field agents to the seven items relating to satisfaction with role achievement and their relationship with their supervisor (Section VI of the instrument). Two factors accounting for 57 percent of the variance were identified. These factors corresponded to the conceptual dimensions of achievement and relationship.

Table 9 shows the factor loadings for the seven items (which appear in Table 9a) and Table 10 their inter-item correlations. On the basis of these data, items 2, 3 and 5 were summed to form an index of role achievement and items 4 and 7 were summed to form an index of perception of

Table 8. Factor loadings for selected items relating to expressed communication.

| Item<br>number | Factor loadings |                  |                 |                 |
|----------------|-----------------|------------------|-----------------|-----------------|
|                | 1<br>Innovation | 2<br>Maintenance | 3<br>Sequencing | 4<br>Initiation |
| 4              | <u>0.61</u>     | 0.17             | 0.11            | -0.07           |
| 6              | <u>0.65</u>     | 0.17             | -0.23           | 0.30            |
| 7              | 0.04            | <u>0.60</u>      | -0.07           | 0.13            |
| 8              | 0.64            | 0.06             | -0.07           | <u>0.03</u>     |
| 9              | 0.04            | <u>0.44</u>      | 0.03            | 0.08            |
| 11             | 0.00            | <u>0.56</u>      | -0.07           | -0.08           |
| 13             | 0.16            | 0.11             | 0.20            | <u>0.46</u>     |
| 23             | -0.29           | <u>0.57</u>      | 0.25            | 0.02            |
| 26             | - <u>0.02</u>   | -0.23            | 0.44            | -0.17           |
| 27             | -0.18           | <u>0.58</u>      | 0.01            | -0.31           |
| 31             | <u>0.64</u>     | -0.01            | 0.22            | -0.27           |
| 33             | <u>0.63</u>     | -0.04            | 0.00            | 0.32            |
| 36             | 0.17            | 0.34             | -0.10           | <u>0.45</u>     |
| 37             | 0.26            | -0.10            | 0.28            | <u>0.46</u>     |
| 38             | <u>0.53</u>     | 0.06             | -0.07           | -0.26           |
| 39             | -0.03           | <u>0.55</u>      | 0.20            | -0.18           |
| 40             | <u>0.58</u>     | 0.14             | 0.30            | -0.08           |
| 41             | 0.09            | 0.18             | <u>0.59</u>     | -0.10           |
| 45             | 0.00            | -0.30            | <u>0.04</u>     | 0.20            |
| 47             | -0.02           | <u>0.47</u>      | 0.16            | 0.07            |
| 48             | 0.35            | -0.09            | <u>0.56</u>     | 0.22            |
| 51             | 0.03            | <u>0.36</u>      | 0.11            | -0.25           |
| 52             | - <u>0.40</u>   | 0.09             | -0.14           | -0.06           |
| 53             | 0.12            | 0.18             | <u>0.51</u>     | 0.34            |
| 60             | 0.01            | 0.22             | <u>0.12</u>     | 0.11            |

Table 9. Factor loadings for items relating to output.

| Item number | Factor loadings  |              |
|-------------|------------------|--------------|
|             | Role achievement | Relationship |
| 1           | 0.63             | 0.42         |
| 2           | <u>0.69</u>      | -0.06        |
| 3           | <u>0.83</u>      | -0.05        |
| 4           | -0.20            | <u>0.81</u>  |
| 5           | <u>0.81</u>      | -0.15        |
| 6           | 0.58             | 0.44         |
| 7           | 0.08             | <u>0.85</u>  |

Table 9a. Questions relating to output measures.

| Item number | Wording                                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.          | How satisfied are you that you have sufficient communication with your supervisor to do your job well?                                                     |
| 2.          | How satisfied are you with your present job when you compare it to similar county extension positions in the state?                                        |
| 3.          | How satisfied are you with the progress that you are making towards the goals that you have set for yourself in your present position?                     |
| 4.          | How would you describe your overall relationship with your supervisor?                                                                                     |
| 5.          | How satisfied are you with your present job when you consider the expectations you had when you took the job?                                              |
| 6.          | How satisfied are you with your job relationships with your supervisor in so far as he is helping to make your work a rewarding and successful experience? |
| 7.          | How would you describe your overall interaction with your supervisor?                                                                                      |

Table 10. Inter-item correlations for items relating to output.

| Item | 1    | 2     | 3     | 4     | 5    | 6    | 7 |
|------|------|-------|-------|-------|------|------|---|
| 1    | .    |       |       |       |      |      |   |
| 2    | 0.26 | .     |       |       |      |      |   |
| 3    | 0.39 | 0.43  | .     |       |      |      |   |
| 4    | 0.02 | -0.13 | -0.10 | .     |      |      |   |
| 5    | 0.25 | 0.50  | 0.72  | -0.10 | .    |      |   |
| 6    | 0.67 | 0.25  | 0.27  | 0.09  | 0.25 | .    |   |
| 7    | 0.27 | 0.12  | 0.08  | 0.60  | 0.00 | 0.21 | . |

relationship. Items 1 and 6 were dropped from the subsequent analysis.

Essentially the same procedure was used for the five items (shown in Table 11a) relating to background of the field agents (Section I of the instrument). Two factors, accounting for 71 percent of the variance were identified. A consideration of the factor loadings shown in Table 11 and the inter-item correlations shown in Table 12, indicates that items 2, 3 and 4 do in fact correspond to the conceptual dimension of similarity of background; while items 1 and 5 are relatively independent. On this basis all three items were retained to form an index of similarity of background, and two single item measures of length of interaction and educational background.

Table 11. Factor loadings for background measures.

| Item number | Factor loadings |       |
|-------------|-----------------|-------|
|             | Background      | --    |
| 1           | 0.42            | 0.60  |
| 2           | <u>0.72</u>     | 0.41  |
| 3           | <u>0.87</u>     | 0.23  |
| 4           | <u>0.85</u>     | -0.01 |
| 5           | 0.02            | 0.88  |

Table 11a. Questions relating to background measures.

| Item number | Wording                                                        |
|-------------|----------------------------------------------------------------|
| 1.          | How many years have you worked under this person's authority?  |
| 2.          | How many years have you been working in your present position? |
| 3.          | How many years have you been in extension work?                |
| 4.          | How old are you?                                               |
| 5.          | If you have received graduate training, please specify below.  |

Table 12. Inter-item correlations for background measures.

| Item | 1    | 2    | 3    | 4    | 5 |
|------|------|------|------|------|---|
| 1    | .    |      |      |      |   |
| 2    | 0.47 | .    |      |      |   |
| 3    | 0.49 | 0.62 | .    |      |   |
| 4    | 0.21 | 0.48 | 0.64 | .    |   |
| 5    | 0.26 | 0.31 | 0.22 | 0.19 | . |

### Inferential analysis

In considering the major statistical analysis of the study, certain general issues will be considered first, then the detailed procedures for testing the two theoretical hypotheses outlined in Chapter II. As discussed in considering the development of indices, individual items were generally not used directly in hypothesis testing, but rather as components of summation indices developed from factor analyses.

Lacking any 'a priori' regression information, these indices were applied as simple unweighted summations of the items showing high inter-item correlations and/or prime loading on orthogonal factors.

Each of the communication indices represents a particularly crucial aspect of the study and therefore a

number of items were included in the instrument and were retained in the indices (see Tables 4 and 5). The range for these communication indices varied from a minimum of 4 to 20 for initiation, to a maximum of 8 to 40 for both innovation and maintenance.<sup>27</sup> Given these ranges, the indices were treated as interval data and the inferential hypothesis testing was based upon the Pearson Product Moment Correlation coefficient,<sup>28</sup> which is the interval measure most appropriate to survey data.

In using the product moment correlation coefficient, the linear rule was taken as a highly desirable approximation in our quest to predict and explain human behavior. The advantages of the linear rule are outlined by Hays (1963, p. 565), and any small deviations from linearity are treated as error effects rather than true effects. Where the assumption of linearity is significantly violated, then neither zero order nor partial correlations can be validly calculated using  $r$ . For this reason  $\eta^2$ s are reported and also any statistically significant curvilinear relationships.<sup>29</sup>

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<sup>27</sup>For Sections IV and V, the range for each item is only 1 to 4 and therefore the index ranges are reduced accordingly.

<sup>28</sup>The assumptions and computation of  $r$  are outlined in detail in McNemar (1962).

<sup>29</sup>
$$F = \frac{(\eta^2 - r^2)/(G-2)}{(1-\eta^2)/(N-G)} - (\text{McNemar (1962, pp. 275-281)}).$$

One other issue of concern is the question of inference when we are dealing with a finite population. McNemar (1962, p. 93) and Edwards (1968, pp. 40-43) both discuss this issue. In this study, we included 100 out of a total population of about 500 dyads, which gives a sample size of about 20% of the population. This is at the level that Edwards suggests is reasonable to neglect the need for a finite correction factor.

An  $\alpha$  level of 0.05 was established for the rejection of the null hypotheses in this study (the null hypotheses being stated in terms of  $r$  not differing significantly from zero). The  $t$  test for testing the significance of the difference of an achieved  $r$  from zero is outlined in Hays (1963, p. 520) and McNemar (1962, pp. 137-138).<sup>30</sup>

Another issue of general application is the transformation of index scores. The focus of the hypotheses is on the coorientational similarity between index values. The general way of achieving a measure of similarity is to determine a difference score between pairs, as noted by Wackman (1969). However, this yields a measure of dissimilarity rather than similarity.

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<sup>30</sup>For  $N$  greater than 50, McNemar suggests the use of the  $Z$  distribution:

$$Z = \frac{r}{\frac{1}{\sqrt{N}}}$$

For ease of interpretation, each index difference score was thus subtracted from the maximum score for that index plus one, so that larger index values reflect greater similarity.

$$C = (I_{\max} + 1) - (|I_1 - I_2|)$$

where:

C = similarity score  
I = maximum possible score  
on this index

$I_1$  = Individual 1's score

$I_2$  = Individual 2's score

Using this formula, similarity scores were developed for each of the four levels of similarity that were described earlier in this chapter:

1. Agreement on the rules of procedural communication.
2. Agreement on the actual dyadic communication.
3. Field agent accuracy in predicting supervisor perceptions.
4. Supervisor accuracy in predicting field agent perceptions.

### Hypothesis testing

General Hypothesis 1 (see previous chapter) can be rephrased in the  $H_0$  form as: That there will be a zero correlation between coorientational similarity (as demonstrated by agreement and accuracy) with respect to procedural aspects (rules and expression) of supervisory

communication, and interpersonal relationship and evaluation between field agents and their supervisors in the extension service.

This hypothesis can be applied to each of the four dimensions of procedural communication; and thus it generates sixteen research hypotheses for each dependent variable, or sixty-four possible relationships with this set of data. These are depicted in Table 13.

These are one-tailed hypotheses (because of the directional prediction in the theoretical hypothesis) requiring the correlation of similarity indices with the dependent variables. The significance of the difference of the achieved  $r$ 's from zero was determined using the  $Z$  test. Because of the assumption of linearity inherent in the use of the product moment correlation coefficient-- $r$ , eta values are also computed for all  $r$ 's that are significantly different from zero and the significance of any curvilinearity tested. In addition, partial correlation coefficients are reported to allow greater interpretation of any significant relationships.

General Hypothesis 2 (see previous chapter) can be rephrased in the  $H_0$  form as: That there will be zero correlation between the summative similarity of orientations (as demonstrated by agreement and accuracy) with respect to procedural aspects of supervisory communication, and

Table 13. Empirically tested hypotheses that are derived from General Hypothesis 1.

| Coorientational<br>variables<br>(increased<br>similarity) | System output variables           |                                  |                         |                                    |                                   |
|-----------------------------------------------------------|-----------------------------------|----------------------------------|-------------------------|------------------------------------|-----------------------------------|
|                                                           | Field<br>Agent<br>role<br>satis'n | Field<br>Agent<br>relat'<br>ship | %<br>salary<br>increase | Super-<br>visor<br>evalu-<br>ation | Super-<br>visor<br>relat'<br>ship |
| <u>Agreement re</u><br><u>rules</u>                       |                                   |                                  |                         |                                    |                                   |
| innovation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                               | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| <u>Agreement re</u><br><u>expressed</u>                   |                                   |                                  |                         |                                    |                                   |
| innovation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                               | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| <u>Field agent</u><br><u>accuracy</u>                     |                                   |                                  |                         |                                    |                                   |
| innovation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                               | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| <u>Supervisor</u><br><u>accuracy</u>                      |                                   |                                  |                         |                                    |                                   |
| innovation                                                | +                                 | +                                | +                       | +                                  | +                                 |
| maintenance                                               | +                                 | +                                | +                       | +                                  | +                                 |
| sequence                                                  | +                                 | +                                | +                       | +                                  | +                                 |
| initiation                                                | +                                 | +                                | +                       | +                                  | +                                 |

interpersonal relationship and evaluation between field agents and their supervisors in the extension service.

This hypothesis can be applied to each of the five output measures as shown in Table 14. It is a two tailed hypothesis requiring testing the significance of the multiple regression equation. In this case a Least Squares Delete regression program is used to determine the collective effect of the sixteen measures of coorientational similarity, and to determine the most parsimonious set of measures that should be taken into account.

Descriptive analysis

Section II of the instrument is primarily used to provide descriptive data on the communication interaction of field agents and their supervisors. Summary statistics in the form of means and standard deviations are reported where-ever appropriate and the t test is used to determine the significance of differences between field agents and supervisors. As well as summary statistics on Section II, descriptive statistics are also reported for the various levels of coorientational similarity between dyads.

Table 14. Empirically tested hypotheses that are derived from General Hypothesis 2.

|                                                                |                                     | System output variables  |                          |                   |                       |                         |   |   |
|----------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------|-----------------------|-------------------------|---|---|
| Coorientation and background variables                         |                                     | Field Agent role satis'n | Field Agent relationship | % salary increase | Supervisor evaluation | Supervisor relationship |   |   |
| <hr/>                                                          |                                     |                          |                          |                   |                       |                         |   |   |
| <u>Background</u>                                              |                                     |                          |                          |                   |                       |                         |   |   |
| Similarity<br>Interaction<br>Distance apart<br>Education level | }                                   |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          |                   |                       |                         |   |   |
|                                                                | + (1) <u>Agreement re rules</u>     |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     | Innovation               | }                        |                   |                       |                         |   |   |
|                                                                |                                     | Maintenance              |                          |                   |                       |                         |   |   |
|                                                                |                                     | Sequencing               |                          |                   |                       |                         |   |   |
|                                                                |                                     | Initiation               |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          | +                 | +                     | +                       | + | + |
| <u>Background</u>                                              | + (2) <u>Agreement re expressed</u> |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     | Innovation               | }                        |                   |                       |                         |   |   |
|                                                                |                                     | Maintenance              |                          |                   |                       |                         |   |   |
|                                                                |                                     | Sequencing               |                          |                   |                       |                         |   |   |
|                                                                |                                     | Initiation               |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          | +                 | +                     | +                       | + | + |
| <u>Background</u>                                              | + (3) <u>Field agent accuracy</u>   |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     | Innovation               | }                        |                   |                       |                         |   |   |
|                                                                |                                     | Maintenance              |                          |                   |                       |                         |   |   |
|                                                                |                                     | Sequencing               |                          |                   |                       |                         |   |   |
|                                                                |                                     | Initiation               |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          | +                 | +                     | +                       | + | + |
| <u>Background</u>                                              | + (4) <u>Supervisor accuracy</u>    |                          |                          |                   |                       |                         |   |   |
|                                                                |                                     | Innovation               | }                        |                   |                       |                         |   |   |
|                                                                |                                     | Maintenance              |                          |                   |                       |                         |   |   |
|                                                                |                                     | Sequencing               |                          |                   |                       |                         |   |   |
|                                                                |                                     | Initiation               |                          |                   |                       |                         |   |   |
|                                                                |                                     |                          |                          | +                 | +                     | +                       | + | + |
| (1) <u>Agreement on rules</u>                                  |                                     |                          |                          |                   |                       |                         |   |   |
|                                                                | + (2) <u>Agreement re expressed</u> |                          |                          |                   |                       |                         |   |   |
|                                                                | + (3) <u>Field agent accuracy</u>   |                          |                          |                   |                       |                         |   |   |
|                                                                | + (4) <u>Supervisor accuracy</u>    | +                        | +                        | +                 | +                     | +                       |   |   |

## CHAPTER IV

### RESULTS

The results of this study are presented in four main sections. First, the characteristics of the sample; second, the major differences in perceptions of communication between supervisors and subordinates; third, the actual levels of coorientational similarity that were found; and fourth, the results for each hypothesis will be shown.

#### Characteristics of the Sample

The 100 field agents in the study were stationed in 63 of the 82 counties in Michigan, and therefore the sample included agents dealing with both rural and urban problems and with a considerable range in their proximity to their supervisors. Table 15 shows the distribution of distances between agents' work centers and their nominated supervisors.<sup>31</sup> The median distance apart was 97 miles.

All of the supervisors had a Masters or Doctoral degree, while approximately two-thirds of the field agents

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<sup>31</sup>Nine of the supervisors were stationed in East Lansing and one in Marquette, Michigan.

had Masters degrees and the remaining one-third had less than a Masters degree.

Table 15. Distance of agents from their supervisors.

| Distance        | Percentage of sample |
|-----------------|----------------------|
| 0 - 49 miles    | 11                   |
| 50 - 99 miles   | 41                   |
| 100 - 149 miles | 22                   |
| 150 - 199 miles | 11                   |
| 200 - 549 miles | 15                   |

In general, the field agents and their supervisors had highly similar backgrounds in extension. The similarity of background index (based on age, time in current position and years in extension work) had a possible range from 4 to 15, with a score of 15 representing complete similarity. Table 16 shows the level of similarity that was found in this study.

Table 16. Similarity of extension background in field agent/supervisor dyads.

| Similarity score | Percentage of sample |
|------------------|----------------------|
| 14-15            | 33                   |
| 12-13            | 25                   |
| 10-11            | 28                   |
| less than 10     | 14                   |

Exactly half of the field agents had worked for less than five years under their supervisors' direct authority and half for over five years. Fourteen percent reported less than two years working under the particular supervisor.

The field agents were generally highly satisfied with their role achievement. The index of role achievement had a maximum range of 3 to 15. The mean score was 12.53. Table 17 shows the distribution of index scores on role satisfaction.

Table 17. Distribution of scores on field agent role satisfaction.

| Role satisfaction score | Percentage of sample |
|-------------------------|----------------------|
| 14-15                   | 35                   |
| 12-13                   | 51                   |
| 10-11                   | 5                    |
| less than 10            | 9                    |

Both field agents and supervisors viewed their relationships as somewhat more formal and business-like than personal and social. The index had a maximum range from 2 to 10, with a score of 2 representing a completely formal and business-like relationship and a score of 10 representing a completely personal and social relationship.

The mean score for field agents was 4.83, while the mean for supervisors was 4.96. Table 18 shows the distribution of relationship scores.

Table 18. Distribution of scores on perceptions of the dyadic relationships.

| Relationship score | Percentage of sample |             |
|--------------------|----------------------|-------------|
|                    | Field Agents         | Supervisors |
| 2-3                | 13                   | 10          |
| 4-5                | 55                   | 54          |
| 6-7                | 32                   | 30          |
| 8-10               | 0                    | 6           |

Percentage salary increases, of July 1971 salaries over July 1968 salaries, ranged from 9 to 51 percent, with a mean increase of 24 percent. Table 19 shows the distribution of salary increases.

Table 19. Percentage salary increases for field agents.

| Salary increase  | Percentage of sample |
|------------------|----------------------|
| 0 - 19.9 %       | 14                   |
| 20.0 - 24.9      | 32                   |
| 25.0 - 29.9      | 22                   |
| 30.0 - 34.9      | 18                   |
| 35.0 and greater | 14                   |

Just as the field agents in general were highly satisfied with their role achievement, so the supervisors tended to be highly satisfied with the performance of the field agents. The supervisor evaluation index had a possible range of 2 to 10, with a score of 10 representing complete satisfaction. The mean index score was 8.16. Table 20 shows the distribution of supervisor evaluations of field agents.

Table 20. Distribution of scores on supervisor evaluations of field agents.

| Evaluation score | Percentage of sample |
|------------------|----------------------|
| 9-10             | 50                   |
| 7-8              | 32                   |
| 5-6              | 10                   |
| 3-4              | 8                    |

Finally, in considering the characteristics of the sample, the association between the various background and output variables is presented. Table 21 shows the inter-item correlations between the four background measures.

The field agents' level of education and the similarity of their background in extension to that of their supervisors are both significantly associated with their length of interaction with their supervisors. This may be a reflection of a common dependence on time. Those who

Table 21. Inter-item correlations for background variables.

| Index                    | Inter-<br>action | Educa-<br>tion | Dis-<br>tance | Simi-<br>larity |
|--------------------------|------------------|----------------|---------------|-----------------|
| Length of interaction    | .                |                |               |                 |
| Level of education       | 0.26**           | .              |               |                 |
| Distance between centers | 0.01             | -0.16          | .             |                 |
| Similarity of background | 0.35**           | 0.11           | -0.23*        | .               |

\*p < .05 two-tail.

\*\*p < .01 two-tail.

have been in the service for more than six years inevitably will have had a long interaction with the particular supervisor and will have had a longer time within which to have completed a Masters degree. The other significant association is between similarity of background and distance between centers. This would seem to suggest that personnel are promoted to counties closer to the supervisory centers. Table 22 shows the inter-item correlations between the various measures of the attractiveness of the supervisor/field agent relationship.

Supervisor evaluation of the field agents' role performance is significantly associated with the field agents' role satisfaction, with the percentage salary increase granted to the field agents, and with the supervisors' perceptions of their relationship with their field agents.

Table 22. Inter-item correlations for output measures.

| Index                    | Role<br>satis-<br>faction | Field<br>relat'<br>ship | Salary | Evalua-<br>tion | Sup.<br>relat'<br>ship |
|--------------------------|---------------------------|-------------------------|--------|-----------------|------------------------|
| Role satisfaction        | .                         |                         |        |                 |                        |
| Field agent relationship | -0.02                     | .                       |        |                 |                        |
| Salary increase          | 0.00                      | 0.13                    | .      |                 |                        |
| Supervisor evaluation    | 0.30**                    | 0.15                    | 0.29** | .               |                        |
| Supervisor relationship  | 0.04                      | 0.09                    | -0.09  | 0.37**          | .                      |

\*\*p < .01 two-tail.

Table 23 shows the inter-item correlations between the background variables and the output measures. Both zero-order and partial correlations are presented to help clarify the independent association between the variables. The partial correlations control on the other background variables and the communication variables that relate to the actual agreement level.

Level of education has a 'true' significant association with field agent role satisfaction; and supervisor perceptions of their relationship is associated with the degree to which they have a similar extension background to that of the particular field agents.

Table 23. Inter-index correlations between background and output measures.

| Background variable             | Role satisfaction<br>r partial | Field Agent relationship<br>r partial | Salary<br>r partial | Evaluation<br>r partial | Supervisor relationship<br>r partial |
|---------------------------------|--------------------------------|---------------------------------------|---------------------|-------------------------|--------------------------------------|
| Length of interaction           | 0.10 0.07                      | 0.19* 0.16                            | -0.12 -0.09         | 0.21* 0.15              | 0.22* 0.12                           |
| Level of education              | 0.26** 0.22*                   | 0.10 -0.01                            | 0.01 0.04           | 0.14 0.08               | 0.06 -0.02                           |
| Distance between centers        | -0.11 -0.10                    | -0.17 -0.15                           | 0.00 -0.01          | -0.03 -0.02             | -0.09 -0.05                          |
| Extension experience similarity | -0.05 -0.09                    | 0.07 -0.01                            | -0.13 -0.10         | 0.02 -0.02              | 0.22* 0.21*                          |

\*p &lt; .05 two-tailed test.

\*\*p &lt; .01 two-tailed test.

Supervisor and Field Agent Perceptions  
of their Communication

The major differences in perceptions of communication are shown in Table 24. Supervisors perceived less frequent overall communication than did the field agents; although, field agents perceived significantly less communication about personal matters and new ideas than their supervisors did. Overall the supervisors were less satisfied with the amount of communication than were their field agents and in particular significantly more supervisors wanted more communication about the existing program. Field agents perceived significantly more of the communication than they received as being imposed by supervisors, rather than being sought by them. Similarly, the field agents also perceived significantly more of the communication, coming from their supervisors, as relating to getting the job done (the existing program) rather than relating to personal matters and new ideas.

Table 25 summarizes the index scores for supervisors and field agents on the four dimensions of procedural communication. On all four indices, supervisors expressed significantly greater interdependence (higher index scores) on the procedural rules of communication between field agents and their supervisors. There were no significant differences between the two groups in their perceptions of

Table 24. Supervisor/field agent differences in perceptions of communication.

| Communication dimension                        | Super-<br>visors<br>% | Field<br>Agents<br>% | $\chi^2$ | Signifi-<br>cance |
|------------------------------------------------|-----------------------|----------------------|----------|-------------------|
| Initiation                                     |                       |                      |          |                   |
| supervisor initiates                           | 20                    | 26                   |          |                   |
| field agents initiate                          | 11                    | 15                   | 2.18     |                   |
| both about equally                             | 69                    | 59                   | df=2     | N.S.              |
| Mode                                           |                       |                      |          |                   |
| more written                                   | 16                    | 17                   |          |                   |
| 1/2 and 1/2                                    | 49                    | 35                   | 4.40     |                   |
| more oral                                      | 35                    | 48                   | df=2     | N.S.              |
| Frequency                                      |                       |                      |          |                   |
| once a week or more                            | 6                     | 15                   |          |                   |
| once a month or more                           | 47                    | 54                   | 7.62     |                   |
| less often                                     | 47                    | 31                   | df=2     | p < .05           |
| Satisfaction with amount                       |                       |                      |          |                   |
| satisfied <sup>1</sup>                         | 25                    | 47                   | 9.57*    |                   |
| like more                                      | 75                    | 53                   | df=1     | p < .01           |
| Sequencing of communication<br>to field agents |                       |                      |          |                   |
| more directed by<br>supervisors                | 17                    | 39                   |          |                   |
| 1/2 and 1/2                                    | 59                    | 48                   | 13.04    |                   |
| more sought by field<br>agents                 | 24                    | 13                   | df=2     | p < .001          |
| Sequencing of communication<br>to supervisors  |                       |                      |          |                   |
| more directed by field<br>staff                | 31                    | 31                   |          |                   |
| 1/2 and 1/2                                    | 54                    | 50                   | 0.62     |                   |
| more sought by<br>supervisors                  | 15                    | 19                   | df=2     | N.S.              |

\*Yates correction applied.

<sup>1</sup> Includes one field agent who would like less communication.

Table 24.--Continued.

| Communication dimension                                                                 | Super-<br>visors<br>% | Field<br>Agents<br>% | $\chi^2$ | Signifi-<br>cance |
|-----------------------------------------------------------------------------------------|-----------------------|----------------------|----------|-------------------|
| Percentage of supervisor<br>initiated communication<br>about the existing<br>program    |                       |                      |          |                   |
| 0-40%                                                                                   | 51                    | 23                   |          |                   |
| 41-60%                                                                                  | 29                    | 37                   | 18.23    |                   |
| 61-100%                                                                                 | 20                    | 40                   | df=2     | p < .001          |
| Percentage of field<br>agent initiated communi-<br>cation about the<br>existing program |                       |                      |          |                   |
| 0-40%                                                                                   | 51                    | 40                   |          |                   |
| 41-60%                                                                                  | 29                    | 31                   | 3.05     |                   |
| 61-100%                                                                                 | 20                    | 29                   | df=2     | N.S.              |
| Initiation about the<br>existing program                                                |                       |                      |          |                   |
| supervisor initiates                                                                    | 23                    | 20                   |          |                   |
| field agent initiates                                                                   | 12                    | 15                   |          |                   |
| both about equally                                                                      | 64                    | 62                   | 1.57     |                   |
| don't communicate<br>about existing                                                     | 1                     | 3                    | df=3     | N.S.              |
| Frequency of communica-<br>tion about the existing<br>program                           |                       |                      |          |                   |
| once a month or more                                                                    | 46                    | 39                   | 0.74*    |                   |
| less often <sup>2</sup>                                                                 | 54                    | 61                   | df=1     | N.S.              |
| Satisfaction <sup>3</sup> with<br>communication about the<br>existing program           |                       |                      |          |                   |
| would like more                                                                         | 68                    | 50                   | 5.68*    |                   |
| satisfied                                                                               | 31                    | 48                   | df=1     | p < .05           |

\*Yates correction applied.

<sup>2</sup>Includes those who don't communicate.

<sup>3</sup>Excludes those who don't communicate.

Table 24.--Continued.

| Communication dimension                                             | Super-<br>visors<br>% | Field<br>Agents<br>% | $\chi^2$ | Signifi-<br>cance |
|---------------------------------------------------------------------|-----------------------|----------------------|----------|-------------------|
| Initiation about personal matters                                   |                       |                      |          |                   |
| supervisor initiates                                                | 16                    | 11                   |          |                   |
| field agent initiates                                               | 16                    | 24                   |          |                   |
| both about equally                                                  | 56                    | 57                   | 3.33     |                   |
| don't communicate about personal                                    | 12                    | 8                    | df=3     | N.S.              |
| Frequency of communication about personal matters                   |                       |                      |          |                   |
| once a month or more                                                | 20                    | 9                    | 4.03*    |                   |
| less often <sup>2</sup>                                             | 80                    | 91                   | df=1     | p < .05           |
| Satisfaction <sup>3</sup> with communication about personal matters |                       |                      |          |                   |
| would like more                                                     | 20                    | 16                   | 0.55*    |                   |
| satisfied <sup>1</sup>                                              | 68                    | 77                   | df=1     | N.S.              |
| Initiation about new ideas                                          |                       |                      |          |                   |
| supervisor initiates                                                | 19                    | 6                    |          |                   |
| field agent initiates                                               | 19                    | 36                   | 14.24    |                   |
| both about equally                                                  | 61                    | 54                   | df=3     | p < .01           |
| don't communicate about new ideas                                   | 1                     | 4                    |          |                   |
| Frequency of communication about new ideas                          |                       |                      |          |                   |
| once a month or more                                                | 38                    | 22                   | 5.36*    |                   |
| less often <sup>2</sup>                                             | 62                    | 78                   | df=1     | p < .05           |
| Satisfaction <sup>3</sup> with communication about new ideas        |                       |                      |          |                   |
| would like more                                                     | 75                    | 62                   | 2.40*    |                   |
| satisfied                                                           | 24                    | 34                   | df=1     | N.S.              |

\*Yates correction applied.

<sup>1</sup>Includes one supervisor who would like less communication.

<sup>2</sup>Includes those who don't communicate.

<sup>3</sup>Excludes those who don't communicate.

Table 25. Supervisor/field agent differences in index scores on procedural aspects of communication.

| Focus                | Index       | Level                       | Maximum range | Mean  | S.D. | Significance of diff. between means |
|----------------------|-------------|-----------------------------|---------------|-------|------|-------------------------------------|
| Rules                | Innovation  | Field agents<br>Supervisors | 8-40          | 31.89 | 3.56 | *                                   |
|                      |             |                             |               | 32.96 | 2.93 |                                     |
|                      | Maintenance | Field agents<br>Supervisors | 8-40          | 19.72 | 4.15 | ***                                 |
|                      |             |                             |               | 23.39 | 5.57 |                                     |
| Actual Communication | Sequencing  | Field agents<br>Supervisors | 5-25          | 17.82 | 3.13 | ***                                 |
|                      |             |                             |               | 20.13 | 2.70 |                                     |
|                      | Initiation  | Field agents<br>Supervisors | 4-20          | 15.58 | 2.52 | ***                                 |
|                      |             |                             |               | 17.60 | 2.00 |                                     |
| Actual Communication | Innovation  | Field agents<br>Supervisors | 8-32          | 22.07 | 2.85 | NS                                  |
|                      |             |                             |               | 21.87 | 3.31 |                                     |
|                      | Maintenance | Field agents<br>Supervisors | 8-32          | 15.83 | 3.14 | NS                                  |
|                      |             |                             |               | 16.48 | 4.40 |                                     |
| Actual Communication | Sequencing  | Field agents<br>Supervisors | 5-20          | 13.44 | 2.22 | NS                                  |
|                      |             |                             |               | 13.30 | 2.22 |                                     |
|                      | Initiation  | Field agents<br>Supervisors | 4-16          | 10.71 | 1.79 | NS                                  |
|                      |             |                             |               | 10.51 | 2.16 |                                     |

Table 25.--Continued

| Focus                                                                | Index                       | Level                       | Maximum<br>range | Mean  | S.D. | Significance of<br>diff. between means |
|----------------------------------------------------------------------|-----------------------------|-----------------------------|------------------|-------|------|----------------------------------------|
| Prediction<br>of other's<br>perception<br>of actual<br>communication | Innovation                  | Field agents<br>Supervisors | 8-32             | 21.82 | 2.92 | **                                     |
|                                                                      |                             |                             |                  | 23.37 | 2.82 |                                        |
|                                                                      | Maintenance                 | Field agents<br>Supervisors | 8-32             | 16.58 | 3.29 | NS                                     |
|                                                                      |                             |                             |                  | 16.12 | 4.18 |                                        |
|                                                                      | Sequencing                  | Field agents<br>Supervisors | 5-20             | 13.65 | 2.25 | NS                                     |
|                                                                      |                             |                             |                  | 13.17 | 2.04 |                                        |
| Initiation                                                           | Field agents<br>Supervisors | 4-16                        | 10.12            | 2.00  | NS   |                                        |
|                                                                      |                             |                             | 10.57            | 1.79  |      |                                        |

the actual communication; but the supervisors attributed significantly more interdependence to the field agents' innovative communication than did the field staff in predicting to their supervisors.

Actual Levels of Coorientational Similarity  
Between Supervisors and Field Agents

The levels of achieved similarity are presented in Table 26. The outstanding overall feature is the high level of similarity on all communication dimensions at both the agreement and accuracy levels. Another major feature is the stability of both the means and standard deviations for a particular communication dimension over the three measures--actual perceptions, field agent predictions of supervisor perceptions, and supervisor predictions of field agent perceptions.

As would be expected from Table 25, the least degree of similarity of orientation, for all dimensions, occurred at the level of rules of communication.

Using Scheff's (1967) model of types of understanding (discussed in Chapter II) it is possible to consider the combined influence of agreement and accuracy. Table 27 presents the 2 x 2 matrices combining agreement and accuracy, with the distributions dichotomized at the category next to that containing the mean. There is a very significant tendency on all dimensions for the

Table 26. Summary of dyadic agreement and accuracy scores.

| Focus                                                   | Index       | Maximum range     | Mean  | S.D. | Adjusted mean <sup>1</sup> |
|---------------------------------------------------------|-------------|-------------------|-------|------|----------------------------|
| Agreement on rules                                      | Innovation  | 8-41 <sup>2</sup> | 37.09 | 2.70 | 88.1                       |
|                                                         | Maintenance | 8-41              | 35.31 | 4.31 | 82.7                       |
|                                                         | Sequencing  | 5-26              | 22.22 | 2.66 | 82.0                       |
|                                                         | Initiation  | 4-21              | 18.10 | 2.17 | 82.9                       |
| Agreement on actual communication                       | Innovation  | 8-33              | 30.14 | 2.64 | 88.5                       |
|                                                         | Maintenance | 8-33              | 29.41 | 2.85 | 85.6                       |
|                                                         | Sequencing  | 5-21              | 18.66 | 1.93 | 85.3                       |
|                                                         | Initiation  | 4-17              | 15.20 | 1.44 | 86.1                       |
| Field agent accuracy in predicting supervisor responses | Innovation  | 8-33              | 30.39 | 2.26 | 89.5                       |
|                                                         | Maintenance | 8-33              | 29.54 | 2.70 | 86.1                       |
|                                                         | Sequencing  | 5-21              | 18.91 | 1.78 | 86.9                       |
|                                                         | Initiation  | 4-17              | 15.23 | 1.33 | 86.3                       |
| Supervisor accuracy in predicting field agent responses | Innovation  | 8-33              | 30.06 | 2.39 | 88.2                       |
|                                                         | Maintenance | 8-33              | 29.57 | 2.64 | 86.2                       |
|                                                         | Sequencing  | 5-21              | 18.87 | 1.97 | 86.6                       |
|                                                         | Initiation  | 4-17              | 15.28 | 1.36 | 86.7                       |

<sup>1</sup>Means transformed to their position on a range from 0-100.

<sup>2</sup>Higher scores represent greater similarity of orientation.

Table 27. Combination of agreement and accuracy about the actual communication.

| Index       | Level        | Agreement   | Accuracy |          | $\chi^2_{yc}$ | Significance |
|-------------|--------------|-------------|----------|----------|---------------|--------------|
|             |              |             | Low      | High     |               |              |
| Innovation  | Field agents | High<br>Low | 9<br>17  | 61<br>13 | 18.73         | ***          |
|             | Supervisors  | High<br>Low | 16<br>21 | 54<br>9  | 18.05         | ***          |
| Maintenance | Field agents | High<br>Low | 7<br>25  | 59<br>9  | 37.99         | ***          |
|             | Supervisors  | High<br>Low | 3<br>27  | 63<br>7  | 56.38         | ***          |
| Sequencing  | Field agents | High<br>Low | 20<br>16 | 59<br>5  | 16.49         | ***          |
|             | Supervisors  | High<br>Low | 17<br>15 | 62<br>6  | 16.77         | ***          |
| Initiation  | Field agents | High<br>Low | 7<br>15  | 65<br>13 | 20.10         | ***          |
|             | Supervisors  | High<br>Low | 9<br>15  | 63<br>13 | 16.46         | ***          |

<sup>1</sup>Yates correction applied.\*\*\*Significant at  $p < 0.001$  level.

respondents to view the system as consistent with their particular orientation. This trend is indicated by the high proportion of responses in the High-High and Low-Low cells. These cells represent Scheff's categories of monolithic consensus and false consensus.

Finally, in describing the achieved levels of similarity of orientation, Table 28 relates centrality of perceptions of actual communication to the levels of coorientation. Perceptions that deviated more than one standard deviation from the mean score for that group, were treated as deviant. Deviations from mean scores on perceptions of actual communication by field agents were not significantly associated with level of dyadic agreement except with respect to the sequencing dimension. However, for all dimensions of communication, supervisor deviation from mean perceptions was significantly associated with low dyadic agreement.

#### Relationship Between Similarity of Orientation and Attraction

Table 29 shows the zero order and partial correlations between the sixteen measures of coorientation toward the procedural aspects of communication and the five measures of system performance. Agreement on procedural rules of initiation of communication was the only measure at the rules level that was significantly associated with

Table 28. Effect of deviation from mean group perceptions.

| Index       | Group        | Centrality         | Accuracy |          | $\chi^2_{yc}$ <sup>1</sup> | Significance |
|-------------|--------------|--------------------|----------|----------|----------------------------|--------------|
|             |              |                    | Low      | High     |                            |              |
| Innovation  | Field agents | Central<br>Deviant | 25<br>5  | 59<br>11 | 0.03                       | N.S.         |
|             | Supervisors  | Central<br>Deviant | 14<br>16 | 64<br>6  | 21.98                      | ***          |
| Maintenance | Field agents | Central<br>Deviant | 26<br>8  | 53<br>13 | 0.03                       | N.S.         |
|             | Supervisors  | Central<br>Deviant | 15<br>19 | 57<br>9  | 17.82                      | ***          |
| Sequencing  | Field agents | Central<br>Deviant | 9<br>12  | 64<br>15 | 10.39                      | **           |
|             | Supervisors  | Central<br>Deviant | 11<br>10 | 68<br>11 | 9.41                       | **           |
| Initiation  | Field agents | Central<br>Deviant | 25<br>3  | 65<br>13 | 0.20                       | N.S.         |
|             | Supervisors  | Central<br>Deviant | 16<br>7  | 65<br>12 | 12.31                      | ***          |

<sup>1</sup>Yates correction applied.\*\*Significant at the  $p < .01$  level.\*\*\*Significant at the  $p < .001$  level.

Table 29. Relationship of coordination to output measures.

| Communication Measures            |             | Output Measures   |         |                                         |         |        |         |            |            |                                        |           |
|-----------------------------------|-------------|-------------------|---------|-----------------------------------------|---------|--------|---------|------------|------------|----------------------------------------|-----------|
| Level                             | Index       | Role satisfaction |         | Field Agent perceptions of relationship |         | Salary |         | Evaluation |            | Supervisor perceptions of relationship |           |
|                                   |             | r                 | partial | r                                       | partial | r      | partial | r          | partial    | r                                      | partial   |
| Agreement on rules                | Innovation  | -0.03             | -0.07   | 0.10                                    | 0.07    | -0.06  | -0.04   | -0.05      | -0.05      | 0.14                                   | 0.14      |
|                                   | Maintenance | -0.05             | -0.09   | -0.14                                   | -0.10   | 0.06   | 0.06    | 0.07       | 0.04       | 0.01                                   | 0.05      |
|                                   | Sequencing  | 0.05              | 0.03    | -0.11                                   | -0.06   | -0.05  | -0.05   | -0.05      | -0.13      | -0.12                                  | -0.14     |
|                                   | Initiation  | **<br>0.26        | 0.21    | -0.12                                   | -0.16   | -0.05  | -0.05   | **<br>0.32 | **<br>0.32 | 0.07                                   | 0.07      |
| Agreement on actual communication | Innovation  | 0.12              | 0.14    | 0.16                                    | 0.16    | 0.07   | 0.04    | **<br>0.36 | **<br>0.30 | **<br>0.24                             | *<br>0.21 |
|                                   | Maintenance | -0.06             | -0.04   | -0.15                                   | -0.14   | 0.01   | 0.00    | -0.08      | -0.10      | -0.17                                  | -0.19     |
|                                   | Sequencing  | -0.09             | -0.14   | 0.03                                    | -0.03   | 0.07   | 0.06    | *<br>0.19  | 0.05       | *<br>0.18                              | 0.07      |
|                                   | Initiation  | 0.03              | 0.03    | -0.04                                   | -0.04   | -0.01  | -0.05   | *<br>0.17  | 0.14       | *<br>0.17                              | *<br>0.17 |

\*p &lt; .05 one-tailed test.

\*\*p &lt; .01 one-tailed test.

Table 29.--Continued

| Communication Measures | Output Measures |       |                        |         |                                              |         |             |         |                 |         |                                             |         |
|------------------------|-----------------|-------|------------------------|---------|----------------------------------------------|---------|-------------|---------|-----------------|---------|---------------------------------------------|---------|
|                        | Level           | Index | Role satisfaction<br>r | partial | Field Agent perceptions of relationship<br>r | partial | Salary<br>r | partial | Evaluation<br>r | partial | Supervisor perceptions of relationship<br>r | partial |
| Field staff accuracy   |                 |       |                        |         |                                              |         |             |         |                 |         |                                             |         |
|                        | Innovation      | 0.02  | -0.01                  |         | 0.17*                                        | 0.14    | -0.01       | -0.02   | 0.33**          | 0.28**  | 0.24**                                      | 0.19*   |
|                        | Maintenance     | -0.03 | 0.01                   | -0.23   | -0.21                                        | -0.01   | -0.01       | -0.02   | 0.01            | 0.03    | -0.03                                       | -0.01   |
|                        | Sequencing      | -0.12 | -0.11                  | 0.05    | -0.02                                        | 0.06    | 0.06        | 0.06    | 0.16            | 0.07    | 0.12                                        | 0.07    |
| Initiation             | 0.02            | 0.03  | 0.06                   | 0.08    | -0.03                                        | -0.07   |             | 0.12    | 0.11            | 0.15    | 0.20*                                       |         |
| Supervisor accuracy    |                 |       |                        |         |                                              |         |             |         |                 |         |                                             |         |
|                        | Innovation      | 0.04  | 0.00                   | 0.08    | 0.04                                         | -0.02   | -0.04       |         | 0.07            | -0.03   | 0.15                                        | 0.10    |
|                        | Maintenance     | -0.17 | -0.14                  | -0.20   | -0.19                                        | -0.01   | -0.09       |         | -0.12           | -0.13   | -0.15                                       | -0.16   |
|                        | Sequencing      | -0.13 | -0.18                  | 0.17*   | 0.14                                         | -0.10   | -0.05       |         | 0.19*           | 0.16    | 0.25**                                      | 0.16    |
| Initiation             | -0.06           | -0.06 | -0.05                  | -0.06   | -0.01                                        | 0.01    |             | 0.17*   | 0.14            | 0.18*   | 0.16                                        |         |

\*p &lt; .05 one-tailed test.

\*\*p &lt; .01 one-tailed test.

any of the criterion measures. At the level of agreement on the actual dyadic communication, innovation, sequencing and initiation were significantly correlated with two of the output measures--supervisor evaluation of the field agents and supervisor perceptions of the relationship.

Field staff accuracy in predicting supervisor perceptions of the actual communication with respect to innovation was significantly associated with field agent and supervisor perceptions of the relationship; and with supervisor evaluations. Field staff accuracy in predicting supervisor perceptions of initiation was also significantly associated with supervisor perceptions of the relationship. Finally, supervisor accuracy in predicting field agent perceptions of sequencing and initiation was significantly associated with supervisor evaluations and supervisor perceptions of the relationship, and with field agent perceptions of relationship in the case of sequencing.

Coorientation toward maintenance aspects of communication was consistently negatively associated with the criterion measures at all levels except that of rules. Also, none of the sixteen measures of coorientation were significantly associated with percentage salary increase.

In general, Table 29 indicates little difference between the zero order and partial correlations. However, there is a trend for the partial correlations to be lower than the zero order correlations. This suggests that in

these cases, the zero order correlations are boosted through the communication and control measures working through each other.

Table 30 presents the  $\eta^2$  for each significant association, and also a measure of the degree of curvilinearity. In only two cases, agreement on rules of initiation with field agent role satisfaction, and field staff accuracy in predicting supervisor perceptions of innovation, were the relationships significantly curvilinear. Nevertheless, Table 30 indicates that the  $\eta$  values allow considerably greater prediction than the zero order correlations. On the basis of the array means for the communication measures, that showed significant correlations in Table 29, it is possible to predict between five and twenty-seven percent of the variance in the output measures, as shown in the  $\eta^2$  scores in Table 30.

Table 31 presents the evidence relating to Hypothesis 2. Only seven of the twenty-five regression equations were statistically significant at the  $p < .05$  level. None of the regression equations relating to role satisfaction, field agent relationship with supervisor or salary increase were significant. However, seven of the ten regression equations relating to supervisor evaluations of field staff and supervisor relationships with field staff were significant.

Table 30. Variance explained by measures of coorientation.

| Output variable                          | Communication measure                           | $\eta^2$ | Curvilinear-ity F |
|------------------------------------------|-------------------------------------------------|----------|-------------------|
| Field staff role satisfaction            | Agreement on rule on initiation                 | 0.24     | 2.25*             |
| Field staff relationship with supervisor | Field staff accuracy in predicting innovation   | 0.10     | 0.84              |
|                                          | Supervisor accuracy in predicting sequencing    | 0.07     | 0.52              |
| Supervisor evaluation of field staff     | Agreement on rule on initiation                 | 0.21     | 1.38              |
|                                          | Agreement on actual communication on innovation | 0.27     | 1.93              |
|                                          | Agreement on actual communication on sequencing | 0.17     | 1.35              |
|                                          | Agreement on actual communication on initiation | 0.08     | 0.78              |
|                                          | Field staff accuracy in predicting innovation   | 0.26     | 2.30*             |
|                                          | Supervisor accuracy in predicting sequencing    | 0.14     | 1.64              |
|                                          | Supervisor accuracy in predicting initiation    | 0.10     | 1.38              |
| Supervisor relationship with field staff | Agreement on actual communication on innovation | 0.12     | 0.65              |
|                                          | Agreement on actual communication on sequencing | 0.09     | 0.63              |
|                                          | Agreement on actual communication on initiation | 0.05     | 0.39              |
|                                          | Field staff accuracy in predicting innovation   | 0.10     | 0.48              |
|                                          | Field staff accuracy in predicting initiation   | 0.09     | 1.75              |
|                                          | Supervisor accuracy in predicting sequencing    | 0.13     | 1.44              |
|                                          | Supervisor accuracy in predicting initiation    | 0.06     | 0.50              |

\*Curvilinearity significant at  $p < .05$ .

Table 31. Multiple correlations with all variables retained.

| Output measure                                 | Variables                            | R    | R <sup>2</sup> | Regression Equation<br>F | Significance |
|------------------------------------------------|--------------------------------------|------|----------------|--------------------------|--------------|
| Field staff role<br>satisfaction               | Background + Rule agreement level    | 0.36 | 0.13           | 1.79                     | N.S.         |
|                                                | Background + Actual agreement level  | 0.33 | 0.11           | 1.47                     | N.S.         |
|                                                | Background + Field agent accuracy    | 0.31 | 0.10           | 1.27                     | N.S.         |
|                                                | Background + Supervisor accuracy     | 0.35 | 0.12           | 1.59                     | N.S.         |
|                                                | All levels of agreement and accuracy | 0.45 | 0.20           | 1.28                     | N.S.         |
| Field staff<br>relationship<br>with supervisor | Background + Rule agreement level    | 0.35 | 0.12           | 1.52                     | N.S.         |
|                                                | Background + Actual agreement level  | 0.33 | 0.11           | 1.38                     | N.S.         |
|                                                | Background + Field agent accuracy    | 0.36 | 0.13           | 1.73                     | N.S.         |
|                                                | Background + Supervisor accuracy     | 0.35 | 0.12           | 1.56                     | N.S.         |
|                                                | All levels of agreement and accuracy | 0.42 | 0.18           | 1.11                     | N.S.         |
| Percentage<br>salary<br>increase               | Background + Rule agreement level    | 0.20 | 0.04           | 0.45                     | N.S.         |
|                                                | Background + Actual agreement level  | 0.20 | 0.04           | 0.42                     | N.S.         |
|                                                | Background + Field agent accuracy    | 0.20 | 0.04           | 0.41                     | N.S.         |
|                                                | Background + Supervisor accuracy     | 0.17 | 0.03           | 0.38                     | N.S.         |
|                                                | All levels of agreement and accuracy | 0.32 | 0.10           | 0.58                     | N.S.         |

Table 31.--Continued.

| Output measure                           | Variables                            | R    | R <sup>2</sup> | F    | Regression Equation Significance |
|------------------------------------------|--------------------------------------|------|----------------|------|----------------------------------|
| Supervisor evaluation of field staff     | Background + Rule agreement level    | 0.40 | 0.16           | 2.12 | *                                |
|                                          | Background + Actual agreement level  | 0.45 | 0.20           | 2.77 | **                               |
|                                          | Background + Field agent accuracy    | 0.41 | 0.17           | 2.35 | *                                |
|                                          | Background + Supervisor accuracy     | 0.35 | 0.12           | 1.49 | N.S.                             |
|                                          | All levels of agreement and accuracy | 0.57 | 0.32           | 2.45 | **                               |
| Supervisor relationship with field agent | Background + Rule agreement level    | 0.33 | 0.11           | 1.38 | N.S.                             |
|                                          | Background + Actual agreement level  | 0.45 | 0.20           | 2.84 | **                               |
|                                          | Background + Field agent accuracy    | 0.40 | 0.16           | 2.19 | *                                |
|                                          | Background + Supervisor accuracy     | 0.41 | 0.17           | 2.38 | *                                |
|                                          | All levels of agreement and accuracy | 0.50 | 0.25           | 1.73 | N.S.                             |

\*Significant at  $p < .05$  level.\*\*Significant at  $p < .01$  level.

A least squares delete program was used to reduce these equations to a minimal set of variables. Table 32 presents the significant sets of variables. None of the regression equations reached the  $p < .05$  level of significance in relation to salary increase. With each of the other criterion measures, some subset of two or three background and communication measures was able to explain approximately ten percent of the variance.

Table 32. Multiple correlations of selected variables with output measures.

| Output measure                           | Background and communication variables retained                       | R <sup>2</sup> | Regression F | Equation Significance |
|------------------------------------------|-----------------------------------------------------------------------|----------------|--------------|-----------------------|
| Field staff role satisfaction            | Education; Rule initiation agr.                                       | 0.11           | 6.23         | **                    |
|                                          | Rule initiation agr.; Sup. accuracy maintenance                       | 0.11           | 6.17         | **                    |
| Field staff relationship with supervisor | Length of interaction; Distance apart; Rule initiation agr.           | 0.09           | 3.34         | *                     |
|                                          | Length of interaction; Distance apart; Agreement on actual innovation | 0.09           | 3.00         | *                     |
|                                          | Length of interaction; Field staff accuracy maintenance               | 0.08           | 4.42         | *                     |
|                                          | Length of interaction; Distance apart; Sup. accuracy maintenance      | 0.10           | 3.38         | *                     |
|                                          | Agreement on actual innovation; Field staff accuracy maintenance      | 0.08           | 4.47         | *                     |
| Percentage salary increase               | None                                                                  |                |              |                       |
| Supervisor evaluation of field staff     | Rule initiation agr.                                                  | 0.11           | 11.50        | ***                   |
|                                          | Agreement on actual innovation                                        | 0.13           | 14.46        | ***                   |

\*Significant at the  $p < .05$  level.\*\*Significant at the  $p < .01$  level.\*\*\*Significant at the  $p < .001$  level.

Table 32.--Continued.

| Output measure                           | Background and communication variables retained                                                                              | R <sup>2</sup> | Regression F | Equation Significance |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|-----------------------|
|                                          | Field staff accuracy innovation                                                                                              | 0.13           | 14.30        | ***                   |
|                                          | Length of interaction; Sup. accuracy initiation                                                                              | 0.07           | 3.57         | *                     |
|                                          | Rule initiation agr.; Field staff accuracy innovation                                                                        | 0.21           | 12.51        | ***                   |
| Supervisor relationship with field agent | Length of interaction; extension similarity; Rule innovation agr.                                                            | 0.08           | 2.96         | *                     |
|                                          | Extension similarity; Agreement on actual innovation                                                                         | 0.13           | 6.93         | **                    |
|                                          | Extension similarity; Field staff accuracy innovation; Field staff accuracy initiation                                       | 0.14           | 5.29         | **                    |
|                                          | Extension similarity; Sup. accuracy sequencing; Sup. accuracy initiation                                                     | 0.13           | 4.69         | **                    |
|                                          | Agreement on actual maintenance; Field staff accuracy innovation; Field staff accuracy maintenance; Sup. accuracy sequencing | 0.17           | 4.90         | **                    |

\*Significant at the p .05 level.

\*\*Significant at the p .01 level.

\*\*\*Significant at the p .001 level.

## CHAPTER V

### DISCUSSION OF RESULTS

The major findings of this study can be grouped into three sets:

1. A factor analysis of conceptual dimensions of communication.
2. The actual communication between supervisors and field agents, differences in their perceptions and their degree of coorientational similarity.
- and 3. The relationship between coorientational similarity and interpersonal attraction.

#### Factor Analysis

One of the intermediate tasks in this study was to develop a set of indices of procedural communication. While several authors have suggested dimensions of organizational communication, there were no reported attempts to assess the independence or relevance of them to the interaction in a system like the Michigan Cooperative Extension Service. Four independent dimensions were identified through a factor analysis of sixty items relating to

procedural aspects of communication. These four factors accounted for one-quarter of the variance; and they were clearly distinct from subsequent factors, which showed virtually no isomorphism with the conceptual dimensions.

The dimensions represented by the four factors were the innovation function, the maintenance function, the sequencing of interaction and the initiation of interaction.

The questions that prime loaded on the innovation factor focussed on involvement or sharing in new ideas. The stress here seems to be on the distribution of new ideas, with a contrast between field agents being actively involved on the one hand and merely implementing without discussion on the other.

The questions relating to the maintenance function all focus on the extent to which personal matters should be brought into supervisory communication. Both the field agent's personal activities and those of his supervisor are included. The distinction appears to be between restricting the communication strictly to work topics and involving the members in each other's family life as well.

The third factor isolated items relating to the sequencing dimension. The focus in these questions was on the field agent sharing the responsibility for seeing that tasks get completed. Thus they stress questioning, reminding, clarifying and debating various issues.

Finally, the fourth factor was made up of items that conceptually related to the initiation dimension. These questions again stress the sharing of the responsibility for undertaking particular tasks.

Overall, there is a clear stress on the notion of interdependence between the dyad members. In each case the questions focus on a different aspect of sharing--new ideas, family and personal activities, the responsibility for seeing tasks through to completion, and the responsibility for seeing that tasks are in fact undertaken.

While no claim is made for the general application of these procedural dimensions in other systems; their independence and their relative power in this study suggests that they should be considered as possibly powerful dimensions in future studies of organizational communication.

#### Communication Between Supervisors and Field Agents

In contrasting the field agents and their supervisors certain major differences stand out. The field agents as a group tended to view the communication with their supervisors as more frequent, more directed by them, and more oriented toward getting the job done than did the supervisors. They were also more satisfied with the present levels of communication.

These perceptions suggest that the field agents view their supervisory communication in a narrower and less central way than do their supervisors. Given their different roles within the organization this difference would seem understandable. The prime role of the field agents is to communicate with their clients and various county officials, and supervisory communication essentially fills a support or facilitating function for them. On the other hand, for the supervisors their communication with the field agents represents a much more central aspect of their work. These differences suggest that the field agents generally do not feel cut off from their organization; and that any effort on the part of supervisors to increase communication may be seen by many field agents as undesirable overload. The one major exception is communication about new ideas. Two-thirds or more of both supervisors and field staff would like to have more communication about new ideas. Given that the prime purpose of the organization is to introduce new ideas to the people of Michigan, the generation, discussion and sharing of new ideas would seem to be one area where increased supervisory communication and supportive rules would increase satisfaction and enhance performance.

Approximately two-thirds of both the field agents and their supervisors reported discussing new ideas together less than once a month. This would seem to be

far below the optimum for an organization where change is meant to be the prime focus. Such a lack of searching for and discussing new ideas suggests an unfortunate level of complacency or misdirected emphasis in professional interaction. Steps to increase the searching and sharing of new ideas would seem very desirable.

One way to achieve such an increase in the sharing of new ideas would be to encourage the supervisors to act as facilitators--taking ideas from center to center.

When the four dimensions of procedural communication are taken together the supervisors as a group are seen to advocate more interdependent communication than do the field agents. This ties in with their view of the communication as being less imposed and less production oriented than it is seen by the field agents. Supervisors also attributed more interdependence to the field agents' perceptions of innovative communication. Taken together, these tendencies to advocate and see more highly interdependent communication procedures appear to represent an important difference between supervisors and their field agents. Two possible interpretations can be offered to explain this trend. First, it may be a reflection of their greater involvement due to the centrality of this interaction to their roles. On the other hand, it may represent a basic difference in philosophy of supervision. If in fact, supervisors do advocate more interdependent

communication because of a more 'human resource' or 'human relations' philosophy, then the seeds may be developing for a coorientation gap based on different rules of what is appropriate procedural communication.

Although there are these signs of minor differences in orientation between the supervisors as a group and the field staff, the most outstanding feature of the whole study is undoubtedly the high degree of both agreement and accuracy that was found between the dyad members.

Although the indices for individuals were normally distributed, with means approximately at the mid-points of the distributions (see Table 21), the agreement and accuracy scores (for dyads) were all highly skewed with almost all dyads demonstrating very high similarity of orientation.

Also, despite the limited amount of communication between the dyad members, and some differences in experience and educational background, this study shows that almost all of the dyads in the sample were able to achieve a high level of agreement. Perhaps the most important reason for such a result is the great similarity in basic type and level of education and prior experience. The results seem to indicate that common types of experience and background were much more important in this case than the pressures toward disintegration that are proposed by Kaufman (1960). A major implication that follows is that geographic

separation need not lead to serious problems of dissimilar orientations provided that the organization is relatively stable and the members share highly similar background experiences.

By and large, both field agents and their supervisors seem to have come from the same mold--to have attended similar mid-West colleges, to have similar views on the philosophy and place of extension, and to have similar interests and views. Deviant views in general were severely criticized and those who 'rocked the boat' reported having considerable opposition. Many respondents expressed concern about participation in the study because of a fear of reprisal and several reported unfortunate previous incidents where 'confidential' information was released. All of this would seem to point to considerable rigidity in approach and to an unfortunately high level of 'back-biting.'

Conformity does appear to be rewarded and probably almost all who stay in the organization have had to adopt the 'correct' way of doing things.

Again, in an organization of the size of the MCES and one associated with the principles of a University, some freeing of the system to meet new and unknown needs would seem to be very desirable.

While the overall feature is one of high similarity and understanding, the combination of agreement and accuracy

scores for each dyad, reveals some cause for concern. Using Scheff's (1967) combination of high and low levels of agreement and accuracy to yield four types of understanding, it was found that both supervisors and field agents tended to predict that the other member of their dyad would share their particular view of the communication interaction.

This trend is similar to that reported by Berlo et al. (1971b and c). Given high levels of agreement, this feature means a high level of understanding--the members of the dyads agree and know it. However, to the extent that responses in the low agreement cells indicate real differences in orientation, then a significant number of dyads actually have low agreement while they think that they have high agreement--this is the type of understanding that Scheff calls false consensus.

This state of misunderstanding would seem to be particularly undesirable for most systems. Whereas, with dissensus the members disagree and are aware of their disagreement, with false consensus the members think that they understand the other's orientation but do not. False consensus may thus mask differences and encourage the development of even lower agreement.

While over half of the responses indicated high agreement and high accuracy--the pairs agreed and accurately predicted that the other member would share their

view--between one-third and one-half of the responses show disagreement or misunderstanding.

It is this group that gives cause for concern. Certainly the organization should not claim nor assume that everyone shares the same idea about how agents and supervisors communicate. In at least one-third of the pairs that were studied one or other of the members suffered from some type of misunderstanding about the communication.

This need not be always undesirable provided that it is known and taken into account; but if not it will almost certainly contribute to communication breakdowns and strained relationships. With the rotation of supervisors from one group of field agents to another, different expectations do occur and field agents then go through a period of 'trying to psych out' what the new supervisor will want and how he would like things done. Such uncertainty must be dysfunctional to the organization, and informally it seemed to contribute to considerable lack of morale in individual cases.

As both supervisors and field agents were equally likely to make this type of wrong judgment, some form of explicit feedback on the procedural aspects of communication would seem highly desirable. This feedback would hopefully serve as a check on whether the agreement that the members perceive is based on actual agreement or

instead on a false extrapolation of each individual's particular point of view.

Another reason for suggesting such an explicit discussion of procedural aspects of communication, is the tendency for dyads in which the supervisor holds different views, to those of other supervisors, to have low agreement. This could be a result of field staff viewing the interaction as they expect it should occur rather than being aware of its unique features; or equally, it could indicate a lack of awareness by the supervisors of the actual interaction. In either case, explicit feedback on views of the interaction would clarify the situation and that should lead to greater understanding.

Given this difference in ability between supervisors and field staff in predicting unusual views, it would seem that the supervisory staff have less difficulty than their field staff in treating each dyad as a unique system. This may well be another reflection of a basic difference in centrality of this communication to their perceived roles.

#### Relationship Between Coorientational Similarity and Attraction

The major purpose of the study was to test two extensions of Newcomb's (1953) coorientation model. These extensions were: first, that increased similarity of

orientation would lead to greater interpersonal attraction; and second, that attraction would be determined by the net effect of coorientations within the dyad. Both hypotheses suggest that increased coorientational similarity should be associated with increased interpersonal attraction. The first seeks to establish one to one relationships; while the second suggests that the level of attraction will be a reflection of the combined effects of many different orientations within the dyad. For objects of orientation of high instrumentality to the relationship both hypotheses should allow a more precise estimate of attraction than could be obtained by considering individual orientations one by one.

At a gross level, the high levels of coorientational similarity (agreement and accuracy) for all dimensions of procedural communication, combined with the high levels of field agent role satisfaction and high ratings of agent performance by their supervisors would seem to support both hypotheses. To some extent this becomes the most significant support for the hypotheses, because the strong skewing of the similarity distributions sharply curtails the variance on the communication variables.<sup>32</sup> With this type of distribution it could be argued that almost the

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<sup>32</sup>This restricted range on one variable leads to a lower correlation between the variables, see McNemar (1962, p. 144).

entire sample exhibits satisfactory similarity, and that differences are mainly a reflection of response patterns or other confounding factors.

With this important reservation in mind, support is offered for both hypotheses. Given the skewed distributions on similarity of orientations, those relationships that are still significantly different from zero would seem to represent the smallest and strongest core of relationships that do in fact occur. The essentially normal distributions of the individual indices, and the evidence of consistent patterns across levels supports this point of view, as contrasted to the notion of the significant relationships were a simple reflection of various error components.

With respect to hypothesis 1, weak relationships were found between a few dimensions of similarity of orientation and field agent role satisfaction and field agent perceptions of their relationships with their supervisors. Stronger relationships, both in number and size, were found between the measures of coorientational similarity and both supervisor ratings of field agent performance and supervisor perceptions of the formality of their relationship with the particular agents.

Similarity of orientations toward the procedural aspects of communication do in fact seem to contribute to the supervisors' evaluations of the system. More similar

orientations are associated with better evaluations and more social and informal views of the relationship. The partial correlation coefficients give added support to this conclusion, as they show that the associations occur over and above any influence of such factors as similarity of background or geographic separation, and so on. However, despite statistical significance, the individual correlations only explain a very small proportion of the variance in the interpersonal attraction.

These results suggest that while coorientation toward several aspects of procedural communication is associated with dyadic satisfaction and interpersonal perceptions, that many other factors are also contributing to these states.

In particular, no significant correlations were found between any of the dimensions of similarity and percentage salary increase. This occurred in spite of an expectation that at least some part of salary increment would be a reflection of the relationship between the supervisor and the field agent. There could be at least two reasons for this lack of association. First, several people are involved in making the recommendation and decision about salary increases for a particular agent, and the particular supervisor nominated for this study may only have a minor input. Second, other factors such as actual performance as a change agent, promotion or correction of

prior inequities will almost certainly have important influences on salary increases that are granted, and these may have masked any communication effects.

If a systems viewpoint is taken, the lack of association between similarity of orientations toward communication and salary increase would seem to indicate a healthy state. If there was a strong association, that would indicate that 'knowing the ropes' was more important than actual job performance!

Similarity of orientation in terms of accuracy and agreement about the actual dyadic interaction was more strongly associated with the satisfaction measures than was similarity towards the ideal rules of supervisory communication. This does not seem to be an artefact of greater variance or differing means. Instead it indicates that, at least for this organization, the actual communication is more important and more instrumental than the ideal rules.

One finding that is difficult to interpret, is the consistent negative association between similarity of orientation toward maintenance aspects of communication and the various measures of attraction and satisfaction. It is difficult to see why increased agreement and/or accuracy about how much to share personal and family matters with the other member of the dyad should lead to less satisfaction and more formal impressions of the relationship.

One possible explanation may be that both field and supervisory staff feel that they ought to talk about non-work matters, such as each other's family life, but that they in fact do not feel comfortable disclosing these aspects to a person that they define in a work relationship. If people are disclosing more of their personal or intimate selves than they feel comfortable with, then it could be argued that this would lead to dissonance and ultimately to a more strained relationship.

Again, if this is the case, if non-threatening situations could be set up to discuss communication procedures, it may well be discovered that both field and supervisory staff may be happier to make a clear distinction between their professional and personal lives. Both groups may be involving themselves in each other's personal lives simply because they think they should, rather than because they want this sort of involvement.

Hypothesis 2 suggests that combining several dimensions and several levels of similarity should lead to increased accuracy in predicting interpersonal attraction. Although the multiple correlation coefficients ( $R$ ) were consistently larger than the zero order or partial correlation coefficients for individual items ( $r$ ), these differences were generally not statistically significant. The hypothesis was not supported in relation to the field agent aspects of the relationship nor for salary increase,

but the net effect of combining all the dimensions did allow more accuracy in predicting how the supervisors would rate the field agent and how formal they would see the relationship. However, only one-third or less of the variance is explained by the combination of similarity scores. Therefore, considerable influence on field agent satisfaction and salary increase in particular, and all the system measures to a large degree, must be coming from other factors in the system.

Reducing the number of variables through a least squares delete program identifies a more limited set of measures that contribute the major part of the explanation. However, there is no clear subset of instrumental dimensions that are important for all of the measures of interpersonal attraction. This suggests that the five measures of attraction--field agent role satisfaction, field agent perceptions of the formality of the relationship, percentage salary increase, field agent evaluation by supervisors and supervisor perceptions of the formality of the relationship--have little isomorphism.

All of these measures were included because it seemed reasonable to expect that they would be affected by the degree of liking or attraction between the members of each dyad. The results suggest that each is also affected by many other factors within the system.

The associations that were found, and the overall gross association, between level of coorientational similarity and attraction, suggest that coorientation of members of supervisory dyads toward communication procedures in their interaction will be an important contributor to their satisfaction but NOT the sole or even the major determinant in systems like the MCES.

The system relationships may well be considerably more complex than those suggested in the hypotheses. Different aspects of procedural communication seem to be linked with different aspects of dyadic attraction, and many other aspects of the system are almost certainly operating at the same time to help to determine such states as role satisfaction or salary increase.

### Overall Implications

This study was undertaken to determine the levels of coorientational similarity between members of an extension service; and to assess the effect of differing levels of similarity on the integration and success of the agents in the field.

In Chapter I we suggested that some field agents may be penalized for not 'knowing the ropes.' From the sample that we studied, we can conclude that this does not constitute a major problem for the Michigan Cooperative Extension Service at this time. There was what appears to

be a high degree of agreement between the supervisor/field agent pairs, and they held accurate perceptions of each other's views.

Nevertheless, support was found for the hypothesized association between level of similarity toward communication procedures and the relationship between the dyad members. While this association appears to be mediated by other aspects of the system, it does indicate one area where issues not directly related to job performance were influencing the evaluation and the satisfaction of the field agents.

If we accept this association, then it would seem desirable to commit some time and energy to increasing mutual understanding of communication procedures. We have suggested that such a commitment might take the form of explicit discussion of expectations and individual orientations.

At this stage, we have little evidence of how important these differences might be in other organizations. However, if we accept the predictions of such people as Toffler (1970), that organizations and their components will become increasingly short lived with a changing structure built on highly transitory human relationships, then the issue may become critical. If relationships change more rapidly, then differences may become the order

of the day and more and more people may get hurt through misunderstanding the communication rules. Such an outcome would seem untenable.

Communication scientists have a challenge to clarify the association between similarity of orientations toward communication procedures and system output measures; and to develop ways to minimize these differences if they arise.

### Future Research

The results presented in this study provide sufficient evidence of a link between dyadic similarity in orientation toward the procedural aspects of communication and such system measures as role satisfaction, formality of interpersonal relationships and interpersonal evaluations to justify continued research based on the proposed extensions of Newcomb's model.

Three extensions would appear particularly valuable. First, to repeat the study in a system where a greater range in levels of similarity might be expected, thereby overcoming the problems caused by restricted variance. Such a system may be found in commercial organizations between line and staff, or between labor and management negotiators, or between different ethnic or class groups.

Second, to conduct a longitudinal study. Newcomb's model is essentially a dynamic one, and a major development to test the notions of causality would be to conduct a

field experiment. This should involve measuring orientations and relationships at two points of time, with an intermediate, controlled manipulation of similarity of orientation through such strategies as group discussion.

Third, to repeat the study with a wider range of system variables. As Blalock (1969) and others suggest, the solution to a set of simultaneous equations, relating a large set of system variables to each of a set of criterion measures, offers one way to explain the influence of a number of variables. Such an approach would seem to offer valuable insights on the importance and influence of coorientation toward different aspects of interaction, and on the importance of other direct influences on the criterion measures.

These three extensions are not mutually exclusive. In fact, the ideal extension of this research (if resources were unlimited) would be to incorporate each of these modifications into a major field experiment.

Both the notion of coorientation and communication procedures would seem to offer considerable promise to the field of communication.

### Summary of Results

This research examined the association between interpersonal attraction between members of extension agent/supervisor dyads and their level of coorientational

similarity toward the procedural aspects of their communication.

On the basis of extensions of Newcomb's coorientation model, predictions were made about the effect of two levels of similarity--agreement and accuracy.

Using a factor analysis of sixty items relating to the ideal communication, four independent dimensions of procedural communication were identified. These dimensions focus on different aspects of sharing or interdependence in the dyad--new ideas, family and personal activities, the responsibility for seeing tasks through to completion, and the responsibility for seeing that the tasks are in fact undertaken.

In describing their communication, the supervisors saw the interaction as more interdependent than did their field staff. The supervisors also tended to be more skilled at recognizing divergent perceptions.

Both supervisors and field staff wanted more communication about new ideas; while supervisors alone wanted an overall increase in communication about all aspects of their interaction.

The most outstanding feature of the study was the high overall level of both agreement and accuracy with respect to communication procedures. This high level of coorientational similarity, combined with high levels of field agent role satisfaction and high supervisor ratings

of field agents' performance, gives overall support to the notion of an association between similarity of orientation and interpersonal attraction.

Although a number of significant associations were found between measures of similarity of orientation toward communication procedures and measures of attraction, the degree of similarity did not account for a major part of the variance in the indicators of attraction.

General support is claimed for the usefulness of Newcomb's model, but the influence of many other variables as well as the procedural aspects of communication is recognized.

Based upon several trends in the data, explicit discussion between supervisors and field agents about how they view both their current and their ideal expectations for communication procedures is recommended as a way to increase the understanding between the dyad members.

Finally, taking a systems viewpoint, a number of suggestions are made for further research into the application of Newcomb's model to increase our understanding of communication within organizations. The focus on both the shared interaction and on the procedural rules that direct communication is seen as both useful and powerful for future research.

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APPENDIX

FIELD AGENT QUESTIONNAIRE

Department of Communication

Michigan State University

Study of Communication between Field  
and Administrative Staff in the Michigan  
Cooperative Extension Service

Respondent: \_\_\_\_\_

This questionnaire deals with your communication  
with \_\_\_\_\_.

To help us ensure your anonymity, we have already  
coded the questionnaire to identify the pairs. No one  
within the extension service will have access to the list  
of code numbers.

Please tear off and destroy this sheet when you  
have finished.

Department of Communication

Michigan State University

Form A. Field Staff

STUDY OF COMMUNICATION BETWEEN FIELD AND ADMINISTRATIVE STAFF  
IN THE MICHIGAN COOPERATIVE EXTENSION SERVICE

1971

STRICTLY CONFIDENTIAL

-----office use -----

Supervisor: \_\_\_\_\_

Schedule number: \_\_\_\_\_

Field Agent: \_\_\_\_\_

Date of interview: \_\_\_\_\_

Checked: \_\_\_\_\_

Coded: \_\_\_\_\_

INSTRUCTIONS

This questionnaire deals with your communication with one of your immediate supervisors in the Michigan Cooperative Extension Service. We are interested in your present communication with this person, the sort of communication that you would like and what you believe is appropriate communication.

While code numbers are required so that we can match your responses with those of your supervisor, we can assure you that no one within the extension service will have access to any of the completed questionnaires.

How you answer the questions will neither help nor hinder you in your future in the Service. However, we hope that the results of the survey will provide valuable leads in making the Service as rewarding as possible to work in.

Please answer each question by filling in the blank or checking the alternative that is closest to the way you feel. There are no 'right' answers--we are interested in how YOU feel and in how YOU see the situations.

If you have any questions, please feel free to discuss them with the member of the Department of Communication who is present.

PLEASE ANSWER ALL QUESTIONS

I. GENERAL INFORMATION

First we would like some general information about your background and experience in the Michigan Cooperative Extension Service.

1. How many years have you worked under this person's authority?

\_\_\_\_\_ less than 1 year  
\_\_\_\_\_ 1 to 2 years  
\_\_\_\_\_ 3 to 4 years  
\_\_\_\_\_ 5 to 6 years  
\_\_\_\_\_ more than 6 years

2. How many years have you been working in your present position?

\_\_\_\_\_ less than 1 year  
\_\_\_\_\_ 1 or 2 years  
\_\_\_\_\_ 3 or 4 years  
\_\_\_\_\_ 5 or 6 years  
\_\_\_\_\_ more than 6 years

3. How many years have you been in extension work?

\_\_\_\_\_ 5 years or less  
\_\_\_\_\_ 6 to 10 years  
\_\_\_\_\_ 11 to 15 years  
\_\_\_\_\_ 16 to 20 years  
\_\_\_\_\_ more than 20 years

4. How old are you?

\_\_\_\_\_ 30 years old or less  
\_\_\_\_\_ 31 to 40 years old  
\_\_\_\_\_ 41 to 50 years old  
\_\_\_\_\_ over 50 years old

5. If you have received graduate training, please specify below.

\_\_\_\_\_ none received  
\_\_\_\_\_ less than 1 year  
\_\_\_\_\_ Masters or Doctoral degree  
\_\_\_\_\_ special training (please  
specify)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## II. COMMUNICATION BETWEEN YOU AND YOUR IMMEDIATE SUPERVISOR

Now lets turn to the main questions. We need to learn about the communication between you and your supervisor. We want you to describe several aspects of this communication, and to tell us ways in which you are satisfied or dissatisfied.

In describing this communication, we want you to take into account face-to-face conversations, formal or informal meetings, telephone conversations, memos, letters, and any informal interaction out of office hours.

1. When two people begin to communicate, one of them has to ask for it to happen. On the average, when you and your supervisor communicate, who usually initiates it?

\_\_\_\_\_ I usually initiate it

\_\_\_\_\_ He usually initiates it

\_\_\_\_\_ We initiate it about equally

2. On the average, would most of your communication with your supervisor be written (through letters or memoranda) or oral (either phone or face-to-face conversation)?

\_\_\_\_\_ All written

\_\_\_\_\_ More written than oral

\_\_\_\_\_ About 1/2 written and 1/2 oral

\_\_\_\_\_ More oral than written

\_\_\_\_\_ All oral

3. On the average, how often do you and your immediate supervisor communicate?

\_\_\_\_\_ Several times a day

\_\_\_\_\_ Once a day

\_\_\_\_\_ Once a week or more

\_\_\_\_\_ Once a month or more

\_\_\_\_\_ Less often

4. How satisfied are you with the overall frequency with which you and your supervisor communicate?

\_\_\_\_\_ I'd like us to have less communication

\_\_\_\_\_ I'd like us to have more communication

\_\_\_\_\_ I'm satisfied the way that it is.

5. Of the communication that you receive from your supervisor, how much is sought by you as contrasted to merely being directed to you?

☐ All directed to me  
☐ More directed than sought  
☐ About 1/2 directed and 1/2 sought  
☐ More sought than directed  
☐ All sought

6. Of the communication that you initiate with your supervisor, how much is sought by him as contrasted to being merely directed to him?

☐ All sought by supervisor  
☐ More sought than directed  
☐ About 1/2 sought and 1/2 directed  
☐ More directed than sought  
☐ All directed on my choice

We would like you to distinguish between three major functions that communication could serve in the interaction between you and your supervisor:

- a. communication that relates to the implementation of existing programs of work -- coordination, directions, reporting on progress, administrative procedures, general implementation.
- b. communication that relates to personal matters -- relations with other staff, personal advancement, family activities, career opportunities, general health and interests.
- c. communication that relates to the seeking and developing of new ideas -- new things to do, new ways of doing things, new findings, new programs, new areas of application.

Given these three major functions, we would now like you to evaluate the communication between you and your supervisor.

7. On the average, what percentage of the communication initiated by your supervisor with you, would relate to each of these functions?

|                                           |         |        |
|-------------------------------------------|---------|--------|
| Implementation of <u>existing program</u> | _____ % | THESE  |
| <u>Personal</u> matters                   | _____ % | SHOULD |
|                                           |         | TOTAL  |
| Seeking and developing <u>new ideas</u>   | _____ % | 100%   |

8. On the average, what percentage of the communication that you initiate with your supervisor, would relate to each of these functions?

|                                           |         |        |
|-------------------------------------------|---------|--------|
| Implementation of <u>existing program</u> | _____ % | THESE  |
| <u>Personal</u> matters                   | _____ % | SHOULD |
|                                           |         | TOTAL  |
| Seeking and developing <u>new ideas</u>   | _____ % | 100%   |

9. When you and your immediate supervisor communicate about the EXISTING PROGRAM who usually brings it up?

\_\_\_\_\_ He does  
 \_\_\_\_\_ I do  
 \_\_\_\_\_ It's split about evenly between us  
 \_\_\_\_\_ We don't communicate about the existing program

If you don't communicate about the existing program, please turn to question 12, otherwise please continue with question 10.

10. If you do communicate about the existing program, on the average how often do you discuss these topics?

\_\_\_\_\_ Several times a day  
 \_\_\_\_\_ Once a day  
 \_\_\_\_\_ Once or twice a week  
 \_\_\_\_\_ Once or twice a month  
 \_\_\_\_\_ Less often

11. How satisfied are you about the amount of communication that you have about the existing program?

\_\_\_\_\_ I'd like to communicate more about the existing program

\_\_\_\_\_ I'd like us to have less communication about the existing program

\_\_\_\_\_ I'm satisfied the way it is now

12. When you and your immediate supervisor communicate about PERSONAL matters, who usually brings them up?

\_\_\_\_\_ He does

\_\_\_\_\_ I do

\_\_\_\_\_ It's split about evenly between us

\_\_\_\_\_ We don't communicate about personal matters

If you don't communicate about personal matters, please turn to question 15, otherwise please continue with question 13.

13. If you do communicate about personal matters, on the average how often do you discuss these topics?

\_\_\_\_\_ Several times a day

\_\_\_\_\_ Once a day

\_\_\_\_\_ Once or twice a week

\_\_\_\_\_ Once or twice a month

\_\_\_\_\_ Less often

14. How satisfied are you with the amount of communication that you and your supervisor have about personal matters?

\_\_\_\_\_ I'd like to communicate more about personal matters.

\_\_\_\_\_ I'd like us to have less communication about personal matters.

\_\_\_\_\_ I'm satisfied the way it is now

15. When you and your immediate supervisor communicate about NEW IDEAS who usually brings them up?

\_\_\_\_\_ He does  
\_\_\_\_\_ I do  
\_\_\_\_\_ It's split about evenly between us  
\_\_\_\_\_ We don't communicate about new ideas

If you don't communicate about new ideas, please turn to the next section, otherwise please continue with question 16.

16. If you do communicate about new ideas, on the average how often do you discuss these topics?

\_\_\_\_\_ Several times a day  
\_\_\_\_\_ Once a day  
\_\_\_\_\_ Once or twice a week  
\_\_\_\_\_ Once or twice a month  
\_\_\_\_\_ Less often

17. How satisfied are you with the amount of communication that you have with your immediate supervisor about new ideas?

\_\_\_\_\_ I'd like to communicate more about new ideas  
\_\_\_\_\_ I'd like us to have less communication about new ideas  
\_\_\_\_\_ I'm satisfied the way it is now

III. EXPECTATIONS FOR COMMUNICATION WITH SUPERVISOR

We would now like you to indicate how obligated an extension agent should be to do the following things in his communication with his supervisor.

For each statement, please write the number that indicates your opinion about the statement.

- |                       |                           |
|-----------------------|---------------------------|
| 1 = Definitely should | 4 = Probably should not   |
| 2 = Probably should   | 5 = Definitely should not |
| 3 = May or may not    |                           |

- 
1. Avoid interrupting his supervisor if a member of the public wants assistance. \_\_\_\_\_
  2. Share his personal goals with supervisor when in a meeting. \_\_\_\_\_
  3. Plan ahead to save his supervisor time. \_\_\_\_\_
  4. Share tentative new plans with supervisor. \_\_\_\_\_
  5. Apart from routine reports, report on current projects only when there is a change in them. \_\_\_\_\_
  6. Develop new programs through frequent interaction with supervisor. \_\_\_\_\_
  7. Concern himself with the activities of his supervisor's family. \_\_\_\_\_
  8. Send in reports of current projects even when not requested. \_\_\_\_\_
  9. Offer suggestions about his supervisor's personal affairs. \_\_\_\_\_
  10. Phone in summaries of successful field days or projects. \_\_\_\_\_
  11. Enquire about his supervisor's family when together. \_\_\_\_\_
  12. Bring up some new ideas with supervisor at least once a year. \_\_\_\_\_
  13. Leave it to his supervisor to suggest new programs. \_\_\_\_\_

|                           |
|---------------------------|
| 1 = Definitely should     |
| 2 = Probably should       |
| 3 = May or may not        |
| 4 = Probably should not   |
| 5 = Definitely should not |

14. Talk with supervisor about how he gets along with other district staff. \_\_\_\_\_
15. Encourage supervisor to personally inspect local projects. \_\_\_\_\_
16. Avoid contacting supervisor unless important issues arise. \_\_\_\_\_
17. Avoid contacting his supervisor about the current program more than once a week. \_\_\_\_\_
18. Take responsibility for preparing budgets and reports before they are due. \_\_\_\_\_
19. Discuss family activities or problems only when face-to-face. \_\_\_\_\_
20. Seek to add some note of personal feeling into discussion. \_\_\_\_\_
21. Forget unacceptable demands rather than debate them with supervisor. \_\_\_\_\_
22. Interrupt supervisor if unclear about a point that he has made. \_\_\_\_\_
23. Avoid bringing personal affairs into conversations with supervisor. \_\_\_\_\_
24. Discuss projects with supervisor only if they are going well. \_\_\_\_\_
25. Discuss new programs with supervisor orally first. \_\_\_\_\_
26. Consider modifying new programs to fit into local conditions. \_\_\_\_\_
27. Make a point of introducing personal affairs into discussion. \_\_\_\_\_
28. Contact his supervisor only if a project is going badly wrong. \_\_\_\_\_

|                           |
|---------------------------|
| 1 = Definitely should     |
| 2 = Probably should       |
| 3 = May or may not        |
| 4 = Probably should not   |
| 5 = Definitely should not |

29. Feel free to contact supervisor out of office hours. \_\_\_\_\_
30. Discuss personal affairs only after his supervisor has introduced this subject. \_\_\_\_\_
31. Seek involvement in setting priorities for new programs. \_\_\_\_\_
32. Send in reports to supervisor about current projects as things happen. \_\_\_\_\_
33. Contact his supervisor about new ideas whenever he comes across them. \_\_\_\_\_
34. Confirm phone conversations with written summaries. \_\_\_\_\_
35. Keep supervisor regularly informed on current projects. \_\_\_\_\_
36. Wait for supervisor to request any reports that he wants. \_\_\_\_\_
37. Leave it to his supervisor to suggest possible courses for personal advancement. \_\_\_\_\_
38. Talk over new ideas with supervisor before submitting a proposal. \_\_\_\_\_
39. Refer to his family's activities in conversations with his supervisor. \_\_\_\_\_
40. Take the initiative to seek out new ideas to raise with his supervisor. \_\_\_\_\_
41. Keep reminding his supervisor of unresolved issues. \_\_\_\_\_
42. Seek to implement all new ideas suggested by supervisor. \_\_\_\_\_
43. Avoid bringing up new issues at every meeting with supervisor. \_\_\_\_\_

|                           |
|---------------------------|
| 1 = Definitely should     |
| 2 = Probably should       |
| 3 = May or may not        |
| 4 = Probably should not   |
| 5 = Definitely should not |

44. Avoid sending in routine reports and forms until they are requested. \_\_\_\_\_
45. Be prepared to offer criticism of his supervisor's ideas for the agent's advancement. \_\_\_\_\_
46. Write reports on the existing program rather than phoning them in. \_\_\_\_\_
47. Include personal news in memoranda to his supervisor. \_\_\_\_\_
48. Clarify ambiguous memoranda from his supervisor with him. \_\_\_\_\_
49. Discuss progress of current projects face-to-face rather than sending in a report. \_\_\_\_\_
50. Wait for his supervisor to terminate conversations. \_\_\_\_\_
51. Feel free to discuss personal matters over the phone. \_\_\_\_\_
52. Submit new propositions or ideas in writing to his supervisor. \_\_\_\_\_
53. If he is not satisfied with the work that he has been assigned to, then 'grit his teeth and bear it' rather than complain. \_\_\_\_\_
54. Have secretary phone in reports to supervisor if busy. \_\_\_\_\_
55. Invite his supervisor to come to local meetings. \_\_\_\_\_
56. Try to present all new projects as a single package. \_\_\_\_\_
57. Raise new ideas only at formal meetings with supervisor. \_\_\_\_\_
58. Raise only one issue in any one memorandum to his supervisor. \_\_\_\_\_

|                           |
|---------------------------|
| 1 = Definitely should     |
| 2 = Probably should       |
| 3 = May or may not        |
| 4 = Probably should not   |
| 5 = Definitely should not |

59. Make suggestions about how others could improve their work. \_\_\_\_\_
60. Hesitate to question an assignment that is personally inconvenient. \_\_\_\_\_

#### IV. ROLE BEHAVIOR IN COMMUNICATION WITH SUPERVISOR

For the same questions we would now like you to rate the extent to which you do the following things.

For each statement, please write the number that indicates how you communicate with this supervisor.

0 = Never    1 = Seldom    2 = Usually    3 = Always

- 
1. Avoid interrupting my supervisor if a member of the public wants assistance. \_\_\_\_\_
  2. Share my personal goals with supervisor when in a meeting. \_\_\_\_\_
  3. Plan ahead to save my supervisor time. \_\_\_\_\_
  4. Share tentative new plans with supervisor. \_\_\_\_\_
  5. Apart from routine reports, report on current projects only when there is a change in them. \_\_\_\_\_
  6. Develop new programs through frequent interaction with supervisor. \_\_\_\_\_
  7. Concern myself with the activities of my supervisor's family. \_\_\_\_\_
  8. Send in reports of current projects even when not requested. \_\_\_\_\_
  9. Offer suggestions about my supervisor's personal affairs. \_\_\_\_\_
  10. Phone in summaries of successful field days or projects. \_\_\_\_\_
  11. Enquire about my supervisor's family when together. \_\_\_\_\_
  12. Bring up some new ideas with supervisor at least once a year. \_\_\_\_\_
  13. Leave it to my supervisor to suggest new programs. \_\_\_\_\_
  14. Talk with supervisor about how I get on with other district staff. \_\_\_\_\_
  15. Encourage supervisor to personally inspect local projects. \_\_\_\_\_

|           |            |             |            |
|-----------|------------|-------------|------------|
| 0 = Never | 1 = Seldom | 2 = Usually | 3 = Always |
|-----------|------------|-------------|------------|

16. Avoid contacting supervisor unless important issues arise. \_\_\_\_\_
17. Avoid contacting my supervisor about the current program more than once a week. \_\_\_\_\_
18. Take responsibility for preparing budgets and reports before they are due. \_\_\_\_\_
19. Discuss family activities or problems only when face-to-face. \_\_\_\_\_
20. Seek to add some note of personal feeling into discussions. \_\_\_\_\_
21. Forget unacceptable demands rather than debate them with supervisor. \_\_\_\_\_
22. Interrupt supervisor if unclear about a point that he has made. \_\_\_\_\_
23. Avoid bringing personal affairs into conversations with supervisor. \_\_\_\_\_
24. Discuss projects with supervisor only if they are going well. \_\_\_\_\_
25. Discuss new programs with supervisor orally first. \_\_\_\_\_
26. Consider modifying new programs to fit into local conditions. \_\_\_\_\_
27. Make a point of introducing personal affairs into discussions. \_\_\_\_\_
28. Contact my supervisor only if a project is going badly wrong. \_\_\_\_\_
29. Feel free to contact supervisor out of office hours. \_\_\_\_\_
30. Discuss personal affairs only after my supervisor has introduced this subject. \_\_\_\_\_
31. Seek involvement in setting priorities for new programs. \_\_\_\_\_
32. Send in reports to supervisor about current projects as things happen. \_\_\_\_\_

|           |            |             |            |
|-----------|------------|-------------|------------|
| 0 = Never | 1 = Seldom | 2 = Usually | 3 = Always |
|-----------|------------|-------------|------------|

33. Contact my supervisor about new ideas whenever I come across them. \_\_\_\_\_
34. Confirm phone conversations with written summaries. \_\_\_\_\_
35. Keep supervisor regularly informed on current projects. \_\_\_\_\_
36. Wait for supervisor to request any reports that he wants. \_\_\_\_\_
37. Leave it to my supervisor to suggest possible courses for personal advancement. \_\_\_\_\_
38. Talk over new ideas with supervisor before submitting a proposal. \_\_\_\_\_
39. Refer to my family's activities in conversations with my supervisor. \_\_\_\_\_
40. Take the initiative to seek out new ideas to raise with my supervisor. \_\_\_\_\_
41. Keep reminding my supervisor of unresolved issues. \_\_\_\_\_
42. Seek to implement all new ideas suggested by supervisor. \_\_\_\_\_
43. Avoid bringing up new issues at every meeting with supervisor. \_\_\_\_\_
44. Avoid sending in routine reports and forms until they are requested. \_\_\_\_\_
45. Be prepared to offer criticism of my supervisor's ideas for my advancement. \_\_\_\_\_
46. Write reports on the existing program rather than phoning them in. \_\_\_\_\_
47. Include personal news in memoranda to my supervisor. \_\_\_\_\_
48. Clarify ambiguous memoranda from my supervisor with him. \_\_\_\_\_
49. Discuss progress of current projects face-to-face rather than sending in a report. \_\_\_\_\_

|           |            |             |            |
|-----------|------------|-------------|------------|
| 0 = Never | 1 = Seldom | 2 = Usually | 3 = Always |
|-----------|------------|-------------|------------|

50. Wait for my supervisor to terminate conversations. \_\_\_\_\_
51. Feel free to discuss personal matters over the phone. \_\_\_\_\_
52. Submit new propositions or ideas in writing to my supervisor. \_\_\_\_\_
53. If I am not satisfied with the work that I have been assigned to, then 'grit my teeth and bear it' rather than complain. \_\_\_\_\_
54. Have secretary phone in reports to supervisor if busy. \_\_\_\_\_
55. Invite my supervisor to come to local meetings. \_\_\_\_\_
56. Try to present all new projects as a single package. \_\_\_\_\_
57. Raise new ideas only at formal meetings with supervisor. \_\_\_\_\_
58. Raise only one issue in any one memorandum to my supervisor. \_\_\_\_\_
59. Make suggestions about how others could improve their work. \_\_\_\_\_
60. Hesitate to question whether to accept an assignment that is personally inconvenient. \_\_\_\_\_

## V. PREDICTING SUPERVISOR'S RATINGS

You have described and evaluated your communication relationship with your immediate supervisor. We will also ask him the same questions we've asked you.

We would now like you to predict how he will rate your behavior.

Please write the number that you think your supervisor will use in rating your behavior as it relates to each of the following statements.

- 0 = You predict that he will rate your behavior as never  
 1 = You predict that he will rate your behavior as seldom  
 2 = You predict that he will rate your behavior as usually  
 3 = You predict that he will rate your behavior as always

- 
1. Avoid interrupting him if a member of the public wants assistance. \_\_\_\_\_
  2. Share your personal goals with him when in a meeting. \_\_\_\_\_
  3. Plan ahead to save him time. \_\_\_\_\_
  4. Share tentative new plans with him. \_\_\_\_\_
  5. Apart from routine reports, report on current projects only when there is a change in them. \_\_\_\_\_
  6. Develop new programs through frequent interaction with him. \_\_\_\_\_
  7. Concern yourself with the activities of his family. \_\_\_\_\_
  8. Send in reports of current projects even when not requested. \_\_\_\_\_
  9. Offer suggestions about his personal affairs. \_\_\_\_\_
  10. Phone in summaries of successful field days or projects. \_\_\_\_\_
  11. Enquire about his family when together. \_\_\_\_\_
  12. Bring up some new ideas with him at least once a year. \_\_\_\_\_

|   |   |                                                               |
|---|---|---------------------------------------------------------------|
| 0 | = | You predict that he will rate your behavior as <u>never</u>   |
| 1 | = | You predict that he will rate your behavior as <u>seldom</u>  |
| 2 | = | You predict that he will rate your behavior as <u>usually</u> |
| 3 | = | You predict that he will rate your behavior as <u>always</u>  |

13. Leave it to him to suggest new programs. \_\_\_\_\_
14. Talk with him about how you get on with other district staff. \_\_\_\_\_
15. Encourage him to personally inspect local projects. \_\_\_\_\_
16. Avoid contacting him unless important issues arise. \_\_\_\_\_
17. Avoid contacting him about the current program more than once a week. \_\_\_\_\_
18. Take responsibility for preparing budgets and reports before they are due. \_\_\_\_\_
19. Discuss family activities or problems only when face-to-face. \_\_\_\_\_
20. Seek to add some note of personal feeling into discussions. \_\_\_\_\_
21. Forget unacceptable demands rather than debate them with him. \_\_\_\_\_
22. Interrupt him if unclear about a point that he has made. \_\_\_\_\_
23. Avoid bringing personal affairs into conversations with him. \_\_\_\_\_
24. Discuss projects with him only if they are going well. \_\_\_\_\_
25. Discuss new programs with him orally first. \_\_\_\_\_
26. Consider modifying new programs to fit into local conditions. \_\_\_\_\_
27. Make a point of introducing personal affairs into discussions. \_\_\_\_\_
28. Contact him only if a project is going badly wrong. \_\_\_\_\_
29. Feel free to contact him out of office hours. \_\_\_\_\_

|   |   |                                                               |
|---|---|---------------------------------------------------------------|
| 0 | = | You predict that he will rate your behavior as <u>never</u>   |
| 1 | = | You predict that he will rate your behavior as <u>seldom</u>  |
| 2 | = | You predict that he will rate your behavior as <u>usually</u> |
| 3 | = | You predict that he will rate your behavior as <u>always</u>  |

30. Discuss personal affairs only after he has introduced this subject. \_\_\_\_\_
31. Seek involvement in setting priorities for new programs. \_\_\_\_\_
32. Send in reports to him about current projects as things happen. \_\_\_\_\_
33. Contact him about new ideas whenever you come across them. \_\_\_\_\_
34. Confirm phone conversations with written summaries. \_\_\_\_\_
35. Keep him regularly informed on current projects. \_\_\_\_\_
36. Wait for him to request any reports that he wants. \_\_\_\_\_
37. Leave it to him to suggest possible courses for personal advancement. \_\_\_\_\_
38. Talk over new ideas with him before submitting a proposal. \_\_\_\_\_
39. Refer to your family's activities in conversations with him. \_\_\_\_\_
40. Take the initiative to seek out new ideas to raise with him. \_\_\_\_\_
41. Keep reminding him of unresolved issues. \_\_\_\_\_
42. Seek to implement all new ideas suggested by him. \_\_\_\_\_
43. Avoid bringing up new issues at every meeting with him. \_\_\_\_\_
44. Avoid sending in routine reports and forms until they are requested. \_\_\_\_\_
45. Being prepared to offer criticism of his ideas about your advancement. \_\_\_\_\_
46. Write reports on the existing program rather than phoning them in. \_\_\_\_\_

0 = You predict that he will rate your behavior as never  
 1 = You predict that he will rate your behavior as seldom  
 2 = You predict that he will rate your behavior as usually  
 3 = You predict that he will rate your behavior as always

- 47. Include personal news in memoranda to him. \_\_\_\_\_
- 48. Clarify ambiguous memoranda from him with him. \_\_\_\_\_
- 49. Discuss progress of current projects face-to-face  
rather than sending in a report. \_\_\_\_\_
- 50. Wait for him to terminate conversations. \_\_\_\_\_
- 51. Feel free to discuss personal matters over the  
phone. \_\_\_\_\_
- 52. Submit new propositions or ideas in writing to him. \_\_\_\_\_
- 53. If you are not satisfied with the work that you  
have been assigned to, then 'grit your teeth and  
bear it' rather than complain. \_\_\_\_\_
- 54. Have secretary phone in reports to him if busy. \_\_\_\_\_
- 55. Invite him to come to local meetings. \_\_\_\_\_
- 56. Try to present all new projects as a single  
package. \_\_\_\_\_
- 57. Raise new ideas only at formal meetings with him. \_\_\_\_\_
- 58. Raise only one issue in any one memorandum to him. \_\_\_\_\_
- 59. Make suggestions about how others could improve  
their work. \_\_\_\_\_
- 60. Hesitate to question whether to accept an assign-  
ment that is personally inconvenient. \_\_\_\_\_

VI. JOB SATISFACTION

Finally, we would like you to indicate how you feel about various aspects of your present job and your relationship with your supervisor.

Please check the alternative that best indicates your degree of satisfaction.

1. How satisfied are you that you have sufficient communication with your supervisor to do your job well?

\_\_\_\_\_ Very satisfied  
\_\_\_\_\_ Satisfied  
\_\_\_\_\_ Indifferent  
\_\_\_\_\_ Dissatisfied  
\_\_\_\_\_ Very dissatisfied

2. How satisfied are you with your present job when you compare it to similar county extension positions in the state?

\_\_\_\_\_ Very satisfied  
\_\_\_\_\_ Satisfied  
\_\_\_\_\_ Indifferent  
\_\_\_\_\_ Dissatisfied  
\_\_\_\_\_ Very dissatisfied

3. How satisfied are you with the progress that you are making towards the goals that you have set for yourself in your present position?

\_\_\_\_\_ Very satisfied  
\_\_\_\_\_ Satisfied  
\_\_\_\_\_ Indifferent  
\_\_\_\_\_ Dissatisfied  
\_\_\_\_\_ Very dissatisfied

4. How would you describe your overall relationship with your supervisor?

☐ Completely business-like  
☐ More business-like than social  
☐ Intermediate between business-like and social  
☐ More social than business-like  
☐ Completely social

5. How satisfied are you with your present job when you consider the expectations you had when you took the job?

☐ Very satisfied  
☐ Satisfied  
☐ Indifferent  
☐ Dissatisfied  
☐ Very dissatisfied

6. How satisfied are you with your job relationships with your supervisor in so far as he is helping to make your work a rewarding and successful experience?

☐ Very satisfied  
☐ Satisfied  
☐ Indifferent  
☐ Dissatisfied  
☐ Very dissatisfied

7. How would you describe your overall interaction with your supervisor?

☐ Completely formal  
☐ More formal than personal  
☐ Intermediate between formal and personal  
☐ More personal than formal  
☐ Completely personal and informal

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