AN ANALYSIS OF RELATIONAL COMMUNICATION IN ONGOING GROUP SYSTEMS

by

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ABSTRACT

This research begins by examining four theoretical perspectives on interpersonal relationships. After reviewing reinforcement theories, cognitive theories, and psychoanalytic theories a set of propositions are set forth which direct attention to the importance of communication for the establishment and development of interpersonal relationships. This function of communication is termed relational communication. The study sought to develop and validate a coding scheme for measuring relational interaction by answering the following questions: (1) What types of relational interaction characterize decision-making groups and consciousness-raising groups?; (2) What, if any, are the differences in relational interaction between a decision-making group and a consciousness-raising group?' (3) Do patterns of relational interaction in either a decision-making group or a consciousness-raising group change over time; (4) Does the interaction produced by dyads in either a decision-making group or consciousness-raising group differ from a group's total interaction.

The audio-recordings of two decision-making groups and two consciousness-raising groups were subjected to a

Markov statistical analysis.

The results of the study suggest the following conclusions: (1) Decision-making groups function similarly and are characterized by equivalent symmetry, competitive symmetry, initiation cycles, and deference; (2) Consciousness-raising groups operate as unique interacting systems. While both groups are characterized by equivalent symmetry, one consciousness-raising group used initiation sequences and the other resorts to relational deference; (3) Decision-making interaction varies over time; (4) Only one of the consciousness-raising group had significant change over time; (5) Dyads formed by the leader and opinion deviate in decision-making groups differ from the total group interaction. Finally, the study proposes changes in the coding scheme and recommendations for future research.

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CHAPTER I

THE RESEARCH PROBLEM

In 1943 Kurt Lewin argued that "the essence of a group is not the similarity or dissimilarity of its members, but their interdependence." Fifteen years later May Brodbeck (1958, p. 2) suggested that group situations were determined by the unique observable relationships among a collection of individuals. And Cartwright and Zander (1968, p. 46) in their comprehensive work on group dynamics conclude that the significant interdependence of individuals is the defining property of groups.

The above perspectives on the nature of the small group setting have one thing in common. The relationships among individuals is the basic element of the concept "group." The definitions do not refer to the necessity of some organizational type (see McDavid and Harari, 1968), a common goal (Mills, 1967), perception (Bales, 1954), or the motivation to satisfy some need (Cattell, 1959; Bass, 1960). Individuals may join groups because they are motivated to satisfy a need and this motivation may be useful in accounting for the formation of groups. And

it also follows that some organizational structure is inevitable and is certainly a consequence of group interaction. Moreover, individual members might perceive themselves as members of an entity called a group. Finally, a common goal may be either a reason to join a group, a consequence of group interaction, or possibly unimportant to the existence of the group. The essential point is that none of these dimensions of groups adequately defines the nature of a group. A meaningful distinction between individual and collective behavior can be made only by referring to interdependence or relationships among individuals.

A human relationship is essentially a characteristic pattern of interlocked behaviors. That is, one person's behavior is dependent upon or influenced by the behavior of another, and this dependency is mutual and repetitive. If, as Lewin, Brodbeck, and Cartwright and Zander argue, the essence of a group lies in member interdependence, then the direct observation of member relationships should provide fruitful insights into the nature of group functioning. What follows, then, is the development of a perspective on the role of verbal behavior in establishing human relationships, i.e., relational interaction.

The research questions which guide the proposed study are designed to elucidate the nature of relational interaction in two group situations, namely, a problem

solving group and a consciousness-raising group. These two groups provide diverse settings in order to test the sensitivity of a coding scheme designed to measure relational interaction. The research questions include: What types of relational interaction characterize a decision-making group? What types of relational interaction characterize a consciousness-raising group? What, if any, are the differences in relational interaction between a decision-making group and a consciousness-raising group. Do the patterns of relational interaction in either a decision-making group or a consciousness-raising group change over time? What is the relation between each member of the group and every other member? How do the individual dyadic relationships differ from the total group interaction?

Theoretical Perspectives

The focus of this research is on the nature and development of member relationships in group settings. An examination of the previous research dealing with interpersonal relations reveals four discernible theoretical perspectives: reinforcement theories, cognitive theories, psychoanalytic theories, and system theory. Each theory is outlined with respect to underlying assumptions, the variables appropriate for study, and the status of the research.

Reinforcement Theory

The claim that reinforcement theories have generated more research and met with more success than any other theoretical framework has become a truism. While a comprehensive view of reinforcement theory is certainly impossible (see Hall, 1966; and Kimble, 1967), the intent of this section is to expose basic principles and relate these principles to the work in interpersonal relations which fall under the rubric of a reinforcement orientation.

The fundamental assumption of the reinforcement orientation is that humans seek to extract rewards from their environment and avoid punishment. The reinforcement orientation posits that people enter a relationship because the relationship is rewarding in some way. Couched in the language of learning theory, one interactant elicits a stimulus which occasions a change in the behavior of a second interactant and the second person responds in accord with the stimulus. If the response of the second interactant is reinforced, it will increase in both frequency and strength. Interpersonal relationships, according to the reinforcement orientation, may be considered a series of stimulus-response sequences which are rewarding to the individuals involved.

The literature born out of the reinforcement paradigm is ample. However, a brief explication of two bodies of

research generated by the reinforcement perspective should demonstrate the perspective's major contribution. The two lines of research include Homans' theory of elementary social behavior, and Thibaut and Kelley's theory of interaction outcomes.

Homans' research on interpersonal behavior has undergone a series of criticisms and adjustments (see Homans, 1950; Riecken and Homans, 1954; and Homans, 1961); yet the basic premise remains unchanged. Homans maintains that interpersonal relations can be explained by reference to the psychological exchange of rewards (positive reinforcement) and costs (negative reinforcement). He argues that people interact when they exchange activities and sentiments. If interaction has been rewarded in the past under some stimulus situation, then future occurrences of that stimulus situation should elicit the same behavior.

Though Homans has articulated a fairly elegant explanatory system for human interaction, his approach has generated very little research. One reason offered by Shaw and Costanzo (1970, p. 81) is the vagueness of some of the terms, particularly the term "value." Many of Homans' terms cannot be operationalized and, while they are conceptually interesting, they are heuristically static. The term "sentiments," for example, needs to be elaborated. Numerous types of sentiments and situational

factors can mediate their effects. Therefore, if the exchange of sentiments is reinforcing, some elaboration of the qualitatively different types of sentiments is necessary. However, given the obscurity of the concepts no such elaboration exists. A potentially more accurate reason for the failure of Homans' theory to generate research is probably because the theory has been overshadowed by the ideologically similar and more popular propositions of Thibaut and Kelley.

Like Homans, Thibaut and Kelley (1959) attempt to explain how two or more people maintain a dependence on one another by exchanging rewards and costs. However, they go farther than Homans by elucidating a technique for establishing relationships, determining rewards and costs, and evaluating a relationship.

Participants in a relationship decide whether to maintain their relationship by matching rewards and costs to a comparison level (CL) or standard to judge the value of the relationship. Rewards and costs are derived from outside the relationship (exogenous), or emanate directly from the unique interaction between the individuals (endogenous). A minimum positive level (rewards greater than costs) must exist for continued attraction and affiliation.

Thibaut and Kelley's explanation of interpersonal relationships has generated a voluminous body of research.

The research question which has received the brunt of empirical attention concerns the fundamental issues of why people interact at all or how interpersonal attraction helps determine relationship formation and development. Lott and Lott (1961) report that children who were rewarded transfer these rewards to future interaction. Early studies by Festinger, Schachter, and Back (1950) and Sommer (1959) clearly reveal the role of proximity in determining interpersonal relationships. Schachter (1959), followed by Darley and Aronson (1966), demonstrated that the presence of others was particularly rewarding when an individual was in a state of anxiety. In addition to lowering anxiety, the rewarding presence of others lessens stress (Back and Bogdonoff, 1964) and increases self-esteem (Dittes, 1959).

A central theme from the reinforcement paradigm holds that if persons A and B like one another, then they are reciprocally rewarding each other and thereby interpersonally attracted (see Homans, 1961; Dulany, 1961). Yet this conclusion is modified by the results of the Deutsch and Solomon (1959) study. Deutsch and Solomon found that when one person in a relationship had recently experienced failure, the rewarding behavior of another did nothing to increase attractiveness. Dickoff (1961) supports this incongruity exception to reciprocity-of-liking and concludes that the extent to which one person's

perception of self-esteem is congruent with another's is an important factor in reciprocity-of-liking.

The literature on social penetration (Altman and Taylor, 1973) draws heavily from exchange theories. An earlier work by Frankfurt (1965) used the varying levels of interactant self-disclosure to conclude that interpersonal relations developed toward intimacy over time as a function of reward-cost ratios. Altman and Taylor (1965) and Taylor (1968) support the developmental process of interpersonal relations and contend that the penetration profile is wedge-shaped. That is, relationships deepen from broader and more superficial areas of exchange, to layers of greater intimacy and specificity.

Notably, the social penetration work is concerned with the time dimension of human relationships. Altman and Taylor continuously warn against viewing interpersonal relations as static or smooth. Nevertheless, communication is still considered only a "conveyor" of rewards or costs (e.g., positive or negative affect) rather than a functional determinant of a relationship.

One construct certainly important to the group process and relevant to interpersonal relations is group cohesiveness. Group cohesiveness is actually quite comparable to interpersonal attraction. The only real difference is that interpersonal attraction is usually associated with the opportunity to interact rather than

the effects of attractive or rewarding relationships after formation.

Cartwright and Zander (1968) and Lott and Lott (1965) provide an overview of the cohesiveness literature. Essentially, high cohesiveness further increases interpersonal influence (Back, 1951; Schachter, et al., 1951), generates higher productivity (Bjerstedt, 1961), increases the quantity and quality of interaction (Lott and Lott, 1961), increases satisfaction and morale (Marquis, et al., 1951), and heightens participation and activity (Back, 1951; Libo, 1953). Nevertheless, the precise nature of the causal order among cohesiveness variables remains troublesome. Many of the consequences of group cohesiveness could also be determinants of cohesiveness. Moreover, though cohesiveness has been defined in terms of interpersonal relations and the rewarding or costly nature of these relations, the construct allegedly refers to a "state" of the group. Most studies experimentally manipulate the cohesiveness level of a group and rarely take its dynamic properties into account. Therefore, rather than specifying the particular interpersonal relationships which either do or do not promote cohesiveness, research tends to "endow" the group with cohesiveness and assume that communicative behaviors are a function of this state of the group.

The reinforcement orientation has surely contributed

to our understanding of interpersonal relationships. Yet the perspective is not very useful to the communication researcher who is interested in observing and determining the functions of verbal behavior. Individuals work through a relationship and determine the worth of the relationship by communicating with one another, and the efficacy and organizational nature of ongoing verbal behavior is overlooked by research within the reinforcement paradigm.

Arguing that people somehow construct payoff matrices before making a decision is a provocative thought but not very realistic. People are not that rational (Shepherd, 1964). More importantly, they are limited in their abilities to construct such a complex mechanism. The reason Thibaut and Kelley's work has not advanced significantly beyond the dyad is obvious. Even a four-person group constructing a four dimensional payoff matrix defies any reasonable limits to complexity. On the other hand, the rewards-costs perspective often becomes unproductively simple. The literature concludes that an existing relationship must be rewarding, and because the relationship is rewarding it will continue to exist. A similar problem of circularity exists within the attraction and cohesiveness literature.

Cognitive Theories

The cognitive theories of interpersonal interaction differ considerably from reinforcement theories. Of course, cognitive theorists are not in complete agreement, but the following brief explanation should capture the flavor of the perspective (see Kretch and Crutchfield, 1947; Ausubel, 1965).

Unlike the reinforcement theories, cognitive theories of interpersonal relations refer to "mentalistic" concepts which exist in the heads of individuals. Concepts such as understanding, meaning, and knowing play important roles in determining the formation and development of interpersonal relations. Cognitive theories are concerned with thinking, perception, and concept formation rather than classical conditioning. Where reinforcement theories refer to organismic processes to explain "mental" events, cognitive theories emphasize states of consciousness and the organization of images and concepts. The research which stems from this perspective and relates most directly to human relationships deals with the proposition that people cannot live in states of mental inconsistency.

The most fundamental assumption of cognitive consistency is that if cognitions are inconsistent people will act to restore consistency. The seminal work of Fritz Heider (1946, 1958) draws upon the principles of

perceptual organization formulated by the Gestalt psychologists. Heider hypothesized that perception of a unit formation between individuals increases interpersonal attraction. Strong evidence for this hypothesis is reported in Darley and Berscheid (1967), Dickoff (1961), and Jones, Gergen, and Davis (1962). And limitations are outlined in Aronson and Linder (1965).

Heider assumes that states of imbalance produce forces toward balance or discontinuance. The hypothesis that people prefer states of balance is well supported by Price, Harburg and Newcomb (1966), and Rodrigues (1967). And much of the work on attitude similarity and attraction (Jones, Gergen, and Davis, 1962; Newcomb, 1956; and Levinger and Breedlove, 1966) supports the hypothesis that agreement increases attraction which maintains balance.

A concept similar to Heider's balance theory was advanced by Newcomb (1953). Newcomb took balance out of the head of one person and applied it to communication among people and relations within groups. Newcomb claimed that communication between people sought to establish symmetrical orientations.

Unlike Heider's balance theory, Newcomb's A-B-X model has stimulated little research beyond the classic longitudinal study of the acquaintance process (Newcomb, 1961, 1963; and Burdick and Burnes, 1958). The research

generated by Newcomb's A-B-X model attempted to link the variables responsible for strains toward symmetry. Steiner (1960) and Steiner and Rogers (1963), for example, have demonstrated how personality differences and sex affect cognitive imbalance. However, there is little research which specifically applies to group communication. Schachter's (1951) and Festinger and Thibaut's (1951) work on pressures toward uniformity in a group might be construed as at least tangentially related. These authors argue that regardless of their origins pressures toward uniformity exist in a group. They cite the group's tendency to direct communication toward deviant members in an effort to maintain uniformity of opinion as evidence of this phenomenon.

One area of inquiry which has resulted in confused conclusions is the similarity-of-attitudes literature. Newcomb's (1961) study of the acquaintance process concluded that attitude similarity produced liking. However, later studies by Byrne and Wong (1962) and Levinger and Breedlove (1966) take a slightly different stand and argue that liking produces the perception of similarity. And Rychlak (1965) and Novak and Lerner (1968) demonstrated quite the opposite, i.e., that similarity and attraction may not be related. In any case, the precise nature of the similarity-attraction relationship has yet

to be specified.

In general, the empirical consequences of the cognitive orientation for interpersonal communication have been rather limited. Even though Newcomb's A-B-X model is often cited as a classical contribution to communication theory, its strongest contribution is the extension of balance principles to an interpersonal relationship. Yet despite this alleged contribution, Osgood (1960) has criticized Newcomb for moving too easily from the individual to the interpersonal level. Heider was originally preoccupied with Gestalt psychology and cognitive structural dynamics; the transfer from mental systems to social systems is not clearly distinguishable. Price, Harburg, and Newcomb (1966), for example, failed to verify balance predictions involving negative relations among triads. Moreover, Zajonc (1960) has criticized the precision of liking and attraction and argues that they are situation-specific. Festinger asked, according to Zajonc, because a chicken likes chicken feed and a person likes chicken, whether that person should also like chicken feed. Though the example is facetious, it points to some problems with balance theories.

Cognitive theory, and balance theories in particular, often refer to the reasons for initiating communication (similarity, attraction) or outcomes of communication (balance resolution), but never to the process of

communication. The very structure of balance theories minimizes their ability to examine the process of communication. Experimenters assume that inconsistency will be reduced and hence block all modes of reduction but the one of interest. At the very least, some examination of the relevant verbal behavior is necessary.

Psychoanalytic Theory

A third body of literature which bears on the issue of interpersonal relations rests on the assumptions of psychoanalytic theory. Psychoanalytic theory derives from Freudian psychology and is concerned with motivational and personality properties of individuals as they relate to group existence. Freud's basic unit was the structure of the personality, and all of the relevant literature involves understanding or prediction on the basis of individual or group personality.

A typical psychoanalytic theory is Bion's (1959, 1961) theory of group functioning. Bion assumed that a group was not only a collection of individuals but possessed emotional and motivational properties of its own. Bion refers to certain facets of member relations as neurotic assumptions. The assumptions of dependence, pairing, and flight-fight determine member relations.

Although Bion's work has attracted very little attention among communication scholars, Bormann (1975)

claims that some of the results of the Minnesota studies are consistent with Bion's propositions. For example, patterns of leadership emergence are consistent with the pairing assumption described by Bion. Schutz, on the other hand, has been quite successful at generating research from a psychoanalytic perspective.

Schutz (1955, 1958) was influenced by Bion and formalized postulates and theorems delineating three interpersonal needs--inclusion, control, and affection. Schutz theorizes that a relationship is satisfactory and effective if needs are compatible. Compatibility refers to the degree of concurrence between expressed behavior and wanted behavior. If a source has a high need to express affection and receiver has a high need to receive affection, then the relationship is compatible.

The research on the efficacy of compatibility for relationship formation and development is cumbersome. Winch (1955) and Schutz support a compatibility-of-needs hypothesis. Based on Schutz's theorizing, Sapolsky (1965) and Vansickle (1963) found that high compatibility dyads were more productive. However, Shaw and Nickols (1964) report low and nonsignificant correlations between compatibility and group cohesiveness and satisfaction. Altman and Haythorn (1967) also failed to support compatibility predictions. An investigation based on need achievement, need dominance, and need affiliation found

expected compatibility effects for need affiliation only.

Frandsen and Rosenfeld (1973) severely criticize both Schutz's theory and his measuring instrument. They conclude that the theory is not reasonable because it does not distinguish between forms of compatibility. Moreover, FIRO-B has a structural bias against the need area of control. Control does not seem to be orthogonally distinct from inclusion and affection. It is impossible, according to Frandsen and Rosenfeld, to acquire an uncontaminated measure of need for control.

Assessing and measuring personality traits to predict individual or group behavior has always been a popular pursuit. Personality or trait theories focus on motivational or personal properties of the individual and emphasize the consistency of behavior. The fundamental assumption is that there is a response consistency which allows one to predict behavior across situations.

Initial efforts sought to link subject variables with relationship behavior. Researchers have studied age (Beaver, 1932; Dymond, Hughes, and Raake, 1952), sex and physical characteristics (Ort, 1950), eye contact (Exline), 1963), liking and warmth (Fiedler, 1951), assertiveness (Borg, 1960), sociability (Bouchard, 1969), and prominence (Shaw, 1959), as some of the subject variables affecting interpersonal relations.

The social penetration literature also makes use of personality variables. Jourard (1971) found significant relationships between self-disclosure and MMPI scales, and self-concept. Taylor, Altman, and Frankfurt (1968) support Worthy, Gary, and Kahn (1969) by finding no relationship between dogmatism and self-disclosure. The Taylor (1968) and the Frankfurt studies (1965) confirm the suspicion that high revealers disclose more than low revealers at all stages of the penetration process. Altman and Taylor (1973) also report some biographical, demographic, and cultural determinants of social penetration. While the evidence of a relationship between individual differences and social penetration is consistent, Altman and Taylor argue that the results are not integrative and generally indicate an initial stage of research.

Psychoanalytic and personality theories have really done little to further our understanding of human relationships. Psychoanalytic theories are often extremely abstract, difficult if not impossible to test (i.e., unobservable), and of questionable explanatory utility (see Marx and Hillix, 1973, pp. 268-274). Marx and Hillix suggest that there is really no such thing as psychoanalytic theory, per se. There is only a set of concepts derived from Freud which scholars have elaborated upon. And these concepts can occasionally be insightful

and instructive. The assumption of response consistency across situations does not seem to be very informative. Much of the research within this perspective lends credence to Sherif and Sherif's (1965) warning about the psychodynamic fallacy which erroneously attributes behavior to the individual rather than the interactive properties of a context.

The three theories discussed above all approach human relationships somewhat differently. In the true Kuhnian (1970) sense, neither theoretical position is necessarily wrong. Each is capable of unearthing certain facts or asking certain questions that the other is not. A reinforcement theorist who makes no assumptions about internal mental states, simply could not ask questions about the possible relationship between psychological balance and interpersonal relations. Each perspective certainly has conceptual merit.

However, none of these perspectives pays direct attention to communication. Communication is typically included as a network system which affects leadership, power, satisfaction, or problem solving efficiency (Shaw, 1971, pp. 137-148). Few research studies utilize verbal behavior in some interactive context as the basic focus of analysis. The section which follows briefly outlines a set of assumptions which assume that communication shapes human relationships. The research questions

originate directly from these assumptions.

The Interact System Model

The theoretical foundation for this study is the Interact System Model. The ISM is fully developed in Fisher and Hawes (1971). Briefly, the ISM uses the propositions of modern system theory as a model of communication (see Ellis and Fisher, 1975; and Ellis, 1975). The most basic structural unit is the act, i.e., one uninterrupted verbal utterance. However, since Weick (1969) argues that any theory of social organization is based on interdependence, interacts (two contiguous acts) become the most important observable unit. Communication occurs in a social system and order in the system is defined by predictably occurring sequences of interaction Consequently, relationships emerge and are defined within an interactive context. Communication is the basis for relationship definition.

The assumptions of the ISM are crucial to the study of relationship interaction because the unit of analysis is the interact or the exchange of messages. And only by tracking combinations of message exchanges do relational qualities become apparent.

Watzlawick et al. (1967, p. 49) maintain that all communication has both a content and a relationship dimension. The content level of communication is the

simple conveyance of information (data). The relationship level provides information about the information (metainformation) and classifies the content. Jackson (1965, p. 7) clarifies when he writes that the relationship aspect of a communicative act can be taken to read, "this is how you are to see me in relation to you."

The elementary modes of relational communication refer to control in the relationship. An individual may occupy a primary or "one-up" (↑) position, a secondary or "one-down" (↓) position, or define the relationship as equal (→). Message combinations form either complementary or symmetrical relationships. Complementarity pertains to those cases where the behaviors and aspirations of individuals are interlocked but fundamentally different. A complementary relationship occurs as one individual holds a "one-up" (↑) position, and the other a "one-down" (↓) position--e.g., dominance-submission and succor-dependence. Such complementary exchanges include giving and taking instructions, or asking and answering questions. Symmetrical interaction is based on equivalence. Both interactants stress the same definition of the relationship, e.g., superiority, deference, or parity. Some examples of symmetrical interaction might be agreement followed by agreement or giving orders and countering with orders.

On the content level, a number of authors have reported results (see Bales and Strodtbeck, 1951; Fisher,

1970; Scheidel and Crowell, 1964; Ellis and Fisher, 1974). However, research examining relational interaction is sparse. Sluzki and Beavin (1965) were the first to operationalize complementarity and symmetry. They discuss in some detail complementarity and symmetry and provide insights into coding relational interaction. Mark (1970) further operationalized relational interaction and stimulated Glover (1974) to apply the system to a family setting. Glover found that complementarity and symmetry were significant and frequent forms of interaction. Rogers (1972), and Millar (1973) also report data based on family interaction. Except for Farace and Rogers' (1974) reconceptualization of relational interaction, little further research exists.

Statement of Purpose

The purpose of the present study is to test the utility of a coding scheme for measuring relational interaction and investigate the nature of relational interaction in decision making and consciousness-raising groups.

Since the emergence and development of interpersonal relations in a group setting is important, an understanding of relational interaction becomes essential. Moreover, communication functionally interstructures group behavior and studying relationship formation and development from

a communicative perspective seems most useful. The study investigated the following research questions.

1. What types of relational interaction characterize a decision-making group?

2. What types of relational interaction characterize a consciousness-raising group?

3. What, if any, are the differences in relational interaction between a decision-making group and a consciousness-raising group?

4. Do the patterns of relational interaction in a decision-making group change over time?

5. Do the patterns of relational interaction in a consciousness-raising group change over time?

6. Does the interaction produced by any dyadic relationship in a decision-making group differ from the composite group interaction?

7. Does the interaction produced by any dyadic relationship in a consciousness-raising group differ from the composite group interaction?

CHAPTER II

PROCEDURES

Previous research points to the inadequacies of highly restricted laboratory settings for the analysis of interaction. Subjects asked to volunteer for brief laboratory studies are often easily manipulated and have low levels of commitment. Moreover, structured laboratory settings do not lend themselves to the observation of ongoing interaction over time. When subjects are forced to choose among arbitrary alternatives or denied the opportunity to develop stable relationships, any characterization of the interaction as either generalizable or representative is suspect. Both decision-making groups and consciousness-raising groups develop through characteristic phases of interaction (see Bales and Strodtbeck, 1951; Fisher, 1970; Ellis, 1974; and Eastman, 1973). Therefore, this research used naturally developing groups as data.

Selection of Groups

The consciousness-raising groups used in this study were actual groups formed as a result of people volunteering for this particular type of human relations

experience. Two consciousness-raising groups were selected--one from Salt Lake City, Utah and the other from Reno, Nevada. Because the consciousness-raising groups were not newly developed and had continued for several months, their entire histories were not available. Therefore, the consciousness-raising data in this study consist of four hours of interaction drawn from the middle of each group's history. This procedure reduced the data to manageable size. Also, by this point in time the groups should have developed normative behaviors.

The decision-making groups were two classroom groups enrolled in the basic course in group decision making at the University of Utah. Unlike the consciousness-raising groups, the entire history of the decision-making groups was available. These groups met weekly for a period of one academic quarter. The first meeting to the last constituted the group's entire history. Group one had six meetings and group two had five meetings. The two groups generated 8.5 hours of interaction. The decision-making groups in the basic course are an integral part of the course and help determine final grades. Member commitment, then, should not be a problem.

Both types of groups operated in a naturally developing context. They had few external restrictions placed upon them and were not composed according to subject or task variables. The author had no contact with the

consciousness-raising groups, and provided few, if any, instructions for the decision-making groups. This procedure allowed individual group norms, patterns of interaction, message strategies, and relationship definitions to emerge regardless of compositional variables.

Interaction was primarily oral. This research focussed on verbal behavior. Nonverbal behavior was not considered.

A semi-permanent record of all interaction was available. The interaction of each group was recorded on audio-tape.

Data Collection

All groups used in this study were tape recorded. Members were informed of the confidential nature of the tapes. The consciousness-raising tapes were supplied by a colleague. The classroom decision-making groups received tapes and a recorder and were asked to record all group interaction. The author maintained contact to check on recording problems and replenish tapes. At the completion of the quarter the tapes were gathered and coded.

Coding

The tape recorded interaction was submitted to interaction analysis using an original coding system developed by the author. Members of the consciousness-

raising groups agreed to record their interaction for research purposes. However, they were concerned about who was listening to the tapes. Therefore, the colleague who provided the tapes coded the consciousness-raising group interaction and was the only person to actually hear the tapes. The author coded all of the decision-making data.

The system describing the interaction contains the following mutually exclusive and exhaustive categories.

Dimension I Speaker Identification

1 - N

Dimension II Grammatical Format

1. Declarative Assertion
2. Imperative
3. Question
4. Incomplete

Dimension III Relation to Previous Comment

0. Nonextended
1. Informative Extension
2. Elaborative Extension
3. Justification
4. Simple Personal Support
5. Extended Personal Support
6. Ideational Support
7. Extended Ideational Support
8. Personal Nonsupport
9. Extended Personal Nonsupport
10. Ideational Nonsupport
11. Extended Ideational Nonsupport
12. Initiate New Direction
13. Other

A complete explanation of the coding system including operationalizations and rules for transforming categories into ↑+, ↑-, ↓+, ↓-, and → appears in Appendix A.

Following Sluzki and Beavin's (1965) suggestion that relational interaction is a combination of grammatical form and response style, a coding scheme was devised to tap these dimensions of a message. After identifying the speaker, the second dimension codes grammatical form, and the third dimension classifies the message according to how it relates to the previous message. On the basis of this coding procedure, each message is transformed into either a strong up (↑+), a weak up (↑-), a strong down (↓+), a weak down (↓-), or one-across (→). These transformations represent dominance, submission, or equality respectively.

Complementary relationships are operationalized as any down (↓+,↓-) following any up (↑+,↑-), or any up following any down. Complementary transactions refer to message pairs which are dissimilar in control direction. Therefore, if a particular dyadic relationship is characterized by one person always in a dominant position (↑), and the other always in a submissive position (↓), then the relationship is complementary. The precise nature of this complementarity may vary. The relationship may be one of a leader instructing a follower (↑↓), or information exchanges between one person who seeks information (↓) and the other who provides information (↑). In either case, the individual behaviors are fundamentally different but interlocked.

Symmetrical relationships feature paired messages with the same control direction (↑+↑+/↑+↑-/↑-↑-/↑-↑+/; ↓+↓+/↓+↓-/↓-↓-/↓-↓+/; or →→). This type of relationship often depicts competition for control of some position in the relationship. The exception to this competition is the →→ interact which is based on a mutual definition of equality. There are three types of symmetry. An up followed by an up (↑+↑+/↑+↑-/↑-↑-/↑-↑+) is competitive symmetry. Competitive symmetry is usually the result of the struggle over which interactant will control the up position in the definition of the relationship. A down followed by a down (↓+↓+/↓+↓-/↓-↓-/↓-↓+) is submissive symmetry, and indicative of a struggle over who will occupy the submissive position in the relationship. Equivalent symmetry (→→) is based on participant equality and an expression of the interactants' mutual definition of parity.

The remaining exchanges include any up or down followed by an across (↑+→/↑-→/↓+→/↓-→), or any across preceding an up or down (→↑+/→↑-/→↓+/→↓-). These relationships have been considered ambiguous. Table 1 illustrates all possible relational exchanges.

A test for reliability (Guetzkow, 1950, pp. 47-50) was performed on 172 units of interaction selected from group transcriptions. Interrater reliability among each pair of three trained coders averaged .81 for dimension three ($p. < .01$).

Table 1

Matrix of Relationship Types

	↑+	↑-	↓+	↓-	→
↑+	Intense Competitive Symmetry	Competitive Symmetry Favoring Antecedent	Complementary	Complementary	Ambiguous
↑-	Competitive Symmetry Favoring Subsequent	Minimal Competitive Symmetry	Complementary	Complementary	Ambiguous
↓+	Complementary	Complementary	Intense Submissive Symmetry	Submissive Symmetry Favoring Antecedent	Ambiguous
↓-	Complementary	Complementary	Submissive Symmetry Favoring Subsequent	Minimal Submissive Symmetry	Ambiguous
→	Ambiguous	Ambiguous	Ambiguous	Ambiguous	Equivalent Symmetry

After coding half the data, the two coders conducted another test for reliability to check for decay. Reliability between the two coders maintained an acceptable level. (.80, p. <.01).

This system of coding relational interaction is slightly different from others used in the past. First, some indication of relational intensity has been added. Rogers and Farace (1975, p. 234) indicate that some measure of intensity is necessary because the various messages codable as either an up or a down do not contain the same "amounts" of up or down. An order, for example, is stronger than an instruction. Therefore the + or - sign by the up or down is an indication of the strength of the control attempt. The imperative category in dimension two has been added and is always transformed into a strong up or down. Also, the categories referring to personal support or nonsupport often transform into strong control attempts and have been added to increase precision. Attacking or disconfirming someone at the personal level is certainly more intense than simply disagreeing with an idea or opinion.

The addition of the strong and weak intensity measures increases the size of the interact matrix from 3 x 3 to 5 x 5. There are now four measures of competitive and submissive symmetry and eight measures of complementarity. While the relationship definitions remain the same,

degrees of symmetry or complementarity may vary. Since being "more" or "less" equal is impossible, the one-across code has no intensity measure.

Finally, this coding procedure reconceptualizes the one-across category. Ericson and Rogers (1973) first added the one-across category to the original up and down codings. However, they conceived of one-across as neutralized symmetry or the absence of definition of the relationship. All uncodable responses, incompletes, unclassified comments, and simple extension were coded one-across. Such a conceptualization of the one-across category is problematic. First, it is theoretically inconsistent. Both Ericson and Rogers (1973) and Rogers and Farace (1975) support the assumptions of Watzlawick, Beavin, and Jackson and cite their second axiom about the content and relationship levels of communication. However, their definition of one-across assumes no definition of the relationship. If all communication has a relationship dimension, then they cannot consider → as neutralized or nondefinitional.

Secondly, such a conceptualization of one-across leaves no room for the relationship which is based on equivalence, e.g., friends and peers. Otherwise the only types of symmetry are competitive and submissive. Redefining the one-across code as equivalent symmetry allows for the discovery of those attempts at relational

equality. Relational equality is not necessarily "better" than complementarity--just different. Complementarity is a very efficient mode of relational interaction and probably characterizes a large percentage of most relationships. However, interactants often make attempts to be equal, and by redefining the one-across code, these attempts should become apparent.

Data Analysis

The basic unit of interaction analysis is the act. An act is one uninterrupted verbal utterance. When a speaker's comment is interrupted, his act terminates and another speaker's act begins.

An interact is a contiguous pair of acts. That is, when person A emits an act which stimulates an act from person B, that unit is an interact. Person A provides the antecedent act and B the subsequent act and together they comprise a single interact. An interaction matrix is then generated with rows as antecedent acts and columns as subsequent acts. This matrix represents interact frequencies, or the frequency with which each row unit is followed by each column unit (see Fisher, 1970; Fisher and Hawes, 1971).

The data were subjected to a Markov statistical analysis (see Attneave, 1959, pp. 43-67; Garner, 1962, pp. 98-137; Hawes and Foley, 1973; and Ellis and Fisher, 1975). The Markov model generates transition probabilities

or the probability of entering one of the states from the last state occupied. The five-state system used in this research generated a 5 x 5 matrix with 25 possible second-order transitions.

This matrix illustrates the most and least used categories of interaction and designates the predominant modes of relational interaction. When a cell contained a frequency and transition probability greater than random expectations, the cell contributed to structure in the matrix.

To answer the question of change over time, the data from the two group systems were divided into thirds and fourths and subjected to an Anderson-Goodman (1957) test. The Anderson-Goodman test compares an individual time period matrix to a composite matrix (the total of all individual matrices). The Anderson-Goodman statistic has a chi square distribution. A statistically significant overall Anderson-Goodman signifies change in the interaction over time. The Anderson-Goodman statistic for a particular state, then, indicates that the transition probabilities from the state in a particular time period differ from the composte interaction.

Finally, each dyadic relationship with each speaker as antecedent and each as subsequent was profiled, i.e., all possible dyadic relationships for each of the four groups. Each dyad matrix was compared to the composite

matrix to test for differences. This comparison tested the assumption of homogeneity (Kullback and Kupperman, 1962). The assumption of homogeneity supposes that no subgroups in the population have substantially different transition probabilities. A significant homogeneity test indicated whether the interaction of a particular dyad was significantly different from the total group interaction.

CHAPTER III

RESULTS

This chapter reports the results of the study as they relate to the research questions. Essentially, the research questions deal with the descriptive nature of the data; a comparison of the two group systems; the analysis of change over time; and the question of dyadic relationships.

Data Description

Describing the interaction involves identifying those cells which induce structure in the matrix. These cells symbolize the relational interacts which characterize the group system. A cell contributes to structure when its frequency and transition probability are greater than random.

Decision-Making Groups

The two decision-making groups were compared to one another using the Anderson-Goodman procedure. This procedure computes a composite matrix consisting of both groups and compares each separate group to the composite. The obtained Anderson-Goodman for this comparison was non-significant (AG = 43.19; df = 40) and indicates that the

interaction of the two decision-making groups was not significantly different. Therefore, all further analysis refers to the combined decision-making group data. Appendix B contains all composite matrices.

The combined decision-making groups produced 5,496 units of interaction. Random frequency in the decision-making composite is 219, and all cells must have a transition probability greater than .20 to contribute to structure. Asterisks in the composite matrices refer to those cells which meet these criteria. Moreover, since the distribution of data (frequency), rather than transition probabilities, is a more important contributor to matrix structure and often refers to patterned interaction those cells which exceed random frequency but do not have a transition probability above .20 are also identified. The structured cells in the decision-making data are ↑-↑- (238, .21), ↑-→ (705, .60), ↓-→ (357, .62), →↑- (742, .21), and →→ (2145, .63). Cell →↓- exceeds random frequency (338) but has a transition probability below .20.

Consciousness-Raising Groups

The two consciousness-raising groups were also compared to one another using the Anderson-Goodman statistic. However, these two groups were significantly different (AG = 187.23; df = 40; p. <.01). Therefore, the data generated from the consciousness-raising groups were not

combined, and the interaction of each consciousness-raising group was analyzed separately.

The interaction of the first consciousness-raising group is also reported in Appendix B. This group produced 2,105 units of interaction with a random cell frequency of 84. Unlike the decision-making data, this consciousness-raising group exhibited only two cells which exceed both random frequency and transition probability--→↑- (169, .70), and →↓ (1322, .80). Cell ↓-→ (160) surpasses random frequency but not the random transition probability.

The interaction of the second consciousness-raising group appears in Appendix B. There were 3,242 units of interaction for this group with a random cell frequency of 130. Cells ↓-→ (134, .83) and →→ (2578, .89) contribute to structure. Cell →↓- exceeds only random frequency.

Decision-Making Compared to Consciousness-Raising Groups

One comparison of the decision-making and consciousness-raising groups matches the decision-making data against each of the consciousness-raising groups. Table 2 reports the results of comparing the decision-making groups with the first consciousness-raising group. The table reports structured cells which are the same in both sets of data, and those cells which are different.

Table 2

Interacts Inducing Structure in Decision-Making Groups Compared to First Consciousness-Raising Group

	Decision-Making	Consciousness-Raising
Same Interacts	↑ →	↑- →
	→ ↑-	→ ↑-*
	→ ↓-*	→ ↓-*
	→ →	→ →
Different Interacts	↑- ↑-	
	↓- →	

*Exceeds RF only

The table indicates that all cells which contribute to structure in the first consciousness-raising group also induce structure in the decision-making groups. However, two cells (↑-↑-, and ↓-→) exceed only random expectations in the decision-making groups. These two units capture the differences in the interaction between the decision-making groups and the first consciousness-raising group. The decision-making groups reflect more competitive symmetry (↑-↑-) and instances of equality following deference (↓-→).

Table 3 summarizes the data generated by comparing the decision-making data with the second consciousness-raising group. In this comparison three cells produce structure in the decision-making groups only--competitive symmetry (↑-↑-), dominance attempts followed by equivalence (↑-→), and equivalence followed by dominance (→↑-).

A second comparison between group systems involved combining all decision-making data and all consciousness-raising data and comparing the two systems directly. This comparison is problematic because earlier analysis indicates that the two consciousness-raising groups systems were dissimilar and therefore should not be combined for a composite analysis. However, the result of this comparison is so large (AG = 800.52; df = 40; p. <.01) that it warrants special attention. Appendix B also contains the composite of all consciousness-raising data. The combined

Table 3

Interacts Inducing Structure in Decision-Making Groups Compared to Second Consciousness-Raising Group

	Decision-Making	Consciousness-Raising
Same Interacts	↓- → → ↓-* → →	↓- → → ↓-* → →
Different Interacts	↑- ↑- ↑- → → ↑-	

*Exceed RF only

consciousness-raising groups produced 5,251 units of interaction, approximately the same as the 5,496 interacts included in the decision-making data.

Table 4 summarizes the Anderson-Goodman statistic for each row of both group systems. The null hypothesis for each of the five rows (states) is that the transition probabilities from this state are the same in the particular group matrix as in the composite matrix created by combining both group systems. For example, the figure in the decision-making column for the ↑+ row (11.9) means that the transition probabilities from the ↑+ row differ in the decision-making groups when compared to the composite of all groups. In the consciousness-raising groups the null hypothesis was rejected for all states except the ↓+ state. And in the decision-making groups only transitions from states ↑+ and → differ significantly from the composite matrix.

Table 5 is similar to Tables 2 and 3 except that Table 5 illustrates structured cells for all decision-making data compared to all consciousness-raising data. The only cell which uniquely induces structure in one group but not the other is the ↑-↑- cell. However, the →↑- interact only exceeds random frequency in the consciousness-raising groups and thereby contributes less structure than the same interact in the decision-making groups. Examination of both Tables 4 and 5 reveals that

Table 4

Anderson and Goodman Measures for Combined Decision-Making Groups and Combined Consciousness-Raising Groups

Row	Decision-Making	Consciousness-Raising
↑+	11.0*	19.6*
↑-	3.7	16.4*
↓+	.35	3.6
↓-	5.7	15.9*
→	350.6*	372.34*

*P. < .05
Overall A-G = 800.52; df = 40; P. < .01

Table 5

Interacts Inducing Structure in Decision-Making Groups Compared to Combined Consciousness-Raising Groups

	Decision-Making	Consciousness-Raising
Same Interacts	↑- →	↑- →
	↓- →	↓- →
	→ ↑-	→ ↑-*
	→ ↓-*	→ ↓-*
	→ →	→ →
Different Interacts	↑- ↑-	

*Exceeds RF only

while the strong up state (↑+) has a significant Anderson-Goodman value, no cell contributes to structure in either of the two groups. This simply indicates that even though the transition probabilities from the ↑+ state in each group differ from the composite, the state does not induce sufficient structure in the individual group composite. Interacts using ↑+, then, may differ between the two groups, but they do not account for a sufficient number of interacts to structure the particular group systems.

Phasic Analysis

The phasic analysis addresses the issue of change over time. This is the assumption of stationarity or whether the parameters of the interacting system are uniformly stable over time. Nonstationary parameters indicate that the interaction within a time period is distinct from composite interaction.

Decision-Making Groups

The pooled decision-making data were divided into both thirds and fourths and tested for significant changes over time. Table 6 summarizes the Anderson-Goodman statistic for each state when the data were divided into thirds. The overall Anderson-Goodman statistic is significant (AG = 108.21; df = 60; p. <.01) and indicates significant variation over the three time

Table 6

Results of Anderson and Goodman Measures for Three Phases of Decision Making

Row	Phases		
	1	2	3
↑+	2.42	3.73	1.33
↑-	4.67	3.24	1.27
↓+	7.66	3.18	3.77
↑-	7.55	6.52	9.87*
→	12.62*	17.87*	22.55*

*p < .05
Overall A-G = 108.31; df = 60; p.< .01

periods. The one-across state (→) varies from the composite in each time period, and the weak down (↓-) state in the third time period differs from the composite data. Rejecting the null hypothesis for a particular state in a phase means that the transition probabilities from that state differ significantly in that time period when compared to the composite. The value of 12.62 with four degrees of freedom, for example, in phase one for the → state indicates that the transition probabilities from the → state are different in phase one when compared to the composite data.

Tables 7 and 8 summarize the transition probabilities from the significant states and compares these transition probabilities to the transition probabilities in the composite matrix. Table 6 reports that the one-across (→) row varies significantly in all three time periods. Table 7, then, reports the transition probabilities for all interacts generated by the → row in the three significant phases. For example, the .03 in the →↓+ cell is exactly the same as the transition probability in the composite cell. This cell does not account for the variation in the → state during phase one. Moving across the row, however, the →↑- cell has a transition probability which is higher than the transition probability for the same cell in the composite matrix. The →↑- cell, then, is partially responsibile for the significant variation in

Table 7

Transition Probabilities from → Row
Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase One	.03	.25	.02	.09	.58
Phase Two	.01	.22	.01	.08	.65
Phase Three	.05	.17	.01	.11	.64
Composite	.03	.21	.01	.10	.63

Table 8

Transition Probabilities from ↓- Row Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase three	.02	.18	.01	.09	.68
Composite	.03	.25	.01	.06	.62

phase two. Table 8 is read in the same manner but reports the results for the ↓- state which was significant only during phase three. Again, this procedure is purely descriptive and attempts only to account for the reported statistical significance.

The next phasic analysis divided the data into fourths. The overall Anderson-Goodman statistic for this analysis was also significant (AG = 163.32; df = 80; p. <.01), and Table 9 reports Anderson-Goodman values for each state across the four phases. Table 9 is interpreted precisely the same as Table 6. In Table 9 the ↓+ state in phase three and ↓- in phases three and four do not reach a significance level of .05. However, since these states approach significance (p. <.10) and may account for the accumulated variance in the overall statistic, they are tabled in the following section.

Table 9

Results of Anderson and Goodman Measures for Four Phases of Decision Making

Row	Phases 1	2	3	4
↑+	1.82	2.63	3.19	1.34
↑-	3.24	1.17	17.87*	1.42
↓+	7.2	6.67	7.77**	5.7
↓-	5.27	6.11	7.77**	8.35**
→	9.43*	11.33*	28.77*	26.22**

*p. < .05
**P. < .10

Overall A-G = 163.32; df = 80; p. < .01

Tables 10, 11, 12, and 13 summarize the transition probabilities for states ↑-, ↓+, ↓-, and → respectively. These tables also are interpreted exactly as Tables 7 and 8. They illustrate the differences in transition probabilities from each state within a phase compared to those equivalent transitions in the composite matrix.

Table 10

Transition Probabilities from ↑- Row Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase three	.007	.19	.05	.11	.62
Composite	.04	.20	.03	.14	.60

Consciousness-Raising Groups

Since the consciousness-raising groups differed significantly from each other, they could not be combined for a phasic analysis. Therefore, each group was analyzed separately, and each was divided into both thirds and fourths. Except for the first consciousness-raising group divided into fourths, all phasic analyses were nonsignificant. The second group reflected stationary

Table 11

Transition Probabilities from ↓+ Row Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase Three	.12	.15	.12	.05	.55
Composite	.06	.20	.04	.09	.61

Table 12

Transition Probabilities from ↓- Row Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase Three	.07	.25	.01	.02	.63
Phase Four	.02	.19	.005	.09	.68
Composite	.03	.25	.01	.06	.62

Table 13

Transition Probabilities from → Row
Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase one	.04	.24	.02	.10	.58
Phase two	.02	.25	.01	.08	.62
Phase three	.02	.19	.02	.07	.70
Phase four	.05	.18	.01	.13	.60
Composite	.03	.21	.01	.10	.63

parameters whether the group was divided into thirds (AG = 68.39; df = 60; NSD) or fourths (AG = 90.20; df = 80; NSD); and the first consciousness-raising group reflected stationarity when divided into three time periods (AG = 79.08; df = 60; NSD). However, the creation of four time periods for the first consciousness-raising group yielded a significant result (AG = 142.59; df = 80; p. <.01).

Table 14 displays the Anderson-Goodman statistics for all states across the four phases for the first consciousness-raising group. The → row is significant in phases one, three, and four. And the ↑+ and ↑- rows approach significance in phase one.

Tables 15, 16, and 17 report the transition probabilities for the three significant states in Table 14. These state probabilities are compared to composite transition probabilities and indicate which cells contribute to significant variation within a time period.

Dyadic Analysis

The dyadic analyses test the assumption of homogeneity measure suggests that the interaction produced by a subgroup (dyad) of the population (group) differs from the composite interaction.

Decision-Making Groups

An interact matrix reflecting the interation between

Table 14

Anderson and Goodman Measures for Four Phases of Consciousness-Raising Group One

Row	Phases			
	1	2	3	4
↑+	9.04**	7.6	.47	2.68
↑-	8.10**	3.3	3.38	4.31
↓+	1.04	.52	2.99	2.34
↓-	3.13	5.6	5.53	3.02
→	11.13*	7.2	47.47*	13.54*

*p. <.05
**p. <.10
Overall A-G = 142.59; df = 80; p. <.01

Table 15

Transition Probabilities from ↑+ Row Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase one	.22	.07	0.0	0.0	.70
Composite	.12	.07	0.0	.13	.67

Table 16

Transition Probabilities from ↑- Row Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase one	.02	.26	.02	.08	.60
Composite	.03	.15	.008	.10	.70

Table 17

Transition Probabilities from → Row
Compared to the Composite

Phases	↑+	↑-	↓+	↓-	→
Phase one	.05	.11	0.0	.07	.76
Phase three	.03	.02	.008	.05	.90
Phase four	.05	.13	.01	.04	.75
Composite	.03	.10	.006	.05	.80

each pair of speakers was formed for every dyadic relationship in both groups. That is, each speaker as the antecedent speaker is matched with every other subsequent speaker, and a matrix is generated displaying the interaction which characterizes each particular dyad. Tables 18 and 19 report the homogeneity measures for all dyads in decision-making groups one and two respectively. For example, the 30.64 in the 1-2 cell of Table 18 designates the interaction generated by speaker one as antecedent and speaker two as subsequent as significantly different from the composite interaction. In Table 18 all dyads including speaker one as the subsequent speaker differ significantly from the composite. And speaker one as the antecedent speaker forms significant dyadic relationships with two other members as subsequent interactants.

Table 19 shows speaker two as the antecedent speaker generated significant homogeneity measures in combination with every other member. The only other significant homogeneity measures include speaker two as subsequent to speaker one, and in the interaction formed by members four and three. Appendices C and D contain the matrices for all significant dyads in decision-making groups one and two respectively.

Consciousness-Raising Groups

Except for the 4-2 dyad in the first consciousness-

Table 18

Results of Homogeneity Measures for All Dyads in First Decision-Making Group

Antecedent Speaker	Subsequent Speaker 1	2	3	4	5
1	---	30.64**	10.3	22.9	34.48*
2	30.28**	---	19.85	24.88	16.31
3	29.47**	23.10	---	18.21	12.4
4	33.63*	19.04	23.63	---	16.86
5	31.92*	10.54	16.69	12.85	---

*p. <.05
**p. <.10
df = 20

Table 19

Results of Homogeneity Measures for All Dyads in Second Decision-Making Group

Antecedent Speaker	Subsequent Speaker 1	2	3	4
1	---	32.65*	19.48	20.3
2	34.72*	---	32.88*	29.14**
3	24.04	18.1	---	20.83
4	21.85	18.84	35.14*	---

*p. <.05
**p. <.10
df = 20

raising group, which barely exceeds p. <.10 (28.92; df = 20), no other dyadic relationship in any of the consciousness-raising groups is significant. All combinations of dyadic interaction in the consciousness-raising groups are homogeneous with the composite interaction. Appendix E contains the homogeneity measures for these dyads.

CHAPTER IV

DISCUSSION AND RECOMMENDATIONS

This chapter discusses each research question. The chapter is organized according to the presentation of results. These involve the descriptive question comparing the interaction of the two types of groups; the comparison between groups; the issue of change over time; and the nature of dyadic relationships within all groups. The final section of the chapter discusses limitations and implications for future research.

Discussion

Descriptive Characteristics

The structure-inducing cells reflect the interaction characteristic of each group system. After describing the interaction of decision-making groups and each consciousness-raising group, the following section compares and contrasts the interaction patterns of both group systems. A set of theoretical assumptions are offered which account for the interactional differences in the two group-systems.

Decision-making groups. The most obvious conclusion

concerning the descriptive qualities of decision-making groups is the striking predominance of equivalent symmetry. The entire → row constitutes 61 percent of the interaction and equivalent symmetry (→→) accounts for 39 percent. The next highest percentage of interaction is the →↑- cell, and it constitutes only 13 percent of the interaction. Mutual definitions of equality where differences between interactants are minimized seems to be a normative interaction pattern. It is very probable (.63) that given the initiation of a → function, the subsequent function will also be →.

In many respects this finding is consistent with past research. Though Rogers and Farace (1975), Mark (1971), and Ellis (1976) used a coding system slightly different from the one employed in this study, each system has a category for simple extension of the previous comment. And this category is tansformed into →. An inspection of the coded interaction indicates that the continuous extension of the previous comment accounts for much of the equivalent symmetry in the decision-making data. Group members appear to spend a large portion of time extending, elaborating, and providing personal opinions about the comments of others. After a group member introduces an idea, other members extend and support the idea before passing judgment and moving to another issue. Defining member relationships as equal contributes to an atmosphere

of inquiry and freedom to participate which is crucial to the generation of information.

The extensive use of equivalent symmetry is also consistent with the interactional context of the decision-making groups. Group members did not hold predetermined role positions or have sufficient prior contact with other group members to formulate any expectations of interpersonal relations. These groups functioned in a naturally developing context which is conducive to mutual definitions of equality.

The ↑-↑- interact (competitive symmetry) also induces structure in the decision-making groups. However, the ↑-↑- interact is not a forceful attempt to dominate. The ↑- function is produced by either informative extensions or disagreement and plays an important role during the entire history of the group. Simple conflict (contiguous statements of disagreement) and sequences of informative extension which broaden or focus the interaction produce competitive symmetry. Moreover, contention for control or leadership roles manifests itself in "one-up" attempts (↑+ or ↑-).

Competitive symmetry is analogous to "one-upmanship" or a game of contention which must ultimately be resolved. Group members may contend for positions of dominance in a relationship, but inevitably one member must assume the submissive role or at least agree to support the dominance

attempt. However, this is an important distinction between the ↑+ and the ↑- functions. The weak up (↑-) in this study is best considered an attempt at initiation rather than "dominance." The ↑+ act is probably a more obvious attempt to dominate the relationship. The ↑+ functions are either blatant topic changes which control the interaction; disconfirmation at the personal rather than ideological level; or imperatives. The ↑- function, on the other hand, is a simple effort to influence rather than control the interaction.

The ↑-↑- interact is an expression of traditional conflict in decision-making groups. Each interactant competes for a managerial or directive position in the relationship. The ↑- function reflects socially acceptable communicative efforts to modify, refine, and test the ideas present in the interaction. When one individual initiates influence (↑-), and another individual challenges (↑-), relational conflict is the result. Substantive conflict is important and functional to the decision-making process. As interactants struggle for a scarce position of influence they test ideas and increase the options available to the group.

On the other hand, a ↑+↑+ interact symbolizes competition for dominance. This interact is also competitive symmetry but qualitatively different from ↑-↑- competitive symmetry. Group members attempting to dominate seek to

restrict the behaviors of others. This relational mode is less socially acceptable. Orders, commands, or personal disconfirmation often engenders negative affiliative responses and do not promote an atmosphere or open discussion. While ↑-↑- competitive symmetry is a significant verbal function in decision-making groups, ↑+↑+ interacts are extremely rare.

Other related coding schemes (Mark, 1971; and Rogers and Farace, 1975) consider statements of agreement deferential or one-down (↓). However, this coding system defines supportive statements as efforts to equalize of identify with the previous speaker. Therefore when a group member supports another member's initiation of new information, the interact appears as a ↑-→. The → serves to indicate the subsequent members association with the previous speaker.

The data clearly display a cyclical pattern of interaction among the ↑-→, →→, and →↑- interacts. A cyclic pattern is a set of system states such that the most probable transitions are to members of the set (see Hawes and Foley, 1973). The cyclical pattern formed by the ↑- and → states is an initiation pattern where information is processed by group members. Figure 1 graphs the transitions within this cyclical pattern.

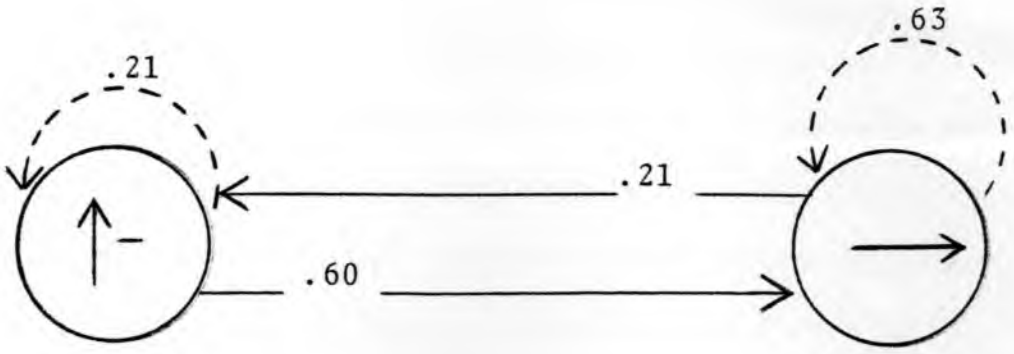

Figure 1. Cyclical pattern of information initiation.

The pattern is set into motion with the introduction of new information (↑-). The most probable transition from the state is to support or extension (→), thereby forming a ↑-→ interact. And since the most probable transition from → is to another →, the →→ interact functions to extend and support the original initiation. The high proportion of equivalent symmetry (→→) suggest that the process of extending and supporting generates long chains of interaction. Group members find this relational definition most comfortable for discussing ideas. When equivalent symmetry is interrupted, the most probable transition is back to ↑-, thereby returning the cycle to its initial state. Occasionally, a group member seeks to influence others (↑-) and is challenged by another influence attempt. The second most probable transition from ↑- is to another ↑- (.21). This form of conflict induces structure in the decision-making interaction and appears sporadically throughout the cyclical pattern.

The final cell which structures the decision-making data is not a part of the interaction cycle outlined above. The ↓- function symbolizes moderate deference to a source of knowledge. Unlike the ↓↓ which implies extreme submission, the ↓- is a form of yielding or conformity. A common act in decision-making groups which symbolizes deference is the question. Interactants publicly express their ignorance and yield to a source of knowledge. The ↓-→ interact is the result of those group members who seek information from others or submit to the authority of others.

Though Glover (1974) studied family systems, his conclusion that some people use a down function to "let" others assert their authority seems applicable here. An intuitive conclusion drawn by the author from listening to the tapes of the interaction supports the assumption that interactants purposely defer to others. During a series of →'s group members often yield to others in an effort to control the direction of the interaction. The down relationship definition in the form of a question functions to force another group member to respond. Most group members respond with personal opinion (→) which does not change the level of abstraction in the group. Those group members who respond with new information (↑-) form a complementary relationship with the other member. While complementarity is the second most probable

transition from the ↓- state, it does not contribute to structure in the matrix.

No other forms of relational interaction characterize the decision-making groups. In an earlier study Ellis (1976) found considerable complementarity in decision-making groups. Though the study used a different coding system, complementarity is an intuitively appealing form of relationship definition. Nevertheless, these data indicate that only 7 percent of the interaction was complementary interaction as opposed to 29 percent in the earlier study. Moreover, submissive symmetry in any form (↓+↓+/↓+↓-/↓-↓+/↓-↓-) is almost nonexistent in these groups. The combination of all cells defined as submissive symmetry constitute only about one percent of the interaction. Contention for the submissive position in a relationship is an atypical mode of interaction and usually takes the form of mutual exchanges of person support--which are extremely brief.

Consciousness-raising groups. Because the two consciousness-raising groups were significantly different from one another, they must be discussed as separate group systems. This section discusses each of the consciousness-raising groups. The following section will then compare consciousness-raising and decision-making groups.

In the first consciousness-raising group equivalent

symmetry is the most probable type of interaction and induces the most structure in the data. The largest percentage (77 percent) of relational modes are →, and 62 percent of the interaction is equivalent symmetry. A preponderance of mutual definitions of equality is not surprising in a consciousness-raising group. The expressed purpose of consciousness-raising groups is to make the group members aware of their experiences as women. These experiences are then translated into sociological and political implications. The group serves as a vehicle for the creation of a supportive atmosphere where group members can share and interpret their feelings. The group discourages the establishment of leaders or any form of status hierarchy which may be detrimental to the honest expression of feelings. By examining specific experiences in a nonintellectualizing manner, the group will hopefully arrive at general conclusions about the experiences of women. Given this atmosphere, the abundant use of equivalent symmetry is predictable. Group members carefully avoid passing judgment on one another and foster a supportive environment. The process of reporting personal experiences and extending and elaborating the experiences of others leads directly to relational definitions based on equality.

The other structure-inducing cell in the first consciousness-raising group is the ↑-→ cell. The ↑- act

is a useful relational function for initiating direction. When a group member introduces information about herself, or provides closure for the comment of another, she is attempting a mild form of relational control. The typical interaction pattern in the first consciousness-raising group involves the initiation of control and subsequent acceptance and elaboration of the control attempt. The →↑- cell, which would account for the shift from equivalent symmetry to further initiation of control and close the initiation, elaboration, initiation cycle (↑-→/→→/→↑-), does not quite contribute to structure. However, the interact does exceed expected random frequency. Members of this consciousness-raising group define one another as equal and occasionally initiate relational control. Analyzing the changes over time and the dyadic relationships would provide further insight into the interactional nature of this consciousness-raising group.

The interaction pattern in the second consciousness-raising group is so repetitious that it warrants little attention. The group enacts an overwhelming amount of equivalent symmetry. Over 80 percent of the relational definitions are equivalent and 90 percent of the utterances were →. The coding scheme simply revealed few discriminations in the interaction of this group. Again, relationships in a consciousness-raising group which are based on equality are to be expected. Yet, the incredible

proportion of equivalent symmetry in this group is possibly an indication that the category system is not sensitive enough to reveal variation in the interaction.

However, one difference between group one and two is most interesting. In the first consciousness-raising group, members initiated relational control (↑-). In the second group the initiation of control occurs only rarely. Rather, the cell which induces structure is based on deference rather than initiation (↓-↑-). The weak-down function is more frequent than the weak-up in this group. The weak-down is a relational technique for deferring to others. Group members seek rather than assert, thereby placing themselves in a passive role. Usually the ↓- is a result of seeking information or support for your ideas.

Deferring to another can also be a way of changing the topic of discussion. Group members seek the approval of others for their feelings and thus redirect the group. Rather than initiate, extend, initiate (↑-→/→→/→↑-) like the decision-making groups and the first consciousness-raising group, members of the second consciousness-raising group first defer to another member and then extend. Note the ↓-→, →→, →↓- cycle. Similar to the other consciousness-raising group, the →↓- only exceeds random frequency; however, the sequence seems to describe the relationship definition which is inherent in the interaction.

Consciousness-raising groups do not utilize any form of competitive symmetry or complementarity. These relational forms suggest either competition or status hierarchies which are highly incongruous with the norms and expectations of a consciousness-raising group. Moreover, the strong down (↓+) is almost nonexistent. Apparently such an obvious form of submission is a relational position which members of a consciousness-raising group avoid.

Comparison of Decision-Making and Consciousness-Raising Groups

This section first compares the decision-making groups to each of the consciousness-raising groups and discusses similarities and differences. Secondly, the composites of each group system are compared.

Decision-making groups with first consciousness-raising group. Table 2 illustrates the similarities and differences between the decision-making data and the first consciousness-raising group. Both groups utilize the ↑-, →→, →↑- cycle as acceptable forms of relational definitions. These are the most recurring interactional sequences in both groups and must be the relational modes which efficiently conduct the "work" of the group. While mutual definitions of relational equality are often desirable, it isunrealistic and impractical not to expect group members to assert some control. Anytime a group is

influenced by the behavior of one group member, that individual is asserting his inclination for relational control.

Recall that control in a relationship is not something to avoid. Individuals who initiate control (not dominance) are responsible for new ideas, information which challenges and increases the quality of ideas, and possible innovation. Moreover, while the qualitative nature of some relationship definitions may be similar for both decision-making and consciousness-raising groups, those relational forms can serve a variety of interpersonal functions. A characteristic sequence of initiation, equality, initiation may facilitate task information processing in a decision-making group and self-awareness in a consciousness-raising group.

All cells which induce structure in the consciousness-raising group are also responsible for structure during decision making. The first consciousness-raising group and the decision-making group share a cyclical pattern in common (↑ - → / ↠ / → ↑ -). This recurring process sets into motion a repetitive cycle of relationship definitions which "reverberate infinitely" (Raush, 1972, p. 282). Regardless of subject matter or goal state both groups must steer the group into a course of action and comment and elaborate before offering new direction.

An important distinguishing feature, however, is that

the consciousness-raising group does not engage in conflict or competition. Competitive symmetry (↑-↑-) is not a characteristic of the first consciousness-raising group. If an initial ↑- act is not extended or supported (↑-→), then it will most likely meet with resistance. Another group member will either initiate a new idea immediately and subtly reject the preceding one, or disagree with the original comment outright.

This type of interaction is highly compatible with the requirements of each group. Consciousness-raising groups avoid passing judgment, prescribing behavior or disconfirming the experiences of another. Competitive symmetry is exactly the form of interaction members of a consciousness-raising group want not only to avoid but eliminate. In decision-making groups, on the other hand, competitive symmetry can function as substantive conflict which is crucial for idea testing. Moreover, since differentiation and some form of role specialization often facilitates work, competitive symmetry suggests members who are contending for influence.

Decision-making groups with second consciousness-raising group. The decision-making groups interface with the second consciousness-raising group in a different manner. The second consciousness-raising group utilizes seeking rather than asserting behavior. The most

recurring cycle in this group is ↓-→, →→, →↓-. The decision-making groups employ this cycle though not as often as the initiation cycle. The ↓-→ and →↓- interacts are used half as often (12 percent vs. 25 percent) as the ↑-→ and →↑- interacts. It is possible that ↓- sequences symbolize broader areas of discussion in decision-making groups. In other words, group members seek permission (↓-) to consider some issue. The group then sets into motion the initiation cycle (↑-→/→→/→↑-) which is more conducive to providing information and discussing the issue. People defer to others in decision-making situations to acquire some form of information and subsequently enter into discussion about the information. The second consciousness-raising group uses the ↓- cycle exclusively. Group members simply defer to others before extending and do not initiate relational control. The differential use of these cycles of interaction are certainly what account for the significant differences between the two consciousness-raising groups.

The second consciousness-raising group does not share competitive symmetry or initiation (↑-) with the decision-making groups. Recall competitive symmetry is probably a highly undesirable mode of interaction for consciousness-raising groups. And this particular group continuously avoids initiating relational control. Unlike the first consciousness-raising group, this group uniformly

avoids the use of authority and control as forms of relational definition.

Comparison of both group systems. The two consciousness-raising groups cannot justifiably be combined and compared to the decision-making groups. However, for heuristic reasons some discussion of the two group systems might prove insightful. When the two sets of data were compared directly, the differences were considerable. And Table 4 reports those functions which differ between the two groups. The concept of group tensity may help illuminate the differences between the two groups (see Werbel, Ellis, and Fisher, 1974).

Any collection of people legitimately called a group exist because of some tension or disparity between the state of the group and the state of the environment. Tensity refers to the relationship between the group system and the immediately environing system. The manner in which a group operates upon or transacts with its environment is termed tensity. There are important theoretical implications of tensity for communication. Groups relate to their environment differentially, and the only way a group system accomplishes this is through some communicative exchange. Therefore, it is interaction which becomes the defining characteristic of groups. For example, decision-making groups are "extensive." That is, they

reach out to create, manipulate, and organize information from their environment. Decision-making groups require a free exchange (open system) with their external environment because their goals are predicated upon altering the environment in some desired manner. Members of a decision-making group must readily obtain, test, and process information. A consciousness-raising group is an "intensive" group. Intensive groups turn away from the external environment. Group members turn toward one another and try to eliminate influences from the outside. Interaction in the intensive group is designed to serve the individual and is primarily a closed system.

Tensity partially explains the differences between the two group systems. Decision-making groups employ a greater variety of interaction and utilize those relational modes which are most useful for extracting and processing information from the environment. Except for the strong down (↓+) the two groups differ from one another in every way. The up function, by definition, indicates that group members have used some outside source of information in an effort to control the environment. The decision-making groups employ ↑ functions 25 percent of the time as opposed to nine percent in the consciousness-raising groups. And the weak-up which is a more acceptable form of control and highly valuable for information processing occurs four times as often

in decision-making groups.

The weak-down mode, while of secondary importance in the decision-making groups, still occurs with twice the frequency than in consciousness-raising groups. Consciousness-raising groups avoid differences, conflict, and judgmental statements. Consistent with the expectations of intensive groups, they enact their own environment which is divorced from external influence. And equivalent symmetry is the form of relational interaction most capable of ensuring a minimum of outside influence. Except for the →, all states in the consciousness-raising groups which differ significantly from the decision-making groups occur with less frequency.

These two groups operate in accordance with tensity expectations. Of course, most groups can be classified by more than one tensity class. Both extensive and intensive groups often utilize relational functions which are characteristic of the other; however, how the interaction is organized is most important. Though consciousness-raising groups use initiation cycles, they are secondary in importance to equivalent symmetry. And while equivalent symmetry is most probable in decision-making groups it is not nearly as persistent in decision-making groups as in consciousness-raising groups. Moreover, the impact of initiation and control sequences coupled with competitive symmetry, are certainly unique

to extensive groups.

Phase Analysis

This section examines the interaction as it changes over time. Most literature posits either three or four-phase sequences. Therefore, these groups were divided into both thirds and fourths. The following section discusses relational definitions as they progress through time.

Decision-making groups. Whether the data were divided into thirds or fourths, the decision-making groups exhibited significant change over time. Only two states account for the variation when the data were divided into three time periods. However, four states break out when divided into four time periods. The time series analysis enhances specificity because certain interaction which is nonsignificant in the total interaction is important in specific time periods.

The transitions from the ↓- row differ in phase three from the composite. The cells or specific interacts which are most disparate from the composite are the ↓-↑- and ↓-→ cells (see Table 7). The ↓-↑- cell is less probable in phase three than in the composite and the ↓-→ interact is more probable. Also, the ↓- function is more frequent during the third time period than any other time period. Recall that the down function is a form of

yielding or conformity. During the end of the decision-making process group members are essentially finished arguing over issues. Members are aware of the issues and have been debating them for some time. Hence few comments initiate new ideas. The infrequent occurrence of ↑- functions in phase three corroborates this. Disfavor and confusion must be transformed into favorable decision making in this time period. As group members come to agreement on key issues and begin to finalize conclusions, they seek the assistance of others. Therefore the ↓-→ is more functional late in the decision-making process.

The → function is the second state which contributes to significant variation in the data. And it is significant across all three time periods. During the first phase the →↑- and →→ interacts are most different from the composite. Increases in ↑- early in the interaction is consistent with some of the literature on phasic development. Group members have entered a new social climate and during their attempts to orient and define the situation members test and contend for control. Group members are making bold statements and trying to direct the interaction. A decrease in equivalent symmetry is consistent with this trend.

The second phase marks an abrupt increase in equivalent symmetry and decrease in ↑- statements. There are still instances of initiation, but the group resorts to

prolonged extension of issues. In phase one numerous decision proposals come under consideration. However, the group now focuses on more specific issues and spends more time discussing and supporting these issues. Ellis (1976) also noted an increase in equivalent symmetry during the middle time period. Such a relational definition may be a style of cooperation and conducive to generating information for the groups eventual use. Equivalent symmetry is a comfortable form of relational interaction and varies inversely with messages asserting control.

The most noteworthy aspect of the final phase is the drop in ↑- comments. Group members avoid asserting control in the final phase and maintain a reinforcing atmosphere. Consistent with a decline in control is the increased use of one-down functions. The weak-down state is significant in phase three because of a marked increase in frequency. All other states operate at approximately their equilibrial level. The only cell which varies to any degree from the composite transition probability is the →↑- cell. All others have marginal differences. The final phase of decision making is characterized by a dissipation of dissent. Though one might expect an increase in equivalent symmetry, this does not occur because most of the → functions combine with ↓- (see Table 8) to form a ↓-→ interact. Group members are simply seeking and receiving support for the accomplished work.

The three-phase division of the data is not as enlightening as the four-phase division. When divided into fourths twice as many states account for variation. Three phases seem to overlap finer distinctions and spuriously conceal sources of variation. The ensuing description of four phases of decision-making highlights the importance of a greater variety of interaction sequences and, for the most part, supports previous research.

The first fourth of the data is compatible with the first third. The only state which varies significantly is the → state. The → state functions almost autonomously in these data. When equivalent symmetry is at an equilibrial level, the system appears to maintain a homeostatic balance. Significant variation results when interactants either increase or decrease their use of the → function. The → seems to be the norm, and only when members deviate from the norm does the interaction vary over time. Moreover, since most relational definitions are either →, ↑-, or ↓- a departure from → usually constrains the transition probabilities of either ↑- or ↓-. This is especially true in the first phase. Equivalent symmetry is less probable and initiation is more probable. Interactants immediately compete for control. This finding is supported by Fisher's (1970) four-phase model of decision making. Fisher discovered that group members search for ideas and direction,

and that there are fewer favorable comments in the beginning moments of interaction. If this is true, an increase in initiation functions (↑-) and a decrease in supportive functions (→) is expected. During time of developing social climate and ambiguous relationships group members contend for authority and hesitate to reinforce the authority efforts of others.

Ellis and Fisher (1975) argue that conflict in the first moments of decision making stems from individual differences rather than group-generated information. Though competitive symmetry (↑-↑-) does not vary significantly, the first phase contains more than any other except phase two. The ↑- function plays a very important role in phase one. Group members assert their relational control as a ploy to test and clarify their relationships with other members. If early interaction is characterized by individual rather than group generated issues, a dominance of ↑- is an expected form of interaction.

The second phase helps clarify the first phase. Again, the → state is the only significant state in phase two. However, there is a further increase in →↑- and →→ interacts. The →↑- interact is more probable in phase two than any other. If members cautiously explore their relationships with others in the first phase, they expand this exploration in the second phase. But the second phase exhibits more control attempts and more competitive

symmetry than any other phase. Apparently, group members are challenging the ideas of others and beginning to take the group-generated subject matter to task.

The probability of equivalent symmetry or supportive extension increases from phase one to phase two. In addition to the initiation of more relational control, group members begin to support certain individuals. The research by Tuckman (1965) and Fisher (1970) would predict that the second phase of group interaction be a conflict phase. Though these data do not clearly support such a prediction, the trends in relationship definitions seem consistent.

The third phase of the interaction is the most interesting. All states except ↑+ contribute to significant change over time. The essence of the third phase is the dissipation of relational control. Group members tentatively asserted relational control in phase one and contested it in phase two. In the third phase this is no longer a consideration. The frequency and transition probability of ↑- comments decline. Equivalent symmetry increases substantially in phase three which indicates prolonged extension and relational definitions of equality which promote decision making. Group members have resolved their relational conflicts over how they will organize and begin the task of processing information about specific issues. Equivalent symmetry may be the most expeditious

manner of accomplishing this. Relationships based on equality provide the flexibility and tolerance required for serious discussion of an issue.

The ↓+ state is difficult to interpret and hence not very meaningful. The ↓+↓+ cell probabilities are misleading. The composite data only contains five instances of ↓+↓+ interacts which comprises only .0009 percent of the interaction. Even though all five occur in phase three and increase the transition probability, there is far too little data to justify any conclusions. The same is true for the ↓+↑+ interact. The ↓+→ has a lower transition probability then expected because those interacts which went from ↓+ to ↓+ or ↑+ were drawn from →. These interaction sequences may certainly be a hint of some important occurrence in phase three, but these data simply require further research. The ↓- is beginning to appear in phase three. Group members are more supportive of one another and less hesitant to seek relevant information. The ↓- state is more important, however, in phase four.

The final phase of the decision-making process is distinguished by the ↓- and → states. Contrary to intuitive and empirical expectations, equivalent symmetry is not at its peak during the final phase of decision making. Initiation of relational control is, however, at a low. Assertion of control is no longer important in the final phase. Disagreement of any sort has probably vanished

and ↑- comments are less functional to the interaction system. The ↓- state is the key to understanding the last phase of decision making. The last phase accommodates the greatest proportion of ↓- functions and utilizes a ↓- , →↓- exchange. Personal rather than ideological support is an infrequent form of content interaction. Yet, personal support may be accounting for the increased use of ↓- functions in the final phase. Group members may be expressing personal support for one another as they complete their task. This finding is consistent with Fisher's (1970) reinforcement phase.

Consciousness-raising groups. Each of the consciousness-raising groups was divided into both thirds and fourths. The second consciousness-raising group was not significant in either division of the data. The parameters of the interaction, then, were stationary and reflecting no sequences of interaction attributable to a specific time period. The overwhelming use of equivalent symmetry surely accounts for this finding. Group members have established equivalent symmetry as the normative relationship definition and employ no other type of relational interaction to a significant degree. An examination of larger portions of the group's history may have yielded significant variation over time. The first consciousness-raising group was also nonsignificant when

the data were divided into thirds. However, the group did yield a significant four-phase pattern.

The first phase of group one produces an increase in the probability of competitive symmetry. The transition probability from ↑- to ↑- in phase one substantially exceeds the composite probability. Even the infrequent ↑+ is most probable in the first phase. This conclusion is interesting because relational control is an unusual form of interaction in a consciousness-raising group. Recall that this group generated a ↑-→, →→, →↑- initiation cycle. Apparently this cycle is characteristic of early interaction. Similar to the decision-making groups, then, members of a consciousness-raising group assert their authority. Women who engage in a consciousness-raising experience for the first time need structure. Not until later in the group's history do they become comfortable with the norm of equality. The high probability of competitive symmetry in phase one is an indication that those who seek relational control are being challenged. Members of decision-making groups exhibit early challenges of authority, but not as abruptly as consciousness-raising groups. Members may not yet be acquainted with the imposed constraints of a consciousness-raising experience.

The second phase reflects no significantly varying interaction. Phases one, three, and four account for the

overall significance. Phase two is typical of composite interaction. Equivalent symmetry is highly redundant and there are occasional transitions to ↑- but less than in phase one.

Phase three is characterized by an increase in equivalent symmetry (see Table 17). Equivalent symmetry is a highly predictable type of interaction in a consciousness-raising group. But in the third time period it is even more predominant. No other interact exceeds its expected transition probability. Given the advent of a → the probability of a transition to another → is very high (.90). As group members take turns sharing and discussing their feelings they enact equal relationships. The essence of the group experience is the interaction in the third phase. Eastman (1973) writes that women in consciousness-raising groups learn that in order to decide and control their behavior they are dependent on their interactions with others. And that the women require confirmation and the acceptance of their identity. The equivalent symmetry in phase three is how women accomplish this. Continuous patterns of relational equality allow for implicit and explicit confirmation of personal experiences. By internalizing the norms of the group, women group members can intertwine their identities with the group identity.

The last phase prompts another decrease in equivalent

symmetry and slight increase in ↑-. Eastman (1973) in her participant observation study discovered that quite often group members had to deal with challenges and disputes from others. The trends in these data support such a conclusion. As the group develops, members are possibly less concerned about infringing on personal matters. Issues which were either dropped or avoided earlier are later confronted. Over time the group develops the spirit of unit and allows for a greater variety of interaction.

Nature of Dyadic Relationships

The homogeneity measure was used to test whether specific dyads had interaction patterns different from the composite interaction. Interestingly enough, neither consciousness-raising group had a statistically significant dyadic relationship. Based on the analysis presented above this is not surprising. The data generated by these consciousness-raising groups are very predictable and consistent over time. For the most part, the parameters of the interaction were stationary. The lack of statistical significance indicates that all group members related to one another similarly. The decision-making groups, however, display in intriguing pattern of significant relationships. This final section is devoted to the significant dyads in the decision-making groups.

Group one. Speaker one of the first decision-making group has a significant relationship with every other member of the group when he is the subsequent speaker. And as the antecedent speaker, speaker one forms a significant relationship with speakers two and five. Table 20 reports all the interacts which induce structure in the matrices generated by the significant dyads. For example, the matrix generated by dyad 1-2 (one as antecedent speaker and two as subsequent), has five cells which induce structure (→→/↑-→/↓-→/↑-↑/↓-↑-), and three which exceed random frequency (→↑-/→↓-/↑-↓-). When these interacts are compared to the composite interacts (last column of Table 20) the functions which are unique to the dyadic relationship and accounting for significance become evident.

When the group completed its task each member was asked to identify their perceived leader. In group one, every member identified speaker one as the leader. While the dyads formed with the group leader differ from the composite interaction, the differences are not of a single type. That is, the leader's relational interaction is different with every other member of the group. The leader does not "do" one thing which sets him apart from all other group members. Apparently, the leader takes stock of the individuals in the group and enacts behaviors he considers appropriate for each individual.

Speakers one and two form a reciprocal complementary

Table 20

Interacts Inducing Structure
in Speaker One Dyads

1-2	1-5	2-1	3-1	4-1	5-1	Composite
→→	→→	→→	→→	→→	→→	→→
→↑-*	→↑-*	→↑-	→↑-	→↑-	→↑-	→↑-
↑-→	↑-→	↑-→	↑-→	↑-→	↑-→	↑-→
→↓-*		→↓-*	→↓-*	→↓-*	→↓-*	→↓-*
↓-→	↓-→	↓-→	↓-→		↓-→	↓-→
↑-↑-		↑-↑-			↑-↑-	↑-↑-*
↓-↑-		↓-↑-				
↑-↓-		↑-↓-				
	↑+→					
					→↑+*	

*Cells which exceed RF only

relationship. Reciprocity, according to Bateson (1935), obtains when both parties in a relationship are capable of interchangeable behaviors. Though person A enacts behavior X and B responds with Y, B is also capable of enacting X and having A respond with Y. The two interacts which distinguish dyads 1-2 and 2-1 are ↓-↑- and ↑-↓-. However, both dyads 1-2 and 2-1 enact a ↓-↑- relationship. The two group members interchange their behaviors. At one time the leader will defer to the authority of member two, and speaker two later defers to the leader. The leader frequently enacts a ↓-.

An intuitive impression from listening to the interaction suggests that the leader asks many questions, and questions transform into ↓-. This is how the leader directs the interaction. Rather than instructing someone, the leader suggests a course of action in the form of a question. Also, after a group member offers an opinion the leader often responds with a question such as "What do you think about that," or "Does anyone else have anything to add." Member two is the only other group member who regularly challenges the leader. Often when the leader asserts relational authority, member two challenges the authority (↑-↑-), However, the leader maintains the authoritive role because member two ultimately responds to leader control with deference.

The reciprocity between the leader and member two

indicates a balanced relationship. Both members defer to the other when appropriate, but neither will hesitate to challenge. Such reciprocal relations are probably useful to the successful leader. It allows him to draw upon the expertise of others and still maintain a healthy interpersonal atmosphere. Cattell (1951) argued that any behavior which assisted the group in achieving desired results was leadership behavior. And any member of a group could display these behaviors in varying degrees. This leader produced a variety of behaviors which fit those around him. Moreover, in addition to interaction consistent with composite expectations, all other dyadic relationships formed with the leader have distinguishing characteristics.

The interaction which characterizes members one and five (1-5, 5-1) is a ↑+→ cycle, with the leader in the dominant position. The only blatant dominance is initiated by the leader and supported by member five. Member five does not challenge the leader at any time, and is definitely submissive to the leader. Each time the leader seriously disagrees or disconfirms someone, he is supported by member five. Furthermore, note that competitive symmetry with the leader producing the first ↑- is nonexistent in dyad 1-5. Member five does not challenge the leaders authority. However, when member five initiates control he is challenged by the leader. This individual

is not a strong force in the interaction and relates to the leader in a conventional manner. He supports the leader's authority and is not rewarded when he attempts to initiate control.

The leader forms significant relationships with members three and four only as the antecedent speaker. All the interaction in the 3-1 dyad is consistent with expectations except for a lack of competitive symmetry and the addition of ↑-↓- complementarity. The leader interchanged behaviors with member two and dominated member five. And now the leader is deferent to member three. It is possible that member three made significant ideological contributions to the group, or at least his ideas were not challenged. The lack of expected competitive symmetry is the strongest argument in support of this position. When member three initiates relational control he is not challenged. The leader either supports or defers to member three. If the leader's deference is in the form of a question, then the leader must be spending time seeking information from member three.

Again the leader is discriminating about how he responds to others. Group members who express potentially instrumental ideas are rewarded or utilized by the leader. Such behavior is highly functional. The leader guides group progress and facilitates outcomes not by exerting final authority but by knowing when and how to draw the

contributions of others into the interaction.

The 4-1 dyad is interesting because of how they do not interact. There is no competitive symmetry or leader support of speaker four deference. These two individuals probably pay little attention to one another. Member four initiates an expected amount of relational control and is reinforced rather than challenged. Similar to the 3-1 dyad, the leader does not see fit to disagree with the control initiations of member four. The 4-1 dyad is much more casual than the others. The lack of competitive symmetry, dominance, and submission indicate that these two group members disperse their behavior across a variety of functions. The leader simply did not invest considerable time in member four. All other group members interact uniquely with the leader and thereby contribute to one or more fo the numerous verbal functions required for decision making. The leader avoids relational contention probably because member four is not considered a significant force in the group.

In short, dyadic relationships formed with the leader of group one are unique. The leader enacts and interstructures special behaviors with each group member. The leader challenges and is challenged. He defers at one moment, dominates at another and sometimes ignores. A more complete explanation of these data should argue that all group members perform leadership behaviors. When

forced to identify the group leader, members can point to an individual. However, it is still probably true that this individual is not "the leader" of the group.

Yet one certainly cannot deny that dyads formed with the identified leader are distinctive. But these dyads are distinctive not because the leader behaves in a single and consistent manner, but because he responds to others with greater frequency and variety. Table 20 indicates that the leader as respondent rather than initiator is more important. If all group members perform important verbal functions, then the leader is possibly most viable as a reactor. The leader may direct the group through the adept use of various responsive behaviors rather than patent structuring.

Group two. The second decision-making group also displays a neat pattern of significant dyadic relationships with one person. However, the one individual is not the perceived group leader. The second decision-making group does not exhibit the same leadership interaction as the first group. However, when members of group two were asked to identify their leader only three of the four members named the same person. Though this one deviation is slight, it does indicate some wayward perceptions.

Speaker two, who forms the significant relationship

with other group members, was perceived as a deviant by the rest of the group. However, member two was labeled an opinion deviate rather than a role deviant (see Sampson and Brandon, 1964). A role deviate is someone whose entire personality is antithetical to the group. He is not liked by the group and usually ignored by other members. An opinion deviate is someone whose ideas differ from the group. This individual is often valuable and the group expends considerable energy interacting with the opinion deviate. Group members wrote that member two had expressed opinions, was vociferous, and often went off on a tangent. In group two, then, the opinion deviate formed significant relationships with all group members.

The person the three group members perceived to be the leader was member one. And member one enters into a significant relationship with the opinion deviate (member two) when he is both antecedent and subsequent speaker. Member one, if he may be considered a leader, responds to the opinion more than anyone else. Unlike the 1-2 and 2-3 dyads, member one engages in competitive symmetry with the opinion deviate. He challenges member two. Yet the distinguishing interaction in the 2-1 dyad is ↓-↑- complementarity. In other dyads deference by member two either does not exist or is extended. But the leader attempts to control the opinion deviate. Speaker one

Table 21

Interacts Inducing Structure
in Speaker Two Dyads

1-2	2-1	2-3	2-4	Composite
→→	→→	→→	→→	→→
↑-→	↑-→	↑-→	↑-→	↑-→
→↑-	→↑-	→↑-	→↑-	→↑-
↓-→	↓-→	↓-→		↓-→
	→↓-*	→↓-*		→↓-*
	↑-↑-		↑-↑-	↑-↑-
			↑-↓-	
	↓-↑-			

*Cells which exceed RF only

might feel threatened by the attitudes of member two. When member two defers, the leader does not hesitate to assume the control position. However, when member one initiates (column 1-2) the opinion deviate shies away. Member two only supports control attempts by the leader and does not challenge.

The opinion deviate may be a creative force in the group, but his relationship with the supposed group leader is restraining. Members one and two do most of the talking in the group and enact the greatest variety of behaviors. It is entirely possible that many of the opinion deviate's behaviors are leadership behaviors. Most of the group work occurs between members one and two with the other group members assuming more passive roles. The other dyadic relationships support this contention.

Member two does not enter into conflict with member three. The absence of competitive symmetry is the distinguishing feature of the 2-3 dyad. When the opinion deviate exerts relational control, he is supported by member three. The 2-4 dyad also illustrates control by the opinion deviate. Member four at least contends within expectations, but ultimately defers. Though no data support this hypothesis, it is possible that the competitive symmetry between the 2-4 dyad occurred early. After repeated failure member four finally assumes the submissive

position in the relationship. Member two does not defer to member four and is usually reinforced by him. The data are not conclusive, but everyone except for the possible leader enters into compliant relationships with the opinion deviate. His continuous efforts to direct the group process are challenged by the leader and accepted by others.

The one significant dyad (4-3) which does not include member two tends to support the argument that members three and four cooperate and defer to others easily. Dyad 4-3 produced the fewest units of interaction (60 percent fewer than dyads 1-2, 2-1, and 2-3) which means they participated less and listened more. Moreover, dyad 4-3 has the highest percentage of equivalent symmetry (53 percent) when compared to the other significant dyads. And many of their interacts barely exceed random frequency.

Reciprocal complementarity is their characteristic mode of interaction. When member four initiates control member three takes the cue and defers. And when four goes down, three goes up. These easily interchangeable behaviors indicate cooperation. Members one and two control most of the interaction and three and four assist. The sheer frequency and intensity of the 1-2 and 2-1 dyads must be overwhelming. Members three and four respond only to the relational attempts of the opinion deviate and let the perceived leader contend with member

Table 22

Interacts Inducing Structure
in Dyad 4-3

4-3	Composite
↑-↑-	↑-↑-
↑-↓-	
↑-→	↑-→
↓-↑-	
↓-→	↓-→
→↑-*	→↑-
→↓-*	→↓-*
→→	→→

*Cells exceed RF only

two. And their relationship with member two is one of deference and cooperation.

Briefly the opinion deviate is a significant force in group two. A distinction between leadership behaviors and many of the beahviors elicited by the opinion deviate is probably not very useful. Both individuals make significant contributions to the group. Member one may have been perceived as the leader because he faced and challenged the difficulties prompted by the opinion deviate. Or member one may have assumed responsibility for procedural matters which many group members view as leadership duties. In any case, the perceived leader and opinion deviate interstructure their behaviors to promote group progress.

Fisher and Valentine (1974) developed a principle of Merton's (1957) to explain deviance in the process of interaction. Merton's category of innovative deviance implies that a group member may support the goals and ambitions of the group, but not the means for attaining these goals. By deviating from the group norms, the innovative deviant enriches the group's available stock of ideas. Interrogating and probing others allow for important tests of ideas. The behavior of member two is consistent with predictions derived from verbal innovative deviance. Most of the group interaction involves member two, and he engages in considerable disagreement. Future

research should endeavor to refine the concepts of leadership and opinion deviance. The prescribed leader who skillfully and successfully guides a group is, in a sense, a deviant. And the opinion deviate who challenges and resists also leads.

Recommendations

First, I want to reiterate the descriptive nature of this study. Specifically, all conclusions based on those data which induce structure in a matrix or compare one transition probability to another must be tempered by the limitations of the procedure. The argument that an interact which occurs with a frequency and transition probability greater than random expectation, contributes to structure or predictability in the data is certainly sound. However, it is difficult to determine "how much" structure a particular interact induces. Some conclusions about predictable interaction are based on cells which barely surpass random expectations. While others are drawn from highly frequent and probable data.

The tables which compare state transition probabilities in a specific time period to a composite transition probability are especially troublesome. Whether the word "significant" is used statistically or pragmatically, the question remains, how much of a deviation is a "significant" deviation. Future research might consider using chi square

or logarithmic transformations where the shape of the distribution is known. Though either procedure is often subject to debate, they might provide a useful decision-making tool for determining cell differences. Nevertheless, these findings are interesting and certainly suggest further research. The following discussion of proposed changes in the category system should provide guidelines for future research.

First, the category system requires reconceptualization. The + and - codes should remain but rather than considering them as merely measures of intensity, they should be reconceptualized as contributing qualitatively different functions. The ↑+, for example, is an obvious instance of dominance. When an iteractant attempts to severely restrict the options open to a respondent, he seeks to dominate the other individual. Imperatives, questions demanding justification, and personal nonsupport are efforts to dictatorially control the behavior of another.

In contrast to ↑+, the ↑- offers relational control but provides for a variety of responses. The ↑- function is best considered as an initiation or an influence attempt which is qualitatively different from dominance. The distinction between ↑+ and ↑- is not accurately one of mere intensity. Rather, the ↑+ function seeks to gain mastery over another, while the ↑- is a socially acceptable

form of management. Dominance often, but not necessarily, implies negative affect. Initiation, on the other hand, is highly characteristic of normal interaction and occurs so regularly that interactants are often unaware of it as relational control.

An important reconceptualization involves the → category and specifically its transformation rules. Other researchers transformed ideational support into a ↓ function. But this study considered simple support as an attempt by the speaker to associate himself with a desirable position. One speaker was telling another that he agreed with his idea and wanted to share in its worthiness. Therefore, simple ideational support was transformed into a →. Upon reconsideration, however, simple support is probably not clearly a → functions. The → function should be comprised of those relational definitions which do not promote any differences between the interactants. Extension and elaboration symbolize efforts to avoid control by one individual and should preserve the sole functioning of →.

Ideational support should return to a down code, but in this revised coding scheme support would become a ↓-. The ↓- is then considered deference but not submission. When one speaker supports another, he is dependent upon the previous speaker for the initiation of the idea. And the subsequent speaker is admitting his respect for the

idea--not submission to the person. An interactant holds a deferential position in a relationship when he acknowledges the control attempt of another person. This reconceptualization will allow for complementarity in the form of initiation and support (↑-↓-).

Finally, the ↓+ remains submission. Extended support of another individual implies submission to the will of that individual. When a speaker submits, he admits to a lack of power in the relationship.

Changes in how certain categories are transformed are necessary to accommodate the proposed suggestions. The "extended" categories along the personal dimension (categories 5 and 9) could easily be eliminated. Personal support of any kind would then be submissive (↓+), and personal nonsupport would become a ↑+. Support or nonsupport at the personal rather than ideological level is always acute, and the distinction between simple and extended is not particularly helpful. Therefore, the 14 code would be transformed to ↓+ and the 18 code to ↑+. Because of the grammatical format, code 24 should also become a ↑+.

Redefining the relational implications of simple ideational support necessitates a transformation change for 16. For the reasons outlined above, code 16 must be transformed ↓-. Moreover, 26 should change to a ↑+. When an interactant commands support for another he seeks to

dominate the interaction.

These proposed changes should also serve to alleviate the persistent occurrence of equivalent symmetry and reveal a greater variety of relational modes. As Rosen (1972) asserts, an analytical system should be "function perserving." That is, a category system should distinguish among the various communicative functions operating in a system. The amount of structure in a system is less important than the qualitative nature of the structure. By reconceptualizing the category scheme, future data should reflect these differences.

A first priority for future research is a replication study using the proposed category changes. If equivalent symmetry is so prevalent in decision-making and consciousness-raising groups, more research is required to validate and clarify this finding. Future data should include decision-making groups other than classroom groups. Replications might take into account varying levels of motivation, commitment, prior role structure, or status as possible determinants of relational interaction.

Consciousness-raising groups should be examined more completely. Consciousness-raising groups are unique experiences. However, some relational functions may be unique to consciousness-raising groups. Other groups may not experience the extreme equivalent symmetry these did. The consciousness-raising group experience is especially

important to the private lives of its members. A long term study examining the complete evolution of consciousness-raising groups is essential. Little is known about the long term effects of these groups. How do women become socialized? What sort of interpersonal conflicts must group members encounter and overcome? Communication is the essence of a consciousness-raising group, and the observation of interaction patterns should yield important results.

Furthermore, relational interaction should have tremendous implications for validating group tensity. Groups are self-regulating systems which often defy a priori categorization. If how people "relate" to one another is the defining characteristic of a group, then varying types of relational interaction should correlate with tensity classes. There may be structural similarities across groups but the interaction may function variably according to situational constraints.

Leadership is an important concept which has significant implications for group interaction. The conclusions drawn from this study uphold the functional perspective of leadership. Leadership should reflect a process of interpersonal influence in the group, and not necessarily a structural position in a network or a personal characteristic of an individual. As a system, a group is characterized by equifinality or the ability to reach a final

state from different initial conditions. As a model of adaptability, the concept of equifinality implies a finite set of behavioral choices, present in the here and now, which facilitate goal attainment. Leadership, then, exists in the interaction and is the result of the continuous process of trial and error. The system ultimately settles at a point where there is no longer conflict with the environment.

The findings in this study suggest further examination of adaptable leadership functions. The important research questions become "how" do leaders interstructure their behaviors with others to satisfy group requirements. For example, if a group is threatened by conflict, how do leaders mediate the conflict? What relational functions do leaders use to stimulate critical evaluation of ideas? If several people perform leadership functions, how do these individuals organize their behaviors? What relational definitions determine who will lead or when an individual will take the initiative? These questions are best answered by observing member relationships rather than individual characteristics.

If the process of interaction is the dependent variable, then experimental procedures should prove useful. By manipulating task, compositional, and environmental variables and then allowing a group to proceed naturally under the constraints of these manipulations,

researchers can observe the developing patterns of interaction which facilitate group success. These research programs may lead to eventual conclusions about what constitutes a good or successful leader.

Returning to Lewin's (1943) observation about member interdependence as the crucial element of a group, attention is easily directed to the diversity of perspectives on human relationships. People interact with family, friends, enemies, coworkers, subordinates, and colleagues; but these interactional settings say little about how specific verbal behavior is manifested in our relationships with others. The most important aspect of this study is probably its emphasis on the process of communication. Individuals take stock of one another and interstructure their behaviors. By focusing on these interactional programs, one can gain insight into how people form their relationships.

APPENDIX A

CODING MANUAL

Relational Interaction Coding System

This category system attempts to measure relational interaction. Watzlawick, Beavin, and Jackson (1967) posit two axioms about the content and relationship levels of communication, and complementary and symmetrical interaction. Consistent with these two axioms, the category system is designed to transform verbal content into relational definitions. After identifying a speaker, the category system codes the unit of analysis into grammatical format and how the unit relates to the previous comment. Based on this coding, each unit of analysis is transformed into an "up" (↑), a "down" (↓), or an across (→). These codings refer to attempts at either relational authority, submission, or equality, respectively.

Example:

Person A 31 "Where did you find that information?"
Person B 11 "I read it in Time magazine where it reported that the divorce rate in America was up 18 percent."

This interaction would be coded 31 (question seeking informative extension) followed by 11 (assertion providing information extension). According to the transformation rules, this interact would be a ↓-/↑-. Seeking is a deferential relationship to a source of knowledge or authority. The '-' sign is an intensity measure indicating that this "down"/"up" relationship is not very extreme.

Seeking justification, on the other hand, is an attack on the previous comment and would be a 33 coded ↑+. And when someone provides this justification of the previous comment they are also striving to maintain an ↑ position. This 13 is coded ↑. The '-' indicates less intensity in the face of a challenge to justify your position.

DIMENSION I - Identify the speaker: 1-N.

DIMENSION II - Grammatical structure of the statement; format of the utterance.

1. Declarative Assertion
   a. An explicit statement with a referent.
   b. Does not explicitly seek a response.

2. Imperative
   a. A command or instruction.
   b. Refers more to what another person should do, than to

the opinion or attitude of the speaker.
c. Ex. "You must."
"It has to."

3. Question
a. Interrogative in form.
b. Explicitly seeks a response.
c. Inquiry.
d. When a statement begins with an assertion and ends with a question, treat it as a question.

4. Incomplete
a. Initiated but not a completed utterance.
b. Ex. "What I meant was . . ."
"Do you mean, ah . . ."

DIMENSION III - This dimension classifies each statement according to how the statement relates to the previous comment.

0. Nonextended
a. An "I don't know" comment is nonextended and can only follow 31, 32, 33, or 34.

1. Informative Extension
a. Continues the flow of the preceeding message by providing (or seeking) information.
b. Either focuses or broadens by adding information not previously considered.
c. The inclusion of new information, by definition, lowers the level of abstraction.
d. Ex. "Pollution by autos is really a problem."
11 "Yes, figures show that most cars only have one or two people in them."

2. Elaborative Extension
a. Does not change the level of abstraction.
b. Continues the theme of the preceeding message.
c. Elaborates on the previous message.
d. Often takes the form of a digressive, personal experience.

		e. Can repeat, clarify, restate. f. Ex. "Yea, I know what you mean. The same thing happened to me last year. . . ."
3.	Justification	a. Provides or seeks a warrant. b. Statement of grounds or reasons for believing something. c. Upholds or vindicates the previous statement. d. Ex. "How is it that you can 33 believe such a thing?" "I think he is right 31 because . . ." e. Statement may also extend with information, but the purpose of the statement is to justify. The information is a warrant for the justification.
4.	Simple Personal Support	a. A simple or brief comment with no reason attached, which supports the person in the previous message. b. Seeks or provides acceptance, confirmation, or approval of the individual. c. Ex. "You really did a fine job." "I like the way you relate to people." d. May contain ideational support along with explicit reference to personal support.
5.	Extended Personal Support	a. Personal support with additional information. b. Provides a reason. c. Look for a "because" implication.
6.	Ideational Support	a. Supports the idea inherent in previous message. b. Simple statement of approval for the subject matter under discussion. c. Refers to ideas and data of various types. d. Ex. "I agree." "Good idea."

7.	Extended Ideational Support	a. Statement that favors or advocates the idea in the previous message. b. Provides reasons, data, evidence, warrants. c. Look for a "because" implication.
8.	Personal Nonsupport	a. Disagrees with, rejects, disconfirms the previous message at the personal level. b. Refers to the individual, i.e., his being, self-concept, etc. c. Brief or simple comment. d. Ex. "You're all screwed up." "You're nuts." e. A topic change can be a personal nonsupport when it is a way of relating to a specific response. f. Ex. "What do you think of my idea." "Let's do something else." g. May contain nonsupport of ideational content if done in a manner which rejects the individual.
9.	Extended Personal Nonsupport	a. Same as personal support, but extended. Provides reasons. b. Look for the "because" implication.
10.	Ideational Nonsupport	a. Disagreement, rejection of previous idea. b. Relates to idea not the individual. c. Ex. "I disagree."
11.	Extended Ideational Nonsupport	a. Disagrees with or rejects previous statement but provides evidence, data, etc. for doing so. b. Look for a "because" implication. c. Ex. "Well, I don't see it that way because . . ."

12.	Initiate New Direction	a. Topic change or establishment of new direction. b. Not personal disconfirmation if not a response to a request for response commonality. c. Ex. "Let's consider this issue." d. Can be stock-taking synthesis. e. A 312 is a message which seeks and initiates new direction.
13.	Other	a. Nonfluencies and incompletes. b. No definition of the relationship. c. Can only follow a four (4) in Dimension II.

Some Coding Hints

For any comment ask yourself whether or not the comment is clearly a statement of support or nonsupport. If it is neither then you have eliminated eight (8) of the thirteen (13) categories. Since codes 12 (initiate new direction) and 13 (other) are rare and easier to identify, the only real decision is between categories 1, 2, or 3. Category 1 of Dimension II is the assertion of, or seeking new information. The question of new information is important because if a comment is a restatement or simply more of the same information, then the comment is coded 2 (elaborative extension). When someone provides an example it is coded 1, unless the example is a restatement or a second example to clear up an earlier one.

If you decide that a comment is either support or nonsupport, next ask whether or not it is ideational or personal. After answering this question, simply decide if the message is simple or extended. This process of elimination should facilitate the coding judgment.

Transformation Rules

10	↓-	Unless follows a 33, then +	31	↓-
11	↑-		32	→
12	→		33	↑+
13	↑+		34	↓+
14	→		35	↓+
15	↓+		36	↓-
16	→		37	↓+
17	↓+		38	↑-
18	↑+		39	↑+
19	↑+		310	↑-
110	↑-		311	↑+
111	↑-		312	↓-
112	↑+			
21	↑+		413	→
22	→			
23	↑+			
24	→	If preceeded by a 35, then -		
25	↑+			
26	→			
27	↑+			
28	↑+			
29	↑+			
210	↑+			
211	↑+			
212	↑+			

APPENDIX B

COMPOSITE MATRICES

Composite Interact Matrix for Combined Decision-Making Groups

	↑+	↑-	↓+	↓-	→	
↑+	21 .09	40 .18	6 .02	20 .09	125 .58	212
↑-	47 .04	238** .21	36 .02	165 .13	705** .60	1191
↓+	7 .06	23 .20	5 .04	10 .09	72 .61	117
↓-	20 .03	148 .25	10 .01	39 .06	357** .62	574
→	117 .03	742** .21	60 .01	338* .10	2145** .63	3402
	212	1191	117	572	3404	5496

**Exceeds expected RF and TP
*Exceeds expected RF only

Composite Interact Matrix for First Consciousness-Raising Group

	↑+	↑-	↓+	↓-	→	
↑+	10 .12	6 .07	0 .00	11 .13	56 .67	83
↑-	7 .02	38 .15	2 .00	25 .10	169** .70	241
↓+	1 .07	1 .07	0 .00	1 .07	10 .76	13
↓-	4 .03	37 .28	0 .00	6 .04	82 .63	129
→	61 .03	160* .09	11 .00	85* .05	1322* .80	1639
	83	242	13	128	1639	2105

**Exceeds expected RF and TP
*Exceeds expected RF only

Composite Interact Matrix for Second Consciousness-Raising Group

	↑+	↑-	↓+	↓-	→	
↑+	12 .09	4 .03	0 .00	5 .04	101 .82	122
↑-	6 .07	10 .12	0 .00	7 .08	59 .71	82
↓+	0 .00	0 .00	0 .00	0 .00	3 1.0	3
↓-	7 .04	9 .05	0 .00	11 .06	134** .83	161
→	97 .03	59 .02	3 .00	137* .04	2578** .89	2874
	122	82	3	160	2875	3242

**Exceeds expected RF and TP
*Exceeds expected RF only

Composite Interact Matrix for Combined Consciousness-Raising Groups

	↑+	↑-	↓+	↓-	→	
↑+	22 .10	10 .05	0 .00	16 .08	157 .76	205
↑-	13 .04	48 .14	2 .00	32 .10	228** .70	323
↓+	1 .06	1 .06	0 .00	1 .06	13 .81	16
↓-	11 .03	46 .15	0 .00	17 .05	216** .74	290
→	158 .03	219* .05	14 .00	223* .05	3903** .86	4517
	205	324	16	289	4517	5351

**Exceeds expected RF and TP
*Exceeds expected RF only

APPENDIX C

MATRICES FOR SIGNIFICANT DYADS IN FIRST DECISION-MAKING GROUP

Interact Matrix for Dyad 1/2

	↑+	↑-	↓+	↓-	→	
↑+	0 .00	3 .25	0 .00	2 .16	7 .58	12
↑-	1 .01	12* .19	1 .01	12* .19	37** .59	63
↓+	1 .08	0 .00	1 .08	1 .08	9 .75	12
↓-	0 .00	12** .36	1 .03	1 .03	19** .57	33
→	4 .02	29* .16	2 .01	17* .09	124** .70	176
	6	56	5	33	196	296

**Exceeds RF and TP
*Exceeds RF only

Homogeneity = 30.64; Df = 20; $p < .10$

Interact Matrix for Dyad 1/5

	↑+	↑-	↓+	↓-	→	
↑+	1 .09	3 .25	0 .00	0 .00	8** .66	12
↑-	1 .02	5 .10	1 .02	5 .10	37** .75	49
↓+	0 .00	1 1.0	0 .00	0 .00	0 .00	1
↓-	1 .05	0 .00	0 .00	1 .05	17** .90	19
→	2 .01	20* .18	0 .00	6 .05	81** .74	109
	5	29	1	12	143	190

**Exceed RF and TP
*Exceed RF only

Homogeneity = 34.48; df = 20; $p < .05$

Interact Matrix for Dyad 2/1

	↑+	↑-	↓+	↓-	→	
↑+	0 .00	3 .50	0 .00	0 .00	3 .50	6
↑-	0 .00	14** .26	2 .03	2 .03	34** .65	52
↓+	0 .00	1 .20	0 .00	2 .40	2 .40	5
↓-	3 .10	11 .35	0 .00	1 .03	16** .51	31
→	12* .05	49** .23	8 .03	19* .09	120** .57	208
	15	78	10	24	175	302

**Exceeds RF and TP
*Exceeds RF only

Homogeneity = 30.28; df = 20; $p < .10$

Interact Matrix for Dyad 3/1

	↑+	↑-	↓+	↓-	→	
↑+	1 .07	1 .07	1 .07	3 .21	8 .57	14
↑-	4 .06	10 .15	3 .04	13** .20	34** .53	64
↓+	1 .11	1 .11	0 .00	3 .33	4 .44	9
↓-	2 .08	5 .20	1 .04	0 .00	17** .68	25
→	8 .04	57** .29	3 .01	23* .11	104** .53	195
	16	74	8	42	167	307

**Exceeds RF and TP
*Exceeds RF only

Homogeneity = 29.47; df = 20; $p < .10$

Interact Matrix for Dyad 4/1

	↑+	↑-	↓+	↓-	→	
↑+	3 .33	2 .22	1 .11	0 .00	3 .33	9
↑-	5 .10	7 .14	6 .12	8 .16	22** .45	48
↓+	0 .00	1 .25	0 .00	0 .00	3 .75	4
↓-	1 .05	6 .33	0 .00	3 .16	8 .44	18
→	10 .05	41** .21	4 .02	23** .12	111** .58	189
	19	57	11	34	147	268

**Exceeds RF and TP
*Exceeds RF only

Homogeneity = 33.63; df = 20; $p < .05$

Interact Matrix for Dyad 5/1

	↑+	↑-	↓+	↓-	→	
↑+	2 .28	1 .14	0 .00	0 .00	4 .57	7
↑-	1 .03	9** .28	0 .00	2 .06	20** .62	32
↓+	0 .00	2 1.0	0 .00	0 .00	0 .00	2
↓-	0 .00	1 .08	0 .00	0 .00	11** .92	12
→	13* .09	28** .20	6 .04	15** .10	78** .55	140
	16	41	6	17	113	193

**Exceeds RF and TP
*Exceeds RF only

Homogeneity = 31.92; df = 20; $p < .05$

APPENDIX D

MATRICES FOR SIGNIFICANT DYADS IN SECOND DECISION-MAKING GROUP

Interact Matrix for Dyad 1/2

	↑+	↑-	↓+	↓-	→	
↑+	2 .12	1 .06	1 .06	3 .18	9 .56	16
↑-	4 .04	14 .14	3 .03	15 .15	61** .62	97
↓+	1 .33	0 .00	0 .00	0 .00	2 .66	3
↓-	1 .02	6 .12	1 .02	4 .08	37** .75	49
→	5 .02	40** .20	6 .03	12 .06	135** .68	198
	13	61	11	34	244	363

**Exceeds expected RF and TP
*Exceeds expected RF only

Homogeneity = 32.65; df = 20; $p < .05$

Interact Matrix for Dyad 2/1

	↑+	↑-	↓+	↓-	→	
↑+	2 .16	1 .08	0 .00	3 .25	6 .50	12
↑-	3 .04	24** .34	0 .00	10 .14	32** .46	69
↓+	1 .10	4 .40	0 .00	0 .00	5 .50	10
↓-	1 .03	14** .42	0 .00	1 .03	17** .51	33
→	6 .02	53** .25	1 .00	32* .15	115** .55	207
	13	96	1	46	175	331

**Exceeds expected RF and TP
*Exceeds expected RF only

Homogeneity = 34.72; df = 20; $p < .05$

Interact Matrix for Dyad 2/3

	↑+	↑-	↓+	↓-	→	
↑+	0 .00	1 .10	0 .00	0 .00	9 .90	10
↑-	3 .04	12 .17	1 .01	11 .16	41** .60	68
↓+	0 .00	3 .30	0 .00	0 .00	7 .70	10
↓-	0 .00	11 .35	0 .00	0 .00	20** .65	31
→	1 .00	57** .25	4 .01	15* .06	146** .65	223
	4	84	5	26	223	342

**Exceeds expected RF and TP
*Exceeds expected RF only

Homogeneity = 32.88; df = 20; $p < .05$

Interact Matrix for Dyad 2/4

	↑+	↑-	↓+	↓-	→	
↑+	2 .29	2 .29	0 .00	1 .14	2 .29	7
↑-	1 .03	7** .24	2 .06	7** .24	12** .41	29
↓+	0 .00	0 .00	1 .50	1 .50	0 .00	2
↓-	0 .00	2 .18	1 .09	2 .18	6 .55	11
→	5 .05	20** .21	2 .02	6 .06	60** .64	93
	8	31	6	17	80	142

**Exceeds expected RF and TP
*Exceeds expected RF only

Homogeneity = 29.14; df = 20; $p < .10$

Interact Matrix for Dyad 4/3

	↑+	↑-	↓+	↓-	→	
↑+	0 .00	2 .50	0 .00	0 .00	2 .50	4
↑-	0 .00	5** .29	1 .05	6** .35	5** .29	17
↓+	1 .50	0 .00	0 .00	0 .00	1 .50	2
↓-	1 .08	5** .42	0 .00	1 .08	5** .42	12
→	0 .00	6* .08	0 .00	10* .13	59** .79	75
	2	18	1	17	72	110

**Exceeds expected RF and TP
*Exceeds expected RF only

Homogeneity = 35.14; df = 20; $p < .05$

APPENDIX E

HOMOGENEITY MEASURES FOR CONSCIOUSNESS-RAISING GROUPS

Homogeneity measures for all dyads in first consciousness-raising group

Antecedent Speaker	Subsequent Speaker 1	2	3	4	5	6	7
1	---	5.88	15.31	17.44	8.14	7.45	12.22
2	11.66	---	18.32	14.3	7.53	9.13	11.72
3	10.54	14.45	---	13.34	17.58	22.39	10.57
4	10.73	28.92	14.85	---	18.17	5.64	18.34
5	4.72	7.33	10.75	17.17	---	7.88	17.96
6	9.47	8.81	10.78	18.12	11.83	---	17.61
7	7.87	13.26	21.86	23.55	9.69	9.96	---

Homogeneity measures for all dyads in second consciousness-raising group

Antecedent Speaker	Subsequent Speaker 1	2	3	4	5	6
1	---	11.53	17.04	13.55	17.81	9.32
2	12.61	---	12.79	9.65	7.67	7.09
3	14.5	17.05	---	14.75	9.88	23.75
4	18.65	5.51	17.98	---	3.67	11.13
5	11.29	15.67	4.41	9.07	---	0.0
6	10.4	8.96	11.49	11.91	0.0	---

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