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THE INTERACTION OF PARTICIPANT CONCEPTUAL LEVEL
AND STRUCTURE OF GROUPS TEACHING
INTERPERSONAL COMMUNICATION

BY

VALERIE L. BREWER

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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ABSTRACT

The interaction of participant conceptual level and structure of groups teaching interpersonal communication was investigated. Additionally, a checklist measure attempting to operationalize positive, negative, and neutral aspects of communication skill was developed and applied to both a written response measure and Goodman's GAIT exercise. Sixty-six male and female college students enrolled in a personal development course were randomly assigned within blocks of high and low conceptual level (CL) to one of three experimental conditions: structured group, unstructured group, or control group interventions. Dependent variables of communication skill and satisfaction were examined. Little support was found for Hunt's matching-model interactional predictions. Structured group interventions taught the specific skills of paraphrasing and giving constructive feedback as measured by written responses better than did unstructured or control groups. Unstructured groups were rated as more enjoyable than structured or control groups. Structured groups were rated as more enjoyable than the control group, and structured and unstructured groups were rated equally useful by participants and both more so than the control group. High conceptual level subjects learned to produce more "therapeutic" listening responses as measured by Goodman's GAIT peer ratings and were more self-disclosing overall than were low CL subjects. Implications of these findings are discussed in terms of both structure of groups, construct validity of conceptual level, and measurement of communication skill.

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CHAPTER I

INTRODUCTION

Educators and therapists have long known that the best way of teaching/reaching one person may not be the best way for another--"different strokes for different folks."

The current study investigates two ways of teaching better interpersonal communication to college students--(1) via a structured/directive group approach vs. (2) via a less structured/more nondirective group approach. The study investigates the ways this degree of structure interacts with group participants' characteristic ways of processing information (whether individuals tend to view others in primarily black-white contrasts or in shades of gray). Another way of stating the purpose of the study is to clarify the interaction of conceptual level/integrative cognitive complexity and degree of structure in interpersonal communication group counseling interventions as this interaction affects improvement in communication skill and satisfaction. Readers familiar with these variables will recognize the above as an application of David Hunt's (1971) conceptual level matching-model to affective education.

Interactionism: $B=f(P,E)$

Lewin's (1936) formula $B=f(P,E)$, "Behavior (B) is a function of the Person (P) and Environment (E)" is a principle which has been accepted for years in theory but sometimes overlooked in research. At

various times in the past four decades a focus on interactionism has again been strongly urged (Cronbach, 1957; Bowers, 1973), primarily in response to trends toward either predominantly trait theorizing in personality (P) or situationist approaches to behavior (E). Despite these urgings the psychology-as-science orientation which has sought to isolate general laws of human functioning applicable to all persons has tended to overlook individual differences just as the psychology of individual differences as represented by trait theory has tended to search for generality across situations, overlooking inevitable situational variation.

As Hunt and Sullivan (1974) point out, the B-P-E paradigm forces psychologists to attend to the differential nature of psychological principles and to ask questions such as "What specific behaviors might be expected to change (B) if persons possessing specific sets of characteristics (vs. other sets) (P) are exposed to certain environmental conditions (vs. other conditions) (E)?" Paul's (1967) famous statement regarding outcome research in psychotherapy is an example of this approach: "What treatment, by whom, [E], is most effective [B] with this individual with that specific problem [P] under which set of circumstances [E]." To more adequately fit the B-P-E paradigm, in fact, Paul should add to his question, "most effective in changing which specific behaviors [B]."

Recently, psychologists both in personality and education specialties have called for attention to cognitive information-processing variables as an important dimension of individual differences to study within an interactionist framework. Mischel (1977, 1979) has repeatedly urged a rapprochement of personality and cognitive psychology,

commenting upon the emergent image of persons as active problem-solvers, constructing their psychological world while being influenced by it. Dember (1974) has called this growing concern with cognitive mediating variables "the cognitive revolution." Concomitantly, cognitive-developmental theorists have begun extending the sorts of cognitive-developmental interactionist models already studied in younger children into adulthood (Schroder, Driver & Streufert, 1967; Harvey, Hunt, & Schroder, 1961; Perry, 1968). Consequently, as personality theorists have searched for meaningful individual differences, various aspects of information-processing have increasingly come to the fore.

Several theorists have specifically developed interactionist theories in a field often characterized by terms like "cognitive complexity" or "conceptual levels" (Schroder, Driver & Streufert, 1967; Hunt, 1971), and these will be described in greater detail shortly. In these approaches, the complexity of a person's strategies for processing information (whether inflexible, relatively concrete, dichotomous strategies or more flexible, abstract, relativistic strategies are used) are investigated. Persons are believed to vary from one another in conceptual level in general dependent upon prior personal development. And any given person likewise is believed to vary somewhat in conceptual level across situations as a function of factors such as environmental complexity, in combination with person variables, in any specific situation. (See section on Cognitive Complexity (P) for further elaboration.)

Hunt (1971) proposes a matching-model approach in education in which conceptual level as described by Schroder et al. (1967) (P), interacts with structure of environment (E) to produce a number of

measurable and important changes in behavior (B) including concept formation (McLachlan & Hunt, 1973; Tomlinson & Hunt, 1971), satisfaction (Tuckman, 1968; Hunt & Hardt, 1967), and interpersonal flexibility (Hunt & Hardt, 1967).

It is at this point that the above cognitive theorizing takes on special relevance to the specialties of clinical and counseling psychology. Kurtz (1975) has noted the increased use of structured experiences in group psychotherapy in the late 1960s and 1970s. The movement towards use of time-limited structured group therapies has been particularly prevalent in college counseling centers. In 1977 the University of Rhode Island Office of Counseling and Student Development established a "Clearinghouse for Structured Group Programs." In the same year, two psychologists (Drum & Knott, 1977) published a book on the structured group movement and use of structured groups to facilitate personal development.

As cognitive-developmental theorists such as Perry (1968) hypothesize that the late adolescent period (ages 18-21) which coincides with the college years is a time in which higher-level conceptual development often occurs, the interaction of conceptual level and structure is an important variable to consider in planning for psychotherapeutic and affective educational interventions for this population.

A large number of structured groups aim to increase interpersonal flexibility and communication effectiveness. Additionally, client-rated satisfaction with therapy interventions and interpersonal behavior after such interventions are frequently-used measures of outcome effectiveness. Since conceptual level (of students) (P) is believed to interact with structure (of interventions oriented towards social functioning)

(E) to effect changes in the above behaviors (interpersonal flexibility, communication effectiveness, and satisfaction) (B), investigation of this B-P-E interactionist paradigm is an important task both from a conceptual and from a practical standpoint. To date this topic has received little attention. The current study proposes to meet the need for such investigation.

Concepts which have been introduced in this introduction will be explained with more clarity in sections to come.

A review of the main constructs and research establishing them will help to better define the significance and scope of this study. Research pertaining to each variable in Lewin's study and to the already established interactions among variables will be cited.

P: Conceptual Level/Cognitive Complexity

"Conceptual level" and "cognitive complexity" are two classes of cognitive person constructs which have been investigated over the past three decades. Sometimes the term cognitive complexity has been used to include both terms. In an article attempting to synthesize different approaches to cognitive complexity, MacNeil (1974) has defined cognitive complexity as a "cognitive structural approach to individual differences" which is comprised of two parts: (1) a discriminating structure, referring to the partitioning or differentiation of stimuli, and (2) an integrating structure, referring to ways in which the partitioned parts are combined and related.

While all approaches to cognitive complexity rest upon the orthogenetic principle--that development progresses from early, global ways of construing experience, to more differentiated and articulated modes of perceiving, to hierarchical, integrated forms by which concepts are

interrelated (Werner, 1948; Witkin, et al., 1962)--some have focused more on differentiation, some on integration. To better understand the construct of cognitive complexity it is important to understand the major theoretical positions and ways of operationalizing them which have characterized each approach.

Differentiation: Theoretical Approaches

Differentiation approaches have focused upon the number of functionally independent dimensions and the number of articulated gradations along these dimensions which an individual uses to construe his/her experience (Kelly, 1955; Bieri, Atkins, Briar, Miller, Lobeck & Tripodi, 1966). (Examples of different dimensions might be kind, intelligent, strong, tall, etc. Examples of gradations along one dimension might be very kind, somewhat kind, neither kind nor unkind, somewhat unkind, very unkind.) To the extent that a person's dimensions are correlated, that is, the value of information on one dimension determines the value on another dimension, that system is seen to be low in complexity. For instance, persons who tend to view people considered to be "kind" as also "intelligent" (rather than considering that "kind" people might also be "unintelligent"), would be considered low in differential/dimensional cognitive complexity. To the extent that dimensions are uncorrelated and can be used independently, a person is viewed as high in differential/dimensional cognitive complexity. Major theorists and researchers of this tradition include Kelly (1955), Bieri (1955, 1956, 1957, 1966, 1968), Crockett (1965), and Scott (1962, 1963, 1966, 1969). Other conceptualizations of differentiation also exist in a literature called cognitive controls (e.g., Gardner, 1964), but these conceptualizations differ somewhat theoretically and will not be included in the

current review.

Integration: Theoretical Approaches

According to the orthogenetic principle, following differentiation, discriminated parts are interrelated into hierarchical schema, a process called integration. Integrative complexity has been defined as "the complexity of a person's conceptual rules for combining and relating already differentiated items of information" (MacNeil, 1974; Schroder, Driver & Streufert, 1967). Assuming that a person has some differentiated dimensions available to him/her, how does he/she combine them in actual practice? Does the person always use one set of dimensions in one situation, and a different set in another, or can the person pick and choose items from each set of dimensions to form alternative perspectives from which to view a situation? Or, from a developmental standpoint, how dualistic (either/or) vs. relativistic is a person's information-processing system (Perry, 1968)? MacNeil (1974) points out that integrative complexity theorizes beyond the conjoint or independent use of dimensions to specify rules for the combination of these dimensions into larger systems. Major theorists of this approach include Harvey, Hunt and Schroder (1961); Harvey (1967); Schroder, Driver and Streufert (1967); and Perry (1968).

Research stemming from the latter two theories pertains to this project, and these theories are reviewed briefly below.

Schroder, Driver and Streufert (1967) advance an interactionist information-processing theory of integrative cognitive complexity. First, this theory is developmental. Over time, under optimal circumstances, individuals are seen to progress through four levels. At the first level, dimensional "readings" of stimuli are made in fixed,

compartmentalized ways. Consequently stimuli are interpreted unidimensionally and few degrees of freedom exist in the system. There are few means to create ambiguity or conflict and few ways to resolve it except by exclusion. Behavioral manifestations of functioning at this level include categorical black-white thinking, limited ability to think in degrees, minimizing of conflict, fast closure in conflict situations, anchoring of behavior in external conditions, overgeneralization, and abrupt changes in attitude when they occur (Schroder et al., 1967).

Movement to a second level reflects increasing ability to generate more than one alternative organization of dimensions, with conditionality beginning to prevail. Behaviorally, this level is marked by a movement away from absolutism and the emergence of minimal internal causation. Instability and noncommitment, ambivalence, lack of consistency in decision-making, closing off of rejected alternatives once a decision is made, negativism, and failure to consider some environmental pressures are also present.

Higher levels involve rules for identifying more complex relations than alternation. More information is sought before resolution is made and the system remains open to alternatives after resolution. In fact, lack of absolutism becomes a formal rule of the system. Persons can evaluate events not only in terms of two points of view, but each point of view can be used to examine the other point of view. At the third level of functioning, the person is able to observe the effects of his/her own behavior from different points of view and to weigh these effects. Generally functioning is more self-reflective and comparing and relating are integral parts of functioning.

The fourth level of functioning is described analogously to the

difference between an empirical and theoretical outlook, in that an individual is now able to generate general laws which systematize a differentiated body of data produced by simpler structures, and at the same time to generate alternative patterns of complex interactions. In many ways functioning of persons at the fourth level is similar to that of persons at the third level but in greater degree. These distinctions become clearer in the ways Schroder et al. have operationalized their theory. Several measures have been devised. The most reliable is the Impression Formation Test (IFT) and the reader is referred to the section on measures and Appendix A for further clarification.

Given that the theory is developmental, some overall differences between individuals, based on past personal development are hypothesized. That is, in a given situation, if each individual were reasoning at his/her optimal level, some individuals would reason in a more advanced fashion than others based upon past personal development.

Schroder et al. also, however, hypothesize situational variation within each individual dependent upon certain environmental factors, building into their theory a set of inverted U-shaped curves relating level of information processing (conceptual level/integrative cognitive complexity) to environmental complexity. Any given individual is seen to reason at his/her most complex level at an optimum level of environmental complexity. Greater or lesser amounts of environmental complexity result in decreased complexity of an individual's reasoning. Environmental complexity is comprised of three major parts: amount of inconsistency of information, stress (aversiveness of stimuli), and reward factors, which simultaneously affect behavior. Therefore, an individual's conceptual level will fluctuate to some degree as a

function of environmental factors.

Adding this environmental-interactional (within-individuals) component to the theory, and accounting for overall developmental (between-individuals) variation, the authors predict that in extremely complex and extremely simple environments, individuals varying developmentally in conceptual level would perform similarly. At midranges of environmental complexity, however, individuals higher in conceptual level would reason at a higher level than individuals lower in CL. Additionally, individuals higher in CL would reach their maximal level of reasoning at a higher optimal point of environmental complexity than those lower in CL and therefore could handle greater degrees of environmental complexity (stress, reward, amount and inconsistency/ambiguity). This interaction is represented below by the following diagram.

Figure 1. The interaction of conceptual level with environmental complexity in the model of Schroder, Driver, and Streufert (1967)

William Perry (1968) advances a similar theory of integrative complexity, in which cognitive development in the early adult years advances through three levels: dualism, relativism, and commitment within relativism.

Relationships between Differentiation and Integration Approaches

While differentiation might be expected to precede integration along the lines of the orthogenetic principle, in actuality this is only partially so. As Schroder et al. (1967) have pointed out, an individual with many differentiated constructs might use each construct in a dichotomous way, demonstrating little integration. Overall, there is general support that differentiation and integration are related but not identical constructs. In empirical studies, differentiation and integrative cognitive complexity have often behaved similarly with respect to other variables (See Table 3). For this reason, to help sort out confusion in this area it has been suggested that studies employing either differentiation or integration approaches include both measures of differentiation and integration to clarify interrelationships between them and to seek empirical confirmation for conceptual distinctions.

In this study the primary focus was on integrative cognitive complexity/conceptual level, but one differentiation measure was included in line with recent recommendations.

Stability and Generality of the Construct

In order to be considered a meaningful personality variable, a construct such as "conceptual level" should show some stability over time and some generality across situations. Several exceptions to this expectation have been noted from a theoretical standpoint; namely that as conceptual level is a developmental construct, under conditions of exposure to optimum levels of challenge, conceptual level would be expected to advance in predicted ways over long periods of time. Likewise some variation across content areas would be expected since

complexity is postulated to increase with increased experience with a stimulus domain. Perry (1968) has urged use of measures of central tendency for this reason.

Dimensional complexity (Vacc & Greenleaf, 1975; Signell, 1966) and integrative complexity (Perry, 1968) have been found to increase in longitudinal studies of young adults (Perry, 1968) and cross-sectional studies of children from third to ninth grade to adult ages (Vacc & Greenleaf, 1975; Signell, 1966).

Overall, both dimensional and integrative complexity have been found to have limited but significant generality across domains. Within one content area, generality is seen to vary somewhat according to situational factors of valence intensity of attitudes toward the domain, information load, and stress. These findings are consistent with theory and suggest conceptual level is a useful construct to further investigate. Table 1, which follows, presents findings on generality.

Cognitive Complexity and other Intrapersonal Variables

In order to establish the validity of cognitive complexity as a construct, it is also important to demonstrate that it differs from other already existing constructs; i.e., is cognitive complexity really just another name for intelligence or defensiveness? The following discussion will attempt to examine such distinctions.

Defensiveness

Theorists of integrative complexity as represented by Schroder, Driver, and Streufert, and Perry postulate increasing tolerance of ambiguity, openness, flexibility, and inner-directedness with greater

Table 1

Summary of Research Findings on the Generality and Stability
of the Construct Cognitive Complexity

	Dimensional Complexity		Integrative Complexity/Conceptual Level	
	+ evidence	- evidence	+ evidence	- evidence
Complexity increases with age as predicted by developmental theory.	Vacc & Greenleaf, 1975 Signell, 1966		Perry, 1968	
There is a modest but significant generality in complexity across domains of content (at one given point in time).	Allard & Carlson, 1963 Hess, 1966 Durand & Lambert, 1976 Smith & Leach, 1972		Measures of integrative complexity have dealt primarily with one domain, interpersonal perception, and thus have not addressed this issue.	
Familiarity with a domain of content increases complexity.	Signell, 1966 Supnick in Crockett, 1965		See above.	
A person's complexity varies under the influence of information load, stress, and reward factors in the inverted U-curve pattern predicted by Schroder et al.			Streufert & Driver, 1967 Schroder, Driver, & Streufert, 1967 Streufert & Schroder, 1965	
Negatively valenced (disliked) stimuli are judged more complexly overall by subjects than are positively valenced (liked) stimuli.	Miller & Bieri, 1965 Wilkins, Epting & Van De Riet, 1972 Carr, 1969 Irwin, Tripodi & Bieri, 1967 Koenig & Seaman, 1974 Shepherd, 1972 Sappenfield & Fisher, 1974 Deaux & Farris, 1975 Hogan, 1977 Soucar & DuCetete, 1971	Supnick in Crockett, 1965	Finding held for individuals low in integrative complexity, but finding did not hold for individuals <u>high</u> in integrative complexity. Carr, 1969	

conceptual complexity as a part of normal development. A provision is made for pauses and entrenchments in development when an individual becomes overloaded or is understimulated. It seems likely that the degree of complexity (particularly integrative) of an individual may reflect a temporary step in a normal developmental progression, or a more lasting but still temporary entrenchment at that step, more enduring defensive fixations, or regressions in the face of stress, or admixtures of all of these. The integrative theories sketched out in the theoretical section describe developmental aspects of cognitive complexity.

A number of constructs purporting to refer to aspects of defensiveness are clearly conceptually related to cognitive complexity/conceptual level. Concepts representative of more defensive fixations in dualistic stances might include Kernberg's concept of "splitting" (whereby a person divides external objects into "all good" and "all bad" ones with abrupt and sudden reversals among them (Kernberg, 1975)), Adorno's concept of "authoritarianism" (whereby persons simplify their environments "by shutting out conflicting elements, dichotomizing into rigid categories, seeking premature closure, and reducing ambiguous patterns to certainty" (Kelman & Barclay, 1963; Adorno, 1950)), Rokeach's concept of dogmatism (whereby a person adopts a "closed mind" to minimize inconsistency (Shaffer & Hendrick, 1974, Rokeach, 1960)); and Budner's concept of intolerance of ambiguity as a personality trait (Budner, 1962). As Riley Gardner (1964) has suggested, "the terms cognitive control, defense, intellectual structure, and so on may actually . . . be most appropriately considered as useful rubrics referring to different facets of the structural complexity of any bit of cognitive behavior."

There has been confusion about what is being measured in factor analytic and intercorrelational studies of cognitive complexity, and one reason may well be that highly similar stances can be representative of either developmental or more defensive stances. A major factor analytic study of measures of cognitive complexity-simplicity turned up six interpretable factors, one of which represented a defensive stance (Budner's Intolerance of Ambiguity Scale and Adorno's F Scale loaded on this factor); other factors appeared to represent admixtures of defensive and developmental stances with measures of dimensional complexity loading here; and a final factor appeared to represent a more purely developmental stance with the only measure of integrative complexity/conceptual level loading here (Vannoy, 1965).

A number of empirical studies have investigated the relationship between measures of cognitive complexity/conceptual level to defensiveness and results are presented in Table 2. Overall, neither dimensional nor integrative complexity duplicate the aforementioned constructs of defensiveness. However, some findings of relevance are a significant negative relationship between integrative complexity and authoritarianism, resulting from a concentration of integratively low complexity persons among high F scorers (a defensive component here) (Schroder et al., 1967; Streufert & Driver, 1967) and a significant linear relationship between repression-sensitization and dimensional complexity (Wilkins, Epting & Van de Riet, 1972). From a theoretical standpoint it follows that whereas a high degree of dimensional complexity may reflect a non-defensive, analytic approach, it may also reflect a defensive, compartmentalization of information. Similarly, persons low in integrative complexity might be so either as a relatively flexible first step

Table 2

Summary of Research Findings on the Relationship of
Cognitive Complexity to Defensiveness

	Dimensional Complexity		Integrative Complexity/ Conceptual Level	
	+evidence	- evidence	+ evidence	- evidence
There is a significant negative relationship between complexity and authoritarianism (F scale).		Berkowitz & Lundy, 1957 (no relationship)	Schroder, Driver & Streufert, 1967 Streufert & Driver, 1967	
There is a significant negative relationship between complexity and dogmatism (Rokeach).		Burnett, 1973		Schroder et al., 1967 Streufert & Driver, 1967
There is a significant linear relationship between repression-sensitization (Byrne, 1964) and complexity.	Wilkins, Epting & Van de Riet, 1972			

toward developing more complex strategies (i.e., for developmental reasons) or as a more defensive way of warding off ambiguities.

The importance of distinguishing defensive from nondefensive origins of a given manifested level of cognitive complexity lies in the differing predictions for response to current experience which the two origins suggest. If a person low in integrative complexity is so for developmental reasons, increased contact with the environment under optimal conditions would be expected to increase complexity. If a person low in integrative complexity, no matter how dimensionally complex, is low in integrative complexity for defensive reasons, he/she will be more resistant to new experience and expected to profit less.

In the current study two measures of defensiveness were included so that these distinctions could be explored in interpreting results.

Intelligence

As previously stated, in the struggle to define what cognitive complexity is, an important task is to rule out what is it not. It has been established that while defensive stances overlap, they are not equivalent to the more developmental concept of complexity. A second important area to examine is the relationship between intelligence and cognitive complexity.

Studies of dimensional complexity using the Bieri Reptest have consistently found no significant relationship between performance on this instrument and intelligence, whether measured by the vocabulary scale of the Wechsler-Bellevue ($r = -.01$, Bieri & Blacker, 1956), the A.C.E. ($r = -.04$, Leventhal, 1957; $r = .01$, Sechrest & Jackson, 1961), or the Ohio State Psychological Examination, a measure of verbal intelligence ($r = .01$ to $.12$, Bieri, 1955). Nonetheless, all of these

studies have used primarily college populations and a small positive correlation might be expected if a general population were studied (i.e., if lower intelligence scores were added to the range).

With respect to integrative complexity, as Schroder et al. (1967) point out, if intelligence is defined as the amount of information known or the degree to which learned rules can be recalled, there should be no differences between high and low integratively complex subjects with respect to intelligence. If, on the other hand, intelligence is measured by the amount of information which can be generated by new rule combinations, intelligence should be related to integrative (but not necessarily to dimensional) complexity.

Some studies, utilizing a broad range of IQ from the general population (90-150), have demonstrated low but significant correlations between conceptual level and the "Otis, SAT, and other intelligence tests," with correlations ranging between .12 and .50 (Schroder et al., 1967). Other studies have found no significant correlations between conceptual level and IQ (Bottenberg, 1969; Gardiner & Schroder, 1972; Streufert & Driver, 1967). Conceptual level is reported to be independent of verbal fluency (Schroder et al., 1967; Streufert & Driver, 1967; Gardiner & Schroder, 1972).

Because findings relating intelligence to measures of conceptual level have been mixed, studies of this construct have frequently experimentally controlled for intelligence.

Research on Differential Performance by Subjects High and Low in Cognitive Complexity

In order to be a viable construct, conceptual level must also be empirically demonstrated to predict other behavior such that subjects

high in complexity behave one way, subjects low in complexity another. A considerable body of literature has accumulated which establishes that this is so. Studies have investigated differences in predictive accuracy of others' interpersonal behavior, differences in sensitization to similarities or differences in others' behavior vis-a-vis the person's own behavior, differences in styles of attending and modes of inconsistency reduction, differences in communication skills, differences in performance under varying conditions of information load and consistency, and differences in reactions to and learning under differing conditions of structure. Research pertaining to the interaction of conceptual level and structure will be reviewed shortly. Research pertaining to communication skills will also be reviewed in a later section. Table 3 which follows summarizes other findings which establish conceptual level as a construct worthy of further investigation.

Of most relevance to this study are findings regarding differential performance by subjects high and low in integrative complexity/conceptual level under different conditions of environmental structure. David Hunt (1971; 1974) has developed a matching-model approach to study this interaction. Hunt (1971) states that "the heart of the conceptual level matching model is a generally inverse relation between CL and degree of structure, with low CL learners profiting more from high structure and high CL learners profiting more from low structure, or in some cases, being less affected by variations in structure." The rationale for Hunt's matching-model will be described in the section on Interactions of Conceptual Level and Structure. First, however, it is necessary to examine what is meant by "structure" and research comparing the efficacy of structured vs. unstructured interventions in general.

Table 3

Summary of Research Findings of Differential Performance by Subjects High and Low in Cognitive Complexity

	Dimensional Complexity		Integrative Complexity/ Conceptual Level	
	+ evidence	- evidence	+ evidence	- evidence
More complex subjects show greater predictive accuracy in interpersonal perception than do less complex Ss.	Bieri, 1955 Adams-Webber, 1969	Leventhal, 1957 Sechrest & Jackson, 1961 Honess, 1976	Wolfe, 1974	
More complex subjects are sensitized to differences; less complex subjects are sensitized to similarities in other's behaviors and attitudes vis-a-vis their own.	Bieri, 1955 Leventhal, 1957 Honess, 1976 Crockett, 1965 Leonard, 1976			
Less complex subjects rely more on affective information in forming impressions than do more complex Ss	Leventhal & Singer, 1964 Mueller, 1974 Scott, 1963 Shrauger, 1967		Halverson, 1970	
Less complex subjects are more susceptible to variations in presentation which maximize primacy and recency effects than are more complex Ss.	Mayo & Crockett, 1964 Rosenkrantz & Crockett, 1965 Petronko & Perin, 1970	Leventhal & Singer, 1964		
More complex Ss attend to cues relating to underlying motivational factors more than less complex Ss do when explaining other people's behavior.	Tripodi & Bieri, 1966 Bieri, 1968 Tripodi, 1967 Leventhal & Singer, 1964			This assumption is built into the leading measure of CL as an operational definition. Streufert & Driver, 1967

Table 3 (continued)

	Dimensional Complexity		Integrative Complexity/ Conceptual Level	
	+ evidence	- evidence	+ evidence	- evidence
Less complex Ss resolve conflict through internally consistent or mutually exclusive processes whereas more complex Ss use more diversity of strategies to resolve conflict.			Crano & Schroder, 1967	
Less complex Ss discriminate better and are more confident when consistency of information remains constant as new information is added, whereas the inverse holds true for more complex Ss (who are more confident and discriminate better as inconsistent information is added).	Tripodi & Bieri, 1964 Tripodi & Bieri, 1966 Schneider, 1977		Ware & Harvey, 1967	
A series of inverted U-shaped curves exists such that differences in performance (problem-solving and impression formation) between high and low complex Ss are most marked at moderate levels of inconsistency, with complex Ss out-performing less complex Ss. Overall, more complex Ss out-perform less complex Ss.	Fertig & Mayo, 1970 Mayo & Crockett, 1964 Nidorf & Crockett, 1965 Epting & Wilkins, 1974		Schroder, Driver & Streufert, 1967 Streufert & Driver, 1965 " "	

E: The Concept of Structure

Structure itself has been operationally defined in various ways. Webster's Dictionary (1967) gives as a synonym of the verb "to structure," "to organize." In research, structure has often been equated with the ambiguity dimension (Bordin, 1955; Bednar & Kaul, 1978). As the interviewer/counselor/therapist/educator takes control, clarifies, and organizes the situation for the subject, ambiguity is reduced. In the counseling situation, to some extent structure overlaps the dimension "directive/nondirective." "Structure" as applied in Hunt's model can perhaps best be understood by directly examining operational definitions which have been used.

In educational settings high structured vs. low structured interventions have been defined as lecture vs. self-discovery teaching (McLachlan & Hunt, 1973), teaching which presents rules before examples vs. examples followed much later by rules (Tomlinson & Hunt, 1971), directive vs. nondirective teaching (Tuckman in Hunt & Sullivan, 1974).

In counseling research structure has been defined as "intervention(s) in a group's process that involves a set of specific instructions for participants to follow" (Kurtz, 1975), "a planned learning situation with sequential steps leading to a predetermined goal" (1979 brochure for the U. R. I. Clearinghouse for Structured Group Programs), "the degree to which behavioral demands are implied or explicit" (Bednar & Kaul, 1978), (High structure) "counselors determining interview direction by asking specific open- and/or close-ended questions about predetermined topics" vs. (Low structure) "counselors allowing and encouraging participants to determine interview direction by using minimal encouragements to talk and reflection responses (and avoiding

introducing topics to discuss)" (Stein & Stone, 1978), and as "supervisor-controlled normative feedback and external reinforcement," vs. "trainee-controlled/discovery-based self-determined feedback" (feedback on trainee's request only) (Berg & Stone, 1980).

Drum and Knott (1977) discuss the meaning of "structured groups" in more detail. They point out that the structured group model is grounded in several broader movements which have been identified as "affective education," "psychological education," "humanistic education," or "personal education." All of these aim

. . . to intervene as early as possible in an individual's life so that unmet normal developmental needs do not become the foundation for more serious problems later in life . . . Thus for example, instead of trying to help a person relieve his depression after an unsuccessful marriage, the focus is on intervening earlier to help a person learn how to communicate feelings nondefensively and how to share openly (Drum & Knott, 1977, p. 23).

Communication-oriented groups such as that of this study fall into these authors' classification of "life skills." Requirements for such a group involve:

(a) a blending of didactic and experiential learning, (b) sequential and cumulative building from session to session, (c) out-of-group assignments to reinforce learning and increase generalization to real life; and (d) a predetermined number of sessions [usually 4-8 sessions with a time commitment of 8-16 hours] to achieve the stated goal (Ibid., p. 27).

These authors also emphasize that the leader takes a "very active role during the life of the group by modeling appropriate behavior, role-playing difficult or perplexing problems, providing positive reinforcement or constructive criticism, and assigning and reviewing homework" (Ibid., p. 28).

In summary, education and counseling definitions have in common high-structured approaches being characterized by the leader direction,

organization of material for presentation to subjects, and in some cases leaders' partially processing of information for subjects to determine direction and to process information before "principles" or "points" are summarized.

In general, are structured or unstructured group interventions more effective? An early review article on relative efficacy of structured vs. unstructured group counseling in groups ranging from encounter and T-groups to vocational groups to consciousness-raising groups found no main effects differences in effectiveness between structured and unstructured groups on a variety of outcome measures (Kurtz, 1975). However, participants in structured groups consistently reported greater satisfaction with their experiences than did their counterparts in unstructured groups (Kurtz, 1975).

Other studies, using somewhat different definitions of structure (pregroup cognitive instructions which made explicit the norms for group behavior vs. no pregroup instruction (Bednar & Kaul, 1978)) found that structuring produced more early self-disclosure than did non-structuring, but these effects dissipated over time (Crews & Melnick, 1966; DeJulio, Bentley & Cockayne, 1966). An unrelated study found similar results when comparing the efficacy of structured and unstructured group counseling for underachieving college students with respect to raising GPA (Chestnut, 1965).

Another study (Leak, 1980) of prison inmates given highly structured group treatment in counseling techniques, nondirective group treatment, or placed on a waiting-list control found the structured approach superior to the unstructured approach in producing changes on the California Psychological Inventory, MMPI, and behavioral measures of

prison adjustment for one year following treatment. Relative to the nondirective treatment condition, the structured condition increased "interpersonal functioning," reduced serious rule violations, and produced greater empathy. Contrary to expectation, there were no differences between approaches in amount of self-disclosure.

Finally, several studies have found groups receiving pregroup structuring (as defined above) vs. nonstructuring to produce more participation and more self-disclosure by subjects (Bednar & Battersby, 1976; D'Augelli & Chinsky, 1974; Whalen, 1969) and lower attrition (Warren & Rice, 1972). As in earlier studies satisfaction has been linked to pregroup structured vs. unstructured instruction conditions (Bednar & Battersby, 1976; Strupp & Bloxom, 1973). Table 4 summarizes these findings.

Definitions of structure and outcome measures have differed in these studies, making generalizations difficult. Results regarding long-range differences in outcome have been mixed. At the same time, evidence for greater reported participant satisfaction in structured vs. unstructured groups has begun to accumulate. Increasingly, investigators concerned with structure as a group variable have been designing factorial research in which some variation of structure is crossed with a "theoretically relevant personality variable" (Bednar & Kaul, 1978). These studies are proving extremely helpful in clarifying the ways in which structure affects therapeutic outcome. Bednar and Kaul (1978) note that in the majority of such interactional studies subjects "with higher levels of interpersonal functioning responded more favorably to the lower structure demands, at least on some dependent measures. Conversely, the less adequate participants seemed to respond more

Table 4
Summary of Findings of Relative Overall Efficacy of
Structured vs. Unstructured Groups

	Structured Groups Superior	Structured Groups Initial- ly Superior But Effects Wash Out Over Time	Structured and Unstructured Groups Equally Effective	Unstructured Groups Superior
	(+ evidence)	(- evidence of differences)	(- evidence of differences)	(+ evidence)
Overall Efficacy on Outcome Measures	<p>More participation and self-disclosure: Bednar & Battersby, 1976</p> <p>D'Augelli & Chinsky, 1974</p> <p>Whalen, 1969</p> <p>Lower attrition: Warren & Rice 1972</p> <p>CPI, MMPI and 1 yr. prison adjustment: Leak, 1980</p>	<p>GPA: Chestnut, 1965</p> <p>Self-disclosure: Crews & Melnick, 1976</p> <p>DeJulio, Bentley & Cockayne, 1976</p>	<p>Kurtz review, 1975: Lieberman, Yalom & Miles, 1973</p> <p>Levin & Kurtz, 1974 Pinkney, 1973 Erskine, 1974</p> <p>Self-disclosure: Leak, 1980</p>	
Satisfaction with Group Experience	<p>Kurtz review, 1975: Lieberman, Yalom & Miles, 1973</p> <p>Levin & Kurtz, 1974 Pinkney, 1973 Erskine, 1974</p> <p>Bednar & Battersby, 1976</p> <p>Strupp & Bloxom, 1973</p>			

favorably to higher demand conditions on some variables." This finding has held for the constructs of internal-external locus of control (Abramowitz, Abramowitz, Roback, & Jackson, 1974; Kilman, Albert & Sotile, 1975), "risk-taking disposition" (Lee & Bednar, 1976), and especially for the construct described in this study, integrative cognitive complexity/conceptual level (McLachlan & Hunt, 1972; Tomlinson & Hunt, 1974; Tuckman, 1968, in Hunt & Sullivan, 1974; Hunt & Hardt, 1967; Stein & Stone, 1978; negative findings (trend only): Heck, 1968). The next section will examine the interaction between conceptual level and structure of intervention in educational and counseling settings.

B = f(P,E): The Interaction of Conceptual Level and Structure

The reader will recall that Hunt's matching-model specifies that "low-CL persons profit more from a highly-structured environment and high-CL persons profit more from a low-structured environment or, in some cases are less affected by variations in structure" (Hunt & Sullivan, 1974).

Empirical evidence from the section on cognitive complexity as a person variable is very important in explaining why this prediction might be so. As previously noted, both dimensionally and integratively more complex individuals have been empirically demonstrated to discriminate better and express more confidence than dimensionally and integratively less complex subjects when inconsistent information is added, while the inverse holds true for dimensionally and integratively less complex subjects (Tripodi & Bieri, 1964, 1966; Schneier, 1977; Ware & Harvey, 1967). If inconsistency is reinterpreted as ambiguity and consistency as less ambiguity, Hunt's matching-model begins to come more

into focus with research on cognitive complexity. Recall also the findings that under conditions of high consistency (little ambiguity), high and low dimensionally and integratively complex individuals process information similarly (Fertig & Mayo, 1970; Mayo & Crockett, 1964; Schroder, Driver & Streufert, 1967; Streufert & Driver, 1965), but under conditions of moderate inconsistency (ambiguity) high complex individuals outperform low complex individuals. From these findings one would predict that where structure, which reduces inconsistencies/ambiguities by organizing them into consistent higher-order concepts, is high, high and low complex subjects would perform similarly, although low complex subjects might feel more comfortable/confident and high complex subjects less comfortable/confident. Where structure is low, (with inconsistency/ambiguity higher), high complex subjects would feel more comfortable/confident and outperform low complex subjects.

Hunt himself provides a similar rationale. He suggests that structure may provide for low conceptual level subjects functions they cannot provide for themselves (Hunt, 1971), (e.g., more comprehensive integration of inconsistent information). He also suggests that preferences may account for the finding that high CL subjects perform better under less structured than more structured conditions, although overall high CL subjects outperform low CL subjects. Hunt diagrams his matching-model predictions as follows (Hunt, 1971). The crossover effect of high CL subjects performing less well under high than low structure is not noted in the diagram.

Hunt's matching-model has received support in applied settings. Table 5 summarizes empirical findings.

Figure 2. The interaction of conceptual level and degree of structure according to Hunt's model

Hunt's matching-model has received support particularly in educational settings.

Three studies were located which directly addressed interaction effects of integrative cognitive complexity/conceptual level and structure in counseling at the college level.

Heck (1968) investigated the differential effectiveness on interpersonal communication skills and style of person perception of structured vs. unstructured group human relations training approaches for students high and low in conceptual level. Two conditions were compared; the high structure intervention consisted of a programmed lesson intervention in which subjects completed workbook materials in dyads and then met for discussion groups to summarize and draw generalizations from the materials. The unstructured intervention consisted of a "T-group" intervention. Outcome measures included the ability to take the perspective of a 12-year old, sixth-grade elementary school child in explaining the concept of scarcity to him (a variation of a task

Table 5
Summary of Research on the Interaction of
Structured vs. Unstructured Group Interventions With Subjects
High and Low in Integrative Complexity/Conceptual Level

	+ evidence	- evidence
Low CL students learn better under conditions of high than low structure. No differences in learning occur under high and low structure conditions for high CL students.	<p><u>Educational setting:</u> (learning the central meaning of a painting): McLachlan & Hunt, 1973; (Concept learning): Tomlinson & Hunt, 1974</p>	
High CL students prefer low structure to high structure situations.	<p><u>Educational setting:</u> (Ratings of satisfaction and teacher preference): Tuckerman (1968) in Hunt & Sullivan (1974)</p>	
There is a crossover effect in which high CL students profit more from/are more satisfied with low structure conditions and low CL students profit more/are more satisfied with high structure conditions.	<p><u>Educational setting:</u> (attitude to program, motivation to attend college, possibility of college graduation, and interpersonal flexibility in Upward Bound program students): Hunt & Hardt, 1967</p>	<p>(Communication skills/ adapting a message to a different child's perspective): Heck, 1968*</p>
There is a crossover effect in which high CL students profit more from/are more satisfied with low structure conditions and low CL students profit more/are more satisfied with high structure conditions.	<p><u>College Counseling settings:</u> (self-disclosure, satisfaction, return rate): Stein & Stone, 1978 (preference for structure): Berg & Stone, 1980</p>	

*Heck regards a finding (trend) in the predicted direction at $p = .10$ as supportive of his hypotheses. (+ evidence)

developed by Hunt), and a measure similar to dimensional complexity measures. Heck found confirmation of Hunt's matching-model on the communication effectiveness measure at the .10 but not at the .05 level. This finding may be attributable to several methodological problems including a small N (30), use of homogeneous rather than heterogeneous groups, and the nature of the structured group experience (members met as a group rather than in dyads only 50% of the time).

Stein and Stone (1978) studied the interaction of conceptual level of college students and counselor-offered degree of structure in a 40-minute initial individual counseling interview analogue concerning adjustment to the university. (Students were interviewed individually rather than in groups.) High structure was characterized by counselors asking specific open- and/or closed- ended questions. Low structure was characterized by counselors encouraging clients to direct the interview, using minimal encouragements to talk, and using reflection responses. Outcome measures included satisfaction with the interview, clients' total talk-time, self-disclosure, perceiving the interviewer as understanding and helpful, goal attainment, and return rate for a second interview. Matching-model predictions were confirmed for satisfaction; that is, high CL subjects were more satisfied with low structure than high structure interviews while low CL subjects were more satisfied with high structure than low structure interviews. High CL subjects were more self-disclosing under low than high structure conditions. Low CL subjects rated interviewers as more helpful under high than low structure conditions. All subjects spoke more under low than high structure conditions, although this may have been a function of the task itself. However, under low structure conditions high CL subjects spoke more

than low CL subjects. Matching-model predictions for goal-attainment were in the predicted direction but did not achieve significance. Too few students returned for a second interview to make this measure useable. The investigators view their findings as offering support for Hunt's matching-model and extrapolate that "initially in counseling, an unstructured style such as client-centered or existential methods is more productive for high-CL persons. Structured procedures such as behavioral or rational-emotive counseling are more satisfying and helpful initially for low-CL persons."

In a recent study, Berg and Stone (1980) also studied the effects of conceptual level and degree of structure in individual supervision sessions on the development of counseling skills. Sixty female introductory psychology students were assigned to high-structure supervisory, low-structure supervisory, or no-supervision sessions. All subjects were first shown a 23-minute structured didactic videotape explaining reflection-of-feeling responses and giving examples plus positive and negative guidelines. After this tape, pretests were given. These included behavior counts of reflection-of-feeling responses in subject responses to a tape recording of a female university student (role-played by a graduate student) discussing a variety of problems. Quality of reflection-of-feeling responses was rated on 6-point scales by trained raters. The Carkhuff Empathy Scale was also used. Posttest measures were the above and an author-devised satisfaction scale asking raters to rate on 5-point scales "amount learned" and "general satisfaction." In addition, subjects were asked whether they would have preferred more, less, or no change in the amount of structure they received. High structure was defined as supervisor-controlled normative

feedback and external reinforcement. Low structure was defined as trainee-controlled and discovery-based feedback. In this condition supervisors provided feedback only when the trainee requested it.

Both treatment groups improved significantly over controls on quantitative and qualitative reflection-of-feeling responses, as well as on ratings of empathy.

Regarding high structured supervision vs. low structured supervision, low structured groups produced significant increases in quality of responses whereas higher structured groups did not. The high structured approach produced more self-reported satisfaction overall than did the low structured approach.

In terms of Hunt's matching-model, the high CL/low structure combination produced the only significant difference for quantitative reflection-of-feeling responses. With respect to empathy on Carkhuff's measure, the low CL/high structure combination was the only group to produce significant differences from pre- to posttesting in empathy ratings. Other expected comparisons were not proven.

Evidence for Hunt's matching-model was obtained on self-report measures. Low CL trainees reported they learned more from high than low structure. High CL subjects receiving low structure (but not high structure) felt they learned more than controls. Low CL/low structure subjects requested more structure whereas low CL/high structure subjects did not. High CL persons preferred low structure to high structure whereas low CL persons preferred high structure to low structure. Low CL students in the low structure condition were the most dissatisfied of all experimental subjects.

The authors conclude that behavioral indices yielded minimal

support for the Hunt's matching-model and indicate that in general, high and low CL trainees were not significantly differentially affected by differences between high- and low-structured supervision; whereas Hunt's matching-model was supported by self-report measures. Authors note the brevity of treatment: 46 minutes total [didactic (23 minutes) plus supervisory (23 minutes)] time, and need for a more complex, ambiguous test as pre- and post- measure as possible complicating factors. Overall, application of Hunt's conceptual level matching-model to counseling situations holds promise and is clearly an area warranting further research.

B: A Note on Outcome Measures

By now it is probably apparent to the reader that Hunt's matching-model uses the term "profit more" quite loosely. "Profit more" has been defined in numerous ways in the applied research testing the model. In educational research it has included integration of component parts to arrive at the meaning of a painting (McLachlan & Hunt, 1973), definition of a concept, recall and production of new examples which illustrate a concept (Tomlinson & Hunt, 1974), and satisfaction (Tuckman, 1968; Hunt & Hardt, 1967). In counseling research "profit more" has been defined as learning of communication skills as measured by the ability to take another's perspective in an analogue teaching task (Heck, 1968), clients' talking longer, producing more self-disclosure, goal-attainment, return rate for a second interview, satisfaction (Stein & Stone, 1978), quantitative and qualitative reflection-of-feeling responses, scores on Carkhuff's Empathy Scale, and satisfaction (Berg & Stone, 1980).

In the research reviewed earlier on structured vs. unstructured

group interventions irrespective of interactions, outcome measures have included participation, self-disclosure, attrition, self-reported satisfaction, and self-report paper-and-pencil measures of personal control, trait anxiety, self-esteem, and self-actualization.

Some commonalities among these measures are suggested. Satisfaction is one important outcome measure which has been studied, and the measure most susceptible to the CL matching-model crossover effect. Participation, including attrition, is another. "Learning" in the sense of increasing one's ability to take the perspective of another person or increasing integration and generalizability in concept formation has been a third.

Communication Skills

Since "profit more" may be defined in various ways, if Hunt's model is to be applied to group counseling interventions, it should be defined in consonance with the goals of such interventions.

In previous work on the interaction of conceptual level and structure of intervention, "communication skill" has sometimes been operationalized as the ability to explain particular concepts [e.g., scarcity to another person (child) using the other person's frame of reference (Heck, 1966)]; as more meaningful self-disclosure, specifically the number of statements about different areas of personal life, weighted for use of the pronoun, I, on Jourard's self-report questionnaire (Stein & Stone, 1978); or as clients' talking longer (Stein & Stone, 1978).

Communication skill as it has been operationalized in cognitive complexity research has included the ability of children to adapt messages to another's perspective (Clark & Delia, 1977), as peer-perceived socioemotional skill (Stevenson, 1974; Sechrest & Jackson, 1961), and as

scores on Carkhuff's Accurate Empathy Scale (Heck & Davis, 1973). In summary, measures used to operationalize the construct "communication skills" have tapped a number of different specific skills--the ability to explain well, the ability to self-disclose, amount of talking, accurate listening skills, and peer-perceived global skill.

The literature on assessment of "social skills" is even broader. Two review articles describe assessment devices in this area in depth (Bellack, 1979; Hersen & Bellack, 1977). Primarily measures, whether self-report, role-play, or physiological measures, have been directed toward the construct of assertiveness (including the ability to say no without guilt and to express negative and positive feelings constructively). A more recent focus has been the development of heterosexual dating behavior and the reduction of social anxiety.

Bellack (1979) summarizes:

The range of techniques subsumed under the rubric 'social skills' training, and the types of clinical populations to which it is applied continue to multiply. As might be expected under such circumstances, claims of success are legion. . . . However, with few exceptions, they are currently unsupportable for one consistent reason: the reliability and validity of most social skill assessment procedures are uncertain. It is unclear whether the predominant assessment strategies are adequate, whether specific instruments are sound, or whether the most appropriate aspects of interpersonal functioning are being targeted.

After a careful review of existing measures, it became clear that no single measure tapped the particular dimensions referred to as "communication skills" in this study. Aspects of communication skills targeted here include self-disclosure, explanatory skills, active listening, therapeutic assistance, and feedback skills. This view of "communication skills" is closest to the "Effectiveness Training" viewpoint of Thomas Gordon (1970), as presented by Adams and Lenz (1979).

Measures coming closest to these foci include Brunink and Schroeder's "System for assessing therapeutic communications (SATC)" (Brunink & Schroeder, 1979), and Goodman's "Group Assessment of Interpersonal Traits (GAIT)" (Goodman, 1972) although neither adequately covers all aspects. Consequently portions of the SATC were incorporated into a behavior checklist to be applied to transcripts of audiotape recordings from the GAIT procedure and written responses to standard stimuli. Peer-ratings from the GAIT were also used.

A question of concern to assessment is whether "communication skill" is independent of conceptual level.

Two studies have found Bieri's measure of dimensional complexity to be independent of communication skills as measured by peer-ratings (Stevenson, 1974; Sechrest & Jackson, 1961). The relationship of conceptual level to peer-rated socioemotional skill has not been studied.

With respect to the ability of individuals to adapt messages to the perspective of another individual, results have been mixed. One study of dimensional complexity using second to ninth grade children found a significant relationship between social-perspective taking and dimensional complexity (Clark & Delia, 1977). The social perspectives task in this study required each child to describe what another person who had (a) hurt the child's feelings, or (b) made him/her do a disliked chore, was thinking about the child at the time of the experience. A rating scale of the degree to which the child suspended his/her own evaluation of the act to provide an explanation measured social perspective-taking. Dimensional complexity and social perspective-taking have not been studied in adults. Heck (1968) found no relationship between conceptual level in adults and the ability to adapt a message to a

child's perspective.

Finally, two studies were located which examined the relationship of conceptual level to active listening responses made by subjects in analogue counseling tasks. One utilized Carkhuff's Accurate Empathy Scale (Heck & Davis, 1973), the other Carkhuff's scale and a behavioral measure of reflection-of-feeling responses (Berg & Stone, 1980). Both studies suggested that students high in conceptual level may be more empathic than students low in conceptual level.

Predictions of the Current Study

The current investigation studied the interaction of conceptual level/integrative cognitive complexity and degree of structure in interpersonal communication-oriented group counseling interventions as this interaction affects satisfaction and improvement in communication skills. It addressed Hunt's matching-model hypothesis that "low-CL persons profit more from a highly-structured environment and high-CL persons profit more from a low-structured environment or, in some cases are less affected by variations in structure" (Hunt & Sullivan, 1974).

Specifically, it was predicted that:

1. There would be an interaction effect between structure of intervention and conceptual level of students. Groupings in which structure of intervention and conceptual level of students are matched in accordance with Hunt's matching-model (High conceptual level (CL)-low structure, low conceptual level-high structure) would produce significantly greater change in communication effectiveness than would groupings in which structure of intervention and conceptual level of students are mismatched (High CL-high structure, low CL-low structure).

This same pattern was predicted for ratings of satisfaction. With respect to main effects, it was predicted that:

1. Structured and unstructured interventions would be superior to no intervention in promoting improvement in communication effectiveness.
2. There would be no main effects differences in promoting communication effectiveness between structured and unstructured interventions.
3. (On the basis of previous research rather than theory), structured interventions would be slightly more satisfying to participants overall than would unstructured interventions.

CHAPTER II

METHOD

The basic design of the current study is as follows: Subjects were measured on conceptual level and divided into two groups by a median split procedure--high conceptual level and low conceptual level subjects. Subjects from within each block were randomly assigned to one of three intervention conditions: structured, unstructured, or control groups. All subjects were tested on a written measure pre and post intervention. Half of the subjects were tested pretest and all of the subjects were tested posttest on a group intervention task. Scales of a communication skills checklist applied to both the written and transcribed taped group intervention measures provided outcome measures of communication effectiveness. Peer ratings, satisfaction ratings, and attrition were also used as outcome measures. Results were analyzed by means of analysis of variance techniques.

Sample

All subjects were drawn from an entry-level psychology course at the University of Rhode Island which is entitled "Towards Self-Understanding." This course is designed to introduce students to psychological concepts through the medium of personal self-exploration and study of personal development themes. In many ways this course is a variant of Drum and Knott's descriptions of "affective education," "psychological education," "humanistic education" and "personal education

and self-management" as a trend in college education. Therefore this course provided an ideal setting for introduction of an experiential curriculum teaching communication skills, which was, in fact, the intervention of this study. Since "Towards Self-Understanding" does not count as a credit toward a major in psychology, traditionally few of the students are psychology majors and the group is a heterogeneous one with respect to majors.

While there has been justifiable criticism of many psychological studies utilizing college undergraduates, in fact for this study college graduates are a very appropriate target group. As already noted, affective education and communication skills training are most frequently sponsored by college counseling centers and geared towards persons making the transition from adolescence to early adulthood. Additionally, as previously noted in the theoretical section describing William Perry's (1970) work, this same age group is believed to be the one in which the developmental transition from less complex to more complex information-processing strategies occurs, providing the greatest range of scores in which to study the interactional predictions of this study.

The Formation of Intervention Groups

As previously noted, since the content area of the interventions so closely overlaps the content of the course "Towards Self-Understanding," contracts were arranged with the instructors and students of three sections of this course, offered in the summer of 1980. For the two sections designated as experimental groups dissertation staff took over 10½ consecutive class hours in 1½ hour blocks over a period of three weeks to teach the segment of each class listed as

communication skills on the course syllabi. The research provided an additional 15 minutes debriefing after the interventions and testing were completed. Dissertation staff took over 4 3/4 hours of class time for pre- and posttesting and debriefing of subjects in the control section. The control subjects continued to attend class on a content area other than communication skill taught by their professor during the three weeks comparable to intervention time in the experimental sessions. Subjects were allowed the option of not participating in the study but rather participating in an alternative class project on communication during this time. However, all subjects selected the research participation option. See Appendix C, document #2, for the presentation of these options and informed consent forms which were used. No subjects were excluded. Intervention took place starting the second week of classes.

To meet both research and class needs, several additional steps were taken. Professors in the experimental sections did not participate in the contracted-for classes and subjects were reassured of the confidentiality of their materials. However, each professor was furnished with complete intervention manuals. Manuals can be found in Appendix D. Manuals provide session by session lesson plans such that professors could easily become conversant with all materials taught during the segment of their courses during which they were absent. After completion of interventions and testing, subjects in all conditions were given a complete set of the handouts distributed during the structured interventions. Subjects were assured before interventions that they would not be graded on their performance during sessions. Professors incorporated the above segments of their courses into their overall teaching

strategies by allowing students to utilize the research participation segment of the course equally along with any other segment of the course to write a final paper on one of two topics: (1) what students had learned about themselves by participation in any segment of the course, or (2) preparation of an annotated bibliography on any topic (e.g., non-verbal communication) which had sparked the interest of the student during the course. In the control group section, participation in the research was later incorporated into a discussion of the principles of experimental research design utilizing first-hand experience.

One experimental section, divided in half to create one structured and one unstructured group, was run first semester of summer school, June-July, 1980. A very large section second semester of summer school, July-August, 1980, was divided by the Registrar's Office into two sections. The first of these sections was divided in half to create one structured and one unstructured group. The second section was left intact and used as a control group section.

Subject Characteristics

The first semester experimental section numbered 15; the second semester experimental section numbered 15; the second semester control section numbered 36.

With respect to age, the range of subject ages in the experimental groups was 17-58 years, with a median age of 21, the range of subject ages in the control group was 17-30 years, with a median age of 18.

In the experimental groups 47% of subjects were men, 53% of subjects women. In the control group 44% of subjects were men, 56% of subjects women. Breakdown by sex and treatment category was as follows: structured interventions, men = 7, women= 8; unstructured interventions,

men = 7, women = 8; control group, men = 16, women = 20.

With respect to majors the breakdown in experimental and controls was as follows: Business--experimentals, 17%; controls, 17%; engineering--experimentals, 20%; controls, 0%; sciences--experimentals, 10%; controls, 6%; computer science--experimentals, 0; controls, 6%; fine arts--experimentals, 10%; controls 6%; health-related professions (nursing, dental hygiene, pharmacy, premedical)--experimentals, 3%; controls, 14%; social sciences (including psychology)--experimentals, 20%; controls, 8%; journalism--experimental, 3%; controls, 3%; political science--experimentals, 0; controls, 8%; other or undecided-experimentals, 10%; controls, 31%.

Specifically there were two psychology majors among the 30 experimental group subjects (6.7%) and one psychology major among the 36 control groups subjects (3%).

Attendance and Attrition

Any subject who did not attend (1) all testing sessions (two to three sessions, 3 or 4½ hrs., depending upon whether subject was in the pretest/posttest or posttest-only condition, and (2) in the experimental groups, any subject who did not in addition attend at least 50% (3 hrs.) of intervention sessions, was considered a "dropout." One subject dropped out of the unstructured experimental group. No subjects dropped out of the structured experimental group. Nine subjects dropped out of the control group.

Pilot Study

Prior to the running of the actual experiment, a pilot sample was studied to assure that an adequate range of scores on all measures was

obtainable from the proposed population. Pilot subjects were solicited from "Towards Self-Understanding" on a volunteer basis in the spring semester of 1980 in exchange for extra credit. A copy of what was told to pilot subjects can be found in Appendix C, document #1, along with an informed consent form. Forty subjects volunteered. Of these students 62.5% were men, 37.5% were women. 17.5% students were business majors, 20% engineering majors, 5% science majors, 5% natural resource majors, 10% computer science majors, 15% art majors, 12.5% journalism majors, 2.5% psychology majors and 12.5% undecided or other. Age range was 18-32 years with the median age 19.

Wide ranges of scores on all variables, in approximately normal distributions, were obtained. Given that this was so, the major study was then conducted. Pilot data were used only for checking adequacy of score ranges on measures and for training raters on the IFT and Communication Skills Checklist.

Measures

A brief description of measures used in this study follows. Actual measures appear in Appendix A.

Personal Variables (P)

Individual differences among subjects were measured by the following measures: Streufert and Driver's IFT, Bieri's Reptest, Budner's Intolerance of Ambiguity Scale, and Crowne and Marlowe's Social Desirability Scale.

Conceptual Level/Integrative Cognitive Complexity

Impression Formation Test (IFT). Conceptual level is measured by the Impression Formation Test of Streufert and Driver (1967). In this

test, five sets of adjectives are available and the following two sets were used in the present study:

(1) intelligent-industrious-impulsive-critical-stubborn-envious,

(2) nervous-obstinate-jealous-reliable-sociable-independent.

Each individual is given 1½ minutes to describe in writing a person to whom the first three adjectives in a set apply (e.g., intelligent, industrious, impulsive). Next the individual repeats the task with the second three adjectives of a set (e.g., critical, stubborn, envious). Finally, the individual is given three minutes to describe an individual to whom all six adjectives apply. Scoring relies on the final description.

Integration is scored on a five-point scale, with 1 low and 5 high. A score of 1 reflects an inability to deal with conflicting information such that the conflict is negated, rather than resolved, usually by omission of the implications of the incongruent adjectives. A score of two reflects an inability to apply conflicting information to a single setting or a single point in time. Conflict is resolved by isolating conflicting elements to separate occasions or places. A score of 3 reflects some integration with the ability to bring at least one of the incongruent adjectives into the description. A score of 4 reflects greater integration. A relationship between all adjectives is established but it remains based on surface events or relationships rather than on an understanding of underlying motivation. A score of 5 reflects establishment of relationships between all the adjectives on the basis of underlying motivational and personality components. Streufert and Driver (1967) provide a scoring key with examples in their article, which is duplicated in Appendix A. Possible scores range from 1 to 5.

Two raters, one 5th and one 6th year clinical psychology graduate student with graduate training specifically in the area of adolescent cognitive development, and with two hours joint discussion of the IFT, rated each subject protocol. Interrater reliability, figured by the intraclass correlation coefficient (Haggard, 1958; Scott, 1962) was calculated. This statistic represents the level of absolute agreement between two sets of ratings (rather than the degree to which two sets of scores are linearly related regardless of differences in means or standard deviations, which is what is measured by the Pearson product-moment correlation). Interrater reliabilities measured by the intraclass correlation coefficient between the two raters in this study were $R = .81$ for pilot data, and $R = .98$ for experimental and control data on the IFT.

Test-retest reliabilities provided by Streufert and Driver at five weeks for the two sets of adjectives used in this study were Set 1 = .92, Set 2 = .88, (Streufert & Driver, 1967). The intercorrelation between set 1 and 2 is .79. As described in the review of the literature provided in Chapter 1, the pattern of results obtained with this measure across many studies generally supports its construct validity.

Dimensional Cognitive Complexity: Bieri's RCRT

Bieri's measure of dimensional cognitive complexity is based on Kelly's Role Construct Repertory Test (Kelly, 1955). In Bieri's measure (Tripodi & Bieri, 1963), the subject is presented with a 10 x 10 grid. Ten roles of individuals known to the subject are provided (e.g., mother, best friend, etc.) Each role is written across the top of a matrix and subjects are asked to identify specific individuals for each role. Next ten bipolar adjective constructs are provided (e.g., Shy vs.

Outgoing). Each target person is rated on each construct row on a six-point Likert scale. Similarity in ratings between rows is calculated by a matching procedure for all possible row combinations. Cognitive complexity is derived from the matrix of 100 ratings which is generated. A range of scores from 40 (few matches) to 450 (all matches) is possible. Low scores (fewer matches) indicate high complexity; high scores (frequent matches) indicate low complexity. Bieri (1955) suggests that a person whose check patterns are highly similar to one another would be considered dimensionally cognitively simple whereas a person whose check patterns were highly dissimilar would be considered dimensionally cognitively complex. Test-retest reliabilities of Bieri's measure have been reported as .78 (Bieri, 1955) .85, .82, .51, .67, and .69 (Bavelas, Chan & Guthrie, 1976). See the introductory chapter for research supporting the validity of this measure.

Defensiveness

Two measures of defensiveness were used.

Intolerance of Ambiguity Scale. The first, Budner's Intolerance of Ambiguity Scale (Budner, 1962), loaded on Vannoy's (1965) "defensiveness" factor in his factor analytic study of cognitive complexity. This test is comprised of sixteen items with which subjects register strong agreement to strong disagreement on a 6-point Likert scale. A 7-point scoring system is used with 7 = strong agreement, 1 = strong disagreement. Omissions are scored as 4. An example of such an item is "An expert who doesn't come up with a definite answer probably doesn't know too much." The instrument measures "the tendency to perceive ambiguous situations as sources of threat" (Budner, 1962). Each subject receives

one score, with scores ranging from 16 (high tolerance of ambiguity) to 112 (high intolerance of ambiguity).

Test-retest reliabilities over two to four weeks yield a correlation of .85 (Budner, 1962). Internal consistency by Cronbach's Alpha is reported as .49. Budner discusses reasons for low internal consistency in his article (Budner, 1962). Validity data demonstrating moderate correlations with other measures of this dimension and empirical correlates are also reported in Budner's original article (Budner, 1962).

Social Desirability Scale. As Robinson and Shaver (1973) point out, the Crowne-Marlowe Social Desirability Scale (Crowne & Marlowe, 1964), a measure designed to tap social desirability, or the tendency to describe oneself in favorable terms to gain the approval of others, may be a good measure of denial. Unpublished work by Lillibridge, reported in Robinson and Shaver (1972, p. 729) suggests that denial of bad qualities is a major component of this scale. Weinberger, Schwartz, and Davidson (1979) note that the Crowne-Marlowe "actually assesses repressive defensiveness" and provide empirical evidence and references to support this position. The Crowne-Marlowe Social Desirability Scale presents 33 items which the subject endorses as true or false. An example of such an item is "Before voting I thoroughly investigate the qualifications of all the candidates." Each subject receives one score. The range of possible scores is 0 to 33. Low scores indicate low denial; high scores indicate high denial. Test-retest reliabilities over one month are reported as .88 (Crowne & Marlowe, 1964). Internal consistency is also reported as .88.

Dependent Variables (B)

Four dependent variable measures were utilized: 1) Self-ratings of satisfaction, 2) GAIT peer ratings of therapeutic effectiveness, and behavioral ratings of communications skills applied to 3) written responses to interpersonal situations and 4) transcripts of audiotaped GAIT interactions.

Satisfaction

Satisfaction was measured by participants' ratings on 5-point semantic differential scales of their impressions of the "usefulness," "enjoyableness," and "the amount they believe they have learned" in the group sessions. This measure is similar to the satisfaction measure used by Berg and Stone (1980), who asked subjects to rate on 5-point scales the "perceived amount learned" about a particular topic and "general satisfaction."

See Appendix A for the exact measure. Intercorrelations among the three items in the current study were as follows: usefulness and how much learned .54; usefulness and enjoyability .56; how much learned and enjoyability .34. Because of the high intercorrelations, how much learned and usefulness were combined. The slight discrepancies which exist among the three categories may be explained by some subjects' comments. Several subjects commented that the group experience was extremely "useful" in that it helped subjects in ways not directly related to communication, e.g.: "overcoming shyness about speaking in class," "getting to know other students," "realizing I'm not the only one with problems like this." Likewise, some students found the experience very enjoyable but not very educational. Enjoyability was kept separate from

the other two constructs on theoretical grounds.

Communication Effectiveness

As noted earlier, finding a measure of communication skills to tap a broad range of skills including self-disclosure, self-assertion, listening with "accurate empathy," explaining, and giving feedback was problematic. Consequently, a three-pronged approach to the measurement of communication effectiveness was devised.

First, peer ratings in a structured interactional setting were collected on Goodman's GAIT (1972). Secondly, GAIT dialogues were taped and transcribed. At a later time two trained raters tabulated occurrences of seven categories of "good" and "bad" communication transactions on a checklist devised for this study. Finally, all subjects wrote responses to five set situations which tapped the subjects' ability to explain, take criticism, give feedback and listen empathically. The same checklist was applied to written responses as to transcripts of GAIT dialogues. Each approach will be described in more depth below.

GAIT-Group Assessment of Interpersonal Traits, Peer Ratings. Goodman (1972) developed a small group assessment situation in which peers provide sociometric ratings of one another's communication effectiveness after each member in a group attempts to listen and to self-disclose to a stranger (a fellow group member). The GAIT task poses two challenges: 1) how to self-disclose in a difficult situation, and 2) how to enter another person's frame of reference. Each member of the group is asked to think of an immediate interpersonal concern he/she could share with the group and to state it in writing. The self-descriptive statements

are used as catalysts to start dialogues between pairs of subjects. A modification of Goodman's procedure was introduced in this study such that pairs were randomly assigned. One person read his/her statement to the chosen partner, who responded. Instructions to the second individual were to "be a good listener." Dialogues between pairs took five minutes, at which time the listener summarized the interaction. Then the discloser reread his/her initial statement. According to Goodman, this juxtaposition of initial statement and summary gives the group a sharper view of the listener's grasp of the situation and success at facilitating the expansion of the problem presented. Dyads were reformed until each member of the group had had a turn at being both the discloser and the listener/understander. After the group exercise was completed, each member rated each other applicant on sociometric scales. The entire task took about one hour and a half. Appendix A explains the exact instructions and procedures for each GAIT group as employed in this study.

At the end of Goodman's exercise (and the variation used in this study), subjects rate one another on three items purported to measure therapeutic talent: how well each person "understands" other participants, how "honest, frank, and emotionally open" the person appears, and how "warm, patient, and accepting" the person seems.

Mean ratings of effectiveness on each item were calculated, and Goodman reports interjudge reliabilities from the procedure as: Understanding, $r = .64$; Warm, $r = .63$, and Open, $r = .54$. Test-retest reliabilities reported by Goodman at three weeks were Understanding, $r = .78$; Warm, $r = .69$; and Open, $r = .71$.

Goodman combines these three variables, "Accepting-Warm," "Open,"

and "Understanding" into one composite, "Therapeutic Talent," on the basis of both the theoretical concept of "accurate empathy" and on the basis of high intercorrelations among these three variables: Accepting-Warm/Open = .48, Accepting-Warm/Understanding = .54, and Open/Understanding = .54 (Goodman, 1972). "Therapeutic Talent" therefore is a composite of the self-disclosure and the good listening skills required by the GAIT task. Each group member is given one composite "Therapeutic Talent" score based on averaging of ratings by other group members on the three component scales. Possible scores range from 1 (no talent) to 6 (extreme talent).

In the current study, as an additional check for the appropriateness of Goodman's Therapeutic Talent as an outcome measure in a study of communication skills, an additional question was added to the GAIT peer-rating sheet. Raters were asked to rate each individual in the exercise on a 5-point scale for the question "Overall, how effectively does this person communicate?" The correlation between Goodman's "Therapeutic Talent" composite and "overall communication effectiveness" was .81, suggesting high redundancy between these items and strengthening the argument that Goodman's Therapeutic Talent triad is an appropriate measure for use in this study. Therefore Goodman's peer rating of Therapeutic Talent was used in this study. (The overall communication effectiveness question was not.)

Interjudge reliabilities reported by Goodman (range .54 to .64) are moderately low. To improve the specificity of Goodman's measure, an attempt to operationalize behaviors more concretely than done on GAIT scales was made.

Communication Skills Checklist applied to the GAIT (CSC-GAIT). A behavioral checklist scoring system was devised for this study. A complete copy of the checklist may be found in Appendix B. Items on the checklist derive from numerous sources, most particularly Adams and Lenz, 1979; Brunink and Schroeder, 1979; and Johnson, 1972. Specific skills which are taught in counseling or communication effectiveness courses and generally agreed upon as positive (e.g., paraphrasing) or negative (e.g., calling names/blaming) are included on the list. The checklist also incorporates concepts similar to the outcome measures of Berg and Stone, 1980 (reflection-of-feeling responses), and Heck, 1968 (explanatory skill).

Scores of positive, neutral, and negative aspects of communication are tallied by seven categories of responses: self-disclosure, explaining, taking criticism, giving feedback, empathic listening, interpreting, and advice-giving. Additionally, for purposes of comparison with Berg and Stone's study, the specific item "paraphrasing" was studied.

The "Communication Skills Checklist" (CSC) so devised has an added advantage in that the particular ways a person's communication changes can be tabulated--for instance, if interventions increase the amount of paraphrasing a person does and decrease the amount of advice-giving a person does, this will be reflected on the pretest and posttest checklists applied to the GAIT.

Tape recordings of all GAIT exercises were transcribed. Transcriptions from pre- and posttesting were shuffled such that raters were blind to the condition they were rating. Two raters, one a sixth year clinical psychology graduate student, the other a Ph.D. clinical psychologist, trained together for five hours. Interrater reliabilities

for these raters ranged from .79 to 1.00 and are presented in the Results chapter. Internal consistency data are also reported in the Results chapter.

Communication Skills Checklist applied to the Response Scale (CSC-Response Scale). Subjects were also asked to write responses to five written situations. In each situation, a paragraph describing an interpersonal situation requiring a response is presented, followed by words such as "You say, or You explain." Subjects are instructed to imagine themselves in each situation and write down as though speaking "what you would/could say as your response."

Two situations require subjects to explain to children how something works; one situation requires a response to parental criticism delivered in a demeaning way, and two situations require responses to distressed friends (one drawn from Johnson, 1972; one from DeLancey, 1979). Pretest and posttest measures were shuffled prior to ratings by judges. Situations were scored on the same Communication Skills Checklist by the same raters as used for the GAIT typescripts. The Response Scale and Communication Skills Checklist appear in Appendices A and B. Interjudge reliabilities and internal consistency data are presented in the Results Chapter.

Procedures/Interventions (E)

Contracts with professors of three sections of personal development course were made along the lines previously stated such that two sections served as experimental conditions, one as a control condition.

Assignment to Groups

First of all, in the second class meeting of the experimental sections and midway through the control classes, students were given the IFT, Bieri, Crowne-Marlowe, Budner, and Response scales. This battery takes $1\frac{1}{2}$ hours to complete.

In the next class session, half of each class was recalled to take the pretest GAIT. Scores on the IFT were calculated and students were assigned to attend (Pretest/Posttest) or not attend (Posttest only) the GAIT pretest by random assignment from blocks of high and low CL scorers, separated at a median split score of 3. High CL was defined as greater than 3, low CL as less than 3. Subjects achieving a score of 3 were randomly assigned to high or low conditions. Each GAIT group therefore was comprised of half high CL and half low CL students. GAIT groups were also examined after assignment to make sure groups were mixed with respect to sex (which all were). Students in the Posttest-only condition were given a later beginning time for class such that these students had $1\frac{1}{2}$ hours free between the initial testing session and the beginning of interventions (or resumption of professor lecturing in the case of the control group). The discrepancy between coming or not coming to a pretest session was minimized as students were contacted (both by phone and mail) to be given their second meeting time in the interval after the instrumentation class but before the pretest class. Since many students live off-campus in the summer, communication about class-time in the interval between classes was presumably minimal.

Group Composition

Students in the experimental group were then assigned to intervention conditions as follows: Students were again assigned to groups by

random assignment from four blocks--High CL--Pretest/Posttest, High CL--Posttest-only, Low CL--Pretest/Posttest, Low CL--Posttest-only. Consequently in each group half of the subjects were high CL, half low CL. Of each of these two groups half were pretest/posttest, half were posttest only. Groups were mixed to include half men, half women insofar as possible, and all groups included both sexes. Heterogeneous experimental groups of 7-8 students each were composed in this way.

Four experimental groups were formed, two each semester, for intervention conditions, as below.

Intervention Conditions

Two levels of structure were introduced, such that each semester one group was given a high structure intervention, one group a low structure intervention. In the high structure condition, the group leader presented short didactic explanations of concepts, gave instructions for exercises in which students participated in order to illustrate concepts, and actively led discussion of the experiences. Four $1\frac{1}{2}$ hour sessions were conducted, one each on the topics of communicating clearly/explaining concepts to others, active listening, giving constructive feedback, and nonverbal aspects of communication. Testing and intervention sessions spanned $2\frac{1}{2}$ -3 weeks for each group. The communication skills structured group was based on a model developed by the author of this research when a trainee at the URI Counseling Center and a manual is included in Appendix D.

In the low structure conditions four $1\frac{1}{2}$ hour discussion groups were held. The group leader initiated the discussion by introducing a topic (the same four topics) for discussion, then took a role of using minimal encouragements to talk, reflection responses, and highlighting the same

points taught in the structured group if group members brought them up first. Instructions for the unstructured group also appear in Appendix D.

The control group took pre-post or post-only tests but participated in no group interventions, attending class lectures as a large group on a topic unrelated to communication skills.

Check For Faithfulness of Interventions

All group sessions were audiotaped, thereby producing sixteen intervention recordings (of 1½ hour sessions). To check whether interventions did in fact differ on degree of structure, tapes were run on fast forward past the opening of each group and stopped somewhere prior to the three-quarters mark on each tape on the first side such that an uninterrupted segment of at least fifteen minutes was available on each tape. Tapes were labeled by code number only such that no marking of treatment condition was apparent to a naive rater.

A social worker with five years' therapy experience was asked to listen to seven to ten minutes of each of the sixteen tapes and to sort the tape into either a "structured" or "unstructured" pile. Structured was defined as a group in which the leader was "directive, taught concepts didactically: for instance, led exercises to illustrate concepts; and facilitated discussion in an active fashion." Unstructured was defined as a group in which the leader "followed the lead of the group members, used reflection responses (Mmm-hmm, paraphrased, How so?, how do you mean, uh huh?), highlighted points only after they were made by group members, and facilitated the group in a relatively nondirective fashion." The judge identified every segment correctly.

Group Leaders

Two advanced clinical psychology graduate students (one 4th year, one 5th year) served as group leaders. Both leaders were women in their early thirties with at least two years of clinical experience, and at least two years of teaching experience. Both described their usual therapy styles as relatively more unstructured than structured, their teaching styles as relatively more structured than unstructured. Both measured 4 or above on the IFT.

These leaders (and a third leader who was not used due to small enrollment sizes of the summer classes) were trained together by the researcher for five hours. The training session consisted of leaders' working through on an experiential as well as didactic level segments of both the structured and unstructured groups they were to run. Complete manuals, as in Appendix D, were provided to leaders.

Each leader conducted one structured and one unstructured group.

Pre-post or Post-only Testing

The GAIT measure, including peer ratings and ratings on a behavior checklist by trained raters, was administered to half of the subjects pre and post intervention. The other half of the subjects received the GAIT measure as a posttest-only to explore the possibility that the GAIT, a structured group measure itself, might interact with the interventions to produce change. All group members received the measure of satisfaction, posttest-only. The measure of satisfaction was administered to control subjects, despite the fact they had not received group interventions, to rule out the possibility that participation in the GAIT alone was sufficiently rewarding so as to account for a major portion of subjects' satisfaction. All group members also received the

Response Scale both pre and post intervention.

GAIT Posttesting

Assignment to GAIT posttesting was random within the following blocks: Half of each group was high CL, half low CL. Within these groups half were pretest/posttest, half posttest-only. GAIT posttest groups from experimental sections were arranged such that half of members had received structured interventions and half unstructured. Membership was also mixed with respect to sex.

Pretest GAIT groups were composed of all strangers. Posttest GAIT groups were composed in such a way as to minimize prior acquaintance of group members.

Summary of Experimental Design

A summary of the experimental design is shown in Table 6 on the following page.

Table 6
Diagram of the Experimental Design of the Current Study*

	PRETEST			POSTTEST			
	CSC- Gait	Gait Peer Ratings	CSC- Response Scale	CSC- Gait	Gait Peer Ratings	CSC- Response Scale	Satisfaction Ratings
Therapist 1	High CL	X	X	X	X	X	X
		X	X	X	X	X	X
	Low CL	X	X	X	X	X	X
		X	X	X	X	X	X
	High CL	X	X	X	X	X	X
		X	X	X	X	X	X
Therapist 2	High CL	X	X	X	X	X	X
		X	X	X	X	X	X
	Low CL	X	X	X	X	X	X
		X	X	X	X	X	X
	High CL	X	X	X	X	X	X
		X	X	X	X	X	X
Control Condition	High CL	X	X	X	X	X	X
		X	X	X	X	X	X
	Low CL	X	X	X	X	X	X
		X	X	X	X	X	X
	High CL	X	X	X	X	X	X
		X	X	X	X	X	X

*X = those receiving test

CHAPTER III

RESULTS

Results of the study will be presented in two parts. Part I will present psychometric data regarding the Communication Skills Checklist and relationships among theoretical constructs. Part II presents experimental findings and is divided into two sections. In the first section information pertinent to reducing the experimental design and testing the adequacy of random assignment is presented. The second section presents findings regarding the predictions of the study.

RESULTS - PART I

Psychometrics of the Communication Skills Checklist
and Inter-Construct Relationships

Interrater Reliabilities

Interrater reliabilities calculated by Pearson Product-Moment correlations on the Communication Skills Checklist were consistently very high and are listed in the tables below by item, by scale, and by overall positive, negative, and neutral categories on the Response Scale, pre and post, and the GAIT pre and post.

Pretest N for the CSC-Response Scale was 66; Posttest N for the CSC-Response Scale was 56.

Pretest N for the CSC-GAIT was 29, Posttest N for the CSC-Gait was 56.

Table 7 presents median interrater reliabilities for total scales on each measure. Table 8 provides item by item reliabilities.

Table 7

Median Interrater Reliabilities by Scales of the
CSC applied to both the Response Scale and transcribed
GAIT Audiotapes

	Positive		Negative		Neutral	
	CSC-Response Scale	CSC-GAIT	CSC-Response Scale	CSC-GAIT	CSC-Response Scale	CSC-GAIT
Self-disclosure	.90	.95	.89	.97	.98	.97
Explaining	1.00		1.00		1.00	
Empathic Listening	.97	.98	1.00	1.00	.79	.98
Interpreting	.84	.92	.88	.93		
Advice-giving	.91	.94	.91	.95		
Taking criticism	.98		.98			
Giving feedback	.93		.96			

N for CSC-Response Scale = 66 (pre), 56 (post); CSC-GAIT = 29 (pre), 56 (post).

Table 8

Interrater Reliabilities by Items on CSC-Response Scale
and CSC-Gait

	POSITIVE			CSC- RS			NEGATIVE			CSC- RS			NEUTRAL		
	CSC- Pre	CSC- Post	CSC- Gait	CSC- Pre	CSC- Post	CSC- Gait	CSC- Pre	CSC- Post	CSC- Gait	CSC- Pre	CSC- Post	CSC- Gait	CSC- Pre	CSC- Post	CSC- Gait
<u>Self-disclosure</u>															
I-feelings	.88	.87	.95	.99	.99		.89	.89	.96	.98			.98	.97	
I-intent	.93	.92	.91	.95											
<u>Explaining</u>															
Explaine frame reference	1.00						.95	1.00					.99	1.00	
Check out Questions	1.00	1.00					1.00	1.00							
Visual- demonstrates	1.00	1.00					1.00	*							
Defines	.99	1.00													
Explainer finds out	1.00	*													
Contrasts	1.00	.95													
<u>Empathic Listening</u>															
Paraphrases	*	.99	.90	.97			1.00	1.00	.85	1.00			.76	.81	.99 .98
Clarifies	.84	.47	.95	.98			.96	.95	.89	1.00					
Acknowledges	*	*	.98	.98			1.00	1.00	.99	1.00					
Parallel Experience	.97	1.00	.97	1.00			.93	1.00							

Table 8 (cont.)

	POSITIVE			NEGATIVE			NEUTRAL		
	CSC- RS Pre	CSC- RS Post	CSC- GAIT Pre	CSC- RS Post	CSC- GAIT Pre	CSC- RS Post	CSC- RS Post	CSC- GAIT Pre	CSC- GAIT Post
Availability	.97		.98						
Interpretations									
Tentative	.81	.87	.94	.91	.88	.92	.93		
Advice- giving									
Solicits own solutions	.95	.96	.90	.96	.91	.92	.94	.96	
Tentative	.87	.83	.93	.97					
Taking Criticism									
Agree with truth	.96	1.00			1.00	1.00			
					reaction				
					Counter- attack	.95	.96		
					Sarcasm	1.00	1.00		
					Blame external	.96	.96		
Giving Feedback					Giving Feedback Accuse	.91	1.00		
Specifies Behavior	.93		.97						
Assertive	.93		.92						
Engages critics' view	.92	*							

* = too few instances to rate (no occurrences rated by at least one rater)
 N = for CSC-Response Scale, pre = 66, post = 56; CSC-GAIT, pre = 29, post = 56.

Table 9
Interrater Reliabilities by Scales on CSC-Response Scale
and CSC-Gait

	<u>POSITIVE</u>			<u>NEGATIVE</u>			<u>NEUTRAL</u>		
	CSC- RS Pre	CSC- RS Post	CSC- GAIT Pre	CSC- RS Post	CSC- RS Post	CSC- GAIT Pre	CSC- RS Post	CSC- GAIT Pre	CSC- GAIT Post
Self-disclosure	.92	.95	.95	.98	.89	.96	.98	.98	.97
Explaining	1.00	.99			1.00		.99	1.00	
Empathic Listening	.93	.96	.98	1.00	.98	.99	1.00	.81	.98
Interpreting	.81	.87	.94	.91	.88	.92	.93		
Advice-Giving	.87	.88	.96	.97	.91	.94	.96		
Taking Criticism	.96	1.00			.96	.97			
Giving Feedback	.96	.97			.91	1.00			

N for CSC-Response Scale, pre = 66, post = 56; CSC-GAIT, pre = 29, post = 56.

Internal Consistency of Scales

Internal consistency as calculated by Cronbach's Alpha, of scales was low. (See Table 10.) Possible explanations for these findings can be found in the Discussion Section.

Table 10

Internal Consistency of Scales of the CSC-Response Scale
and CSC-GAIT with More than One Part as Calculated
by Cronbach's Alpha

	Positive				Negative			
	CSC- RS <u>Pre</u>	CSC- RS <u>Post</u>	CSC- GAIT <u>Pre</u>	CSC- GAIT <u>Post</u>	CSC- RS <u>Pre</u>	CSC- RS <u>Post</u>	CSC- GAIT <u>Pre</u>	CSC- GAIT <u>Post</u>
Self-disclosure	.48	.45	.64	0				
Explaining	.37	.44			.22	0		
Empathic Listening	.26	.06	0	0	0	0	.31	.37
Interpreting								
Advice-Giving	0	.01	.01	0				
Taking Criticism					0	.05		
Giving Feedback	.32	.68						

Pretest CSC-Response Scale: N = 66, Posttest = 56

Pretest CSC-GAIT N = 29, Posttest = 56

Test-retest Reliabilities

By correlating the pretest to posttest scores of control group subjects, estimates of test-retest reliabilities of the Communication Skill Checklist applications at 2½ weeks were obtained. Results are presented in Table 11. These can only be considered estimates at best as the total number of observations in the control group (N = 27, CSC Response Scale; N = 12, CSG-GAIT) is very small. Also it should be

Table 11

Test-Retest Reliabilities Calculated by Pearson Correlations of
Pretest and Posttest Scores on the CSC-Response Scale and
CSC-GAIT of Control Group Subjects at a 2½-Week Interval

	CSC-Response Scale		
	<u>Positive</u>	<u>Negative</u>	<u>Neutral</u>
Self-Disclosure	.61*	Δ	
Explaining	.71*	.68*	.50*
Empathic Listening	.80*	.32*	.67*
Interpreting	.21	.38*	
Advice-giving	.34*	.59*	
Taking Criticism	.40*	.84*	
Giving Feedback	.20	Δ	
N = 27 Δ too few instances in this sample to make correlations meaningful (either pre- or posttest = 0)			
	CSC-GAIT*		
	<u>Positive</u>	<u>Negative</u>	<u>Neutral</u>
Self-Disclosure	.90*	-.20	-.27
Empathic Listening	.03	-.15	.53*
Interpreting	.17	.16	
Advice-giving	.12	.32	
N = 12			

* p < .05

noted that the Response Scale descriptions were the same at both pre- and posttesting, requiring of subjects free-form written responses. While the GAIT exercise utilized the same format on pre- and post-testing, the dialogue and person to whom each subject responded was totally different at each sitting.

Test-retest reliabilities range from very good to poor on different items. Strongest items on the CSC-Response Scale were positive self-disclosure, positive and negative explaining, positive and neutral empathic listening, and negative taking criticism. On the CSC-GAIT, only positive self-disclosure achieved satisfactory test-retest reliability.

Interrelationships Among Scales of the Communication Skills Checklist

Another question is how various scales relate to one another within a measure. Is someone who explains well also likely to listen well? If someone makes absolute (categorical) interpretations, are they less likely to make tentatively phrased interpretations?

The following tables address such questions. To answer the question of how interrelated positive skills are, Pearson product-moment correlations were calculated for the following subsets of data:

- (1) Positive items on the pretest CSC-Response Scale with one another (N = 66, items = 7)
- (2) Positive items on the CSC-GAIT pretest with one another (N = 29, items = 4)

Table 12 presents these data. Significant correlations are starred.

On the Response Scale, within positive categorizations, seven correlations were significant at the .05 level. (One would be expected by chance alone.) Giving feedback in a positive fashion was significantly

correlated with positive self-disclosure ($r = .25$, $p = .02$), positive explaining ($r = .31$, $p = .01$), and positive listening ($r = .28$, $p = .01$); taking criticism well was significantly correlated with positive self-disclosure ($r = .23$, $p = .03$); phrasing advice tentatively was significantly correlated with phrasing interpretations tentatively ($r = .23$, $p = .03$), empathic listening was significantly correlated with explaining well ($r = .25$, $p = .02$); and explaining well was significantly correlated with positive self-disclosure ($r = .21$, $p = .04$).

On the CSC-GAIT, only one significant correlation occurred, which might be predicted by chance alone.

It would be expected that a person would not simultaneously make good and poor responses in any one given category. For example, positive self-disclosure should be negatively correlated with negative self-disclosure. To investigate the question of whether making positive communication responses was incompatible with making negative communication responses, Pearson product-moment correlations for the following subsets of data were calculated:

- (1) Positive items on the CSC-Response Scale with negative items on the CSC-Response Scale. ($N = 66$, items = 7×7)
- (2) Positive items on the CSC-GAIT with negative items on the CSC-GAIT ($N = 29$, items = 4×4)

Tables 13 and 14 present these data. Correlations on the diagonal provide + and - same-scale comparisons.

Three of seven scale pairs were significantly correlated, although one (making positive and negative interpretations) was in an unanticipated direction. As expected, positive and negative explaining and positive and negative listening were significantly negatively correlated at the .05 level. Three correlations in this entire matrix would have been

Table 13

Pearson Product-Moment Correlations of Negative with Positive Scales of the
CSC-Response Scale on Pretest Data

	MSDRP	MEXRP	MELRP	MINRP	MAGR	MTCRP	MGFRP
Positive self-disclosure	PSDRP	.15	-.92	.31**	.32**	-.35**	.011
Positive explaining	PEXRP	-.29**	-.11	.39**	.18	-.08	.03
Positive empathic listening	PELRP	-.15	-.22*	.05	-.29**	-.03	-.13
Positive interpreting	PINRP	.07	-.13	.24*	.03	-.21*	-.10
Positive advice-giving	PAGRP	.03	-.18	-.16	-.20*	-.28**	.08
Positive taking criticism	PTCRP	-.10	-.16	-.00	-.09	-.14	-.20
Positive giving feedback	PGFRP	-.12	-.15	-.00	.05	-.15	-.18
Negative self-disclosure							
Negative explaining							
Negative empathic listening							
Negative interpreting							
Negative advice-giving							
Negative taking criticism							
Negative giving feedback							

*p < .05

**p < .01

N = 66

expected to reach significance by chance at the .05 level; there are 12 significant correlations.

Expected findings did not hold up on the CSC-GAIT, although the same pattern with respect to interpreting occurs there.

Table 14
Pearson Product-Moment Correlations of Negative with
Positive Scales of the CSC-GAIT on Pretest Data

		Negative self-disclosure	Negative empathic listening	Negative interpreting	Negative advice-giving
		MSDGP	MELGP	MINGP	MAGP
Positive self-disclosure	PSDGP	-.07	.26	-.05	-.09
Positive empathic listening	PELGP	.34*	.05	.04	-.34*
Positive interpreting	PINGP	-.11	-.23	.31	.23
Positive advice-giving	PAGP	-.25	-.22	-.23	-.03

*p < .05
N = 29

Finally the question arises, whether poor communicators use more than one disruptive skill concurrently. To determine this Pearson product-moment correlations were calculated for the following data:

- (1) negative items on the pretest CSC-Response Scale with one another (N = 66, items = 7), and
- (2) negative items on the pretest CSC-GAIT with one another (N = 29, items = 4).

Tables 15 and 16 present these data.

Table 15

Pearson Product-Moment Correlations of Negative with Negative Scales of the
CSC-Response Scale on Pretest Data

	MSDRP	MEXRP	MEJRP	MIRSP	MAGRSP	MTCRSP	MGFRSP
Negative self-disclosure	MSDRP	-.04	-.07	-.19	-.25*	.17	-.06
Negative explaining	MEXRSP		.06	-.10	.08	-.17	.12
Negative empathic listening	MELRSP			-.05	.12	.04	.15
Negative interpreting	MIRSP				.42**	-.20	.13
Negative advice-giving	MAGRSP					-.22*	.15
Negative taking criticism	MTCRSP						.00
Negative giving feedback	MGFRSP						

* $p < .05$

** $p < .01$

N = 66

One significant correlation would be predicted by chance alone; three occur. It would appear that giving advice in an absolute fashion is highly correlated with making interpretations in an absolute fashion; and negatively correlated to referring to oneself in the third person and counter-attacking when criticized.

Table 16
Pearson Product-Moment Correlations of Negative by
Negative Scales of the CSC Applied to the
Pretest GAIT Data

		MSDGP	MELGP	MINGP	MAGP
Negative self-disclosure	MSDGP		-.10	-.01	-.23
Negative empathic listening	MELGP			.13	.34*
Negative interpreting	MINGP				.48**
Negative advice giving	MAGP				

N = 29
* p < .05
** p < .01

On the CSC-GAIT giving advice in an absolute fashion is likewise correlated with interpreting in an absolute fashion; and is also correlated with poor listening.

Construct Validity: Correlations Between Same Scales on the CSC-GAIT and CSC-Response Scale

The same scoring system was applied to the written responses on the Response Scale and to transcriptions of verbal responses on the GAIT. The CSC-Response Scale is a more "test-like" structured vehicle for responding to hypothetical situations; the CSC-GAIT is more free-form and duplicative of "real-life behavior."

Correlations between performance on specific scales (e.g., positive self-disclosure) on these two measures would provide a look at generality of skills across two different situations. Pearson product-moment correlations between 4 positive items at pretest and at posttest on each measure were determined. (N's = Response Scale, pre = 66, GAIT pre = 29, Response Scale post = 56, GAIT post = 56.)

Comparison table 17 follows on the next page.

Only one significant correlation occurs (the tendency to give tentative advice crosses both situations on posttesting). This could occur by chance alone.

Similarly, Pearson product-moment correlations between 4 negative items at pretest and at posttest on the CSC-Response Scale with the CSC-GAIT were calculated. (N's = CSC-Response Scale pre = 66, CSC-GAIT pre = 29, CSC-Response Scale post = 56, CSC-GAIT post = 56). See Table 18.

On the negative skills, poor listening (denial, no response, coercion, changing the subject) was relatively consistent across situations on posttesting, although this one finding might also have been due to chance.

Overall, skills used in one situation were not very likely to be used in the other ones.

Correlations between Goodman's GAIT Peer Ratings and CSC-GAIT Data

Two different types of ratings were made from the same situation on the GAIT. Transcripts were coded on the Communication Skills Checklist by trained raters. Then, additionally, participants made peer ratings on Goodman's GAIT. Correlations between items on the CSC-GAIT and peer ratings of "Therapeutic Talent" are presented in Table 19.

Table 17
Pearson Product-Moment Correlations of Positive Pre- and Posttest Scales
of the CSC-Response Scale with Corresponding
Positive Scales of the CSC-GAIT

CSC-Response Scale	CSC-GAIT							
	PSDCP	PSDGS	PELGP	PELGS	PINGP	PINGS	PAGCP	PAGGS
Positive self-disclosure pretest	PSDRP	.06						
Positive self-disclosure posttest	PSDRS	-.06						
Positive listening pretest	PELRP		-.05					
Positive listening posttest	PELRS			.13				
Positive interpreting pretest	PINRP				-.08			
Positive interpreting posttest	PINRS					-.09		
Positive advice-giving pretest	PACRP						.03	
Positive advice-giving posttest	PACRS							.33*

*p < .01

Table 18

Pearson Product-Moment Correlations of Same-Scale Comparisons Between
CSC-GAIT and CSC-Response Scales on Negative Scales
at Pre- and Posttest

CSC-Response Scale	CSC-GAIT							
	MSDCP Negative self-disclosure pretest	MSDGS Negative self-disclosure posttest	MELGP Negative listening pretest	MELGS Negative listening posttest	MIGP Negative interpreting pretest	MIGS Negative interpreting posttest	MAGGP Negative advice-giving pretest	MAGGS Negative advice-giving posttest
MSDRP	Δ							
MSDRS		.11						
MELRP			-.14					
MELRS				.40*				
MIRSP					.27			
MIRSS						.07		
MAGRP							-.11	
MAGRS								.11

Δ can't be calculated due to no variance

*p < .001

Table 19
Pearson Product-Moment Correlations of Goodman's
GAIT Peer Ratings with CSC-GAIT Scales

GAIT			
CSC-GAIT Communication Skill Checklist		Peer Pretest Ratings	Peer Posttest Ratings
<u>Positive</u>			
Self-disclosure	$r = .46^{**}$	$r = .25^*$	
Listening	$r = .03$	$r = .15^*$	
Interpreting	$r = -.01$	$r = .24^*$	
Advice-giving	$r = .07$	$r = -.05$	
<u>Negative</u>			
Self-disclosure	$r = .02$	$r = .12^{**}$	
Listening	$r = .24$	$r = -.33^{**}$	
Interpreting	$r = -.05$	$r = .00^{**}$	
Advice-giving	$r = -.19$	$r = -.33^{**}$	

*
** $p < .05$
 $p < .01$
Pretest N = 29
Posttest N = 56

Prior to intervention, peer ratings of high skill at communicating ("therapeutic talent") primarily reflected high positive self-disclosure (use of I-feeling and I-intent statements). On posttesting (when there also was a larger N; N = 56 rather than 29), peer ratings of good communication skills reflected the following components:

1. positive self-disclosure (+ self-disclosure)
2. phrasing interpretations in a tentative manner (+ interpreting)
3. not denying, changing the subject, ignoring and other aspects of poor listening (- listening)
4. not giving categorical, absolute advice (- advice-giving)

These correlations give a suggestion about what peer raters are keying into in forming their global ratings. The four components above were independent of one another. None was significantly correlated at the .05 level with any other on posttest data as calculated by Pearson Product-moment correlations.

Relationships Among Theoretical Constructs

In order to determine whether integrative complexity as measured by the IFT in this study was related to measures of dimensional complexity, or defensiveness, four variables (integrative complexity measured by the IFT, dimensional complexity measured by the Bieri Reptest, tolerance of ambiguity measured by Budner's Intolerance of Ambiguity Scale, and denial measured by the Crowne-Marlowe) were correlated by Pearson product-moment correlations. Sample N was 66. Results follow in Table 20.

Table 20
Pearson Product-Moment Correlations of Four
Measures of Cognitive Complexity
with One Another

	IFT	Bieri	Budner	Crowne-Marlowe
IFT		-.17	.01	-.04
Bieri			-.08	.16
Budner				.05
Crowne-Marlowe				

None of the measures of cognitive complexity were significantly related to one another. The implications of these findings will be examined in the Discussion chapter.

Correlations of age and gender to theoretical constructs were also calculated. Neither age nor gender were significantly correlated with any measure of cognitive complexity. The only significant correlation ($r = .28$, $p = .01$) was between age and gender themselves, attributable to six of sixty-six subjects, all of the subjects over 30 years old, being women enrolled in a continuing education program for women returning to college.

Relationships of Person Variables to
Baseline (Preintervention)
Communication Skills

Next, the question of whether conceptual level is related to communication skills (prior to intervention) was addressed. In this study the relationship of conceptual level to each scale on the Communication Skill Checklist for both CSC-Response Scale and CSC-GAIT measurements, and on peer sociometric ratings on the GAIT, was investigated in two ways. First, Pearson product-moment correlations among 4 person variables (IFT, Bieri, Budner, and Crowne-Marlowe), 22 items on the pretest Communication Skills Checklist, and the pretest ratings by peers on Goodman's GAIT Therapeutic Talent measure were calculated. Table 21 reviews scale directionality of measures of person variables to help clarify the meaning of these correlations. Secondly, twenty-three one-way ANOVAS comparing CL levels (high and low) on each scale on pretest data were performed. Results of these ANOVAS can be found in Appendix E. Table 22 presents correlational findings. The first column presents IFT findings.

On the IFT, the measure of conceptual level employed, two of twenty-three correlations were significant; one would be expected by chance alone. Both correlations had to do with the way in which persons

Table 21
Scale Directionality of Measures
of Person Variables

	High score means:	Low score means:
IFT	high conceptual level	low conceptual level
Bieri	low dimensional complexity	high dimensional complexity
Budner	low tolerance of ambiguity	high tolerance of ambiguity
Crowne-Marlowe	high social desirability (high denial)	low social desirability (low denial)

differing in conceptual level made interpretations. High conceptual level was associated ($r = -.38$, $p = .02$) with making low amounts of absolute interpretations on the CSC-GAIT; i.e., the higher the conceptual level the less likely to interpret categorically. High conceptual level was also associated with making low amounts of absolute interpretations on the CSC-Response Scale ($r = -.25$, $p = .02$). Observation of raw data suggests that even in statistically nonsignificant findings means for all types of interpreting (whether tentative or absolute) were lower for high CL than for low CL subjects. See Table 23. High CL subjects simply did less interpreting than did low CL subjects.

Findings on other measures suggested that making categorical interpretations (high amounts of negative interpreting) is related to 1) low dimensional complexity (Bieri, $r = .36$, $p = .03$), and 2) high tolerance of ambiguity (Budner, $r = -.48$, $p = .004$). Giving advice in a tentative manner was also related to other "person variables."

On the relationship of conceptual level to communication skills

Table 22

Relationship of Cognitive Complexity Constructs/Person
Variables to Baseline (Pretest) Communication
Skills on the CSC-Response Scale, CSC-GAIT,
and GAIT Peer Ratings, as Measured by
Pearson Product-Moment Correlations

	IFT	Bieri	Budner	Crowne- Marlowe
<u>GAIT</u>				
Peer ratings	.16	.05	.11	.11
<u>CSC-RESPONSE SCALE</u>				
+				
+Self-disclose	.17	-.08	-.13	.05
+Explain	-.05	.15	.10	.04
+Listen	-.01	.15	-.08	-.09
+Interpret	-.25*	.17	.05	.10
+Advise	.08	-.13*	-.06	-.05
+Take Criticism	-.09	.25	-.08	.04
+Give Feedback	.04	.06	-.09	-.01
<u>CSC-GAIT</u>				
+				
+Self-disclose	.19	-.17	-.01	-.00
+Listen	-.05	.06	-.01	-.18
+Interpret	-.25	.21*	.11*	.23*
+Advise	.16	-.32*	.42*	-.39*
<u>CSC-RESPONSE SCALE</u>				
-				
-Self-disclose	.08	-.19	-.02	-.04
-Explain	.07	.01	-.03	-.10
-Listen	-.02	-.18	-.05	-.18
-Interpret	-.05	.07	.18	-.06
-Advise	-.09	-.14	.13	-.09
-Take Criticism	.10	-.18	.09**	-.00
-Give Feedback	.04	.06	.50**	-.09
<u>CSC-GAIT</u>				
-Self-disclose	-.06	.28	-.06	.15
-Listen	-.07*	-.07**	-.16**	-.19
-Interpret	-.38*	.36	-.48**	.20
-Advise	-.21	.15	-.21	.08

*

**p < .05

p < .01

CSC-Response Scale N = 66

CSC-GAIT N = 29

GAIT Peer Rating, N = 29

Table 23

Mean T-Scores on the Dimensions Positive (Tentative) and Negative (Absolute) Interpreting for High and Low CL Subjects on the CSC-Response Scale and CSC-GAIT

	CSC-Response Scale		CSC-GAIT	
	Tentative (+)	Absolute (-)	Tentative (+)	Absolute (-)
High CL	48.8	49.3	50.0	46.5
Low CL	52.3	50.2	52.4	49.8

other than making interpretations, no differences, positive or negative, were found with respect to self-disclosure, explaining, empathic listening, giving advice, taking criticism, or giving feedback (including making assertive responses) on either the CSC-Response Scale or CSC-GAIT measures. Peer sociometric ratings of skill were also independent of conceptual level. One-way ANOVA findings support the independence of conceptual level and communication skills as well.

The correlational findings which achieved significance with respect to interpreting do not show up in the ANOVA data as representing significant differences between responding of high and low CL subjects on pretest data on each scale of the Communication Skills Checklist applied to the Response Scale, the GAIT, and on GAIT peer ratings. Of twenty-three one-way ANOVAS (SPSS program 17.1), only one produces a significant finding. High conceptual level subjects are more self-disclosing on the CSC-Response Scale (though not on the CSC-GAIT) than were low CL subjects ($F(1, 54) = 4.98, p < .05$.) This finding might be due to

chance, as in the correlational findings positive self-disclosure and the IFT achieve a correlation of only .17.

Overall, conceptual level was not related in any consistent way to communication skill, as measured by either skill checklists or peer ratings, indicating that prior to interventions major CL differences did not exist in communication skill levels.

RESULTS - PART II

Experimental FindingsSection I: Collapsing the Experimental Design

In order to reduce the experimental design to the 2 x 2 (CL by Structure) analysis of variance which answers the major questions of the study, several preliminary analyses were done.

Therapist differences. First, it was necessary to determine whether either of the two therapists in the study was more effective than the other. To do this, twenty-three one-way ANOVAS, (SPSS program 17.1) ($F = 1, 54$), comparing therapists on posttest data were done. There were no significant differences between therapists on any posttest measure, such that the experimental design could be collapsed across the therapist factor. A table of F values from these analyses can be found in Appendix E.

Pretest/posttest-only differences. Next, to determine whether pre-testing on the GAIT "primes" subjects to learn better and therefore respond more effectively on posttesting on the CSC-GAIT, CSC-Response Scale, or Satisfaction measures, twenty-four one-way ANOVAS (SPSS program 17.1) comparing the performance of subjects who were pre-post vs. post-only tested on each of these measures were conducted. A complete listing of F values can be found in Table 24.

Of 24 tests, all but two showed no significant difference. One to two tests would be expected to obtain significance by chance alone.

The finding that taking a pretest (vs. not) on the GAIT predisposes subjects to give less advice of a tentative nature on the CSC-Response Scale at posttesting [$F(1, 54) = 4.11, p < .05$] but not on the CSC-GAIT

Table 24

Preliminary Analyses
 One-way ANOVAS ($F = 1, 54$) Comparing the Performance on
 Posttest Data of Subjects Who were Pre-Post Tested vs.
 Posttested Only on the CSC-GAIT, CSC-Response Scale,
 and Satisfaction Data

Positive Scales		
	CSC-Response Scale $F(1, 54)$	CSC-GAIT $F(1, 54)$
+Self-disclosure	$F = 1.23$	$F = .00$
+Explaining	$F = .36$	
+Listening	$F = 1.13$	$F = 2.01$
+Interpreting	$F = .06$	$F = .75$
+Advice-giving	$F = 4.11^*$	$F = 2.78$
+Taking Criticism	$F = .01$	
+Giving Feedback	$F = .40$	
Negative Scales		
-Self-disclosure	$F = .80$	$F = .44$
-Explaining	$F = .02$	
-Listening	$F = .75$	$F = 1.50$
-Interpreting	$F = 1.41$	$F = .00$
-Advice-giving	$F = .00$	$F = .00$
-Taking Criticism	$F = .18$	
-Giving Feedback	$F = 1.05$	
Satisfaction data	Enjoy $F = .25$ Usefulness $F = 4.82^*$	

* = $p < .05$

does not make much sense and may be due to chance. The other finding, that taking a pretest (vs. not) on the GAIT may prime subjects to rate the group interventions as more useful [$F(1, 54) = 4.82, p < .05$], may reflect genuine differences and will be discussed in the Discussion Section.

Accuracy of random assignment. Subjects within each of two sections of Psych. 103 were randomly assigned within CL blocks to either the structured group or unstructured group conditions. A third section was used as the control condition. The two sections second summer term (control and experimental) were initially one section divided by the registrar into two sections to provide smaller class size. Later enrollees were placed in the experimental section by the registrar such that this latter division was not random. Within the experimental section, subjects were randomly assigned within CL blocks as noted above.

In the best possible circumstances the combination of random assignment and chance would have produced groups which were equivalent on all demographics and communication skills to begin with. To determine whether this was so, twenty-six one-way analyses of variance (SPSS program 17.1) comparing conditions of structure on demographics and pretest communication skills data were performed. A table of F values from these analyses can be found in Appendix E.

Groups were equivalent on gender, Bieri, Budner, Crowne-Marlowe, all CSC-GAIT pretest data, Goodman peer ratings, and most CSC-Response Scale pretest data.

However, there were five points of non-equivalency. The following significant differences were found (by one-way analysis of variance followed by Newman-Keuls tests.) One to two significant differences would

be expected by chance alone.

With respect to age, the structured and unstructured groups contained subjects older than the control group [$F(2, 63) = 6.31, p < .01$], although there were no significant differences on age between structured and unstructured groups. This difference was accounted for by the presence of four subjects over 35 years in the experimental groups and none over 30 years in the control group. However, since as earlier indicated, age was not significantly correlated with IFT in this sample (age range 17-58) this does not pose a serious problem.

Three findings of initial differences between subjects assigned to different groups on pretest communication skills items on the CSC-Response Scale were obtained.

On positive empathic listening, subjects in the unstructured group initially made more positive empathic listening responses than subjects in either the structured or control conditions [$F(2, 63) = 3.44, p < .05$]. The unstructured group members also initially made more tentative interpretations than members of the control group, but not more than members of the structured group [$F(2, 63) = 5.54, p < .01$]. Finally, members in the unstructured group gave significantly more tentative advice than subjects in other groups [$F(2, 63) = 8.40, p < .01$]. Since CSC-Response Scale items were administered to all subjects pre and post intervention and results subjected to repeated measures analyses, these differences should not have confounded later analysis.

Of greater concern was a finding of significant differences in conceptual level between groups. The median CL score in all three groups was "3" (from a scale of 1-5) and half of the subjects in each group were designated as high or low CL by a median split procedure with

random assignment of Ss falling in the "3" group, such that an equal number of high and low CL subjects was present in each group. Examination of data suggests, however, that there was a slightly greater concentration of high CL's in the "4" and "5" categories in the control group vs. a slightly greater concentration of low CL's in the "1" group in the experimental conditions, such that the control group scored significantly higher on CL than either experimental group [$F(2, 63) = 3.22, p < .05$]. Means were (in T scores): Controls = 50.27, Unstructured group = 49.71, Structured group = 49.61. The unstructured group also scored ever so slightly but significantly higher on CL than the structured group. Therefore, while by median split procedure groups were equivalent on CL, there were subtle differences among groups. If, as previous theory suggests, high CL subjects may learn more easily than low CL Ss, the control group may have had an edge over experimental groups, which may have minimized treatment effects. The unstructured group may have had a slight edge over the structured group, but the difference here is so small that the significant finding is less likely to have made a difference.

Sex differences. As reported in the Method section, men and women subjects were relatively evenly represented in each condition of structure (structured group: men = 7, women = 8; unstructured group: men = 7, women = 8; control group: men = 15, women = 20) and across CL groups (High CL: men = 13, women = 21; Low CL: men = 16, women = 15). Chi-square tests verified that differences in representation of men and women were nonsignificant for both structure of group ($\chi^2 (3df) = .096$) and conceptual level of participants ($\chi^2 (1df) = 1.17$).

To determine whether sex of subject interacted with either

structure or conceptual level, a series of thirty-two two-way analyses of variance (Program BMDP2V) were performed (1) first, comparing sex of subject by conceptual level, and (2) secondly, comparing sex of subject by structure of group on each scale of the CSC-Response Scale, CSC-GAIT, and Goodman's GAIT peer ratings.

In no case did sex of subject interact with either conceptual level or structure of group.

In one case sex of subject interacted with repeated measures [$F(1, 53) = 4.62, p < .05$]. See tables below.

Simple effects follow-up tests indicate that women significantly decreased the amount of absolute interpretations they were making on the CSC-Response Scale from pretest to posttest [$F(1, 50) = 4.98, p < .05$] whereas men significantly increased the amount of absolute interpretations they were making from pretest to posttest [$F(1, 50) = 4.57, p < .05$].

In one case, women demonstrated significantly superior communication skill overall to men at both pretesting and posttesting on the CSC-Response Scale. Women explained concepts to children more fully than did men. Tables 25-28 present these data.

Since groups were equal on membership sex of subjects and since sex of subject did not interact with either CL or structure of group, these findings do not directly affect the testing of the major predictions of this study although they do add to the literature on sex differences.

Table 25

Pre- and Posttest Cell Means and Standard Deviations
by Sex and Structure on the CSC-Response Scale
Dimension "Negative Interpreting"

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Structured group	Men	47.47	7.50	52.63	6.10
	Women	51.25	9.35	45.65	10.80
Unstructured group	Men	45.74	6.50	50.19	6.62
	Women	52.90	12.62	46.45	8.90
Control group	Men	46.44	9.39	47.47	11.27
	Women	52.49	13.27	54.59	10.73

Table 26

Analysis of Variance (2 x 3 x 2) of Sex by Structure across Repeated Measures on the CSC-Response Scale Dimension: "Negative Interpreting"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	246720.56411	1	246720.56411	1677.79
Structure	40.10221	2	20.05110	0.14
Sex	123.30233	1	123.30233	0.84
Sex by Structure	330.89750	2	165.44875	1.13
Error	7352.54994	50	147.05100	
Repeated measures	0.21898	1	0.21898	0.00
Repeated measures by Structure	32.21779	2	16.10869	0.25*
Repeated measures by Sex	300.94836	1	300.94836	4.62
Measures by Sex by Structure	236.51074	2	118.25537	1.81
Error	3258.53582	50	65.17072	

N = 56

*p < .05

Figure 3. Graphic representation of pre- and posttest cell means by sex and structure on the CSC-Response Scale Dimension: "Negative Interpreting."

Table 27

Pre- and Posttest Cell Means and Standard Deviations
by Sex and Conceptual Level on the CSC-Response
Scale Dimension: "Positive Explaining"

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Men	High CL	48.76	3.58	48.16	3.40
	Low CL	47.41	3.26	48.49	3.68
Women	High CL	50.39	5.22	50.87	5.03
	Low CL	52.38	4.68	51.74	6.34

Table 28

Analyses of Variance (2 x 2 x 2) of Sex by Conceptual
Level across Repeated Measures on the CSC-Response
Scale Dimension: "Positive Explaining"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	257961.42030	1	257961.42030	7579.53
Sex	256.64061	1	256.64061	7.54*
C	5.40549	1	5.40549	0.16
SC	24.49359	1	24.49359	0.72
Error	1769.76621	52	34.03397	
R	0.17729	1	0.17729	0.02
RS	0.67960	1	0.67960	0.08
RC	0.49320	1	0.49320	0.06
RSC	12.78800	1	12.78800	1.46
Error	454.37300	52	8.73794	

*p < .01

Section II: Predictions of the Study

Since there were no therapist differences and negligible pre-post/post-only differences and all interventions and GAIT groups were counterbalanced for both factors, two-way (3×2) analyses of variance with the factors being structure and conceptual level were performed. On CSC-Response Scale data analyses were repeated measures. On CSC-GAIT data, to increase the total N from 29 to 56, posttest-only analyses (rather than repeated measures) were performed. Thus the N for all analyses was 56. Computer program BMDP2V was used for two-way and three-way ANOVAS. This program is able to handle repeated measures and unequal cell sizes in higher-order designs. SPSS program 17.1 was used for one-way ANOVAS.

Interventions aimed at increasing positive behaviors and decreasing negative behaviors. In several instances the negative behaviors targeted for reduction did not occur sufficiently frequently for meaningful analysis. Whenever there were no (zero) occurrences of a target negative behavior in one or more cells in any treatment group (there was nothing to eliminate) analyses were not done. Hence, negative self-disclosure, negative explaining, negative empathic listening, negative taking criticism, and negative giving feedback scales of the Response Scale were not subjected to analysis. Likewise an analysis of negative empathic listening on the CSC-GAIT was not performed as there were no instances of this behavior in these cells. Table 29 lists analyses which were performed.

Prior to running analyses of variance, variances were inspected. ANOVAS were performed, following which Fmax tests were calculated to formally evaluate data for violations of assumptions of homogeneity of

Table 29
Analyses Performed to Answer the Predictions of
this Study

Response Category:	Dependent Variables					Drop-out Rate	# of Persons Using Response Category "Paraphrasing" on the CSC-Response Scale
	Communication Skills Checklist-Response Scale	Communication Skills Checklist-GAIT	Goodman's GAIT peer Ratings	Satisfaction Data			
Type of Analysis Done:	3 x 2 x 2 ANOVA with Repeated Measures	3 x 2 ANOVA	3 x 2 ANOVA	3 x 2 ANOVA		Chi-square	Chi-square
Data:	<div>1. Positive self-disclosure</div> <div>2. Positive explaining</div> <div>3. Positive empathic listening</div> <div>4. Positive interpreting</div> <div>5. Positive taking criticism</div> <div>6. Positive advice-giving</div> <div>7. Positive giving feedback</div> <div>8. Negative interpreting</div> <div>9. Negative advice-giving</div>	<div>1. Positive self-disclosure</div> <div>2. Positive empathic listening</div> <div>3. Paraphrasing</div> <div>4. Positive interpreting</div> <div>5. Positive advice-giving</div> <div>6. Negative self-disclosure</div> <div>7. Negative interpreting</div> <div>8. Negative advice-giving</div>	<div>1. Goodman's peer ratings of "therapeutic talent"</div>	<div>1. Ratings by participants of "usefulness" of interventions</div> <div>2. Ratings by participants of "enjoyability" of interventions</div>		<div>1. # of Ss dropping out of each treatment group</div> <div>1. # of Ss producing one or more "paraphrase" responses</div>	

variance. ANOVAS which had produced significant findings were carefully re-evaluated at this time. In three instances (positive empathic listening, positive giving feedback, and Goodman's "Therapeutic Talent") Fmax tests revealed heterogeneity of variance. In all other ANOVAS producing significant findings, Fmax tests confirmed homogeneity of variances. In the three cases noted, Bartlett's test for homogeneity was performed. Data from one analysis (Goodman's "Therapeutic Talent") proved satisfactory by Bartlett's test and this ANOVA was retained. In the remaining two cases, positive giving feedback and positive empathic listening, logarithmic transformations were used in an attempt to stabilize the variances. Fmax tests on transformed data suggested that the data on the dimension "positive giving feedback" were now acceptable and an ANOVA on the transformed scores was run for this dimension. Data on the dimension positive empathic listening were examined, and an outlier discovered which produced the extreme heterogeneity of variance. On this scale, the single item "paraphrasing" was extracted, the data unit specified as number of people producing one or more "paraphrase" responses, and (nonparametric) Chi-square analysis was performed.

Summary tables of all analyses of variance and cell means and standard deviations for all groups appear in Appendix F.

The sum total of ANOVAS performed was 20. Given this many ANOVAS one would expect one analysis to produce significant findings by chance alone. Ten produced significant results. MANOVA was not used due to the relatively small number of Ss (56), large number of dependent variables (21), unequal n in cells, and repeated measures on some variables.

Attrition. Chi-square analyses with the Fisher corrections for cell sizes smaller than 5 showed no significant differences in attrition between structured vs. unstructured vs. control groups ($\chi^2 = 3.96$, $df = 2$). There was one dropout from the unstructured group (original $N = 15$), none from the structured group (original $N = 15$), and 9 from the control group (original $N = 36$). A Fisher-Yates Exact probability test revealed no CL differences between drop-outs and non-dropouts ($p = .41$).

Analyses which produced significant effects are described in the following pages.

Conceptual level by structure interaction effects. This study predicted three-way interactions between conceptual level, structure, and repeated measures, with high CL subjects learning better under low than high structure conditions and low CL subjects learning better under high than low structure conditions. This result was not obtained.

One significant 3-way interaction was obtained by a three-way ANOVA (BMDP2V) ($3 \times 2 \times 2$) investigating structure by CL across the repeated measure "negative interpreting" (making categorically-phrased interpretations) [$F(2, 53) = 3.63$, $p = .03$] on the Communication Skills Checklist applied to Response Scale data.

Tables 30, 31, and Figure 4 present results of analysis of variance, cell means and standard deviations, and a graph of pre- and post-test means.

Simple Effects follow-up tests indicate that this result was attributable to changes occurring in the structured group condition [$F(1, 50) = 6.66$, $p < .05$] for high conceptual level subjects only [$F(1, 50) = 4.15$, $p < .05$]. High conceptual level subjects in the structured group condition significantly decreased the amount of categorical

Table 30

Pre- and Posttest Cell Means by Structure and Conceptual Level on the
CSC-Response Scale Dimension: "Negative Interpreting"

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Structured group	High CL	51.25	8.54	43.47	9.59
	Low CL	47.94	8.66	53.66	6.35
Unstructured group	High CL	51.25	11.72	46.45	8.90
	Low CL	47.94	10.03	50.19	6.62
Control group	High CL	48.70	8.34	52.98	11.75
	Low CL	51.25	14.90	50.34	11.13

Table 31

Analysis of Variance (3 x 2 x 2) of Structure by Conceptual Level
across Repeated Measures on the CSC-Response Scale Dimension:
"Negative Interpreting"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	250411.98107	1	250411.98107	1593.47
Structure	90.00631	2	45.00316	0.29
C	36.73212	1	36.73212	0.23
SC	63.48963	2	31.74481	0.20
Error	7857.44717	50	157.14894	
R	1.08939	1	1.08939	0.02
RS	56.02824	2	28.01412	0.44
RC	166.54791	1	166.54791	2.63
RSC	459.22751	2	229.61375	3.63*
Error	3165.67188	50	63.31344	

*p < .05

Figure 4. Graphic representation of pre- and posttest cell means by structure and conceptual level on the CSC-Response Scale Dimension: "Negative Interpreting"

interpretations that they were making on the CSC-Response Scale, whereas low CL subjects did not. High CL subjects did not significantly alter their behavior in unstructured or control conditions. Low CL subjects did not significantly alter their behavior in any condition. Since a goal of the interventions was to decrease categorical interpreting, the structured group was most successful in achieving this aim for high conceptual level students only. Phrased in another way, high CL subjects learned to decrease categorical interpreting more effectively in the structured than unstructured or control conditions.

Conceptual level main effects. In one instance, although starting at equivalent skill levels, high conceptual level subjects improved significantly more than did low CL subjects across all degrees of structure.

1. GAIT Peer ratings. This was the case for overall "therapeutic talent" as rated by peers on Goodman's GAIT peer ratings. On posttesting, high CL's were rated by peers as communicating significantly more effectively than low CL subjects [$F(1, 54) = 9.04, p < .01$].

There had been no significant differences between ratings of high and low CL subjects by peers on pretesting GAIT peer ratings [$F(1, 27) = .04, p = .84$]. This suggests that high CL subjects were able to learn under all varieties of structure more so than were low CL subjects.

Tables 32 and 33 present posttest analysis of variance, and posttest cell means and standard deviations.

High CL subjects also made significantly more positive self-disclosures on the CSC-Response Scale pre- and posttest than did low CL subjects [$F(1, 54) = 4.37, p < .05$]. This finding was not affected by

Table 32

Cell Means and Standard Deviations of Structure
by Conceptual Level on Posttest Goodman's GAIT
Peer Ratings of "Therapeutic Talent."*

		N	Posttest	
			Mean	Standard Deviation
Structured group	High CL	7	5.21	.21
	Low CL	8	4.52	.48
Unstructured group	High CL	8	5.38	.21
	Low CL	6	5.03	.36
Control group	High CL	13	5.10	.46
	Low CL	14	4.91	.70

*Scores ranged from 2.80 to 5.78, with a mean of 4.99 and a standard deviation of .47 in the current study.

Table 33

Analysis of Variance (3 x 2) of Structure by Conceptual Level
on Posttest Goodman's CAIT Peer Ratings of
"Therapeutic Talent"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	1283.94945	1	1283.94945	5412.58
Structure	0.84125	2	0.42062	1.77
C	2.14414	1	2.14414	9.04*
SC	0.60911	2	0.30455	1.28
Error	11.86079	50	0.23722	

*p < .01

interventions. Tables 34 and 35 present these data.

Structure main effects. There were several findings of differential effectiveness of structured vs. unstructured vs. control groups.

1. CSC-Response Scale. One such finding was at the individual item level on the response "paraphrasing." On pretesting on the Response Scale no subject (any condition, either CL level) produced a paraphrase response. Number of subjects in each condition producing one or more paraphrase responses on posttesting were compared statistically by chi-square test using the Fisher correction for small cell size. There were significant differences according to structure of intervention ($\chi^2 = 10.85$, $p < .01$). Further breakdown of data by the Fisher-Yates Exact Probability Test revealed that the structured group was significantly more effective in teaching paraphrasing than either the unstructured ($p < .05$) or control ($p < .0001$) conditions. There were no significant CL effects.

Repeated measure ANOVAS (BMD2V) ($3 \times 2 \times 2$) of CSC-Response Scale data on structure by CL comparisons produced three significant findings.

The first two are related. In situations where a person is criticized, points could be earned for agreeing with that part of the criticism which was true (positive taking criticism.) There was a significant interaction between structure of intervention and repeated measures [$F(2, 53) = 3.54$, $p < .05$] on this dimension. See Tables 36 and 37.

Simple effects follow-up tests revealed that the structured group intervention significantly decreased the amount of "positive taking criticism," [$F(1, 50) = 5.20$, $p < .05$], whereas this was not the case for other interventions.

Table 34

Pre- and Posttest Cell Means and Standard Deviations by Structure
and Conceptual Level on the CSC-Response Scale Dimension:
"Positive Self-Disclosure"

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Structured group	High CL	49.88	8.13	51.98	7.35
	Low CL	50.11	6.56	48.69	5.97
Unstructured group	High CL	57.03	11.03	55.89	10.88
	Low CL	46.74	6.22	49.16	10.58
Control group	High CL	53.27	11.54	49.33	7.69
	Low CL	48.89	7.51	47.39	5.95

Table 35
 Analysis of Variance (3 x 2 x 2) of Structure by Conceptual Level
 across Repeated Measures on the CSC-Response Scale Dimension:
 "Positive Self-Disclosure"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	261392.12355	1	261392.12355	2318.37
Structure	115.49153	2	57.74576	0.51
C	492.15307	1	492.15307	4.37*
SC	194.68264	2	97.34132	0.86
Error	5637.40159	50	112.74803	
R	8.58504	1	8.58504	0.27
RS	71.73033	2	35.86516	1.14
RC	4.33584	1	4.33584	0.14
RSC	56.31755	2	28.15877	0.90
Error	1567.42971	50	31.34859	

*p < .05

Figure 5. Graphic representation of pre- and posttest cell means by structure and conceptual level on the CSC-Response Scale Dimension: "Positive Self-Disclosure"

Table 36

Pre- and Posttest Cell Means and Standard Deviations by Structure
and Conceptual Level on the CSC-Response Scale Dimension:
"Positive Taking Criticism"

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Structured group	High CL	57.53	12.52	44.93	7.67
	Low CL	52.93	12.13	52.17	10.85
Unstructured group	High CL	47.07	8.28	52.17	10.84
	Low CL	51.95	12.10	55.56	10.48
Control group	High CL	49.55	9.09	49.83	10.27
	Low CL	47.49	8.51	47.83	9.51

Table 37
 Analysis of Variance (3 x 2 x 2) of Structure by Conceptual Level
 across Repeated Measures on the CSC-Response Scale Dimension:
 "Positive Taking Criticism"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	261971.64224	1	261971.64224	1900.09
Structure	270.81949	2	135.40974	0.98
CL	33.04427	1	33.04427	0.24
SC	181.66571	2	90.83286	0.66
Error	6893.64842	50	137.87297	
R	11.37038	1	11.37038	0.18
RS	455.28268	2	227.64134	3.54*
RC	76.44182	1	76.44182	1.19
RSC	209.94043	2	104.97021	1.63
Error	3214.08391	50	64.28168	

*p < .05

Figure 6. Graphic representation of pre- and posttest cell means by structure and conceptual level on the CSC-Response Scale Dimension: "Positive Taking Criticism"

This finding is best examined in conjunction with the next finding. Structure of intervention also significantly interacted with repeated measures on the response category: "positive giving feedback." Logarithmic transformations are presented in Tables 38 and 39. [$F(2, 53) = 4.18, p < .05$]. The "positive giving feedback" category was comprised of specifying concrete behaviors, engaging the other's viewpoint and/or making a nonaccusatory assertive self-statement. Simple effects follow-up tests indicate that the structured group intervention taught this skill significantly better than either the unstructured or control groups [$F(1, 50) = 5.20, p < .05$].

Examination of data suggests that subjects within the structured group substituted the more complex "positive giving feedback" response category for the simpler "agreeing with criticism" response in the same situations, which accounts for the two findings.

On the CSC-Response Scale, a significant interaction was found between structure of intervention and repeated measures on the dimension "positive interpreting" (making tentative interpretations) [$F(2, 53) = 3.39, p < .05$]. See Tables 40 and 41. Simple effects follow-up tests suggest that subjects in the unstructured group intervention significantly decreased the amount of tentative interpreting they were doing [$F(1, 50) = 7.28, p < .01$]. From other analyses it is clear that subjects in the unstructured group did not correspondingly significantly increase or decrease the amount of categorical interpretations made.

2. Satisfaction. Finally, measures of satisfaction showed marked differences according to conditions of structure. A two-way analysis of variance (3×2) on participant ratings of "enjoyableness" of the interventions produced highly significant findings [$F(2, 53) = 10.84,$

Table 38
 Pre- and Posttest Cell Means and Standard Deviations by Structure
 and Conceptual Level on the CSC-Response Scale Dimension:
 "Positive Giving Feedback"
 Data Produced by Logarithmic Transformations

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Structured group	High CL	7	3.88	4.01	.21
	Low CL	8	3.85	3.95	.19
Unstructured group	High CL	8	3.95	4.00	.19
	Low CL	6	3.93	3.83	.09
Control group	High CL	13	3.89	3.83	.09
	Low CL	14	3.87	3.85	.11

Table 39

Analysis of Variance (3 x 2 x 2) of Structure by Conceptual Level
across Repeated Measures on the CSC-Response Scale Dimension:
"Positive Giving Feedback"
Data Produced by Logarithmic Transformations

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	1550.15887	1	1550.15887	55624.55
S	0.12360	2	0.06180	2.22
C	0.05703	1	0.05703	2.05
SC	0.03681	2	0.01841	2.66
ERROR	1.39341	50	0.02787	
R	0.00695	1	0.00695	0.45
RS	0.12802	2	0.06401	4.18*
RC	0.01217	1	0.01217	0.80
RSC	0.03731	2	0.01865	1.22
ERROR	0.76490	50	0.01530	

* $p < .05$

Figure 7. Graphic representation of pre- and posttest cell means by structure and conceptual level on the CSC-Response Scale Dimension: "Positive Giving Feedback" (Logarithmic Transformations.)

Table 40

Pre- and Posttest Cell Means and Standard Deviations
by Structure and Conceptual Level on the
CSC-Response Scale Dimension:
"Positive Interpreting."

	N	Pretest		Posttest	
		Mean	Standard Deviation	Mean	Standard Deviation
Structured group	High CL	47.59	8.82	52.24	9.51
	Low CL	52.61	11.47	51.40	12.38
Unstructured group	High CL	55.71	10.29	49.45	8.37
	Low CL	60.18	13.49	50.75	10.70
Control group	High CL	47.05	8.57	51.55	12.44
	Low CL	48.19	8.68	46.65	7.43

Table 41

Analysis of Variance (3 x 2 x 2) of Structure by Conceptual Level
across Repeated Measures on the CSC-Response Scale Dimension:
"Positive Interpreting"

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	265735.05808	1	265735.05808	1961.21
Structure	592.96833	2	296.48416	2.19
C	27.00148	1	27.00148	0.20
SC	134.13092	2	67.06546	0.49
Error	6774.76717	50	135.49534	
R	60.85958	1	60.85958	0.90
RS	457.86599	2	228.93300	3.39*
RC	160.19359	1	160.19359	2.37
RSC	10.19429	2	5.09715	0.08
Error	3377.28368	50	67.54567	

*p < .05

Figure 8. Graphic representation of pre- and posttest cell means by structure and conceptual level on the CSC-Response Scale Dimension: "Positive Interpreting"

$p < .001$]. Data are presented in Tables 42 - 44. Tukey (a) follow-up tests reveal that subjects rated the unstructured group intervention significantly more enjoyable than either the structured intervention or control condition. The structured intervention was rated as significantly more enjoyable than the control condition.

Because there were significant differences in participant-rated "usefulness" between subjects both pre- and posttested versus posttested-only on the GAIT, these two groups were separated for final analysis.

One-way analyses of variance across conditions of structure on participant ratings of "usefulness" were performed first on data from subjects who had been both pre- and posttested, then on data from subjects who had only been posttested.

Differences in rated usefulness across conditions of structure were significant for subjects who had been both pre- and posttested [$F(2, 23) = 4.53, p < .05$]. These data are presented in Tables 45-47.

Tukey (a) follow-up tests indicated that both structured and unstructured group interventions were rated significantly more useful in teaching communication effectiveness than was the control condition. Structured and unstructured interventions were rated as equally useful.

Differences in rated usefulness across conditions of structure for subjects who had only been posttested followed the same pattern as for subjects who were pre-posttested but barely missed significance [$F(2, 27) = 3.33, p = .051$].

Table 42
Pre- and Posttest Cell Means and Standard Deviations
by Structure and Conceptual Level on
Participant Ratings of Enjoyability
of Interventions

		N	Mean	Standard Deviation
Structured group	High CL	7	4.14	1.01
	Low CL	8	4.25	.71
Unstructured group	High CL	8	4.62	.74
	Low CL	6	4.67	.52
Control group	High CL	13	3.77	.93
	Low CL	14	3.07	.83

Table 43
 Analysis of Variance (3 x 2) of Structure by Conceptual Level
 on Participant Ratings of Enjoyability of Interventions.

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Mean	849.70400	1	849.70400	1220.78
Structure	15.09142	2	7.54571	10.84*
C	0.42577	1	0.42577	0.61
SC	2.08579	2	1.04289	1.50
Error	34.80174	50	0.69603	

*p < .001

Table 44
 Tukey (a) Comparison of Ratings of Enjoyability
 across Structure of Intervention Groups

		Control	Structured	Unstructured
		6.84	8.39	9.29
Control	6.84	----	1.55*	2.45*
Structured	8.39		----	.90*
Unstructured	9.29			----

*p < .01

MS error = .69603

df = 50

$$\sqrt{\frac{MS \text{ error}}{n}} = .1421$$

Table 45

Pre- and Posttest Cell Means and Standard Deviations
by Structure on Participant Ratings of
of Usefulness of Interventions by
Subjects who were both Pre- and
Posttested on the GAIT

	N	Mean	Standard Deviation
Structured group	8	4.25	.53
Unstructured group	6	4.25	.42
Control group	12	3.58	.63

Table 46
 Analysis of Variance by Structure on Ratings of
 Usefulness of Interventions by Subjects who
 were both Pre- and Posttested on the GAIT

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Between Groups	2.872	2	1.436	4.53*
Within Groups	7.292	23	.317	
Total	10.164	25		

*p < .05

Table 47

Tukey (a) Comparisons of Ratings of Usefulness across
Structure of Intervention Groups by Participants
who were both Pre-and Posttested on the GAIT

	Control	Structured	Unstructured
	3.58	4.25	4.25
Control	3.58	.67*	.67*
Structured	4.25		0
Unstructured	4.25		

*
p < .01

MS error = .317

$\tilde{n} = 8$

$$\sqrt{\frac{\text{MS error}}{\tilde{n}}} = .06$$

df = 23

Summary

Results of this study are summarized in the following table, which outlines findings reaching a level of significance of $p < .05$.

Table 48

Summary of Statistically Significant Empirical Findings of this Study

<u>Conceptual Level by Structure by Testing Point Interactions</u>	
(1) High conceptual level subjects learned to decrease the amount of categorically phrased interpretations they were making on the CSC-Response Scale more effectively in the structured group intervention than in the unstructured or control conditions. Low conceptual level subjects did not significantly decrease categorical interpretations in any condition.	
<u>Conceptual Level Differences</u>	
High CL > Low CL	Low CL > High CL
(1) On the GAIT measure (group interactions), high conceptual level subjects were rated by peers as more "therapeutically talented" by Goodman's rating system on posttesting, across all conditions of structure, despite absence of initial differences.	
(2) On the CSC-Response Scale measure (written), high conceptual level subjects were more self-disclosing overall than were low CL subjects irrespective of interventions.	

Table 48 continued

Structured vs. Unstructured Group Differences

(Findings in which there was a significant treatment effect of at least one intervention over controls.)

<u>Structured group was superior to unstructured group</u>	<u>Unstructured group was superior to structured group</u>	<u>Structured and unstructured groups were equally effective.</u>
(1) On the CSC-Response Scale (written), the structured group was significantly more effective than the unstructured and control groups in teaching subjects how to "paraphrase" when listening. The unstructured group was not more effective than the control group.	(1) The unstructured group intervention was rated by subjects as significantly more "enjoyable" than the structured intervention. Both structured and unstructured interventions were rated significantly more "enjoyable" than the control condition.	(1) Both structured and unstructured interventions were rated by subjects who had been both pre- and posttested on the GAIT as "very useful," neither more so than the other but both more so than the control condition.
(2) On the CSC-Response Scale (written), the structured group was significantly more effective in teaching subjects how to give constructive feedback (including assertive self-statements) than were the unstructured or control groups. The unstructured group was not more effective than the control group. As a byproduct, the structured group decreased the	(2) On the CSC-Response Scale (written), the unstructured group decreased the amount of giving tentative interpretations significantly more so than the structured or control groups (which did not differ from one another).	

Table 48 continued

<u>Structured group was superior to unstructured group</u>	<u>Unstructured group was superior to structured group</u>	<u>Structured and unstructured groups were equally effective.</u>
amount of agreeing with criticism signifi- cantly more than unstructured or control groups, as this response was replaced by the feedback response.		

CHAPTER 4

DISCUSSION

Summary of Major Findings Bearing on Predictions of the Study

This study was developed out of a cognitive interactionist tradition in theory and research. This tradition posits the central importance of the interaction between a person variable--conceptual level--and a situation variable--degree of structure in a learning task--in determining resultant learning and satisfaction. The central purpose of the study was to test this model as applied to a critical learning area: interpersonal communication skills. The study also sought to explore main effects of structure and conceptual level, and to develop useful new measures of communication skills. In this first section of the Discussion, results bearing on the major predictions will be briefly examined. In following sections, supplemental findings, more detailed exploration of the implications of the findings, some problems and reservations, and finally some directions for future study, will be presented.

Interaction Effects

It was predicted that there would be an interaction effect between structure of intervention and conceptual level of students such that high CL students would learn to communicate more effectively under conditions of low than high structure, and low CL students would learn to

communicate more effectively under conditions of high than low structure.

This prediction was not supported. Only one three-way interaction was obtained. High CL subjects in the high structure condition learned to reduce the amount of categorical interpretations they were making on written responses whereas this finding did not hold for any other combinations.

It was anticipated in this study that the pattern predicted above would hold for self-reported findings of satisfaction. This prediction was also not supported. While both structured and unstructured groups were rated as both more useful and more enjoyable than the control intervention, and the unstructured group intervention was rated more enjoyable than the structured intervention, there were no interactions with conceptual level.

This study does not, therefore, provide evidence supporting Hunt's matching-model.

Structure Main Effects

It was predicted that both structured and unstructured interventions would be superior to the control intervention in promoting communication effectiveness, but that there would be no main effects differences in promoting communication effectiveness between structured and unstructured interventions.

This finding was obtained only on subject ratings of "usefulness," of interventions by subjects who had been pre- and posttested. Other findings showed differential effectiveness of structured vs. unstructured interventions, and will be discussed in a later section.

It was predicted that structured groups would prove more satisfactory to participants than would unstructured groups. The exact opposite finding was obtained. While structured and unstructured groups were rated as comparably "useful"; unstructured group interventions were rated as significantly more "enjoyable" than were structured interventions.

CL Main Effects

Schroder, Driver, and Streufert (1967) predict that high conceptual level subjects will outperform low conceptual level subjects in moderate ranges of environmental complexity. Hunt and Sullivan (1974) also predict that high conceptual level subjects are less affected by variations in structure and in some cases may learn better than low CL subjects across conditions of structure.

In this study, high CL subjects learned to produce therapeutic listening responses across conditions of structure in the group GAIT situation as measured sociometrically by peers on Goodman's GAIT "therapeutic talent" dimension more so than did low CL subjects; and, overall, high CL subjects were more self-disclosing on written responses than were low CL subjects.

In addition, in the structured intervention, high CL's learned to stop making absolute interpretations on written measures more so than did low CL's.

Implications of Major Findings

Interaction Effects

This lack of findings supporting Hunt's matching-model is disappointing in light of positive findings from previous research. However,

findings of behavioral changes have been less striking overall than findings of self-reported changes, especially satisfaction, in previous research in this area as well. (Stein & Stone, 1978; Berg & Stone, 1980).

The one interactional finding obtained is interesting--that high CL subjects in the high structure condition learned to reduce the amount of categorical interpretations on written responses (CSC-Response Scale) which they were making more so than did subjects of any other CL-structure combination. The nature of this response category (making relativistic or tentative theoretical statements/interpretations vs. making absolutist categorical "this-is-the-truth" statements) would seem to be an important one in that it relates theoretically to the way in which conceptual level has been defined. The reader will recall that movement from dualistic, black-white thinking to more relativistic, shades-of-gray thinking is postulated by theorists of integrative complexity/conceptual level such that high CL subjects would be expected to approach interpretations from a tentative rather than absolute framework. It was surprising that Analysis of Variance on pretest data in this category showed no significant differences between high and low CL subjects on this response category prior to interventions. However, significant Pearson product-moment correlations were found, suggesting high CL subjects were less likely than low CL subjects to interpret categorically in the group CSC-GAIT situation ($r = -.38$, $p = .02$) and less likely to interpret tentatively than low CL subjects on the written CSC-Response Scale ($r = -.25$, $p = .02$). Likewise high CL subjects did less interpreting overall on both the CSC-GAIT and CSC-Response Scale although this finding did not reach significance.

The above may relate to the interactional finding in the following way: Shifting from dualistic to relativistic processing of information may represent a qualitative developmental change. This change might first be represented by a decrease in the amount of absolute interpreting. If making this transition requires a developmental readiness on the part of subjects, high CL subjects might be expected to make the transition sooner than low CL subjects. If the structured interventions are less subtle than the unstructured interventions (the structured intervention directly points out the necessity for giving feedback in a nonabsolute fashion), high CL subjects might be the first to "hear," understand, and incorporate this premise into their behavior. Under conditions of lower structure high CL subjects might still be the first to discontinue making absolute interpretations, by virtue of recognizing the existence of more than one way of interpreting an event by listening to a variety of viewpoints. However, the unstructured intervention was less pointed in making observations such that picking up points was perhaps more challenging. Graphed results show high CL subjects decreasing making absolute interpretations (vs. low CL subjects) in the unstructured group as well although this finding did not reach significance.

A related question is--if the high CL subjects in the high structure condition stopped making absolute interpretations on the CSC-Response Scale, did they then increase the amount of tentative interpreting, making a clearcut shift from absolute to tentative interpreting? The answer is no.

Rather, from observation of data, it appears that high CL subjects may have shifted from absolute interpreting as a listening response in situations of listening to someone with a problem to a whole different

category. In both structured and unstructured groups they began writing more empathic listening responses (such as paraphrasing, clarifying).

Structure Main Effects

Once the interactional hypotheses of Hunt's matching-model are set aside, the question of relative overall effectiveness of "structured" vs. "unstructured" group interventions is raised.

Certainly, from past research, as summarized in the literature review, structured group participants have expressed significantly greater satisfaction with their group experiences than have unstructured group participants (Kurtz review, 1975; Bednar & Battersby, 1976; Strupp & Bloxom, 1973). Interestingly, this was not the case in the current study.

Participants in structured and unstructured groups alike rated their experiences as significantly more "useful" (a combination of 5 pt. ratings of responses to the two questions: "How useful did you find the sessions?" and "How much do you feel you have learned from the sessions?/ How much do you believe you have improved your communication effectiveness?") than did participants in the control condition. However, there were no significant differences in ratings of the structured and unstructured groups. This would have been the expected finding according to matching-model theory if high and low conceptual level students had reacted differentially to the different conditions of structure, but this was not the case.

Of related interest, participants in the unstructured groups rated their experience as significantly more "enjoyable" than did participants in the structured group. Both unstructured and structured group participants rated their experiences as more enjoyable than did control group

participants. These findings are presented first so that the reader may keep them in mind as specific changes measured by behavioral measures are presented next and discussed. Discussion of implications of self-reported satisfaction will follow.

Structured groups demonstrated superiority over both unstructured and control groups in teaching the specific skills of "paraphrasing" and "giving constructive feedback" (including making assertive self-statements) on the written CSC-Response Scale. Relatedly, the amount of agreeing with criticism as a response to being derided significantly decreased in the structured group as it was replaced by the more complex "giving positive feedback" (assertiveness included) response. This finding is relevant to the body of literature on teaching social skills, and suggests that if the goal of an intervention is teaching one of the above specific skills, structured interventions (such as assertiveness training groups) will best accomplish this goal insofar as it is measured by written responses. Further investigation of which specific components of the structured vs. unstructured approach (e.g., modeling, practice) promoted change is warranted.

With respect to unstructured group superiority, in addition to the finding of greater "participant-rated enjoyability" which has already been reported, unstructured group interventions also significantly decreased the amount of giving tentative interpretations on the CSC-Response Scale more so than was the case in the structured or control conditions. This is a perplexing finding. The reader may recall that there were some initial discrepancies which were present by chance, such that unstructured group members produced significantly more tentative interpretations at pretest than did members of the control group but not

than members of the structured group. At posttest all discrepancies had evened out as members of the unstructured group had decreased their degree of tentative interpreting to within the range of the other posttest groups. Members of the unstructured group did not significantly increase (or decrease) absolute interpreting as they decreased tentative interpreting. There were no other significant increases in other responses in the CSC-Response Scale for members of the unstructured group, providing no clear evidence for substitution of another response. Inspection of data suggests that the pattern of high CL subjects decreasing absolute interpreting and replacing this response category with positive empathic listening, an observation already noted with respect to the structured group also occurred in the unstructured group. The most probable interpretation of the finding that unstructured group members significantly decreased tentative interpreting is that these subjects replaced the tentative interpreting response with the positive empathic listening response (as measured by the item "paraphrasing"), although the latter part of this finding was not strong enough to show up at a level of significance and only the first part of the pattern showed up.

It is of interest that, as measured by behavioral indices on the CSC-Response Scale, learning was greatest in the structured group. At the same time, as measured by self-reported satisfaction, participants rated unstructured interventions as equally "useful" and as significantly more "enjoyable" than structured interventions. The structured intervention was more didactic in nature; the unstructured intervention more like a "rap group," such that subjects in the unstructured group had more personal "air time" and this may have partially accounted for

the higher enjoyability rating of the unstructured intervention. Another possibility is that different types of learning occurred in the two groups. For example, in the structured intervention subjects may have learned specific skills, in the unstructured group learning may have been more along the lines of recognizing that opinions/fears/thoughts are shared by others, promoting a sense of universality. Future applications of the teaching package developed for this study might combine the two approaches, having half structured and half open discussion on each topic to maximize benefits from both approaches.

In both groups, one wonders if communication skill was learned first at an intellectual level, such that it was demonstrated in written responses on the CSC-Response Scale but not in the less structured behavioral CSC-GAIT. Intellectual mastery may precede incorporation of the skills into spontaneous behavior, and future researchers would be advised to do a 3-month GAIT follow-up test. This point will be discussed in more detail in discussion of the two measures in a following section.

Previous research has produced varied findings with respect to another response dimension: self-disclosure. Sometimes self-disclosure has been greater in structured groups (Bednar & Battersby, 1976; D'Augelli & Chinsky, 1974; Whalen, 1969), sometimes in structured groups at posttest but not over time at delayed follow-up (Crews & Melnick, 1976; DeJulio, Bentley & Cockayne, 1976), and sometimes structured and unstructured groups have been equivalent on the self-disclosure dimension (Leak, 1980). In the current study, there were no significant differences on self-disclosure between structured, unstructured, or control groups as measured by the CSC-GAIT and CSC-Response Scale.

CL Main Effects

Self-disclosure was a dimension which did reflect differences according to conceptual level. High CL subjects were more self-disclosing overall (across pre- and posttest) than were low CL subjects. Self-disclosure as defined in this study involved taking responsibility for one's feelings and intentions by making "I-statements" when describing feelings and/or plans. Doing so assumes that the speaker recognizes that others might feel or plan differently--hence the response of identifying remarks as "speaking for oneself only." Recognition of differing vantage points is theoretically consistent with definitions of high conceptual level such that this finding adds to construct validity of the conceptual level variable.

Several previous studies (Heck & Davis, 1973; Berg & Stone, 1980) have found high conceptual level subjects to possess greater baseline empathic skills than low conceptual level subjects as measured by Carkhuff's Accurate Empathy Scale and a behavior count of reflection-of-feeling (paraphrase) responses. Indeed, by definition the ability to take another person's perspective only becomes possible at the second level (and above) of Schroder, Driver, and Streufert's schema of integrative complexity. (The second level would still be low conceptual level, but persons scoring at the first level would be expected to have difficulty with accurate empathy), suggesting theoretically a larger concentration of good empathic listeners at higher levels. Subjects high in conceptual level have also been demonstrated to show greater predictive accuracy in interpersonal perception than subjects low in conceptual level (Wolfe, 1974), which would seem to bear on empathic listening predictions.

In the current study there were no significant differences between high and low CL subjects on baseline (pretest) behavior counts of empathic listening on the CSC-Response Scale, CSC-GAIT, or paraphrasing items, indicating that learning accounted for post-intervention differences.

High CL subjects were rated by peers at posttest across conditions of structure as more "therapeutically talented" than were low CL subjects on Goodman's GAIT peer rating measure. Once again there had been no significant pretest differences.

This finding may reflect several possibilities. First, this finding may reflect differential learning between the high CL and low CL groups. It is of note, that peers rated performance in the GAIT situation, and that behavioral counts on the CSC-GAIT did not show significant learning in the area of empathic listening for either high or low CL subjects. It is possible that Goodman's rating system is more sensitive to change than is the CSC-GAIT and picked up genuine learning which occurred.

Another (not mutually exclusive) possibility is that one outcome of the interventions was to change the ways group participants conceptualized good communication/therapeutic talent making them more observant, discriminating raters at posttest. From correlational data comparing peer ratings with CSC-GAIT behavior counts it appears that peers primarily focused on positive self-disclosure prior to intervention. At posttest, after interventions, in addition to positive self-disclosure, peers focused on making tentative interpretations and on not giving categorical advice and not making poor listening responses (remaining silent, changing the subject or denying the speaker's statement).

"Finer tuning" at posttest might have enabled raters to pick up differences in skill between high and low CL subjects that either reflected (1) superior learning by high CL subjects across interventions or (2) pre-existing differences which were overlooked at pretest because of "blunter tuning."

An additional consideration is that peer ratings provide the only index in this study of nonverbal communication changes which may have occurred and changes registered on peer ratings may reflect differences on this dimension.

The Measurement of Communication Skill

As noted in the introductory section, the construct "communication skill" has been construed to incorporate a number of different specific skills including explaining well, self-disclosing, making assertive statements, and listening well, among others. The multidimensionality of this construct has posed problems for assessment, and as Bellack (1979) noted, there have been multiple social skill assessment strategies, but most have had uncertain reliability and validity.

In this study an attempt was made to devise a reliable checklist of varied observable operationally-defined skills judged to be desirable by books on communicating effectively. The checklist was then applied both to a set of written situations and to transcriptions of interactions in a structured group exercise (Goodman's GAIT, Goodman (1972)).

Psychometric Properties of the CSC

A brief recapitulation of psychometric features of the Communication Skills checklist applied to the Response Scale and GAIT transcripts follows.

Interrater reliability. Interrater reliability between two judges applying the checklist to each situation as estimated by Pearson Product-moment correlations was very good with median reliabilities between .79 and 1.00, most falling in the .90 or better range. These figures suggest high agreement between judges upon what was being measured.

Internal consistency. Internal consistency of specific scales was low, ranging from 0 to .68, with a median internal consistency of .055.

The finding of low internal consistency of scales was not viewed as highly problematic for several reasons. Items on four scales were mutually exclusive (e.g., one poor listening response might involve remaining silent--totally ignoring the speaker. A second poor listening response might be speaking in such a way as to deny the validity of the feelings of the person to whom one is listening. Although both responses would be poor, they are mutually exclusive (as one cannot simultaneously remain silent and speak)). Mutually exclusive categories occurred on the following scales: positive explaining (CSC-Response Scale), negative empathic listening (CSC-Response Scale and CSC-GAIT), and negative taking criticism (CSC-Response Scale). Secondly, it is not expected that either good or poor communicators would use all available skills, but rather they would use some and not others.

Perhaps more to the point, the logic of internal consistency reliability is built on a "domain sampling" view of measurement. Items are selected which are presumed to adequately sample from the domain of possible items dealing with a particular construct/variable. From this viewpoint, items must hold together if one is to have confidence that the domain/construct one wishes to measure exists. In the measurement

system devised for this study, however, a more behavioral approach has been taken. An attempt has been made to totally define the domain of communication skills with the items rather than to sample from it. Each item represents a theoretically implicated component of the domain, with the importance of each based on prior theoretical and empirical work. Consistent with this viewpoint, communication skill can be seen as additive in nature--the more of each positive component and the less of each negative component a person demonstrates, the greater overall skill. This viewpoint is different from an averaging approach in which overall skill level is defined by the average across skill components. Inter-item consistency is important to an averaging approach because the average loses meaning if it is based on unrelated or negatively related items. However, the additive approach does not require internal consistency but rather requires complete representation of the conceptual domain.

Both approaches require interjudge agreement, which was found in the current study.

In line with the above, one approach to scoring would be to add positive scales on a particular measure (CSC-Response Scale or CSC-GAIT) to provide an overall positive score, and to add negative scales to provide an overall negative score; then a ratio of positive to negative components could be calculated as a general index of communication skill. Behavior counts might also be converted to T scores such that less frequently occurring behaviors (e.g., empathic listening responses) would be equally weighted in a composite total with more frequently occurring behaviors (e.g., advice-giving). This was the original intent in this study. However, a decision was made to keep scales separate, as

much vital information would have been lost by a composite total score-- (for example, the replacement of certain skills by other skills, such as was the case with positive criticism-taking replaced by positive giving feedback). Decisions on weights for component scales is also a thorny problem for creation of a composite score.

Test-retest reliabilities. Test-retest reliabilities at 2 weeks on the Communication Skills checklist applications to the Response Scale and GAIT exercise were obtained by correlating pre- to posttest scores of control group subjects. Reliabilities ranged from poor to good, with most only fair. Predictably, test-retest reliabilities on the CSC-Response Scale items were higher than those on the CSC-GAIT. On the CSC-Response Scale with an N of 27, test-retest reliabilities ranged from .20 to .84 with half over .60. The Response Scale task presented the same vignettes at pre- and posttesting, to which subjects wrote free-form responses.

The GAIT task, on the other hand, presented different stimulus situations at pre- and posttest and thus more clearly addresses the question of whether skills generalize across situations--i.e., while the format for the GAIT task is consistent across pre- and posttests, the area of self-disclosure each subject chooses to disclose is of different content on the two occasions, and the person and situation to which each subject responds in the listener role is also different on the two occasions. On the CSC-GAIT only one correlation was satisfactory (positive self-disclosure = .90). The others were abysmally low, most under .20. The nature of the listening task from pretest to posttest in the GAIT task--i.e., listening and responding to two different disclosers who might have had extremely different styles and contents of

self-expression (e.g., intellectualized discussion of feelings about nuclear disarmament versus tearful accounting of grief over a parent's recent death) almost certainly affected the ways in which the listener responded. It is uncertain whether "test-retest reliability" is a useful statistic for spontaneously occurring behaviors in response to differing situations. This factor no doubt contributed to low test-retest reliabilities on the CSC-GAIT, especially in the listener role. In addition, the N was very small (12) which is certainly a serious problem. Test-retest reliabilities were calculated primarily to give an estimate of what might be obtained, but until a larger sample is studied, little can be said with confidence about these findings. Even so, the low test-retest reliability of the CSC-GAIT raises the question of its utility as a pretest and posttest measurement device. Standardizing the listening task (by role-playing, for example) might increase test-retest reliability but would further remove the task from approximation to a naturally occurring "real-life" conversation. Inconsistency from pre- to posttesting on the CSC-GAIT may partially explain the lack of findings with this instrument.

Strongest scales of the CSC-Response Scale from a test-retest reliability standpoint were positive self-disclosure, positive and negative explaining, positive empathic listening, and negative taking criticism. The one strong scale on the CSC-GAIT was positive self-disclosure.

Administering both the CSC-Response Scale and the CSC-GAIT to a large sample of subjects to further investigate test-retest reliability is clearly warranted.

Content validity. Content validity of the CSC is excellent. Items for the checklist were drawn directly from textbooks and instruction

materials on communication skills which explicitly defined better vs. worse ways of communicating (Adams & Lenz, 1979; Brunink & Schroeder, 1979; Johnson, D.W., 1972, Handbook for group facilitators, 1976; Bloom, Coburn & Pearlman, 1975; Schiffman; and Weinberg). Behaviors are operationally defined to tap positive and negative behaviors in seven different domains: self-disclosure, explaining, empathic listening, interpreting, giving advice, taking criticism, and giving feedback.

Since it is possible to recall and reproduce in writing (in test-like formats) responses which have been learned, without necessarily generalizing these same responses to verbal behavior in real-life interactions, two different situations were created for application of the CSC. The Response Scale provided structured written vignettes calling for subjects to write out "what would be a good way to respond." The GAIT task provided a situation approximating spontaneously occurring conversation. Therefore two different strategies for sampling communication skill were provided.

Interrelationships among scales. Although the small sample size in this study precluded principal components analysis, it appears that some positive and negative aspects of communication behavior may well be linked. There are several significant correlations (explaining, listening, interpreting) on the CSC-Response Scale. In general engaging in more positive communication behavior is associated with less negative behavior. However, although positive and negative scales are somewhat related, the degree of relationship is not strong enough to warrant viewing them as a single dimension.

On the CSC-Response Scale correlations among positive communication behaviors also suggest some degree of relationship. Giving feedback

well was related to positive self-disclosure, positive empathic listening and positive explanatory skill. The first two relationships are to be expected. By definition, assertive self-statements, which were one component of the positive giving feedback category, could involve reacting to another person by a paraphrase response demonstrating an understanding of the other person's position, followed by a self-disclosing statement about the speaker's reaction in terms of feelings and intentions. The general format for an assertive self-statement as operationalized in this study was: "This is how I see it; this is what I want to do about it," provided the above was phrased in a nonoffensive, nonblaming way. Therefore there was a strong possibility of overlap between the category positive giving feedback with the categories positive empathic listening and positive self-disclosure.

The relationship of positive giving feedback to positive explanatory skill is less clear. Explanatory skill proved an interesting item on the CSC-Response Scale. It was also significantly related to positive self-disclosure and positive empathic listening. One element of explaining well is taking the other person's viewpoint into consideration by using examples familiar to the other person. Sensitivity to the position of the other person might be one link between explanatory skill, empathic listening, and giving feedback well, as all require the speaker to demonstrate an understanding of the way the listener is comprehending the speaker's message. The link between explanatory skill and self-disclosure is less evident. Positive self-disclosure was also related to the ability to take criticism well. The latter two items seem logically related. The person listening to criticism may treat the critic respectfully, then draw a distinction or tell the critic how he/

she feels in reaction. Whether other aspects of explanatory skill which were not specifically defined in this study--e.g., clarity--play a role in the above relationships is uncertain. Factor analysis would be helpful in further exploring these relationships.

Several additional correlations provide some evidence for styles of responding. Interpreting in a tentative fashion was related to giving advice tentatively. And while there were fewer interrelationships among negative scales, on both the CSC-Response Scale and CSC-GAIT, making categorical interpretations was related to giving advice in a categorical fashion. A next step will have to be administration (of at least the Response Scale) to a large sample so that scale factor structure can be examined.

Generality of Communication Skill as Measured
by the CSC Across the Response Scale and GAIT

Communication skill, as operationalized by the CSC did not generalize well across the Response Scale and GAIT. By and large, identical scales on the CSC-Response Scale and CSC-GAIT were unrelated, suggesting either a high degree of situation specificity of skills or problems with the measurement devices. Two relationships were consistent across the two situations--subjects who phrased advice in a tentative manner tended to do so in both situations, and subjects who made poor listeners (i.e., persons who when listening, changed the subject, made no response at all, told the speaker he/she was not really feeling whatever the speaker had said, or responded abusively) tended to listen poorly in both situations. Other aspects of the performance of the CSC-GAIT (e.g., poor test-retest reliability) make it plausible to conclude that the lack of relationship between the two measures is due largely to the instability

of the GAIT procedure.

Construct Validity

Comparisons of the CSC-Response Scale and CSC-GAIT. With respect to construct validity, six scales of the CSC-Response Scale registered changes after interventions designed to improve communication effectiveness. These scales were the paraphrase component of positive empathic listening, positive self-disclosure, positive and negative interpreting, positive taking criticism, and positive giving feedback. The first two scales demonstrate acceptable test-retest reliabilities in addition, suggesting they show promise for future research. Two scales which were disappointing were positive and negative explaining, which demonstrated adequate test-retest reliability but registered no changes after intervention. It is possible that the explanatory scales did not provide sufficient complexity or challenge to register change, or that the interventions failed to produce changes in this area. It is of note that striking differences on positive explaining were found by gender of subjects, suggesting that the second interpretation may be accurate.

The CSC-GAIT task was disappointing despite its verisimilitude to real-life in that no changes were registered after interventions. Likewise, because the stimulus situations varied at pre- to posttest, test-retest reliability was low. It is, however, possible that the CSC-Response Scale measures intellectual mastery of skill, which may precede the incorporation of the skill into the spontaneous behavioral repertoire. Hence, even though the training was largely experiential, changes effected might not have generalized to the GAIT task immediately, but led to cognitive changes that registered on the CSC-Response Scale. If this interpretation is correct, a critical next question is

how well, and over what period of time, the training would generalize to normal social discourse. Do the apparent cognitive changes (on the CSC-Response Scale) eventually lead to performance changes? A 3-month follow-up GAIT might pick this up in a future study.

Relationships among Theoretical Constructs

As noted in the literature, higher conceptual level is expected to be highly related to tolerance of ambiguity, and moderately related to dimensional complexity. Additionally, it was postulated that subjects low in conceptual level might be so for either developmental or defensive reasons, such that low conceptual level was expected to bear a moderate to low significant relationship to denial as measured by the Crowne-Marlowe. None of these expectations were confirmed. Findings of nonrelationship among measures tapping the constructs of conceptual level, dimensional cognitive complexity, tolerance of ambiguity, and denial were disappointing. As Vannoy (1965) found earlier, apparently measures tap different aspects of cognitive complexity despite their strong theoretical similarities.

The suggestions made earlier in this paper that individuals low in conceptual level for defensive rather than developmental reasons might be more resistant to change through teaching methods remains an interesting possibility which was not pursued in this study. To test this in the future, a larger number of subjects would be needed; the study might then be replicated and the low CL subject pool studied in depth. The question could be investigated by comparing the performance of lower CL subjects intolerant of ambiguity vs. tolerant; or high on social desirability vs. low. This analysis was not performed in the current study because of the inadequate N.

Findings of low relationship among theoretically related measures of cognitive constructs are consistent with widely noted difficulties in obtaining construct-validating patterns among measures of cognitive constructs. Although Mischel (1968) is credited with a major attack on trait measures, he has endorsed the value of cognitive dimensions of personality (1973). Defining these dimensions in psychometrically acceptable ways continues to be problematic, as the present study illustrates.

For an interactionist perspective to have meaning, acceptable definitions for the terms of the interaction must be found and operationalizing the person variables, even with cognitive trait constructs, remains a problem.

Conceptual level does receive construct validating support in its relationship to learning, and remains one of the most promising of the cognitive constructs used in current research.

Limitations of the Current Study

One of the most regrettable features of this study was the relatively small enrollment in the summer classes--leading to a smaller than anticipated sample size. On the basis of projections of enrollment from previous summers, twice the number of students obtained was expected. One Psych. 103 section was cancelled due to underenrollment. One trained group leader was not used at all, and individual intervention groups could have handled 12-15 (rather than 7-8) members apiece, such that the actual capacity for the subject pool was about 135 subjects (rather than the obtained 66). A larger number of subjects would have increased the power of statistical tests and enabled use of multivariate

techniques as initially planned. On the other hand, small groups of 7-8 members such as obtained may have provided members more opportunities to practice responses and speak up, thereby enhancing learning. Even in this case there was a capacity for 16 additional subjects (had the third leader conducted two groups), raising the possible N to 82. Had the researcher also led groups, the subject pool capacity would have been raised to 98. It had been hoped that with a larger subject pool, equal N's in all cells could have been obtained (prior to attrition).

The sample itself may have posed some problems. While it is true that the types of interventions designed are specifically designed for young adults, and that structured group interventions are increasingly used in college counseling centers (as discussed in the literature review), it is also true that college student populations do not usually offer a wide range and heterogeneity on personality construct measures. Table 49 illustrates this point. While the most important measure, the IFT, did in fact demonstrate a full range (as did the Crowne-Marlowe), both the Bieri and Budner scales were skewed.

The reader will recall that the experimental conditions had a slightly greater concentration of subjects scoring "1" (low) on the IFT and the control group had a slightly larger concentration of subjects scoring "4" and "5" (high) on the IFT despite equivalency by a median split technique. These differences may have biased results against experimental groups across the condition of structure (given the premise substantiated by past research that high CL subjects may learn more easily). Nonetheless, treatment effects were found.

There were also problems with the control condition, which differed in several ways not planned for in the research design. While subjects

Table 49

Range of Possible Scores, Means, and Standard
Deviations of Scores Obtained on Measures
of Person Variables in the Current Study

Measure	Possible Range of Scores	Means of Scores in Current Study	Standard Deviations of Scores in Current Study
IFT	1-5	2.88	.97
Bieri	40-450	137.32	34.97
Budner	16-112	52.98	9.93
Crowne-Marlowe	0-33	14.12	5.54

N=106 (pilot plus experimental data)

in the control group were significantly more conceptually complex than subjects in the experimental groups, a finding already discussed, subjects in the control group were also younger--with a median age of 18 (vs. 21 for the experimental groups). Age was not significantly correlated with conceptual level in this study (probably due to the small number of older students; with a larger concentration one would expect a positive correlation). Age was correlated with one of twenty-six pretest communication skill responses--explaining well. This finding might be due to chance alone. As noted already, ANOVA procedures found no significant differences among groups on pretest dimensions of communication skill. Nonetheless, age remains an important variable to consider with respect to the variables in this study. A section on sex differences was presented earlier in this paper. All of the older subjects in this study were women. Significant differences were found between women's and men's responses on positive explaining. It is

likely that this difference represents a sex difference rather than age difference. Since groups were counterbalanced for sex of subjects, this finding does not pose a problem for this particular study, but clearly point to an area for further investigation.

The control group section was also larger than experimental group sections. To more adequately control for the influence of size of group on such factors as satisfaction and enjoyability, the control group should have been split into small groups of 7-8 members, to which persons other than the instructor lectured during the research portion of the course. In point of fact, the only difference noted in which the smaller structured and unstructured groups were equivalent to one another and superior to the larger control group was on the dimension of "usefulness." In most cases it is probable that the two smaller groups (structured and unstructured) served as controls for one another on the dimension of size of group. In this study it was not practical from a cost-benefit standpoint to have the instructor of the control group or others lecture to five smaller groups of seven to eight students apiece, although this would have provided a more rigorously controlled comparison group. All teaching situations have both structure and content. Content remained the same and the degree of structure was varied in the two experimental groups. In the control group, content differed and the degree of structure was not specified. Traditionally, lecture methods are less interactional and more structured modes of teaching interventions. It would be nearly impossible to purposefully design a teaching intervention with both content and "no structure." The control group in this study controlled for motivation to enroll in and attend a course in personal development, as well as practice with pre- and posttest

measures.

One final difference between the control and experimental groups was in leader characteristics. All three classes from which subjects were drawn were taught by male professors in their 40s and 50s. Both experimental groups, however, were led by women in their early 30s during the research portion of the course, while the control group remained under the guidance of the original professor (except during GAIT exercises and testing sessions). Whether this difference may have influenced results is uncertain.

All of the differences noted above are mitigated somewhat by the control group subjects having participated in the GAIT exercises for pre- and posttesting, as the GAIT exercises do involve active participation in small group interactions led by group leaders other than the instructor of the course.

Regarding the interventions themselves, several criticisms may be made. While six to ten hours of intervention over a course of two and a half to three weeks falls roughly within the definition of structured group interventions as defined by Drum and Knott (1977), it is nonetheless a relatively short period of time. A follow-up at three months or later would certainly have improved confidence in the effectiveness and generalization of skills learned, particularly if, as hypothesized, an intellectual mastery of communication skill precedes generalization to the natural environment.

A second criticism that may be made of the interventions is that insufficient variety in the degree of structure was provided. While the structured group conforms to guidelines describing structured groups (Drum & Knott, 1977), the unstructured group was perhaps a closer

approximation to a "discussion group" than a clearly experiential "T-group"-type experience as topics were introduced at the beginning of each session. Comparisons of more long-range structured group interventions and traditional nondirective human relations training groups would be expected to produce even larger treatment effects.

With respect to measurement techniques, there was difficulty finding a pre-existing, well-developed measure of communication skills which corresponded to the goals of the interventions of this study. The current study attempted to develop such a measure, and certain methodological problems were encountered as described in more detail earlier in this chapter.

Finally, the problems and limitations encountered in measuring cognitive style have already been enumerated.

Suggestions for Further Study

A number of future research possibilities are suggested by this project.

First of all, replication during first semester of an academic year would enable a follow-up with outcome measures 3-6 months after project completion to assess when and if learning is incorporated into subjects' behavior repertoires and if changes hold up over time. Some previous research has found initial differences between structured and unstructured groups wash out over time (Chestnut, 1965; Crews & Melnick, 1976; DeJulio, Bentley & Cockayne, 1976) such that these questions are particularly important to investigate.

If replicated, one relatively simple addition to the subject evaluation questionnaire would certainly be made which could have greatly enhanced the power of investigation of the interaction hypotheses. In

the Berg and Stone study (1980), published after the data for this study were collected, subjects were asked "would they have preferred more, less, or the same amount of structure" and findings were strikingly supportive of matching-model predictions.

Secondly, further validation efforts for the Communication Skills Checklist are called for. A large sample exploration of psychometric properties including factor structure and test-retest reliability is needed. Ways of further investigating construct validity might include administering the CSC-GAIT and CSC-Response Scale to separate but matched groups of students, one group of which has been selected on the basis of other criteria as being high in communication skill. For instance, dormitory resident assistants and peer counselors in university programs are chosen for their skills at listening and communicating with others. Their scores on the CSC-GAIT and CSC-Response Scale might be compared with other university students matched for age, year in school, and sex.

Thirdly, related questions regarding conceptual level await investigation. The relationship of defensive style and conceptual level, as discussed in the opening chapter of this project, remains an important unexplored area.

Also, investigation of nonverbal changes was not attempted in this study. Audiotapes or videotapes might usefully be subjected to investigation on this dimension to supplement Goodman's GAIT peer ratings.

Finally, research into the ways high and low conceptual level subjects differ from one another in their ways of using rating systems (rather than differences in styles of high and low conceptual subjects as judged by rating systems) remains an interesting question. Research

in dimensional complexity suggests that low dimensionally complex subjects use a narrower range of rating points on Likert-variety scales than do high dimensionally complex subjects (Schneier, 1977). It would be of interest to see if this finding also holds for high and low conceptual level (integratively complex) subjects. If so, ratings on Goodman's GAIT peer ratings and scales of satisfaction might be affected.

Summary

In conclusion, despite the design limitations noted above, this study (a) provides detailed information on a promising measure of communication skills; (b) demonstrates the ability of a carefully designed communication skills program to impart measurable improvement in communication skills; (c) adds to the growing literature testing interactional hypotheses; and (d) paves the way for further exploration in these areas.

While Hunt's matching model received little support, several important findings support other theory. Regarding structured vs. unstructured group interventions, structured groups proved superior in teaching specific concrete skills such as paraphrasing and giving constructive feedback, at least as measured by written responses to a measure designed for this study. Unstructured interventions were viewed by participants as equally "useful" and "more enjoyable" than structured groups and may tap different kinds of learning (e.g., learning that one's problems are not unique). As predicted by Schroder, Driver, and Streufert, high CL subjects showed greater versatility in learning as measured by Goodman's GAIT "therapeutic talent" peer ratings across conditions of structure. Implications of these and other findings, as well as ideas for future research, were discussed.

APPENDIX A
MEASURES

Leader Instruction for GAIT Assessment

Supplies needed: (Check before each session)

- _____ Tape recorder with microphone for good sound recording at distances of 10 ft.
- _____ Tape cassette (60 minutes each side)
- _____ Order of Disclosers and Understanders Sheet for Leader
- _____ Index cards (4" x 6", enough for all subjects in the group)
- _____ Extra pens (enough for all subjects in the group)
- _____ Sheet of lined paper to record names and letters (for leader)
- _____ GAIT Instructions for Subjects
- _____ GAIT Rating Sheets for Subjects
- _____ "Hi my name is ____" stick on labels
- _____ Index cards with large letters A-G, one on each card

A	F	C
---	---	---
- _____ Magic marker to write letters on the label
- _____ Two bowls (fish-bowl or mixing-bowl variety)
- _____ Prepared in advance: Two sets of same-sized paper slips, folded in two. Each set should have exactly the same number of slips as members of the group.

On one set of slips, the slips read "Understander 1" (first slip), "Understander 2" (second slip), and so on.

On the other set of slips, the slips read "Discloser 1," "Discloser 2," and so on.

Place one set in each bowl before the GAIT session. Slips can be made by cutting and folding the xeroxed sheets attached.

- _____ Kitchen timer (Don't place the timer too close to the tape recorder)
- _____ Pledge of Confidentiality Sheets

1. Set up supplies before the session. Allow yourself 15 minutes to do this.

Leader Instructions for GAIT--continued

4. When all members have arrived and are checked in, start the warm-up exercise.

WARM-UP EXERCISE:

Instructions:

First we're going to do a short exercise to loosen up, feel a little more comfortable in the group, give everyone a chance to talk, before we turn on the tape recorder. We're going to go around the group and each person is to ask the group a personal question "as if" the group were an individual. Imagine you were getting to know someone for the first time, someone you'd just met--what might you ask? Address the question to the group, and then anyone can answer the question.

For instance, I'll start--"What do you like to do in your spare time?" (Wait for answer--if none--smile, say "anyone? What do you like to do in your spare time?" Someone will answer.) Next you ask a question--motion to person on your right. After this person has asked a question and someone answered, move to the right again "Now your turn." Go around the group until all have asked a question.

GAIT Procedure:

5. Instructions:

(Intro. to exercise)

Fine, now what we're going to be doing for the rest of today is an exercise involving sharing, or "self-disclosing," and listening. I'm going to pass out a handout explaining everything we'll be doing. Take a few minutes to read it and then we'll go over it together and I'll answer questions.

Give the participants time to read the handout, then read it aloud in a friendly, conversational tone of voice, and answer any questions.

6. Instructions:

(Concern)

Okay, the first thing to do is to take a few minutes and write down on the index card a current concern of yours that you'd feel comfortable sharing with the group, something involving another person or people (meaning your concern shouldn't be how to do a computer program, in other words), something that you have some feelings about.

Pass out Index cards (and pens to those who need them).

Leader Instructions for GAIT, continued

Give everyone time to write down a concern.

7. Pairing:

Next have each person draw one slip out of each bowl. First go one way around the circle with the discloser bowl. Then go the other way around the circle with the understander bowl.

Ask if anyone got the same number twice. If anyone (or ones) did, have the person trade discloser slips with the individual on his/her right. Repeat this if necessary until every person has a discloser slip and an understander slip that have different numbers on them.

8. Procedure:

Ask "Who's discloser 1? Who's understander 1?" Write the appropriate letters on the disclosers and understanders sheet.

Set the timer for 5 minutes (you need to turn the dial past 5 min. and then back to 5 to make it run).

Start the tape recorder.

Ask Discloser 1 to read his/her statement and Understander 1 be a good listener.

When the timer rings, ask understander 1 to summarize. Then ask Discloser 1 to reread his/her initial statement. ("The juxtaposition of initial statement and summary gives the group a sharper view of the understander's grasp of the situation and his/her success at facilitating expansion of the problem presented" Goodman, 1972, 30.)

At the end of the interaction, say thank you. (At this time other group members may want to jump in and comment--if so, tell members that after the exercise is completed, everyone will have a chance to respond to one another and to please save comments).

Then ask "Who's discloser 2, understander 2?" Repeat the procedure exactly. (Reset timer, etc.) Repeat this procedure until all pairs have concluded.

9. Rating:

Shut off the tape recorder.

Leader Instructions for GAIT, continued

Put people's letters (on the large index cards) on the floor in front of each person.

e.g.,

Ask people to take the rating scales which each has and rate each other member of the group on these scales. Tell members to read the instructions first, which are self-explanatory.

When everyone is done, collect the rating scales and GAIT instructions.

10. Free
Discussion:

When all the above is completed, tell members that as the exercise was going on, people may have wished to respond to other members. Now is a time when they can do this. "Is there anything any of you wanted to say to anyone else?"

Facilitate group discussion.

Name of
GAIT session
(e.g., "Jane-1") _____

GAIT leaders

Order of Disclosers and Understanders Sheet

Letter

Discloser 1 _____	--	Understander 1 _____
Discloser 2 _____	--	Understander 2 _____
Discloser 3 _____	--	Understander 3 _____
Discloser 4 _____	--	Understander 4 _____
Discloser 5 _____	--	Understander 5 _____
Discloser 6 _____	--	Understander 6 _____
Discloser 7 _____	--	Understander 7 _____
Discloser 8 _____	--	Understander 8 _____

Next, we would like your overall, global impressions of each group member (other than yourself). Please rate each member on the following scale and write the appropriate number in the slot underneath each group member's letter. Base your impressions on your experience in today's group.

- +5 Very Well
- +4 Moderately Well
- +3 So-so
- +2 Not very Well
- +1 Not at all Well

Group Members

A B C D C F G H

4. Overall, how effectively
does this person
communicate?

GAIT Instructions

The exercise we will be doing today involves two aspects of communication:

- (1) how we go about sharing our thoughts and feelings with other people, particularly those we don't know very well, and;
- (2) how we listen and understand what others say and feel.

What you will be doing in this group exercise will be two things--

You'll take a turn as a "discloser." In this role you'll be sharing with one other person in the group a current concern of yours involving another person or persons; something that is on your mind, that matters to you, that you have feelings about. This may or may not involve a problem you are having with others. What you choose is up to you and you need not identify any other people by name. The group will listen to this interaction.

And you'll take a turn as "understander." In this role you will listen to another person (the discloser) talking about his/her concern and you'll try to understand what the discloser is communicating. Try also to communicate this understanding to the discloser and to help him/her express himself/herself. Essentially in this role you are to be a "good listener." After the interaction is over, you'll summarize it for the group and the discloser will reread his/her initial statement.

To accomplish the above you'll be randomly paired up two times with another group member. One time you'll be the discloser, one time you'll be the understander. The rest of the time you'll listen to interactions among the other group members.

Each dialogue will take 5 minutes. Interactions will be audio-taped.

When everyone has had a turn in both roles, at the very end of the exercise, you'll rate each other member of the group on the scales which you have been given.

These data and audiotapes will be kept strictly confidential. Likewise, you've signed a pledge of confidentiality agreeing not to discuss the exercise and things people have said outside of the group.

Thank you for participating.

Code No. _____

Face Sheet

Please fill in the following information. Your name will only appear on this sheet. Questionnaires will be tabulated by code numbers to assure confidentiality. This information will be removed and kept separately and will be seen only by the director of this research project. Thank you for your cooperation.

Name _____

Social Security Number: _____

Age: _____

Sex: _____

Major (if known, or probable major): _____

Your scores on the SAT (as best you can remember):

Verbal _____ Quantitative (Math): _____

Local/Campus/or Mailing address:

Telephone number where you can be reached:

Your main reason for taking Psych. 103:

Your main reason for attending summer session offering:

Code No. _____

Bieri Scale

Instructions

1. On the next page is a grid. Tear off this sheet and place it next to the grid so that you can look at the grid as you read the instructions.
2. On the grid sheet, at the right, are 10 role categories (e.g., yourself, person you dislike, mother, etc.). For each category imagine a person you know, someone in your life, who corresponds to that role. Imagine a different person for each role. For example, when considering the role "person you dislike," whom do you dislike? John Smith/Sally Jones? Imagine that person. If no one in your life corresponds to a particular role--for instance you grew up never knowing your "father"--imagine the person who comes closest to that role in your life (e.g., perhaps an older male neighbor who was a "father figure" to you). In the blank space to the right of each role write the initials of the person you imagine. This will serve as a reminder/memory aid to yourself. (Initials only please--we are not interested in knowing actual identities, but it is important that you visualize actual people). Be sure to imagine one person for each role; don't skip any roles.
3. Now turn the grid sheet around (at right angles) so that the roles are now at the top and at the right are a series of adjective dimensions (e.g., outgoing vs. shy, adjusted vs. maladjusted, etc.). Notice that each dimension has six points, marked by the numbers +3, +2, +1, -1, -2, -3. These numbers represent degrees. For example, Very Outgoing would be represented by +3, Moderately Outgoing by +2, Somewhat Outgoing by +1, Somewhat Shy by -1, Moderately Shy by -2, and Very Shy by -3.
4. Now, start with the first row and consider the box on the top left side. This square is the intersect of "Yourself" and the dimension "Outgoing vs. Shy". Rate yourself. Place the number in this first square which best describes you on the continuum Outgoing vs. Shy. (For example, if you would describe yourself most accurately as "somewhat shy," you would write -1 in the first box). Be sure to clearly mark + or - signs.

Then move to the next box to the right, which brings you to the next role, the person you dislike (John Smith/Sally Jones, etc.) How would you best describe him/her on the dimension Outgoing vs. Shy? Write that number in the appropriate box. Continue moving to the right until you have rated all ten people on the dimension Outgoing vs. Shy.

Code No. _____

Bieri Scale, continued

5. Now move to the second row at the far left again. Starting with Yourself, rate yourself on the dimension Adjusted vs. Maladjusted. Then move on to the right and rate each of the other nine people just as you did for "Outgoing vs. Shy."
6. Continue row by row rating yourself and the others on each dimension. Work on only one dimension at a time and do the dimensions in order. After finishing Adjusted vs. Maladjusted, move on to Decisive vs. Indecisive, and so on.

Please do not skip any squares; incomplete forms cannot be scored.

Thank you for your cooperation.

Code No: _____

Bieri Grid

Role Categories

- 1. Yourself _____
- 2. Person you dislike _____
- 3. Mother _____
- 4. Person you'd like to help _____
- 5. Father _____
- 6. Friend of same sex _____
- 7. Friend of opposite sex (or spouse) _____
- 8. Person with whom you feel most uncomfortable _____
- 9. Boss _____
- 10. Person difficult to understand _____

Very +3 Moderately +2 Somewhat +1 Adjective Dimensions Somewhat -1 Moderately -2 Very -3

outgoing	shy
adjusted	maladjusted
decisive	indecisive
calm	excitable
interested in others	self-absorbed
cheerful	ill-humored
responsible	irresponsible
considerate	inconsiderate
independent	dependent
interesting	dull

Bieri

Scoring

Source: Bieri, J., Atkins, A. L., Briar, S., Lobeck, R. L., Miller, H., & Tripodi, T. Clinical and social judgment. New York: Wiley, 1966. pp. 184-196.

Instrument:

Each subject is presented with a 10 x 10 grid. Each of ten columns is identified with the role title of a person in the subject's life, e.g., mother, person you dislike, boss. Subjects imagine a real person to fit each role. Then subjects turn the grid and examine the rows of the grid. Ten sets of bipolar adjective constructs are provided, e.g., outgoing vs. shy, adjusted vs. maladjusted, etc. Degrees along each adjective dimension are represented by a 6-point rating scale, such that very outgoing is represented by +3, moderately outgoing by +2, somewhat outgoing by +1, somewhat shy by -1, moderately shy by -2, and very shy by -3. Subjects rate all ten persons on each adjective dimension. Each person is rated on the first dimension; then the subject moves to the second dimension and rates all ten persons on the second dimension, and so forth. When the subject has finished, each box in the grid contains a positive or negative number, representing the intersect of the person in the column, e.g., mother, rated on the adjective dimension in that row, e.g., +1 on outgoing-shy. In this example, the subject would have judged his/her "mother" to be "somewhat outgoing." See the directions to the actual scale for more details.

How to score the grid:

1. Turn the completed grid so that roles (e.g., yourself, person you dislike) are at the top of the page and adjective dimensions (e.g., outgoing vs. shy, adjusted vs. maladjusted) are at the right. Roles now become the headings for ten columns. Adjective dimensions become the headings for ten rows.
2. Scoring is done column by column. That is to say, each column becomes a separate scoring unit. All of the ratings in one column (e.g., all of the ratings on the ten adjective dimensions which have been given to "mother") are compared in pairwise fashion for each possible comparison in the column. See below on how to do this.
3. Start with the uppermost left-hand box, the intersect of "yourself" and "outgoing vs. shy." Look at the number in that box. Place an inanimate marker by that number. (A paper clip or the index finger of your left-hand works fine). You will not move this marker until comparisons of the number in the first box with each other number in that column have been made. Now move to the second box in that column, the number directly below the number you have marked.

Bieri Scoring, continued

Compare the two numbers. If they are identical, score 1 pt. If they are not identical, make no score. Next move to the third box in the column. Compare the number in the third box with the number in the first box (the marked number). Are they identical?

If so, score 1 pt. If not, do not score. Continue this process until the number in the first box (the marked number) has been compared to each other number in the same column, i.e., each number below the marked number. All matches have been scored 1. See example below:

4. After comparisons between the number in the first box and each other number below it have been made, move the marker down to the second box in the column. Repeat the same process. This time the number in the second box will be compared to each other number below it, i.e., the number in the third box, the fourth box, etc. See below.

5. Next move the marker down to the third box and repeat the process, comparing that number with each other number below it. In the example above there is one match (with the number in the 7th box), so a score of 1 would come from comparisons with the marker at the third box.
6. Continue moving the marker down the column and comparing the marked number with each number below it until all comparisons have been made and the marker sits beside the last box in the column. There are 45 possible comparisons in each column. (9 for the first box, 8 for the second box, 7 for the third box, 6 for the 4th box, 5 for the 5th box, 4 for the 6th box, 3 for the 7th box, 2 for the 8th box, 1 for the 9th box, and none for the 10th box).
7. Once you have completed the first column, move to the second column. Place the marker beside the first box in the second column and proceed to make all comparisons in the fashion outlined above. Then move on to the third column, and so forth.
8. Add all of the ten column scores to get the total score.

There are 450 possible comparisons. The range of scores possible is 40 (very few matches) to 450 (all matches, an entire grid with the same number in every box). High scores indicate low cognitive complexity--the person is using her/his construct dimensions in a highly similar way--A role person who is "very outgoing" is also "very adjusted" is also "very decisive" is also "very calm," etc., etc.

Low scores indicate high cognitive complexity. This individual uses constructs differently to discriminate among people and views individuals as more multidimensional.

The sample grid on the following page demonstrates the scoring system.

Budner Scale

Code No. _____

Listed below are a number of statements. Read each statement and decide to what extent you agree or disagree with that statement. Place an X in the column at the right which best describes the extent to which you agree or disagree with each statement.

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
1. An expert who doesn't come up with a definite answer probably doesn't know too much.						
2. There is really no such thing as a problem that can't be solved.						
3. A good job is one where what is to be done and how it is to be done are always clear.						
4. In the long run it is possible to get more done by tackling small, simple problems rather than large and complicated ones.						
5. What we are used to is always preferable to what is unfamiliar.						
6. A person who leads an even, regular life in which few surprises or unexpected happenings arise, really has a lot to be grateful for.						
7. I like parties where I know most of the people more than ones where all or most of the people are complete strangers.						

Continued on next page

-2-

Code No. _____

Budner Scale

	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
8. The sooner we all acquire similar values and ideals the better.						
9. I would like to live in a foreign country for a while.						
10. People who fit their lives to a schedule probably miss most of the joy of living.						
11. It is more fun to tackle a complicated problem than to solve a simple one.						
12. Often the most interesting and stimulating people are those who don't mind being different and original.						
13. People who insist upon a yes or no answer just don't know how complicated things really are.						
14. Many of our most important decisions are based upon insufficient information.						
15. Teachers or supervisors who hand out vague assignments give a chance for one to show initiative and originality.						
16. A good teacher is one who makes you wonder about your way of looking at things.						

Budner
Scoring

Source: Budner, S. Intolerance of ambiguity as a personality variable.
Journal of Personality, 1962, 30, 29-50.

Respondents check off one of six response categories for each item; scoring is as follows:

	Score	Category
(+)	7 (-) 1	Strongly Agree
	6 2	Moderately Agree
	5 3	Slightly Agree
	3 5	Slightly Disagree
	2 6	Moderately Disagree
	1 7	Strongly Disagree

All omissions are scored 4.

There are equal numbers of positively and negatively worded items. Items 1-8 are worded in the positive direction, such that strong agreement receives a score of 7, strong disagreement a score of 1. Items 9-16 are worded in the negative direction, such that strong agreement receives a score of 1, strong disagreement a score of 7.

The maximum possible range of scores is from 16-112. Low scores indicate high tolerance of ambiguity. High scores indicate high intolerance of ambiguity (low tolerance of ambiguity).

Code No. _____

Crowne-Marlowe Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. Circle "True" or "False" after each statement.

1. Before voting I thoroughly investigate the qualifications of all the candidates.	True	False
2. I never hesitate to go out of my way to help someone in trouble.	True	False
3. It is sometimes hard for me to go on with my work if I am not encouraged.	True	False
4. I have never intensely disliked anyone.	True	False
5. On occasion I have had doubts about my ability to succeed in life.	True	False
6. I sometimes feel resentful when I don't get my way	True	False
7. I am always careful about my manner of dress.	True	False
8. My table manners at home are as good as when I eat out in a restaurant.	True	False
9. If I could get into a movie without paying for it and be sure I was not seen, I would probably do it.	True	False
10. On a few occasions, I have given up doing something because I thought too little of my ability.	True	False
11. I like to gossip at times.	True	False
12. There have been many times when I felt like rebelling against people in authority even though I knew they were right.	True	False
13. No matter who I'm talking to, I'm always a good listener.	True	False

CONTINUED NEXT PAGE

-2-

Code No. _____

Crowne-Marlowe

14. I can remember "playing sick" to get out of something.	True	False
15. There have been occasions when I took advantage of someone.	True	False
16. I'm always willing to admit it when I make a mistake.	True	False
17. I always try to practice what I preach.	True	False
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.	True	False
19. I sometimes try to get even, rather than forgive and forget.	True	False
20. When I don't know something I don't at all mind admitting it.	True	False
21. I am always courteous, even to people who are disagreeable.	True	False
22. At times I have really insisted on having things my own way.	True	False
23. There have been occasions when I felt like smashing things.	True	False
24. I would never think of letting someone else be punished for my wrongdoings.	True	False
25. I never resent being asked to return a favor.	True	False
26. I have never been irked when people expressed ideas very different from my own.	True	False
27. I never make a long trip without checking the safety of my car.	True	False
28. There have been times when I was quite jealous of the good fortune of others.	True	False
29. I have almost never felt the urge to tell someone off.	True	False

CONTINUED NEXT PAGE

-3-

Code No. _____

Crowne-Marlowe Scale

30. I am sometimes irritated by people who ask favors of me.	True	False
31. I have never felt that I was punished without cause.	True	False
32. I sometimes think when people have a misfortune they only got what they deserved.	True	False
33. I have never deliberately said something that hurt someone's feelings.	True	False

Crowne-Marlowe

Scoring

Source: Robinson, J. P., & Shaver, P. R. Measures of Social Psychological Attitudes. Revised Edition. Ann Arbor, Michigan: Institute for Social Research, Survey Research Center, 1973. pp. 727-730.

Respondents check "true" or "false" to 33 statements. Eighteen items are keyed in the true direction; 15 items are keyed in the false direction.

One point is scored for each response in the socially desirable direction.

Scoring is as follows:

Item:	Score 1 pt. if:
1.	True
2.	True
3.	False
4.	True
5.	False
6.	False
7.	True
8.	True
9.	False
10.	False
11.	False
12.	False
13.	True
14.	False
15.	False
16.	True
17.	True
18.	True
19.	False
20.	True
21.	True
22.	False

Item:	Score 1 pt. if:
23.	False
24.	True
25.	True
26.	True
27.	True
28.	False
29.	True
30.	False
31.	True
32.	False
33.	True

The maximum possible range of scores is 0 to 33. Low scores indicate low social desirability. High scores indicate high social desirability.

Code No: _____

Impression Formation Test

At the top of each of the following pages you will find a set of adjectives which describe a person. Some of the adjectives will be used in more than one description. Your task will be to write a short paragraph description of the person to whom the adjectives would apply. There will be a time limit for each description. You will have one and a half minutes to write your paragraph when there are three adjectives at the top of the page, three minutes when there are six adjectives at the top of the page. I will tell you when to begin and when to stop on each page.

1.

Code No: _____

INTELLIGENT, INDUSTRIOUS, IMPULSIVE

2.

Code No. _____

CRITICAL, STUBBORN, ENVIOUS

3.

Code No. _____

INTELLIGENT, INDUSTRIOUS, IMPULSIVE, CRITICAL, STUBBORN, ENVIOUS

4.

Code No.: _____

NERVOUS, OBSTINATE, JEALOUS, RELIABLE, SOCIABLE, INDEPENDENT

IFT Scoring System: From Streufert, S. and Driver, M. J. Impression formation as a measure of the complexity of conceptual structure. Educational and Psychological Measurement, 1967, 27, 1025-1039.

Scores for integrative complexity vary from score 1 (low complexity) to score 5 (high complexity).

Score 1. The response shows inability to deal with conflicting information. The conflict is negated, rather than resolved, usually by omission of the implications of incongruent adjectives. There is no evidence of differentiation or integration.

Example: A person who is critical and stubborn is probably a low paid clerk in a government position. He has not been advanced recently, and is therefore jealous and has a great distaste for all who have done better than he has. He hates his work. He mistreats all who work under him. He could not be intelligent.

Score 2. The response shows an inability to apply conflicting information to a single setting or a single point in time. Some evidence of differentiation is present, but there is no evidence of integration. However, some attempt is made to deal with more than one kind of information.

Example: This is a character who is an excellent colleague at work. His intelligence and hard work have helped the business. His quick decision making is often an advantage. However, when he comes home to his family, he becomes intolerable and takes all his troubles out on them.

Score 3. The response indicates an ability to bring at least one of the incongruent adjectives into the description. Differentiation may or may not be relevant, some integration is present.

Example 1: It sounds like my uncle J. K. He is very intelligent, by all means, and he uses his intelligence to be critical, terribly much so as a matter of fact, to defend his view. Even if he is wrong he is stubborn and righteous.

Example 2: Teachers are often that way. If you meet them in the classroom only, they seem to have all the good qualities. They are bright, work hard, and quick thinkers. But when they are together with some people who are for them and some who are against them, where they have to defend themselves, for instance in the PTA, they can show quite some stubbornness together with those other qualities.

IFT - 2

Score 4. The relationship between all adjectives is established, yet it remains based on surface events or relationships rather than on an (empathic) understanding of the underlying motivation producing the characteristics described in the set of adjectives. Differentiation may or may not be present, integration is present, but is not of a high level.

Example 1: He is a real organizer. What he does depends on what he wants to achieve. When he wants people to do something, he talks them into it. He persuades them with quick thinking, and he pushes hard. Anyone who disagrees is immediately put into his place. If someone wants to outdo him, he quickly knocks him off, and then goes on until he succeeds.

Example 2: She is a real person like all of us. She is in college; she works hard, but she does not let others disturb her. She has the ability, and she knows it. She has high plans for the future, and she knows she will get there only if she makes the best grades. So she does. She watches out for the faults of others, and she capitalizes on them. She knows how to make use of all these abilities, and she will go far.

Score 5. The relationship between all adjectives is established, and based on an (intellectual or emotional empathic) understanding of underlying personality components and motivational factors. The persons described emerge as real "live" human beings without inconsistencies. Both differentiation and integration are very high in this response.

Example: This man is an executive in a successful medium size company. He has been driven by the need to succeed, and he has used his intelligence to his advantage. His hard work and quick reactions have let others overlook, or even like his critical manner. After all he usually is right when he criticizes. He has made it up the ladder by working day and night, and by outdoing everyone around. Now he is at the top, but he will not be satisfied till his company is the largest in the field.

Code No. _____

Response Scale

Below is a series of descriptions of interactions you could have with another person. In each instance try to imagine yourself in the situation described. In each situation the other person says something to you and you are to respond. Write down what you would/could say as your response. Write your response as though you were actually speaking.

1. You are babysitting for your four-year-old nephew, who is intently watching you as you do your homework. You are using a fountain pen that takes cartridges of ink. Your nephew asks you, "How does the blue get in there? My crayon's not like that. Your crayon is wet. Where does the wet come from?"

You explain":

Response Scale--2

2. You're an average student. You haven't been working too hard this semester. One of your parents has come to URI to talk with you. Your parent says to you: "Look, your place is a mess; your grades are a disgrace; your friends are a bunch of losers. You don't do anything right anymore. In my day we were a lot more responsible; we cared what happened to ourselves. What do you have to say for yourself?"

You say":

Response Scale--3

3. After watching a family show on TV, a friend asks if he/she might talk with you in private as he/she's feeling upset. When you are alone, he/she says, near tears: "I hate my father. I really hate him and there's no reason for it. He's a minister, a really, truly good man. He's never laid a hand on me. But I have this terrific feeling against him; and it makes me feel so terrible because--there's no reason for it. It's a sin to hate your father, especially if you don't have any reason for it. I--it worries me. I've thought about it and thought about it and it does no good. I feel really bad."

You say":

Response Scale--4

4. You have volunteered to tutor a sixth-grader (age 12) after school. The boy you are tutoring comes from an inner-city area of Providence where he lives with many brothers and sisters. He has been doing poorly in school. Today he tells you: " In Social Studies we're talking about why everything costs so much. The teacher says it's got to do with something called 'supply and demand,' but I don't get it. Can you explain it to me?"

You explain":

Response Scale--5

5. You are very close to someone (boyfriend/girlfriend, close friend, roommate, spouse, etc.) This person does not communicate his/her feelings very easily. Although you have talked with the person about communicating more of his/her feelings, he/she still is not. You notice on this particular day that he/she is very quiet, avoids looking at you, and appears upset. You don't know whether the person is upset about you or something else. You have pointed out that he/she is quiet and you have even asked if anything's wrong. The person says: "Nothing's wrong."

You say":

Code No: _____

Program Evaluation

Please rate your experience in the group sessions.

1. How useful did you find the sessions?

Not at all	Not very	Somewhat	Moderately	Very
1	2	3	4	5

2. How enjoyable did you find the sessions?

Not at all	Not very	Somewhat	Moderately	Very
1	2	3	4	5

3. How much do you feel you have learned from the sessions? How much do you believe you have improved your communication effectiveness?

Nothing/ Not at all	Not very much	Some	Quite a bit	A Great Deal
1	2	3	4	5

4. How might the sessions be improved?

5. Comments

Thank you for participating in this study.

APPENDIX B
THE COMMUNICATION SKILLS CHECKLIST

See also "Method" section for a rationale and general description of this measure. In the pages to follow, first the checklist and scoring roles will be presented. Then a sample of a transcribed GAIT interaction will be presented.

SOURCES

This manual has been compiled relying on the works of:

Adams, L. and Lenz, E. Effectiveness training for women. New York: Wyden Books, 1979.

Brunick, S. & Schroeder, H. E. "A system for assessing therapist communications (SATC), Manual for Raters." Unpublished manuscript, 1979. Kent State University, Kent, Ohio 44242.

Johnson, D. N. Reaching out: interpersonal effectiveness and self-actualization. Englewood Cliffs, N. J.: Prentice Hall, 1972.

DeLancey, A. The Effects of covert reinforcement and social skills training with psychiatric patients. Unpublished doctoral dissertation, Boston College, 1979.

Positive points are awarded for occurrences of types of responses generally identified by sources such as the above as demonstrative of good communication skills (e.g., paraphrasing). Negative points are awarded for occurrences of types of responses considered poor or destructive to communication (e.g., accusations). The underpinnings of this measure are therefore theoretical (rather than empirical). The checklist therefore involves frequency counts of types of positive and negative communication aspects.

Communication Skills Checklist

Scoring

Scoreable portions of the GAIT transcripts:

Dialogue on GAIT transcripts from Discloser's first statement to "Bell" is scored. Dialogue after Bell is not scored.

Units of scoring:

On the GAIT, each speech, or set of statements bordered on either side by another speaker's speech, silence, or "Bell," is considered 1 unit.

On the Response Scale each example is considered one unit.

Rationale for the unit system is presented following scoring rules.

Calculating Discloser and Understander Units on the GAIT:

Given the construction of the GAIT (see Method section), each subject takes a turn as a "discloser" in one dialogue and a turn as an "understander" in a separate dialogue.

The number of "discloser" units for one subject in one dialogue on the GAIT is calculated by counting the total number of discloser units occurring in one interchange. The number of "understander" units is calculated in the same way.

Scoring rules:

From the attached checklist, score one point for the occurrence of each category in one unit. If one category occurs more than one time in a single unit, do not score same-category occurrences over one to one unit.

However, do score once each category which occurs in each unit. In other words, no more than one occurrence in any one given category per

one unit is scored, but one unit may contain occurrences from several different categories. Likewise, when an entire protocol (many units) is scored, more than one occurrence of a particular category may be seen overall.

For example.

Discloser: My brother-in-law John insulted me yesterday. I felt really angry and hurt. I guess I want everyone to like me.

Understander:

Discloser's statement from "my brother-in-law . . ." to "like me" is one unit.

Within that unit you would score 1 Info-narrative, 1 I-message with feelings, and 1 I-message with intent. (See checklist for descriptions of these categories.) You would not score one I-feeling for angry and one I-feeling for hurt, as both appear in the same unit.

Contrast with the following examples:

Discloser: My brother-in-law insulted me yesterday and that made me mad.

Understander: Mad?

Discloser: Well, hurt too. I guess I want everyone to like me.

Now there are three units, the first unit extends from "My-brother-in-law . . ." to ". . . mad"; the second unit is one word, "Mad?"; the third unit extends from "Well . . ." to "me."

The first unit would be scored under "Disclosing role" as 1 Information narrative, 1 I-message with feeling. The second unit would be scored under "Understander role" as 1 Clarification. The third unit would be scored as 1 I-message with feeling, and 1 I-message with intent.

Both feelings are scored in this example as they appear in separate units.

On the GAIT, units separated by discloser and understander roles are clearly delineated by the nature of the task and are clearly marked on the GAIT transcripts.

On the Response Scale each of the five examples (5 units) may elicit a response in either the discloser or understander role and all examples but #2 and #4 (explaining) frequently elicit responses in both roles. Therefore, when scoring the Response Scale the rater must be flexible and carefully analyze each component of the subject's responses.

Rationale for Unit Scoring:

Units were designed as a rough control on length of expression/verbosity and on redundancy. On the GAIT transcripts, one unit roughly equals a "paragraph" in the case of the more verbose subjects, a "sentence" or "phrase" in the case of the less verbose subjects. A unit tends to express one idea or sentiment in the way a paragraph or sentence tends to be organized around a central focus.

While more than one type of categorization was often present in a unit--e.g., an interpretation followed by advice-giving: (see sections to come): ("Perhaps you don't really hate your father. Have you tried talking with him about this?"), it was unusual for more than one discretely different instance of the same category to occur more than once in one unit. Second instances of the same category in one unit tended to be elaborations on the first instance and therefore involved some redundancy: e.g., an interpretation followed by elaboration on that same interpretation ("Perhaps you don't really hate your father. Maybe

you feel something else but just think it's hate.") Each unit was scanned for the presence or absence of each category on the attached checklist. A more molecular measure might have been number of words spoken or written; but this approach would not have cut down on subjects repeating themselves as clearly as the more molar "unit."

Each unit can be seen as an opportunity to produce any of a number of responses. On transcripts of spoken material, each unit is seen as a separate opportunity for producing any category of response. If a subject spoke 18 units, for example, the potential of producing any particular category was 1-18.

Correcting Checklist Occurrences
for Number of Units Present:

On the GAIT, speakers take a "discloser" role in one interchange, an "understander" role in a separate interchange.

Therefore on the GAIT, if someone speaks in the discloser role nine times, there are nine opportunities to produce an "I-feeling statement," and nine opportunities to produce an "I-intent statement." If the same someone speaks 12 times in the Understander role, there are 12 opportunities to produce a "clarification," 12 opportunities to produce an "acknowledgement," and so forth.

On the GAIT, so that subjects' pre and post performances in a given category could be compared, the percent of opportunities which S took advantage of in each category was calculated by dividing the number of observed instances in a given category (rater 1 plus rater 2) by the number of units.

On the Response Scale all Ss were presented with the identical same five opportunities and created five units by writing one response to

each situation. Therefore, discloser and understander units were standard across Response Scales and corrections for number of units produced were not necessary. On the Response Scale, therefore, number of instances observed (rater 1 + rater 2) were used in their original form.

CHECKLIST SCORING

Disclosing Role

The speaker (as opposed to listener); the actor (as
opposed to reactor)

Self-Disclosure: Personal material shared (Positive)

I-messages: "Declarative I-messages are . . . self-disclosures to others about your beliefs, ideas, likes, dislikes, feelings, reactions, interests, attitudes and intentions. . . . They describe your inner reality . . . [and] do not contain evaluations, judgments, or interpretation of others." (Adams & Lenz, 1979, pp. 31-32)

1. I-message relating feelings.

e.g., "I'm confused about this."
"I feel bad about it."
"I'm really worried."
"I get all pissed off."

2. I-message relating intentions, needs, wishes, wants.

e.g., "I don't really want to go home."
"I wish I could help."
"I wished I had taken a year off."

Score also statements of "trying" under I-intent.

e.g., "I'm trying to be more understanding."

Self-Disclosure: Personal material shared (Negative)

1. Substitution of 2nd or 3rd person for first person-referent.

e.g., "And you know you kind of get fed up because you're not experiencing anything you're learning." (speaker clearly is speaking about himself without saying I or taking responsibility for this.)

"People . . .
"You kind of get fed up when . . ."

Disclosing Role

Self-disclosure:

(Neutral)

1. Information narrative: Discloser fills in the facts of an encounter or problem, gives the history, sets the stage, tells his/her "story" by filling in concrete background information.

e.g., "She's in high school. She's going to college next year."

(Reactions of speaker to facts should be coded under I-message category, e.g., "This upsets me" is a feeling I-message.)

If Discloser describes other people's motivations and feelings but not his own, this is scored under information narrative.

Score agreement by Discloser with an Interpretation of Understander as Information narrative.

Explaining: (Examples 1 and 4 of Response Scale) (Positive)

1. Explainer attempts to take into account the explainee's frame of reference by drawing parallels, similarities between new concepts and items familiar to the explainee from explainee's experience.

e.g., "The cartridge with ink is kind of like a milk bottle. When you hold it upside down, the milk pours out."

"The cartridge is like a toothpaste tube."

"Wax is like candles."

"Take gas for cars, for example."

2. Explainer asks questions of explainee to check out comprehension.

e.g., "Do you understand?"

"Now you explain it to me."

Do not score questions unrelated to explanatory attempts,

e.g., "Would you like to write with it?"

3. Explainer uses visual aids, draws diagram, demonstrates.
4. Explainer defines terms or gives an adequate explanation of supply and demand or cartridge irrespective of use of examples.

Disclosing Role

e.g., "The blue liquid is called ink."

"Supply is how many of something you've got, and demand is how many people want it. If you have a lot--supply is big--and if not very many people want them--demand is low,--then you'll sell them cheap to get rid of them. But if you've only got a few of something--supply is low--and lots of people want it,--demand is high--then you'll charge a lot of money for the things because people will pay more to get that thing."

5. If explainer does not know answer, explainer promises to find out.

6. Explainer draws contrasts.

e.g., "Ink is wet; crayons are slick and dry wax."

Explaining: (Examples 1 and 4 of Response Scale) (Negative)

1. Use of omnipotence to avoid explaining.

e.g., "Because I say so."

"Because."

"Take it for granted."

Score also in this category explaining by use of inaccurate "tall tales" which snooker the explainee.

e.g., "A magic genie puts the wet in."

(This would be comparable to answering the question "How are babies born?" with "A big stork drops them through the chimney when you're asleep.")

2. Derogation of explainee to avoid explaining.

e.g., "You're too little to understand."

Score also dismissal of explainee in this category.

e.g., "Go away." "Leave me alone."

3. Piagetian use of egocentric speech--use of pronouns unattached to appropriate nouns such that who's who is blurred, and the reader is unable to determine what the speaker is talking about.

Disclosing Role

e.g., "If they've got it but too much of it, then you haven't got it, and he'll try to get it to you until they've got less."

Explaining:

(Neutral)

Do not score a totally wrong explanation.

e.g., "Supply and demand is having a lot of something and people wanting it so you supply it for their demands."

Understander/Listener Role

Taking criticism and giving feedback:

(Positive)

(Example 5 and Example 2 of Response Scale)

Taking criticism:

1. Agree with that part of the criticism which is true.

e.g., "It's true that I've not been working hard as I might have this semester."

Giving feedback:

(Positive)

1. Specifies the exact behavior in concrete terms.

e.g., "When you speak to me in that tone of voice."

2. Attempt to engage the other person's viewpoint.

e.g., "I recognize that you're concerned. Weren't there times when you've been too busy to take time to study when you were in college?"

3. Assertive self-statement which is not accusatory.

The concept of assertiveness is a composite of a number of other elements of effective communication. Specifically it refers to the quality of taking responsibility for oneself and clearly stating one's feelings, viewpoints, wishes in a non-alienating way, a way which both respects the self and communicates this, but also shows respect for others.

As such, an assertive self-statement may easily overlap other categories, e.g., I-feelings, I-intent, specificity of feedback, and so forth. However, an assertive self-statement may also involve none of the above but be a straightforward statement of opinion and a straightforward request.

On this measure any response which fits the above description is scored assertive self-statement. Specific elements embedded in

Understander/Listener Role, cont.

the response are also scored such that there is some overlap between this category and others.

Usually assertiveness is seen as a function of the discloser role, but may--and frequently does--follow directly upon the discloser's having functioned in an understander role. Such a formula would go along the lines: "I understand that you feel A--that what you're saying is B (paraphrase). Here is what I feel--C (I-feeling). What I'd really like to do about this is--D- (I intent)." The first portion of the statement is in the understander mode; the latter portion in the discloser mode.

A general formula for assertive self-statements would be, "This is how I see it; this is what I'd like to do about it," provided the above is worded in a non-offensive, non-blaming way. Assertiveness often occurs in the context of giving feedback, which is where it occurs on this inventory.

Examples of assertive self-statements, some of which overlap other categories, some of which do not, follow:

e.g., "I am concerned about my future. I will try to do better (Discloser: I-intent). I think I'd do better faster though with more of your support and less criticism. (Discloser: specificity of feedback). I also know you do care about me and I want you to know that I appreciate your concern [Not scored I-intent because it is a second occurrence in one unit]. Thank you for coming to visit. Let me introduce you to some of my friends." (Tentative suggestion/ advice.)

"I realize I am not doing well (acknowledgement of truth in criticism), but my school performance is my responsibility and I must learn from my own mistakes."

"I notice that you're very quiet today (specificity of behavior). I love you very much (I-feeling), and I want to help you. (I-intent)

Understander/Listener Role, cpmt.

--Anytime you want me, I'll be there to help you."
(Reassurance of availability.)

Taking criticism and giving feedback:

(Negative)

(Examples 2, 3 & 5 of Response Scale)

Taking criticism:

1. No reaction whatsoever (ignore).

e.g., silence, or change subject.

2. Counter-attack: attribution of ulterior motives to critic, or put-down of critic's ability, or outright dismissal.

e.g., "You had it easy in your day."

"You flunked too."

"You never have given me a chance to prove myself because you're so f___ critical."

"F ___ you."

3. Sarcasm.

e.g., "So what do you want me to do, back-flips?"

"Happy Pouting!"

4. Shifting personal responsibility by blaming or externalizing rationale elsewhere.

e.g., "You brought me up that way, it's your fault."

"Everyone parties here so I can't study."

Giving Feedback:

(Negative)

1. Judgmental accusations, put-downs. Accusations carry a name-calling element which goes beyond a simple interpretation in that it implies that the person to whom the feedback is given is in some way "bad," "reproachable."

e.g., "You're selfish to feel that way."

See also #2 "counterattack" above--these are similar except that #2 above follows discloser criticizing responder and is in the specific context of taking criticism.

Understander/Listener Role, cont.

Empathic Listening: (Example 5 of Response Scale) (Positive)

1. Paraphrases: reflects the feeling and/or idea expressed by discloser.

e.g., "Sounds like you're really feeling guilty and confused about this."

2. Clarification: Understander asks a question which further's discloser's statement; but is not a simple request for information; rather it serves to clarify discloser's meaning. Clarification may involve repeating discloser's words with a ? at the end.

e.g., "How do you mean?"
 "Can you tell me more about it?"
 "There's really no reason?"
 "How is it a sin to hate your father?"

Also, inquires for feelings.

e.g., "How did that make you feel?"
 "Are you pleased about that?"

3. Acknowledgement: Understander expresses agreement in a short, emotional affirmation which furthers discloser's speech by serving as encouragement to go on. Score also simple acknowledgements of emotions here and reassurance which does not include denial of feelings.

e.g., "Mm-hmm"
 "Really?!"
 "Yeah"
 "I hear you."
 "That's awful!"
 "Huh!!"
 "Uh huh . . ."
 "I know its hard"
 "It hurts, I know."

4. Relating parallel experience to demonstrate understanding of experience.

e.g., "I think I know what you mean. I felt I'd never be able to trust anyone again after my father died; it hurt so badly."

Understander/Listener Role, cont.

Do not score as parallel experience a statement "I know what it's like" if not elaborated.

5. Reassurance of availability and respect for privacy but non-coercion.

e.g., "I'm here and I'd like to help. I respect your privacy and would like to listen if you want to share what's going on. If not, that's cool too but know I'm here."

(This would also be scored under I-intent.)

Empathic Listening:

(Negative)

1. No response whatsoever; or rejection of responding task.

e.g., ignores, silence for 10 seconds or more. "I don't know what to say" followed by silence for 10 seconds or more.

2. Denial/Discounting of discloser's feelings, Negation.

e.g., "You don't hate your father."
 "That's not how you really feel."
 "You don't really mean that."

Distinguish denial from a command to feel differently. See Advice.

3. Changes subject; responds to tangential detail.

e.g., D: "I'm worried about my job prospects."
 U: "Being from Cambodia, do you hate Americans?"

4. Coercion/blackmail, threats--do this "or else."

e.g., "If you don't talk to me now, I'll never talk to you again."

Interpretations:

(Positive)

To qualify as an interpretation, understander/listener gives a statement of "What is going on" which is more than a paraphrase and carries the inference: "This is the real story," adds additional meaning to what has been said.

Understander/Listener Role, cont.

1. If an interpretation is offered, tentativeness is stressed and/or personal responsibility claimed for the interpretation.

e.g., "I wonder if . . ."

"Perhaps . . ."

"If it were me I think that the fact of his being a minister would hook my conscience and that's why I'd have mixed feelings and I wonder if that's how it is for you too."

"It seems to me that . . ."

"Do you think it could be that . . .?"

Look for qualifiers like "probably, maybe."

Be sensitive to interpretations phrased in a question format:

e.g., "Are you sure you're not confusing hatred with resentment?"

Interpretations:

(Negative)

1. Interpretation is advanced in an absolute fashion which states "this is truth." Also moralizing. Moralizing tends to invoke "homiles" and conventional wisdom principles whereas interpretations are more specific to the occasion at hand.

e.g., "You can't hold a relationship when you're in college."

"The show reminded you of what your father isn't."

"No normal person feels that way."

"Obviously you hate your father and that's why you're feeling that way."

Advice-giving:

(Positive)

1. Advice-giver solicits person's own efforts to solve the problem and questions what advisee has already done before giving any additional advice.

e.g., "What options have you considered?"

"What have you tried so far?"

"Have you tried to talk to him about it?"

2. Advice is qualified as one option, as a suggestion that may or may not help.

e.g., "Sometimes it helps to . . ."

"It might be helpful to her to seek professional help."

Look for use of "could," "might," or person relates what was helpful to him in a similar situation.

"When that happened to me what I did was . . ."

Look also for suggestions phrased as questions beginning with

"Why don't you . . ."

Advice-giving, also commands.

(Negative)

(Differentiate a command advising person not to feel the way the person feels (Don't feel that way!) from "denial" in which the understander flat out states the person is in error and does not feel the way the person has said. "You don't feel that way." A command qualifies as advice.

1. Advice is given in absolute terms with no recognition advice is but one option advisee could pursue.

e.g., "You should talk to him."

"Go see a counselor."

"Don't feel that way."

Watch for the qualifier "should."

Scoring Sheets

Mark the number of instances on the accompanying sheet. Score occurrences unit by unit. Score each unit for the occurrence or nonoccurrence of each checklist point. Remember to score no more than one occurrence of one category per unit. Recall, however, that more than one category may occur per unit.

Code No. _____
 Resp. Sc. _____ GAIT _____
 Total # of units: _____
 of Discloser speech _____
 D:U _____

Disclosing Role Positive + Negative -

Self-Disclosure:

1. I-message relating feelings
2. I-message relating intentions, needs, wishes, wants

Self-Disclosure:

1. Substitution of 3rd person for first person-referent

Neutral

1. Information narrative

Explaining:

+

1. Explainer takes into account explainee's frame of reference
2. Explainer asks questions of explainee to check out comprehension
3. Explainer uses visual aids, draws diagram, demonstrates
4. Explainer defines terms
5. If explainer does not know answer, explainer promises to find out
6. Explainer draws contrasts

Explaining:

-

1. Use of omnipotence to avoid explaining: ("Becuz!")
2. Derogation of explainee to avoid explaining
3. Egocentric speech

Neutral

1. No explanation or wrong explanation

Code No. _____
 Resp. Sc. _____ GAIT _____
 Total # of units _____
 U speech _____
 D:U _____

Understander Role Positive + Negative -

Empathic Listening:

1. Paraphrases; reflects the feeling and/or idea of discloser
2. Clarification: Understander asks a question which furthers discloser's statement & clarifies meaning (not just info. request)
3. Acknowledgement; short emotional affirmation which encourages discloser to continue
4. Relating parallel experience to demonstrate understanding of experience
5. Reassurance of availability and respect for privacy but non-coercion

Interpretations:

1. If interpretation is offered, tentativeness is stressed & personal responsibility claimed for the interpretation

Advice-giving:

1. Advice-giver solicits person's own efforts to solve problems & questions what advisee has already done before giving any additional advice.
2. Advice is qualified as one option, a suggestion that may or may not help.

Empathic Listening:

1. No response; silence
2. Denial, discounting of discloser's feeling
3. Changes subject; responds to tangential detail
4. Coercion/blackmail

Neutral

Empathic Listening:

1. Asks for factual info.

Interpretations:

1. Interpretation is advanced in an absolute fashion, also moralizing

Advice-giving:

1. Advice is given in absolute terms

Code No. _____	Total # of
Resp. Sc. _____	units of Understander _____
	speech _____
Understander Role	Negative -
Positive +	

<u>Taking Criticism:</u> 1. Agree with part of criticism which is true 2. Counter-attack: attribution of ulterior motives to critic or put-down of critic's ability, or dismissal 3. Sarcasm 4. Shifting personal responsibility by blaming or externalizing	<u>Giving Feedback:</u> 1. Specifies exact behavior in concrete terms 2. Assertive self-statement which is not accusatory 3. Attempt to engage the other person's viewpoint
--	--

<u>Giving Feedback:</u> 1. Accusations, judgmental put-downs (See also empathic listening section.)	<u>Giving Feedback:</u> 1. Accusations, judgmental put-downs (See also empathic listening section.)
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Composite Scores

For final analyses positive negative and neutral subtotals by seven categories (scales) were calculated. Corrections for Units on the GAIT were figured as previously specified.

Positive, negative, and neutral frequencies are held separately for several important reasons. Clearly, interventions can increase a person's effectiveness (+), make no change (0), or affect the participant deleteriously (-). All effects are important to observe. Secondly, interventions which are effective may be so by either reducing the number of detrimental things a person does (eliminating bad habits), and/or increasing the number of positive things a person does (building constructive skills). Both processes are important to measure.

In the final analysis positive and negative results are reported as these are the findings of interest. Neutral results are not reported as they are less pertinent to the predictions of the study.

Weighting of Items

Since some responses occur relatively infrequently (e.g., empathic listening), and others occur more frequently (e.g., advice-giving), variances among items on the communication skills checklists were quite different. In order to equally weight the seven categories, all frequencies were converted first to Z and then to T scores for statistical analyses. Initially the idea was to combine categories for a total composite score. However this idea was rejected due to internal consistency findings to be presented later.

Two items, "engaging critics' view" under positive giving feedback, and "egocentricity" under negative explaining were dropped because they occurred too infrequently in the experimental and control data to make

tabulation meaningful. When both Response Scale and GAIT observances were combined "engaging critic's view" = 1.5 observances, "egocentricity" = 1 observance. Other responses which may have been infrequent on the Response Scale but frequent on the GAIT, e.g., "Acknowledge," were left in.

Sample of a GAIT interaction transcript of
one 5-minute dialogue

Nancy - 2 7/2/80

A-Nancy-2 T10 and C-Nancy-2 T9

Leader	Begin . . .
T10 Discloser	I get very anxious when I speak in front of a group of people . . .
T9 Understander	Is that it? . . . Um why do you think that it is . . . is it um . . . because you think that they might think . . . what? . . .
T10 Discloser	It's not them . . . it's myself . . . I get really nervous in front of them . . . my palms sweat . . . and I can feel my heart beatin' . . . I'm afraid I'm gonna mumble everything I speak and I really get nervous . . . laugh . . .
T9 Discloser	In other words, you are afraid that you might embarrass yourself?
T10 Discloser	Yes . . .
T9 Understander	You're afraid that you might look foolish in front of others. . . ?
T10 Discloser	Uh, huh . . .
T9 Understander	Do you feel that way now?
T10 Discloser	. . . yeah . . . laugh . . . not so much right now . . . but . . .
T9 Understander	As uh . . . you go on with your speech or your talkin' . . . do you feel a little bit more relaxed . . .
T10 Discloser	No . . .
T9 Understander	No? . . .
T10 Discloser	When it's over I feel relaxed . . .
T9 Understander	Uh, huh . . . Is there ever a time when you can forget about how you're feeling and concentrate on them? . . .
T10 Discloser	Well, most of the time I think it's when the teacher's in the room . . . it gives me a sense of . . . uh . . . they're watching every move I make and uh . . . you know . . . Like in nursing class, we have pre- and post-conferences . . . everytime we go to uh . . . uh . . . hospital or something like that, we have to speak in front of everybody and tell everything you did today and like . . . I don't feel nervous when I'm talking one to one, with anyone . . . except the teacher . . . laugh . . . but when it gets to be a group of people, I get really nervous . . .
T9 Understander	Have you ever tried any techniques to overcome this? Did anything seem to help you at all . . . ?
T10 Discloser	I never tried anything, you know . . .

page 2

Nancy - 2

T9 Understander Sometimes they say try and concentrate on . . . on the people and forget about . . . about yourself . . . I don't know whether that would help or not . . .

T10 Discloser I'm too busy trying to figure out the right words to say and get the meaning across and . . . not make a fool of myself . . .

T9 Understander Well, you're doing very well, it seems to me now!! . . . laugh . . . You don't seem outwardly THAT nervous . . . but you feel so now?

T10 Discloser Yeah. . . . Did you ever feel that way too?

T9 Understander I think everybody feels that way . . . in some situations . . . some more than others . . . I think it's um . . . probably that we're so concerned . . . I . . . I know when I feel that way, it's because I'm so concerned, as you say, that you're going to embarrass yourself or to make yourself look foolish . . . and I think that most times umm people do alright- . . . Have you found that in the end, it's always turned out alright . . . that you really haven't made a fool of yourself . . .?

T10 Discloser Yeah . . . I think I need more practice . . .

T9 Understander . . . um . . . yeah . . . I think that . . . I think most people really feel that way. . . . pause. . . .

T9 Understander You don't feel this was in social situations?

T10 Discloser With my friends, you mean . . .

T9 Understander Yeah . . .

T10 Discloser No . . . not at all . . .

T9 Understander No . . .

T10 Discloser . . . they all say, you know . . . "she's so friendly . . . and she's always got something to say . . . " . . . you know, no one makes me nervous . . .

T9 Understander um . . . you think that it's just the teacher, then . . . not with your peer groups . . . but with au . . . with somebody in authority . . . or uh . . .

T10 Discloser I think so . . .

T9 Understander you know, a kind of a judging situation . . .

T10 Discloser Uh, huh. . . . right. . . . laugh
-----pause-----

T9 Understander Has this been comfortable for you?

T10 Discloser Not so much this . . .

T9 Understander In a smaller group like this . . . as the weeks have gone by have you felt it lessen? . . . especially with your other group . . . you had gotten to know . . .

T10 Discloser With the other group. . . . I wasn't nervous . . . I got over it . . .

T9 Understander yeah . . . but tonight with some of us being new . . .

T10 Discloser Uh, huh . . .

T9 Understander . . . you find it kind of . . . (mumble) . . .

T10 Discloser . . . and I don't know half . . . the names . . .

Page 3

Nancy - 2

T9 Understander (mumble). . . .

T10 Discloser And I haven't . . . I never talked to . . . to three of the people. . . .

T9 Understander and it doesn't help to be first? . . . laugh . . .

T10 Discloser No! . . . not at all . . . laugh . . . but at least I can get it over with . . .

T9 Understander . . . That's true . . .

T10 Discloser That's right . . .

. . . pause. . . . I'm sure you've heard this before about people being nervous . . .

T9 Understander Yes . . . I felt it myself . . . I don't . . . I think it's a very rare person that says they don't . . .

T10 Discloser Do you feel that with each . . . new circumstance . . . or have you . . . have you just had it and gotten over it . . .?

T9 Understander Um . . . I don't know . . . I think it depends on each circumstance and I think, too, the pressure involved . . . the judging, I think has a lot to do with it . . .

T10 Discloser Um . . .

T9 Understander . . . as you mentioned, in a situation where uh . . . your mark or grade depends upon it . . .

T10 Discloser Uh, huh . . .

T9 Understander and I guess some people are just more . . . innately more outgoing than others . . . they just seem more relaxed . . .

T10 Discloser Uh, hummm . . .

T9 Understander and there's a whole lot of things that go into it uh . . . I guess the more you do it, the more comfortable you feel with it . . .

T10 Discloser How many minutes do we have left? . . . laugh. . . .

BELL

Other Person . . . I wanted to move you guys because I was getting so tired . . . laugh . . .

Leader Okay . . . Listener . . . I want you to summarize what the Discloser said . . . Listener A, you know, summarize what Discloser . . . no you're Listener, right? Listener C, summarize what Discloser said, A . . . Okay? . . .

T9 Understander Discloser A feels very uncomfortable when speaking in front of a uh group of people that she does not know personally . . . It seems to uh . . . have a great deal to do with . . . if it's . . . if she's in a situation where she's being or feels uh . . . to be judged or graded uh . . . as uh . . . she comes to uh . . . know people . . . feels comfortable with them . . . this uh . . . anxiety tends uh . . . to diminish a little bit, but each new situation uh . . . seems to uh . . . have the anxiety present: it doesn't seem to lessen as a new situation appears.

Page 4

Nancy - 2

Leader

Okay . . . and would you read what . . . what it is
you said originally . . . your original statement?

T10 Discloser

I get very anxious when I speak in front of a group
of people.

APPENDIX C

PROTECTION OF HUMAN SUBJECTS: INFORMED CONSENT

FORMS AND ASSURANCE OF CONFIDENTIALITY

INSTITUTIONAL REVIEW BOARD

ASSURANCE OF PRINCIPAL INVESTIGATOR

- TITLE OF PROPOSAL: 1. The relationship of measures of conceptual level to measures of communication effectiveness.
2. The interaction of conceptual level of participants and degree of structure in personal development groups as it affects satisfaction and learning of communication skills.

I CERTIFY as follows concerning the above research in which I am the principal investigator:

- (1) The rights and welfare of the subjects are adequately protected.
- (2) Risks or discomfort to subjects (if any) have been clearly indicated and it has been shown how they are outweighed by potential benefits to the subject or by the importance of the knowledge to be gained.
- (3) The informed consent of subjects will be obtained by appropriate methods which meet the requirements of the University's general assurance procedures.
- (4) Any changes which may alter the investigational situation will be reported to the I.R.B.

Signature: _____

Date: _____

Date: April 13, 1980

TO: Dr. Sage, Office of the Coordinator of Research

FROM: Valerie Brewer, Ph.D. candidate, Psychology Department

SUBJECT: Research proposal involving the use of human subjects

Pursuant to our informal meeting last Monday 4/7/80 I am enclosing one complete research proposal for my doctoral dissertation, less the bibliography and section on statistical analyses. Your committee will probably be most interested in the methodology section, pages 24-30, and in the measures included in the Appendix.

At this time my most pressing concern is proceeding with pilot testing the measures with a volunteer college population. This is the project we spoke about last Monday. However, since in a few more weeks I would be submitting the entire project to you, I am sending along more complete information on the dissertation itself at this time. In essence I am requesting permission to carry out two projects--first, to pilot test the measures; second, to carry out the group interventions and the dissertation research itself. However, my request for quick review, if possible, pertains to the pilot testing.

Therefore, I am including two abstracts: (1) for the pilot testing, and (2) for the dissertation proposal. If you need nine additional copies of either, please let me know and I'll hasten to the copier.

Thank you for your time.

Sincerely,

Valerie L. Brewer
97 Greenwich Avenue
New Haven, CT 06519

Phone (203) 787-3060
(203) 787-3141
ex. 377, 378

or

c/o Dr. John Stevenson
Dept. of Psychology
URI ex. 2971

Abstract #1: Pilot test of measures

Title of Proposal: The relationship of measures of conceptual level to measures of communication effectiveness.

Principal Investigator: Valerie Brewer
Ph.D. Candidate
Department of Psychology, URI

Other Participants: Major professor: John Stevenson, Ph.D.
Department of Psychology

Subjects to be Involved: Subjects will be 50 male and female URI undergraduate students enrolled in an introductory-level psychology course, Towards Self-Understanding, who volunteer to participate in this research study in exchange for "extra credit" offered by their psychology professor. A written description of the research project will be handed out to interested students by their professor, and subjects will be taken on a first come, first serve basis. Informed consent will be obtained before members actually participate (see below).

Project Summary: This project will attempt to establish whether four measures of cognitive complexity (the extent to which persons reason in relatively dualistic, rigid, or concrete ways vs. more relativistic, flexible, or abstract ways) are related to any of three measures of persons' ability to communicate effectively. The four measures of cognitive complexity are all paper-and-pencil standardized tests. These are described in detail on pages 24-26 of the longer proposal, and actual copies of the measures appear in the appendix of the longer proposal. The three measures of communication effectiveness involve two tasks. In one, the subject writes responses to standard stimuli (pg. 27 of the longer proposal and the appendix). In the other, subjects participate in a structured group experience in which each subject spends a few moments telling another group member about an interpersonal concern of his/her choosing, then an additional few moments in the role of listener as a different group member tells the individual about himself/herself. This procedure is described in detail on pgs. 26-27 of the longer proposal. Following the group exercises, all members rate one another on the effectiveness of the other's communication. This procedure will be audiotaped and each person's communication rated on a behavior checklist. The leader of the group will be a graduate student trained in group process in clinical psychology.

Abstract #1 - Page 2

Nature of the Subject's Participation: As above. Students will sign up to come to two sessions of about 1½ hours each in duration. In the first session, students will complete the paper-and-pencil measures of cognitive complexity and the situations measure. Then students will be assigned on the basis of their scores to a second session, in which the group assessment will take place. There will be no deception in this study.

Risks Involved: I do not envision any risk involved to subjects. It is possible that somewhat shy students might feel slightly anxious in the group situation. However, anxiety is minimized by (1) the subject's ability to choose for himself/herself what he/she wishes to disclose, (2) the subject's freedom to not participate at any point, and (3) the presence of a trained psychologist as group leader. Subjects might also be worried about confidentiality matters. Throughout the study all members' names will be removed from all written materials and replaced by code numbers. I will keep the only key to code numbers, and subjects will be assured of this. Subjects will also be asked to sign a pledge to keep confidential anything talked about by other group members. Group members will be given letter "name tags" and no names will be used during the group or appear on audiotapes, and subjects will be reassured of this as well.

Informed Consent: As above. All subjects will receive a written description of the project at the time that they are contemplating volunteering. At the first meeting, students will sign an informed consent form.* At the second meeting, students will sign a pledge to keep anything talked about in the group confidential and will be reminded that they may choose not to participate at any time. Consent forms and the description to be given to subjects are attached.

Confidentiality: As above. Names will be removed from all written materials and replaced by code numbers. Subjects in groups will be addressed by alphabetic letters rather than by names. Subjects themselves will sign a pledge of confidentiality at the second meeting.

Abstract #1 - Page 3

If you have any questions, please do not hesitate to contact me or Dr. Stevenson.

* See the attached form. The bottom portion will be cut off of the form initially so that students take away only the description. At the first meeting a duplicate of the entire sheet will be again given to students and informed consent obtained at that time.

#1

INFORMED CONSENT FORM FOR PILOT STUDY SUBJECTS

Dear Student:

The project you are thinking about signing up for is a study which will investigate the relationship between (1) the ways people think about others--how they go about describing them, what differences and similarities they see among other people, and some of their attitudes about things in general--and (2) the ways people talk about themselves and listen to other people.

This project has two parts:

- (1) If you sign up, first you will come to a large session and fill out a number of paper-and-pencil measures. Please come promptly at the scheduled time.
- (2) Then, after this first session, you will receive a notice in the mail, and a week or so later come back to participate in a small group exercise. In this exercise you'll be talking some about yourself to another person and listening to another person talk about himself/herself. You'll be filling out your impressions of these interactions. The group exercise will be audiotaped so that the researcher can remove information later about styles of talking and listening.

However, all materials will be coded--your name will be removed from any written material and replaced by a code number, and no names will be used in the audiotaping procedure to protect your confidentiality.

This research is the first part of a doctoral dissertation and will be conducted by a graduate student in clinical psychology. I hope you'll decide to participate.

Valerie Brewer

Please sign up on the adjoining sheet and take a card reminding you of the time and place of the first meeting. You may take this description with you.

Informed Consent

I have read the above description and voluntarily agree to participate in this project in exchange for extra credit in Psych. 103. I give my permission for audiotaping and recognize that the above precautions will be taken to protect my confidentiality. I also understand that I may decide not to participate at any time and will only forfeit extra credit as a result.

Name _____

#1, #2

Pledge of Confidentiality

I agree not to discuss anything said in this group
exercise with persons outside of this group itself.

Name _____

Abstract #2: Doctoral Dissertation Proposal

Title of Proposal: The interaction of conceptual level/integrative cognitive complexity of participants and degree of structure in personal development groups as it affects satisfaction and learning of communication skills: The application of David Hunt's matching-model to a counseling analogue.

Principal Investigator: Valerie Brewer
Ph.D. Candidate
Department of Psychology, URI

Other Participants: Major professor: John Stevenson, Ph.D.
Department of Psychology, URI

Research assistants: 3-4 advanced graduate students
in clinical or counseling
psychology.

Please see Abstract #1, proposed pilot testing of the measures to be used in this study, as the same measures will be used in this project.

Subjects to be Involved: Subjects will be 60-90 male and female undergraduates enrolled in three sections of an introductory-level psychology course, Towards Self-Understanding, over the summer session. The group interventions which form the substance of the dissertation aim to teach skills in active listening, giving constructive feedback, explaining concepts and self-disclosing clearly, and expressing ideas nonverbally. As such, they are ideally suited to the course content of this course. Contracts will be made with the instructors of each course to use six class sessions for the running of these groups. The instructors of these sections, Drs. Berman, Gross, Schiff have expressed interest in incorporating these groups into the syllabi of their courses. Subjects therefore would participate in this study as part of their planned course experience. However, informed consent and confidentiality procedures would still hold, and subjects would have the option (as indeed students do) of not participating at any point without jeopardizing their class standing in any way.

Project Summary: This project will investigate the relationship of conceptual level (See Abstract #1 and the longer research proposal) and the degree of structure in group interventions as it affects satisfaction and the learning of communication skills. David Hunt, in educational research, has been studying a

Abstract #2 - Page 2

matching-model which postulates that students high in conceptual level--that is, students whose reasoning is relativistic--profit more from and are more satisfied with low structure interventions (such as discovery-learning or open discussion group formats) than with high structure interventions (such as lecture formats). The inverse finding holds for students low in conceptual level (students who use more dualistic information-processing strategies). These students are more satisfied with and profit more from high structure than low structure interventions. The current project will investigate these hypotheses as they pertain to structured vs. unstructured personal development groups, teaching the topics specified above.

Nature of the Subjects' Participation: See also Abstract #1. Subjects would complete the measures described in Abstract #1. In addition, subjects in two sections would participate in group interventions. These interventions are described in detail on pages 28-29 of the longer proposal. Subjects in the structured group condition would participate in structured exercises teaching skills in active listening, giving constructive feedback, explaining concepts and self-disclosing clearly, and expressing ideas non-verbally. Subjects in the unstructured group condition would participate in less formal discussion groups on the same topics. Leaders of the groups would be advanced clinical or counseling psychology graduate students with training in group process, supervised by the director of this project. Group sessions will be audiotaped with the permission of participants.

Risks Involved: I see no risks involved which have not been discussed in Abstract #1.

Informed Consent: Before embarking upon this part of the course, subjects will receive a written description of the project and an informed consent form. Students not wishing to participate would have alternate coursework arranged for them. Students will also sign a pledge to keep anything talked about in the group confidential, as in Abstract #1.

Confidentiality: See Abstract #1. The same safeguards would be used in this study.

#2e

INFORMED CONSENT FORM FOR EXPERIMENTAL
GROUP SUBJECTS

In the next six meetings of class we'll be doing two things--

- (1) First, we'll be participating in small groups to study interpersonal communication, learning about topics such as how to be a good listener, how to communicate clearly, how we communicate nonverbally, and how to give feedback in ways that make friends rather than alienate them.
- (2) Secondly, at the same time, we'll be participating in an actual psychological research study on ways people with different styles learn to communicate more effectively. This research is part of a doctoral dissertation being conducted by a URI graduate student in psychology, Valerie Brewer.

In the six meetings to follow, you'll be filling out some paper-and-pencil measures, participating in various discussions or group exercises. Sessions will be audiotaped, but only the researcher will listen to tapes for research purposes. All materials will be coded--that is, your name will be removed from any material and replaced by a code number to protect your confidentiality. Your instructor will not see any questionnaire data and your grade will not be dependent on your responses.

If for some reason you do not want to participate in the research, let your instructor know and we will arrange an alternative class project for you. However, we encourage you to attend as we believe the experience will be a rewarding one for you. Students in the spring semester of Psych. 103 who participated in this research reported that they even found the experience to be fun! It is important that you attend all sessions, so attendance will be taken.

Informed Consent

I have read the above description and voluntarily agree to participate in this project. I give my permission for audiotaping and recognize that precautions will be taken to protect my confidentiality. If I decide I do not want to continue participating at any time, I understand that I am free to withdraw from the project, but I will inform the researcher so that an alternative class project can be arranged for me.

Name _____

#2c

INFORMED CONSENT FORM FOR CONTROL
GROUP SUBJECTS

Over the next two to three weeks, we will be participating in a research study in psychology.

This research project will examine the relationship between (1) the ways people think about others, how they go about describing them, some of their attitudes about things in general, and (2) the ways people talk about themselves and listen to other people.

On several different occasions you'll be filling out some paper-and-pencil measures or participating in group exercises. Group sessions will be audiotaped, but only the researcher will listen to tapes for research purposes. All material will be coded--that is, your name will be removed from any material and replaced by a code number to protect your confidentiality. Your instructor will not see any questionnaire data and your grade will not be influenced by your responses.

If for some reason you do not want to participate in the research, let your instructor know and we will arrange an alternative class project for you. However, we believe the experience will interest you and give you an opportunity to explore your reactions. Students in the spring semester of Psych. 103 who participated in this research reported that they even found the experience to be fun!

This research is part of a doctoral dissertation being conducted by a URI graduate student in psychology, Valerie Brewer.

Informed Consent

I have read the above description and voluntarily agree to participate in this project. I give my permission for audiotaping and recognize that precautions will be taken to protect my confidentiality. If I decide I do not want to continue participating at any time, I understand that I am free to withdraw from the project, but I will inform the researcher so that an alternative class project can be arranged for me.

Name _____

APPENDIX D
INTERVENTION MANUALS

Structured Communication Skills Group

Content Overview

- Session 1: Sending Clear Messages
- Session 2: Nonverbal Communication & Assertiveness
- Session 3: Being a Good Listener
- Session 4: Giving Feedback

References & Sources

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- Leavitt, H. J. Managerial psychology. Chicago: University of Chicago Press, 1958, pp. 118-128.
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Structured Group

Session #1

Sending Clear Messages

What we're going to be doing in the next few classes is studying different aspects of communication. Today what we'll be doing is looking at how we get our ideas across, what makes for clear communication on the part of the speaker, how to send a message so that the listener understands and remembers what was said.

1. Get Acquainted Exercise (20 min.) Seat people in a circle.
((Goals--(a) To help group members get acquainted in a non-threatening way

(b) To encourage self-disclosure and set a tone of openness for the sessions

(c) To facilitate discussion of what makes some descriptions vivid (nonverbal aspects, self-disclosure, feeling-talk, hitting on universality of experience, details, etc.))

Instructions:

To start out, we're going to do an exercise to learn one another's name. Each person will take a turn and state his or her first name. One person will start by saying his/her name. Then we'll go around the circle and each other person will tell the group what that name brings to mind. What are your associations to that name? This might be the first, or the most remarkable person you ever met by that name; or a story about a person by that name, or what the name sounds like--whatever. Let's start here--(start with one person and go around). (When the circle is completed, have the owner of the name tell the group what he/she knows of how he/she acquired that name--e.g., who is the person named after, etc.) How did you get that name?

After the entire circle is completed, ask what descriptions were most vivid? What made the descriptions vivid, stand out? (Lead the discussion to deduce and summarize ways of making descriptions clear and memorable.)

2. One and Two-Way Communication Exercise (Next Page) (30 min.)

ONE-WAY AND TWO-WAY COMMUNICATION

(Credit: Leavitt, H. J. Managerial Psychology.Chicago: U. of Chicago Press, 1958,
pp. 118-128.)

((Goals-- (a) To examine the impact of one-way communication as compared to two-way communication))

Procedure/Instructions:

1. Tell group they are going to engage in a communication experiment. Have a volunteer describe a series of five squares to the class. Each student should try to draw the figure. The volunteer should be positioned so he cannot see the class and no questions are allowed.
 - a. Record the time it took. Then ask students to estimate the number of squares they drew correctly, and how confident they were of their guess, using a five-point scale from very confident to not confident at all.
2. Have a second volunteer describe the second series of five squares with students trying to draw the figure. Volunteer can see the class, he can answer all questions, and he can repeat any information. Specific instructions are attached, page 4.
 - b. Record the time it took. Then ask students to again estimate the number of squares they drew correctly and how confident they were of their guess.
3. Write tables on the board for the two trials and fill in the student answers, e.g.,

Number correct	Guess	Actual
5		
4		
3		
2		
1		
0		

Confidence	
very 5	
4	
3	
2	
Not at all	

4. Next show the students the correct figures and ask them how many squares they positioned correctly--fill in these figures on the tables in the column labelled actual.
5. Discuss these results, emphasizing the impact of the different situations in terms of time, accuracy, and level of confidence. Try to have class relate this to interpersonal communication--when do barriers arise that basically result in one-way communication, what other impacts occur when this happens (e.g., impact on feelings, etc.). When is one-way communication desirable in interpersonal situations? When is it harmful?

Note:

1. Make sure to keep track of the time for each of the trials.
2. Do not get into argument about reality of the experiment; some students may try to dismiss the experience as being completely artificial. Do not argue with them; just say there seem to be analogies to this situation in real-life interpersonal situations and try to explore them.

CHART I. ONE-WAY COMMUNICATION
INSTRUCTIONS: Study the figures above. With your back to the group, you are to instruct the participants how to draw them. Begin with the top square and describe each in succession, taking particular note of the relationship of each to the preceding one. No questions are allowed

CHART II. TWO-WAY COMMUNICATION
INSTRUCTIONS: Study the figures above. Facing the group, you are to instruct the participants how to draw them. Begin with the top square and describe each in succession, taking particular note of the relationship of each to the preceding one. Answer all questions from participants and repeat if necessary.

One-Way

Two-Way

"The typical result of the exercise is that one-way communication is quicker, less accurate, and the level of confidence of the receiver is lower.

Two-way communication takes more time, but it is also likely to be more accurate and the level of confidence of the receiver is higher. The sender, however, usually is more disturbed and frustrated during the two-way communication process."

D. Johnson. Reaching Out. New Jersey: Prentice-Hall, Inc., 1972, pp. 69-70.

3. Handout and Lecturette (10 min.)

Handout to each group member the memo "Sending Clear Messages" and go over it in mini-lecture form.

4. Adapting Messages to Another Person's Perspective (rest of session, 30-45 min.)

((Goals--(a) To apply the principles in the above memo to adapting a message to the perspective of a person with a different frame of reference than the sender))

Divide the group into two subgroups (3 apiece, for a group of 6 members).

Each "team" is to explain certain concepts to a young school-age child. You (the group leader) will play the child and ask questions. Questions are outlined below. You may add "huh," "I don't get it" comments and the like, depending upon the specific role-play and how the person is doing. (We'll go over this in leader training). But be sure to ask the questions written below as a minimum.

Instructions to group members:

Okay, what we're going to do next are some role-plays to give you a chance to practice what we were just discussing. First we're going to form two teams (do so). The task for each team is to answer the questions, explain as best you can the answers to questions asked by a young school-age child (say, between ages 6 and 11). I'm going to be the child. Each team should first pick a spokesperson who'll start out the explaining. Whenever that person is having any difficulty, he/she can pass the ball to another teammate who'll help out. Teammates should wait to be asked to help before chiming in. Each team will have two tries, so pick two spokespeople before starting out. (Give teams a chance to do this). The other team will watch. (Take turns, giving Team A the first trial, Team B the second trial, Team A the third, and Team B the fourth).

(Do as many as you have time for--if you run out of time, that's ok--if you have time left at the end of the session, open the floor for discussion).

Role-play questions are on page 5 of this manual.

Sending Clear Messages

(Credit: Handbook for Group Facilitators.
La Jolla, California University
Associates, Inc., 1976, pp.
152-153.)

ENCODING A MESSAGE

In order to make ideas clear, an individual must encode his message in order to reduce the amount of uncertainty the other person experiences in hearing that communication. Encoding is the process of translating ideas into a message appropriate for delivery. Once ideas are encoded into messages, they become the potential information that can reduce ambiguity in the other person's mind and produce a clearer picture. There are seven principles for increasing the accuracy and clarity of the messages persons use to communicate.

1. Principle of Relevance

Make the message relevant in the terms of the listening party. The most difficult task related to encoding a message is to assemble it in such a way that the words used accurately reflect the picture one intends and, at the same time, fall within the other person's psychological frame of reference. If a listener is to comprehend the sender's message, he must be able to relate the information he is receiving to what he already knows. Therefore, it is important that the message be presented in a context that says to the listener, "This is important and significant for you." This can be done by using the words of the listening person rather than one's own to encode a message. Such a strategy in communication requires adaptability and flexibility in communication behavior, so that, whether speaking to a child, a teenager, an adult, or persons from different cultural and subcultural backgrounds, the communicator employs appropriate behaviors for sending a clear message.

Just as the encoding of a message should be relevant to the person to whom one is speaking, so should it be appropriate to the situation or the context. The content of a conversation in the privacy of a home is not necessarily appropriate for a discussion at a church committee meeting. Even if the topic were the same in both situations, the message would very likely be encoded quite differently.

2. Principle of Simplicity

Reduce ideas to the simplest possible terms. The communicator should employ as few words as possible to communicate his ideas to a listener. Simplicity of language and economy of words are helpful in facilitating clarity of communication. Generally, the simpler the words, the more likely they are to be understood. However, simplicity really relates to the experience of the person receiving the message. What is simple to one person is complex to another. Theological material that is easily

understood by the student of theology may seem quite complicated when presented to the layman in a Sunday morning sermon. The effective communicator calculates the extent to which material must be simplified if it is to be understood by those listening, and he uses the principle of simplicity to make sending messages more successful.

3. Principle of Definition

Define before developing, explain before amplifying. Even simple terms can be unclear. Where would a person go, for example, if someone said, "I'll meet you at the side of the building"? Terms more complicated than "side" increase the need for definition and explanation. The use of jargon also creates problems of clarity for those not acquainted with the words. Unfamiliarity with jargon may cause a person to become confused and frustrated in his efforts to understand. He may even stop trying. Unfamiliar or exceptional terms or concepts need to be defined and explained before they are used to make the communicator's message as clear as possible.

4. Principle of Structure

Organize a message into a series of successive stages. Texts on public speaking emphasize the importance of making apparent the order or structure of a message. A well-organized speech, it is said, will increase the audience's understanding. However, there is little research evidence to support such a contention, especially in regard to face-to-face dialogue. Indeed most people will structure the message in accordance with their own patterns of thinking even as they listen, regardless of how well a message is organized.

What is important is the clarity of thought and the expression of individual parts. In interpersonal communication it is probably best to develop one idea at a time. A message can be "packaged" into a series of stages, with one stage completed before the next is introduced.

Furthermore, the communicator can help the person listening by not overloading him with information. When persons are asked to comprehend too much, they tend to forget or become confused. By developing one idea at a time and taking one step at a time, the person speaking can facilitate accuracy in communication.

5. Principle of Repetition

Repeat the key concepts of the message. The principle of repetition is important. Very important. The words "very important" were repetitive. They repeated the idea of the second sentence in a slightly different manner in order to make the concept clearer. Repetition is particularly important in oral communication, where words are spoken only once. Obviously a communicator should not repeat everything he says since it would bore the listener. However, the person speaking needs to use enough repetition to ensure clear reception of his ideas. Some possible strategies: (a) repeating key ideas, (b) restating difficult ideas, (c)

recycling ideas wherever feedback indicates they are weak or misunderstood, and (d) using examples, synonyms, analogies, or periodic summaries. In short, a person should use intentional repetition in his attempts to achieve clarity.

6. Principle of Comparison and Contrast

Relate new ideas to old ideas; associate the unknown with the known. The principle of comparison and contrast is essential to the achievement of clear communication, as understanding comes most often through association--the perception of similarities and differences among objects, events, and people. A person can understand a new, unknown idea more clearly if he is able to relate it to an old, known one.

Discriminating between those elements that rightfully belong to an idea and those that do not will help a listener understand a concept. Comparison helps individuals to identify the similarities in two or more ideas. Contrast helps to point out the differences in two or more ideas. When accurate discriminations occur, clarity in communication emerges: the sharper the discrimination, the greater the clarity.

Helpful devices for presenting comparisons and contrasts include the use of models, metaphors, analogies, and explanations.

7. Principle of Emphasis

Focus on the essential and vital aspects of the communication. Since the transitory nature of interpersonal communication makes it highly susceptible to loss of information, attention should be given to the essential and vital aspects of a message. Communication goals and key points should be sharply focused so as not to submerge the message in details and make it vague, ambiguous, and blurred. The impact of the significant points of a communication can be heightened by speaking louder, using a different tone of voice, pausing, or using various other techniques to captivate the listener. Reinforcing and underscoring ideas help in developing such impact. For example: this last principle is an important one--remember it and use it.

Team A, role-play 1:

Child (leader): "What good is blood?"

"How come when you cut yourself it doesn't all run out?"

"Does a plant have blood?"

"When people say they want to put down roots, what do they mean? I wouldn't want hairy stuff on the bottom of my feet."

"When they say they're tracing their roots, what do they mean?"

"What's a family tree?"

Team B, role-play 1:

Child (leader): "What's evolution?"

"If, like, my great-grandparents were monkeys, how come I don't look like a monkey?"

Team A, role-play 2:

Child (leader): "What does camouflage mean?"

Team B, role-play 2:

Child (leader): "What's a hostage?"

"How come Iran doesn't like us?"

Structured Group

Session #2

Nonverbal Communication& Assertiveness

(Seat members in a circle)

Today we're going to be examining nonverbal communication, and also the concept of assertiveness.

Lecturette (adapted from D. Johnson, Reaching Out):

In 2-person communication verbal messages frequently carry less than 35% of the meaning of a situation, whereas nonverbal components account for as much as 65%.

Nonverbal behavior usually communicates feelings, preferences, likings, and backs up--or doesn't--the verbal message expressed. Some of the problems here are that nonverbal messages are ambiguous--this makes it hard for the listener to know what the speaker is communicating--especially since it is possible to communicate one thing verbally and something totally different nonverbally--Which message do you believe?

The first exercise we're going to do illustrates this.

1. Verbal and Nonverbal Incongruency (30 min.)

((Goals--(a) to demonstrate verbal & nonverbal incongruency

(b) to identify and discuss nonverbal cues, pointing out cues which carry similar meaning to most people, but at the same time demonstrating the greater ambiguity and variability of decoding by interpreters of nonverbal than verbal cues))

Instructions:

We're going to go around the circle and play a guessing game. I'm going to state a phrase. Then one by one, each person will repeat that exact phrase trying to give a totally different meaning to the phrase by the way it's said. One person will go at a time. You can change the tone of voice, your body posture or movements, emphasis on whatever words are in the phrase, but don't change or add any words. After each person says the phrase, other group members will say what it sounds like the person meant and why. If someone had said that to you, what would you assume they were trying to communicate? The person who said the phrase should keep quiet until after other group members have interpreted the message, then he or she will be asked what was intended.

(Leader starts with first phrase. If different ways of saying the phrase are exhausted before one go-around, or if someone blocks after 3 or 4 statements, go on to a new phrase).

Phrases to draw from--Use a minimum of two and a maximum of ? depending upon time and how long or exciting the discussion is.

"I love you"

"Are you kidding"

"I don't really care"

"I'd like to get to know you better"

"Do you know what I mean"

Make sure some renditions are congruent (I love you expresses affection, etc.), Do this yourself if members do not.

Lecturette excerpt: (To be included by leader in summary of exercise)

In an article in Psych. Today (Beier, E. G. Nonverbal communication, how we send emotional messages. Psych. Today, October, 1974, pp. 54-56.), a psychology professor reports an experiment which demonstrates these points.

"He asked several people to act out six different moods on videotape. The moods were anger, fear, seductivity, indifference, happiness, and sadness. Then he let the subjects review their portrayals and eliminate any that they felt were unrepresentative. The chosen portrayals, in other words, were emotionally authentic in the eyes of their creators.

When he played these videotapes to large audiences to discover if they could decode the moods intended, he found that most senders were able to project accurately only two of the six moods. The particular moods, of course, varied from sender to sender, but in general . . . everyone appear(ed) to send out misinformation. Their portrayals often failed to represent their intentions. . . ."

He notes several examples. One of the most striking is a girl who tried to appear angry, fearful, seductive, indifferent, happy, and sad, and who subsequently edited her own performances for authenticity--felt she was conveying these emotions. The judges judged her as angry in every single case. Imagine what a difficult world she must have lived in.

Assertiveness

Introduction:

We've noticed, in the above exercise that some ways we say things sound mean, angry and aggressive; some say "I don't mean what I say" and suggest timidity, embarrassment, and lack of self-confidence; and some can be taken at face--or rather, verbal--value, they say what they mean.

This is very close to what is meant by "assertiveness" and we're going to spend the rest of the session on this concept.

Lecturette:

What is Assertive Behavior?

One set of authors describes the goal of assertive behavior: "To . . . pinpoint what our real feelings are, (to) . . . communicate directly, honestly, and appropriately." "We can do this without infringing on the rights of others, and we can feel comfortable with our own new behavior. This is what being assertive is all about." (Bloom, Coburn, Pearlman, The new assertive woman)

"Characteristics of assertive behavior include expressing your feelings, needs, and ideas, and standing up for your . . . rights in ways that don't violate the rights of others." (Bloom et al.)

Assertive behavior involves making choices for ourselves and expressing ourselves directly and honestly rather than choosing for others or allowing others to choose for us and infringe on our rights. Sort of, standing up for oneself and one's integrity without stepping on or getting stepped on.

Bloom et al. express this as follows: "Assertive behavior is . . . the golden mean between aggressiveness at one extreme and non-assertiveness at the other."

Why Assertive Behavior?

Aggressive behavior obtains goals but at the expense of others. The consequences are alienation from others, retaliation from them, and lack of cooperation.

Nonassertive responses try to avoid unpleasantness and confrontation at the expense of one's own rights and goals. The consequences are goals are not met, the person usually feels bad about himself/herself, and the person may become overburdened by not saying "no."

Assertive responses take responsibility for self, usually but not always attain goals without a sacrifice to one's self-esteem and without hurting others.

By way of example, I'm going to demonstrate some responses, and you identify whether they are aggressive, nonassertive, or assertive.

(Leader reads situations and role-plays responses on next 2 pages)
(pgs. 5-8)

Notice particularly the nonverbal aspects.

Ask participants to identify nonverbal aspects of aggressive, nonassertive, and assertive responses.

After discussion, Pass out Handout "Verbal and Nonverbal components of Behaviors." Briefly, draw their attention to the handout. (pg. 9-10)

2. Introduction to Assertiveness (20 min.)

((Goals--(a) to begin differentiating assertive from aggressive and nonassertive responses in a low-pressure atmosphere))

Instructions:

Okay, I'm going to present a situation, and we're going to go around in a circle. Each person is to give a response to the situation. The response may be assertive, nonassertive, or aggressive; don't say which. Your choice. Others listen.

Present Situations on Page 11.

Leader Examples

(from L. Bloom, K. Coburn, J. Pearlman: The new assertive woman New York: Delacorte Press, 1975, pp. 19-22.)

The alternative answers to the following examples indicate possible nonassertive, assertive, or aggressive responses to given situations.

A. You and Jessica are co-workers in an office. Jessica asks you to give her a ride home every evening from now on. You don't want to do it. So you answer:

1. Well . . . uh . . . I guess I could . . . [pause] . . . Uh . . . O.K." (Non-assertive: non-verbal pauses, with apparent hesitancy)
2. "I'd love to take you, but sometimes I have to stop at the market on the way home. And sometimes I leave late." (Non-assertive: excuses)
3. "What's the matter? Haven't you and Norman gotten around to buying that second car yet?" (Aggressive: sarcastic)
4. "You've got a lot of nerve! Do you think I have nothing better to do than chauffeur you around?" (Aggressive: attempt to make the requester feel guilty)
5. "I know it's a pain to wait around for Norman to pick you up, but I'd rather not be tied down to giving you a ride every night. I'd be happy to do it once a week, though." (Assertive: compromise)
6. "I understand that you don't like having to wait for Norman to pick you up every night, but I really don't want to be tied down to having to take you." (Assertive: direct refusal)

B. It's your lunch hour. You're waiting for a friend. She breezes in a half-hour late, sits down and without any reference to her late arrival asks, "How are you?" You answer:

1. "Fine, thanks," said with a smile. (Non-assertive: denial of actual feelings)
2. "O.K., I guess," said with a frown on your face. (Non-assertive: attempt to communicate the real message, but indirectly)
3. "What do you mean, how am I? How do you think I am, sitting here, waiting for you and staring at the ceiling? Do you ever stop to think of anyone but yourself?" (Aggressive: an attempt to humiliate the latecomer)
4. "Well, I'd been looking forward to our lunch, but since I've been waiting so long, I've really gotten upset. Now we'll have only a half-hour together." (Assertive: a direct statement of feelings)

C. Just as you're about to go out the door, Anna calls you on the telephone. She starts to tell you about the problem she's been having with her parents. You're anxious to get off the phone. You say:

1. "I'd like to hear more about it later. I was just on my way out when you called. I'll call you back tonight." (Assertive: direct statement of wishes)
2. "Look, I'm too busy to talk to you now. You've always got some little problem, and I have more important things to do. Good-bye." (Aggressive: disregard of the other's wishes and feelings)
3. You listen . . . and listen . . . and listen . . . (Non-assertive: accommodation of the other's needs at the expense of your own)

D. You're standing at the blouse counter. The saleswoman says, "Who's next?" It is your turn. The woman next to you says, "I am." You turn to her and

1. smile. (Non-assertive: accommodation of the other's needs at the expense of your own)
2. frown silently. (Non-assertive: attempt at indirect communication of your wishes)
3. mutter under your breath, "Some people are so pushy"--but you say nothing aloud or directly to anyone. (Non-assertive: repression of your own wishes)
4. say, "I believe I was here before you." (Assertive: direct expression of your own wishes)
5. say, "No you're not. I was here first. You can't take advantage of me, lady." (Aggressive: hostile overreaction)

E. You're at a community meeting. A man speaks up and urges the voters not to appropriate money for a day-care center. He gives inaccurate information in his attempt to persuade people that there is no need for such a facility. You disagree with his ideas and his data. You

1. stand up and say, "I've heard what you have to say and I disagree with you. I would like you to listen to my point of view." (Assertive: stand up for legitimate rights without violating the other's rights)
2. stand up and say, "You're a liar. You don't know what you're talking about." (Aggressive: intent to humiliate)
3. say nothing to anyone. (Non-assertive: refrain from expressing your own opinion)

8.

4. stand up and say, "I don't know much about this. I'm no expert, just a mother, but . . ." (Non-assertive: self-demeaning and self-depreciating)
5. whisper to the person sitting next to you about how stupid the speaker is. (Non-assertive: indirect, inhibited behavior)

Verbal and Nonverbal Components of Behaviors

(taken from L. Bloom, K. Coburn, J. Pearlman, The new assertive woman. New York: Delacorte Press, 1975, p. 156).

Verbal and Nonverbal Components of Behaviors

	NON-ASSERTIVE	ASSERTIVE	AGGRESSIVE
I. VERBAL	<p>Apologetic words. Veiled meanings. Hedging; failure to come to point. Rambling; disconnected. At loss for words. Failure to say what you really mean. "I mean," "you know."</p>	<p>Statement of wants. Honest statement of feelings. Objective words. Direct statements, which say what you mean. "I"--messages.</p>	<p>"Loaded" words. Accusations. Descriptive, subjective terms. Imperious, superior words. "You"--messages, that blame or label.</p>
II. NONVERBAL	<p>Actions instead of words, hoping someone will guess what you want. Looking as if you don't mean what you say.</p>	<p>Attentive listening behavior. General assured manner, communicating caring and strength.</p>	<p>Exaggerated show of strength. Flippant, sarcastic style. Air of superiority.</p>
A. General			

10.

Verbal and Nonverbal Components of Behaviors (Cont.)

	NON-ASSERTIVE	ASSERTIVE	AGGRESSIVE
B. Specific 1. Voice	Weak, hesitant, soft, sometimes wavering.	Firm, warm, well- modulated, relaxed.	Tense, shrill, loud, shaky, cold, "deadly quiet"; demanding, super- ior, authoritarian.
2. Eyes	Averted; downcast, teary, pleading.	Open, frank, direct. Eye contact, but not staring.	Expressionless; narrowed; cold; staring; not really "seeing" you.
3. Stance and Posture	Lean for support; stooped; excessive head nodding.	Well-balanced, straight-on; erect, relaxed.	Hands on hips; feet apart. Stiff & rigid; rude, imperious.
4. Hands	Fidgety, fluttery, clammy.	Relaxed motions.	Clenched; abrupt gestures; finger-pointing; fist-pounding.

Group Examples:

(taken from Alberti and Emmons. Your perfect right. San Luis Obispo, CA: IMPACT, 1970, pp. 54-60.)

Possible Situations

Slumber Party

Your twelve-year old daughter is having a slumber party with five other girls. It is past 2 a.m. and the girls should have settled down to sleep by now, but are still quite noisy.

Possible Responses
(Your group will no doubt come up with different ones)

Alternative Responses:

(a) You toss and turn in bed wishing your spouse would get up and say something to the girls. You do a slow burn, but just lie there trying to block out the sounds.

(b) Jumping out of bed, you thoroughly scold and berate the girls, especially your daughter, for their unladylike conduct.

(c) Talking to girls in a tone which they will recognize as meaning business, you tell them that they have had enough fun for tonight. You point out that you need to arise early tomorrow, and that everyone needs to get to sleep.

Visiting Relative

Aunt Margaret, with whom you prefer not to spend much time, is on the telephone. She has just told you of her plans to spend three weeks visiting you, beginning next week.

Alternative Responses:

(a) You think "Oh, no!" but say "We'd love to have you come and stay as long as you like!"

(b) You tell her the children have just come down with bad colds, and the spare bed has a broken spring and you'll be going to Cousin Bill's weekend after next --none of which is true.

(c) You say "We'll be glad to have you come for the weekend, but we simply can't invite you for longer. A short visit is happier for everyone, and we'll want to see each other again sooner if we keep it brief."

Making a Date

You are interested in a date with a person of the opposite sex whom you have met and talked with three or four times recently.

Alternative Responses:

(a) You sit around the telephone going over in your mind what you will say and how your friend will respond. Several times you lift the phone and are almost finished dialing, then hang up.

(b) You phone and as soon as your friend answers you respond by saying "Hi baby, we're going out together this weekend." Seemingly taken back, your friend asks who is calling.

(c) You call, and when your friend answers you ask how school (job, etc.) is going. The reply is "Fine, except I am worried about a test I will be taking soon." Following the lead, you talk for a few minutes about the test. Then you say that there is a show downtown this Friday evening and that you would like it if the two of you would go together.

3. Practice with Assertiveness and Nonverbal Communication (rest of session)

((Goals--(a) To apply principles learned in this session))

Instructions:

Next we're going to practice assertive responses. Each person think of a situation in which you need to be more assertive. . . .

(Give members a few moments).

We're going to role-play these situations. One member will set the scene--describe what the situation is. I'll play the other person. Other members will observe and comment. (Assign one or two members to focus on the voice, one or two members to focus on eye contact, one or two members to focus on posture and hands, one or two members to focus on verbal components; depending on how many are in the group). Make sure verbal and nonverbal components of your message are congruent.

(Give each member a chance to play the situation, receive feedback, and replay the situation a second time, until time runs out. Facilitate discussion. Adjust the difficulty of the assertion to the skill of the participant.)

Structured Group

Session #3

Being A Good Listener

Next we're going to be looking at how to be a good listener.

Lecturette:

In our previous session we were looking at the concept of assertiveness. Assertiveness in personal relationships usually involves more than just saying what you want. It involves listening to the other person, letting him/her know that you hear and understand what the other person is saying and feeling. And only after communicating this understanding, communicating your own feelings and wishes.

Some ways of listening and responding alienate the other person--particularly listening and responding with judgmental statements--"I think you're wrong," "That's a ridiculous way to feel," "Don't feel like that."

Other ways of listening let the know that you're following along, paying attention, and trying to understand the person's message in the same way the person himself/herself understands it.

A good way to do this is to feed back to the person your understanding of the other's message, essentially saying "Here's my understanding of what you're feeling or experiencing, am I right?" To do this you reflect back to the person, restate the way you understand the other person's total communication--the words of the message plus the feelings that go with the message. Sometimes this is called paraphrasing, but it is more than just repeating the other's message in different words--Paraphrasing involves communicating your understanding of what has just been said and felt to see if it matches what the person speaking has meant and experienced.

In doing this it is helpful to use phrases which are tentative, since you are not positive you understand--that's why you're checking your impressions out. For instance, "Is what you're saying . . .?"

"Sounds as if . . ."

When to paraphrase? Especially when the other person has strong feelings about what he/she is saying, or is expressing a problem. It is inappropriate to paraphrase simple, neutral, straightforward comments. If someone asked you "Where is the Memorial Union?" you would not say "Sounds like you're looking for the Memorial Union." However, if someone said to you "If this phone rings one more time I'm going to quit this job, I can't stand it with all the typing and phones and people coming in." You might say "Boy, you sound really hassled and overloaded with too many things to do all at the same time."

We're going to start out today with a demonstration.

1. Modeling Active Listening (15 min.)

((Goals--(a) to demonstrate paraphrasing and to correct misunderstandings about this technique in a modeling/teaching situation before group members are asked to try it and may practice poor technique))

a. Ask for two volunteers, one male and one female.

b. Instructions:

Okay, we're going to practice a paraphrasing situation. I want the two of you to imagine that you have been dating one another for about a year. At the beginning you were very much in love, both of you. However, in the past 3-4 months you (speak to the female) have drifted out of love and have met someone else that you want to start dating. However, you don't want to hurt his feelings. You (speak to the male) don't know anything about this and are still very much in love and in fact want to marry her. You (female) have asked to talk today to clarify the situation. Got it? (Check with both members.)

Now, one of you is to begin. The other is to listen and paraphrase what the first person says. Only after paraphrasing, can you then respond to what has been said--your reactions. After the second person responds, the first must paraphrase before adding more. In other words you are to take turns--each of you must paraphrase before responding from your own perspective. This is to make sure you understand what the other is saying.

c. Leader monitors interaction. (Most commonly, role-players will not paraphrase but respond immediately--make sure paraphrasing occurs. The second most common problem is the responder paraphrases incorrectly, misstating what has been said or felt; in this instance ask the first person if the paraphrase is correct and/or model a better response, keeping in mind to do this in a therapeutic way.)

d. After 10 minutes or when the interaction ends, if before, lead discussion of the exercise.

2. Practicing Active Listening (30 min.) (Credit: D. Johnson, Reaching Out, p. 73).

((Goals--(a) to give members opportunities to practice paraphrasing skills))

a. Divide Group into pairs.

b. Designate one member of the pair A, the other B.

c. A makes a statement to B either about himself/herself, something A has some feelings about, or about B, something A also has some feelings about, or about the relationship between them.

- d. B paraphrases A's statement, stating in his/her own words what A's remark meant to him/her. There is to be no discussion of the statements. A simply makes the statement: B paraphrases it back. Remind participants of some general rules for paraphrasing:
 1. Restate the other person's expressed feelings and ideas in your own words, don't mimic or parrot the exact words of the other person.
 2. Preface reflected remarks with "You feel, . . ." "You think, . . ." "It seems to you that . . ." "It sometimes appears to you that, . . ." and so on.
 3. In paraphrasing another person's statements, avoid any indication of approval or disapproval. Refrain from blaming, interpreting, giving advice, or persuading.
- e. A makes a second statement to B. B paraphrases it.
- f. A makes a third statement to B, B paraphrases it.
- g. Reverse the process. B makes three statements to A; after each one A paraphrases it back.
- h. Reverse process again for another round of 3 statements by each member. (During this time, group leader circulates and helps members with paraphrasing.)
- i. Group discussion.

Summary statement: Before a listener responds, it is important that he/she indicates he/she has attended to the speaker and understands what is being communicated. Paraphrasing is a good first step.

3. Troubleshooting on Problem Listening (40 min. or rest of session)

Group discussion:

So far we've been talking about paraphrasing as a skill to improve listening. It's worthwhile also to talk a little about what gets in the way of good listening and what makes for poor listening. This is what we're going to discuss next. In the discussion, each person also try to paraphrase what someone else is saying, at least once.

What makes for poor listening? What do people do that shuts down conversation? When you're telling someone something, what sorts of responses aggravate rather than help you?

Lead discussion. Facilitate and model paraphrasing in the discussion to clarify points. Encourage group members to do likewise.

Following discussion pass out Handout "How we shut people up" and go over it after discussion has slowed down. Try, however, to use the probes above and facilitating comments to enable group members to arrive at many of the concepts first and to allow for practice of paraphrasing.

How We Shut People Up

(Credit: Muriel Schiffman
exact reference unknown)

Communication is a two-way affair. Besides expressing our feelings to others, we must permit others to express their feelings to us. Here are some ways I see people in the workshops shutting others up, stopping communication:

1. Explaining too soon: justifying oneself before responding to the other's feeling. (The hidden message: You have no right to feel that way.)
2. Reassuring before responding to feelings: "You don't have to be hurt." (You're stupid to feel that way.)
3. Condescending: "Tell me all about it. I want to help you." (I don't care how you feel about me; you cannot move me. I'm so strong and you're so weak.)
4. Blackmailing: "You're giving me a headache, heart attack, depression." (I'm so sensitive and you are a brute.)
5. Responding too soon: "I'm sorry, I didn't mean it. I know how you feel" before the other has had a chance to express his feelings fully. (I don't want to hear. Please stop feeling.)
6. Interpreting: "You are hostile to me because I remind you of your mother." (I don't care how you feel about me; you cannot move me. I'm so clever and you are so sick.)
7. Punishing: "Oh yeah? Well let me tell you what you did." (I'll get you, you dirty rat. You'll be sorry you picked on me.)
8. Pretending to be stupid: "Sorry, I don't understand what you're talking about." (And I don't want to, so why don't you give up?)
9. Passing the buck: "That's your problem." (I don't care how you feel about me, and you cannot move me. I'm so healthy, and you are so sick.)
10. Changing the subject by replying to the content instead of the emotion; getting into an intellectual discussion to avoid responding to the other's feeling: "That's very interesting. I've often noticed that women tend to have that attitude toward men. Why do you suppose that is?" (As an individual person, you are unimportant. Don't take yourself so seriously.)
11. Playing lawyer: "When did I say that? I never said those words." (You made a mistake in this detail and that proves you have no right to your feelings.)

12. Turning the whole thing into a joke with a witty remark. (You are not worth taking seriously.)
13. Scolding: "That's very rude." (You are a vulgar child, beneath my notice. I cannot take your feelings seriously. You are worthless.)
14. Being bored or absentminded: "Sorry, I didn't hear you. My mind wandered." (Your feelings are unimportant.)
15. Deadpan, no response. (You are beneath my notice).

How we stop an encounter between others:

1. Interrupt with your own irrelevant feelings: "That reminds me of what happened to me." (I'm not interested in you people. Shut up and listen to me.)
2. Interrupt with your own relevant feelings before they have had time to express their feelings. "This is upsetting me."
3. Scold the aggressor before the victim has had a chance to defend himself.
4. Express your empathy with the victim before he has had a chance to express his own feelings.
5. Change the subject too soon, before the people in the encounter have had a chance to explore their feelings sufficiently.

Structured Group

Session # 4

Giving Feedback

(Seat members in circle)

Today we're going to be looking at ways of giving others feedback.

Lecturette: I-messages and the description of feelings (Lecturette)

To start out with, we're going to talk about a concept that's gained a lot of attention in the popular press, something called "I-messages."

Quite simply, an I-message is "a statement that describes you; it is an expression of your feelings and experience. It is authentic, honest, and congruent. And since I-messages express only your inner reality, they do not contain evaluations, judgments, or interpretations." (Linda Adams, Effectiveness training for women. New York: Wyden Books, 1979, p. 31)

I stands for the pronoun I, not "eye" that you see with.

It is important to use the pronouns, I, me, my, when relating your own feelings. By so doing, we take responsibility for our feelings.

It's also important to avoid making statements that "sound" as if they are descriptions of the other person's behavior but really are descriptions of our own feelings. Feelings are expressed by words like "Glad, sad, mad, had" and so forth. "I feel sad" is an example of an I-message expressing a feeling.

Notice the difference between "You never listen to me" and "When you look at the wall and I'm talking to you, I feel angry." The second part uses "I" and describes a feeling. The person states specifically a behavior and then the feelings that this behavior evokes in the person, taking responsibility for the feelings "I feel angry"--not "you make me angry," not "you never listen to me."

Another example--"You're inconsiderate" really says "When you behave that way I feel hurt."

1. Practicing I-messages (2-5 min.)

((Goal--to give members practice with the concepts spelled out above))

Let's go around the circle and each person give an example of an I-statement with feelings. (Leader starts--"I feel a little nervous when I start out talking in front of a group, so I feel a little nervous now"; or "I feel excited"; or whatever leader is feeling.)

(Then go on to next person. Monitor and teach as people make statements, repeating some statements--e.g., "I feel confused"-- yes, that's one. Or "I don't understand"--right, that's an I-statement --how does that feel, can you add a feeling?, and so forth. Watch out for "you-statements." "I feel like you're oversimplifying"-- stop the person and point out, "not quite--"like-you're-over-simplifying" isn't a feeling. Um, irritated or bored are--what your I-statement is might be "I feel bored because you're repeating this material and I already understand it." Watch also for confusion of "feel" and "think"--I feel URI is a good school isn't an expression of feelings straightforwardly--either that's "I believe URI is a good school," or "I feel proud or happy to be here at URI because I think it's a good school").

Lecturette: Feedback

When giving feedback, let others know what behavior you are responding to by describing it specifically and objectively enough that they know what you are reacting to. Talk about visible or audible behaviors other people could observe as well, not your interpretations.

A helpful format for doing this is "When you do X, I feel Y," making sure X is an observable behavior and Y is a feeling. The first part of the feedback is a description of specific behavior, the second part is an I-statement with feelings. "When you smile at me while I'm talking, I feel great." "When you yawn, I feel nervous." You can then go on with your interpretations of your own behavior afterwards--When you yawn, I feel nervous. I worry that I'm boring you and I don't want to do that. I like to believe what I'm saying is interesting." But first, state the observable behavior--When you do X; then your reactions in an I-statement of feelings--I feel Y.

What's the matter with this statement? (Ask group)

"When you're rude, I feel like you're a creep."

Answers to be elicited from group:

- a) "rude" is not specific behavior. What might one be? "When you tell stories about times when I've been clumsy and you do this at parties without checking with me first, like just a minute ago. . . ."
- b) You're-a-creep is not a feeling in the sense of glad, mad, sad, etc. What feeling might have been felt? embarrassed, angry.

Notice the difference between "When you're rude, I feel like you're a creep" and "When you tell stories about times when I've been clumsy and you do this at parties without checking with me first, like just a minute ago, I feel embarrassed and angry."

The person receiving the feedback can do something about the behavior after hearing the second version.

2. Translating poor into good feedback (10 min.)

((Goal--to give members practice with the concepts spelled out above))

Okay, I'm going to give you some examples of problematic feedback; you translate it for me into better feedback. (Give examples to group).

a) "You drive me crazy."	Examples of translations:	"When you interrupt me every few moments while I'm studying, I feel hassled."
b) "When you're so nasty you really get on my nerves."		"When you make remarks how I should lose weight in that tone of voice, I feel hurt and angry and get defensive."
c) "You never give me credit for anything, so what's the use of trying?"		"When you tell me ways I should change my behavior--like just now pointing out that I haven't weeded the garden this week or taken out the trash yet --but at the same time you don't mention the things I have done--like mowing the lawn just now and getting milk from the store --well, I feel resentful and hurt and don't want to do any chores at all. I worry that you may not appreciate the things that I do do."

Remember, feedback is

1. descriptive, rather than evaluative
2. specific rather than general
3. aimed at behavior the other person can change

4. motivated by a desire to improve the relationship with the person to whom you are giving feedback.

A useful format for feedback is--This is the behavior I'm focusing on (When you do X), This is how it affects me (I feel Y). Optionally--This is what I imagine (I worry that X means, . . . or I feel Y because. . . .); and then in some cases--Here is what I want.

This is where giving feedback overlaps with assertive behavior.

3. Practice Giving Feedback: Introductory Exercise (20 min.)
((Goal--(a) To give members a chance to try giving feedback in a structured situation before giving feedback in a less structured, here-and-now, interpersonal context (exercise at end of session)).
 - a. Divide group into smaller groups of 3 or 4, depending on size of group.
 - b. Instructions:

One person in each group will be given a situation calling for feedback. Among yourselves choose a volunteer to respond to the situation. The others in the group are to listen and watch carefully. Then, when the situation-player has finished, each other member of the group is to give him/her constructive feedback along the lines we have been discussing. Remember that feedback can be positive as well as negative. It should address specific behaviors. Following the feedback from observers, the group is open and each person may give feedback to one another on the feedback the observers also gave.

Situation for Group 1:

You were at a meeting and offered an opinion of some importance to you. Another person stood up and called your idea stupid and naive, then presented an alternative idea he favored. You froze, feeling stung by this name-calling and realizing that you will have to work with this individual in the future. A third member stood up and said she did not believe your idea was in any way stupid and redirected the discussion back to you so that you were able to then represent your arguments. After the meeting you have occasion to interact with each of the two persons from the meeting. You run into each privately, and separately.

1. Offer positive feedback to the person who helped you out.
2. Offer negative, but constructive feedback to the person who called your idea stupid.

Situation for Group 2:

Your roommate is highly enthusiastic about a course he/she is taking and loves to share the many interesting points he/she reads about, as soon as he/she reads them. This results in your roommate's bouncing over to your desk every five or ten minutes to read you a funny excerpt from a book, to say "Hey, look at this," or to share an interesting concept. You really like your roommate and wouldn't want to hurt his/her feelings, but the constant interruptions are driving you crazy. You're not getting any studying done, and slowly your annoyance has been building up to a point where you have to do something about the situation.

1. Give your roommate constructive feedback about this situation.

Lecturette:**Taking criticism and giving feedback**

Especially when someone is criticizing you, it is important to paraphrase, the skill we learned last session, to understand exactly what the other person is saying and feeling, before responding or giving feedback about the way the criticism affects us.

Notice the difference in the following interaction.

(Leader role-plays situation on next page).

(Adapted from Bloom, Coburn, & Pearlman, The new assertive woman. New York: Delacorte Press, 1975, pp. 162-163)

First Demonstration

Father: Jan, before a new semester starts, I just want you to know that I expect you to get better grades than you have in the past. Your mother and I know what a bright girl you are and--

Jan [interrupting]: Look, Dad, you're never satisfied. I'm old enough to take care of myself. My grades are my business. I want you to stop nagging me.

Father: Why shouldn't I worry about your grades? I'm paying for your future by sending you to college, aren't I? If you don't like it, you can stop going to school and get a job!

Ok, now, if Jan listened carefully, paraphrased, checked out to see that she understood, then expressed her feelings followed by what she wanted. And if she did this in an assertive rather than aggressive or unassertive fashion, how might this look?

Father: Jan, before a new semester starts, I just want you to know that I expect you to get better grades than you have in the past.

Jan: Dad, I know you really care about me, that you want me to get good grades. It sounds as if you're afraid I'll pull a two-point again, and you're angry.

Father: Yes, I am afraid you'll do that. But I'm not angry--just upset that you're not working up to capacity and that this will affect your chances of getting a good job later on.

Jan: Ok, I hear that you're concerned about my welfare. When you speak to me in that tone of voice, though, and tell me you "expect" me to do better, I feel upset and angry. I'm responsible for my own work and I do hear your

concern. What I'd like is for you to not pressure me about my grades. I think I'll do better that way.

Father: Ok, But about those grades . . .

Jan: Please, dad, you said ok; let's do try it.

Father: Ok.

Pass out handout "The Fine Art of Complaining" (Credit: George Weinberg, exact reference unknown).

4. Open Feedback (Rest of session)

- ((Goals--a) practice feedback skills
- b) draw closure to workshops))

For the remainder of today's session, which is our last session in these groups, I'd like you all to circulate and to make a point of speaking with each member of the group in an informal way. Give each member the gift of sharing positive feedback about something you've noticed about that member during these sessions. Also feel free to chat and discuss any other things you'd like with one another, but be sure to touch base with everyone. Feel free to give me negative as well as positive feedback.

Summary:

Thank you all for your participation. Next time, meet in the large lecture hall again and you'll be divided into separate groups for the post-testing of the research.

THE FINE ART OF COMPLAINING

George Weinberg
(exact reference unknown)

Millions of people choose not to object to what they consider mistreatment, when objecting would greatly improve their lives. Instead, they remain silent, fearing that making a legitimate complaint will reveal a weakness of which the other person will take advantage. Others mistakenly feel that anyone who complains is automatically a troublemaker or a shrew. (These people are usually the children of dominating, haranguing parents, and they'll do anything to avoid being like those parents.)

Others feel that they are worthwhile to other persons only so long as they act compliantly. Nearly all these people think that they have tried to voice their objections and weren't listened to. Usually it turns out that the expressions of dissatisfaction weren't heard, because they were vague or so loaded with irrelevant insults that the main point was obscured.

In an intimate relationship, when one person suffers as a result of the other's behavior, often the inflicter of pain doesn't realize what he's doing--and may never find out if the sufferer doesn't speak up. Meanwhile, if the sufferer doesn't voice his objection, he predisposes himself to think the worst of the other person--and he may never find out whether the other person could control his harmful actions if they were pointed out to him.

Most of us don't want to inflict pain, yet we are all capable of harming the people we love. If a friend or mate belittles you by the way he talks to you or behaves toward you it's your responsibility to tell him, and give him the opportunity to show good faith. But complaining is an art as well as a responsibility, and to make an objection in a way that is fair and forceful and accurate takes practice. The following principles of making and taking criticism, evolved over years of working with college students and married couples, have helped to maintain constructive communication in many relationships.

MAKING CRITICISM

1. Complain to the person you think is harming you, not anyone else.
2. Try not to object to your mate's behavior in front of someone else. To most people, being criticized seems like being personally attacked. Your indifference to your mate's comfort, displayed by your willingness to criticize him in front of others, will be taken at least as seriously as the content of what you say. In fairness to him, and for your own sake, wait until you are alone with him.

THE FINE ART OF COMPLAINING, cont.

3. Don't compare the person's behavior with that of others.
No one wants to be described as inferior to anyone else. Comparisons predispose other people not to listen, even when the complaint is justified. Anyhow, such comparisons always miss the main point.
4. Make your complaint as soon as you can, when you're alone with the other person and can articulate it.
Speaking up, like any other task, becomes more difficult when you postpone it. Waiting allows your anger to build, and increases the likelihood that you will make irrelevant comments.
5. Don't repeat a point once you've made it and the other person has carefully considered it.
The reward for patiently listening to criticism ought to be exoneration from having to hear the same crime discussed again.
6. Object only to actions that the other person can change.
You may ask a person not to shout; but if you ask him not to be angry with you, you're probably expecting too much. I always ask patients who wear sunglasses to take them off in my office, both for their sake and for mine, since I can make better contact with people when I can see their eyes. But though nervousness is often the reason that these people come to my office wearing sunglasses, it would be pointless for me to ask them to relax.
7. Try to make only one complaint at a time.
If you make more, you'll demoralize the other person and perhaps obscure your major point. For example, don't quibble about the carpeting in your office when you've stormed in to ask your boss for a well-deserved promotion. If the subject changes to the price of carpet you'll feel unsatisfied--and your boss may feel he has discharged his obligation by promising to have your carpet changed.
8. Don't preface your complaint.
"Listen. There's something I've wanted to tell you for a long time. It may hurt you. Please don't feel offended, but . . ." What could be worse? Instead of inoculating your listener against the pain, you are stabbing him to death with your hypodermic needle. By prefaces, you convince both him and yourself that your complaint is to be monstrous, and that probably he won't be capable of receiving it in the same friendly spirit in which you are making it.
9. After making your complaint in good faith, don't apologize for it.
Apology will only detract from the merit of your accomplishment in your own mind, and renew your conflict about whether you had the right to say what you did. Apologizing is asking the other person to brace you so you won't fall down under the stress of disagreeing with him. Doing so imposes an unnecessary burden on him.

THE FINE ART OF COMPLAINING, cont.

10. Avoid sarcasm.

Among sarcasm's invariable motivations are contempt and fear. Your contempt will predispose the other person not to heed you, and because you make a choice not to confront him directly, you intensify your fear of him. Being sarcastic is cowardly and sniveling, no matter how clever the turn of phrase.

11. Don't talk about other people's motivations when making an objection.

Hardly a man is now alive who doesn't sense the difference between "Please don't interrupt me" and "You never want me to finish what I'm saying." "You don't care how long I wait for you." "Quit try-ing to make me angry." You give the listener reason to disregard your essential complaint if he concludes that your speculation about his motive is wrong. Steer clear of the tendency to confuse consequence and intention.

12. Avoid words like "always" and "never."

Exaggerations intended for emphasis when making objection rob you of accuracy and the psychological advantages that go with it.

13. If you never compliment the other person, don't expect him to remain open to your criticisms.

Complaints ring loud and long when they're the only sounds that are made. If you want to make occasional objections, you have the obligation to compliment the person at other times. Also, I recommend the practice of thanking people for listening to your criticisms.

TAKING CRITICISM

1. Be quiet while you are being criticized, and make it clear that you are listening.

(After the critic is finished, paraphrasing to be sure you have understood is a helpful tool). Whether or not you agree with what is being said is an issue to be discussed later.

2. Look directly at the person talking to you.

Only in this way can you convey open reception to what he is saying.

3. Under no condition find fault with the person who has just criticized you.

If he has made a mistake in grammar, for example, wait a half-hour before telling him. It probably won't seem so important then.

4. Don't create the impression that the other person is destroying your spirit.

The hardest people to deal with are those who are belligerent at first, and who then, when cornered, act as though they were at the edge of despair. Don't be a fragile bully.

THE FINE ART OF COMPLAINING, cont.

5. Don't jest.
Flippancy is properly perceived as contemptuous by a great number of people, and is hurtful to just about everyone.
6. Don't caricature the complaint.
If a person says you were thoughtless, don't ascribe to him the statement that you were vicious and then defend yourself against a charge he didn't make. The deliberate exaggeration of a charge against you amounts to dismissal of the charge.
7. Don't change the subject.
Use your intelligence to help articulate the objection, not to obscure it.
8. Don't imply that your critic has some ulterior, hostile motive.
If you are asking why he objected, you are not dealing with his objection. Paraphrasing it is one good way of doing this. In effect, you are saying you have received the message and noted it.

Don't let people carp at you on the pretext that they're giving you constructive criticism. (You can distinguish carping from criticism by whether the person stays within the rules for making a reasonable objection.) I think you have the right at any time to ask for a short suspension of criticism. Refusal to grant it, or inability to tolerate it, betrays the compulsive critic. The ideal path is narrow: you must be open to criticism but not allow yourself to be tyrannized by it.

Unstructured Groups

"Unstructured groups" may also be thought of as "traditional" "non-directive," or "client-centered." Structure, in a sense, may be thought of as the degree to which the counselor organizes and presents material for the client in advance. Techniques which characterize "unstructured" interventions include "reflection responses, minimal encouragements to talk, allowing and encouraging participants to determine interview direction" (Stein & Stone, 1978). In education, "unstructured" interventions have been described as those which promote self-discovery learning (rather than lecture methods) (McLachlan & Hunt, 1973).

The low structure ("unstructured") condition in this research will consist of discussion groups in which the leader introduces a topic for discussion (the same topic covered in the structured group), then takes a role of using minimal encouragements to talk, reflection responses, and highlights the same points taught in the structured group if group members bring them up first.

The attached handout, "Hints for Discussion Leaders" provides some general guidelines for leading discussion groups. Please read this handout.

Examples of useful probes to help members clarify and elaborate their opinions are:

How do you mean?
 For example?
 Mmm?
 How so?
 For instance?
 Uh huh?
 Paraphrasing
 Repeating a key word or phrase with a "?":
 "Irrelevant?" "Nice?"

Specific Sessions:

1. Sending Clear Messages

Introduction:

Open the group with a general statement along the lines of:

"What we're going to be doing in the next few classes is discussing communication at the same time we're communicating with and getting to know one another."

"Today let's talk about how to get ideas across clearly. You've all listened to people who communicate so well that you follow right along, and to others who communicate in a fashion which is so confusing that you can't make heads nor tails of

2.

Unstructured Groups, cont.

what they're saying. What makes for good communication, anyway? Any ideas?"

Specific Probes which may be Helpful if Conversation Lags:

What makes your best teacher the best?

How do you get your ideas across to younger brothers and sisters?

Who's the most confusing talker you know? What makes him/her confusing?

Highlight:

Highlight the points which are outlined on the Handout "Sending Clear Messages" (appended) as members bring them up.

2. Nonverbal Communication and AssertivenessIntroduction:

Today let's talk about nonverbal communication, and assertiveness. Sometimes people talk about "body language"--What's that? What does it say? (Draw examples from the group) What is assertiveness?

Highlight:

Highlight the points which are outlined on the handout "Verbal and Nonverbal Components of Behavior" (appended) as members bring them up.

3. Being A Good ListenerIntroduction:

Today we're going to talk about listening. What makes for good listening?

Highlight:

Be sure to highlight the concept of paraphrasing. Accent any concepts which come up which correspond to the handout "How We Shut People Up."

4. Giving FeedbackIntroduction:

Our topic for today is feedback. What makes for good feedback: How do you go about giving criticism so that you don't hurt someone's feelings, for instance?

Unstructured Group, cont.

Other Specific Probes:

How do people say things that a) make you listen?,
b) hurt you/make sure you don't
listen?

Highlight:

Highlight the concepts of "I-messages," specificity of behavior, and paraphrasing when criticized. Accent any principles which come up from the handout "The Fine Art of Complaining."

General Pointers:

Draw examples from participants which apply discussion points to their own personal experiences.

Accent feelings.

Moderating Small Groups
HINTS FOR DISCUSSION LEADERS

A few points to remember:

1. Throw it back to the group.
2. Try to solicit divergent opinions.
3. Don't allow one or two to monopolize.
4. Don't hesitate to solicit responses from nonvolunteers.
5. At least begin with a warm, friendly, informal atmosphere.
6. If someone attacks or embarrasses anyone else, allow them to respond, and then intervene.
7. Soften sweeping indictments and clarify generalizations.
8. Be generous in interpreting motives.
9. Expect a slow beginning (warm-up).
10. Throw out questions as if seeking opinions, not facts or answers.
11. Restate constantly.
12. Always attempt to relate points to each other.
13. Avoid giving answers.
14. Summarize occasionally, and especially when closing the discussion.
15. Remember the following purposes to the discussion:
 - To stimulate thinking.
 - To promote communication.
 - To allow people to clarify their own thoughts.
 - To demonstrate similarities and differences.
 - To provide an experience in growth and discovery.

HINTS FOR DISCUSSION LEADERS, cont.

REMEMBER:

Useful FEEDBACK is . . .

- Descriptive rather than evaluative.
- Specific rather than general.
- About behavior that is observable (not merely inferred to) and is able to be changed.

APPENDIX E
PRELIMINARY ANALYSES

APPENDIX E

Table 50

Preliminary Analyses:

One-way ANOVAS Comparing High and Low CL Subjects on Pretest Data
on Each Scale of the Communication Skills Checklist Applied
to the Response Scale and the GAIT, and on Peer
Ratings of the GAIT

	<u>Response Scale</u> F (1,54)	<u>GAIT</u> F (1,27)
<u>Positive:</u>		
Self-disclosure	F = 4.98*	F = .51
Explaining	F = .04	
Empathic Listening	F = .14	F = .35
Interpreting	F = 2.03	F = .34
Giving Advice	F = .58	F = .10
Taking Criticism	F = .02	
Giving Feedback	F = .41	
<u>Negative:</u>		
Self-disclosure	No variance	F = .43
Explaining	F = .12	
Empathic Listening	F = .05	F = .73
Interpreting	F = .12	F = 1.09
Giving Advice	F = 1.54	F = .16
Taking Criticism	F = .36	
Giving Feedback	F = .93	
<u>GAIT peer ratings:</u>		F = .05

*
p < .05

Preliminary Analyses

Table 51

One-way ANOVA Data Comparing Differential Effectiveness
of the Two Therapists on Posttest Communication
Skills Data

	<u>Response Scale</u> F = (1,54)	<u>GAIT</u> F = (1,54)
<u>Positive:</u>		
Self-disclosure	F = 1.28	F = .06
Explaining	F = .07	
Listening	F = .71	F = .04
Interpreting	F = .23	F = 1.48
Advice-giving	F = .21	F = 3.45
Taking Criticism	F = .04	
Giving Feedback	F = 1.79	
<u>Negative:</u>		
Self-disclosure	No variance	F = .92
Explaining	F = .002	
Listening	F = .01	No variance
Interpreting	F = .71	F = .00
Advice-giving	F = 1.62	F = .69
Taking Criticism	F = .16	
Giving Feedback	F = .002	
<u>Satisfaction:</u>		
	Enjoy: F = 1.82	
	Useful: F = 2.03	

*p < .05

Table 52

Preliminary Analyses:

A Check on Accuracy of Random Assignment;

One-way Analyses of Variance of Initial (Pretest) Differences
by Structure of Intervention Groups on Communication
Checklist Applications to Response Scale and Skills
GAIT Data; Peer Ratings; and Demographic Data

	<u>Response Scale</u> F (2,63)	<u>GAIT</u> F (2,26)
<u>Positive:</u>		
Self-Disclosure	F = .19	F = .17
Explaining	F = 1.79	
Empathic Listening	F = 3.45*	F = .89
Interpreting	F = 5.54*	F = 3.17
Advice-giving	F = 8.40*	F = .47
Taking Criticism	F = 2.69	
Giving Feedback	F = 1.50	
<u>Negative:</u>		
Self-Disclosure	No variance	F = .18
Explaining	No variance	
Listening	F = .90	No variance
Interpreting	F = .01	F = 1.48
Advice-giving	F = 1.13	F = .52
Taking Criticism	F = 1.81	
Giving Feedback	F = .49	
<u>GAIT Peer Ratings:</u>		F = .24
<u>Age:</u>	F = 6.31*	
<u>Gender:</u>	F = .02	
<u>IFT:</u>	F = 3.22*	
<u>Bieri:</u>	F = .15	
<u>Crowne-Marlowe:</u>	F = .16	
<u>Budner:</u>	F = .43	

*p < .05

Table 53

Newman-Keuls Follow-up Tests of Significant
Differences Found in
A Check on Random Assignment

	<u>Age</u>		
	Control	Structured	Unstructured
	46.99	56.58	56.90
Control		9.59*	9.91*
Structured			.32
Unstructured			

*p < .05

$$\sqrt{\frac{MS \text{ error}}{n}} = .259$$

df = 63

	<u>Response Scale</u> <u>Positive Listening</u>		
	Control	Structured	Unstructured
	47.80	47.92	49.66
Control		.12	1.86*
Structured			1.74
Unstructured			

*p < .05

$$\sqrt{\frac{MS \text{ error}}{n}} = .533$$

df = 63

Response Scale
Positive Interpreting

	Control 47.79	Structured 50.27	Unstructured 57.42
Control		2.48	9.63*
Structured			7.15
Unstructured			

*p < .05

$$\sqrt{\frac{MS \text{ error}}{\tilde{n}}} = 2.18$$

df = 63

Response Scale
Positive Advice-giving

	Control 48.19	Structured 51.31	Unstructured 56.76
Control		3.12	8.57*
Structured			5.45*
Unstructured			

*p < .05

$$\sqrt{\frac{MS \text{ error}}{\tilde{n}}} = 1.57$$

df = 63

IFT:

	Structured 49.61	Unstructured 49.71	Control 50.27
Control		.10*	.66*
Structured			
Unstructured			.56*

*p < .05

$$\sqrt{\frac{MS \text{ error}}{\tilde{n}}} = .023$$

df = 63

APPENDIX F

TABLE 54

ANALYSES OF VARIANCE
TESTING THE MAIN PREDICTIONS
OF THE STUDY

CSC-Response Scale

Dimension: Positive Self-Disclosure

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	49.88	8.13	51.98	7.35
	Low CL	50.11	6.56	48.69	5.97
Unstructured group	High CL	57.03	11.03	55.89	10.88
	Low CL	46.74	6.22	49.16	10.58
Control group	High CL	53.27	11.54	49.33	7.69
	Low CL	48.89	7.51	47.39	5.95

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom		Mean Square		F
MEAN	261392.12355	1		261392.12355		2318.37
S	115.49153	2		57.74576		0.51
C	492.15307	1		492.15307		4.37*
SC	194.68264	2		97.34132		0.86
ERROR	5637.40159	50		112.74803		
R	8.58504	1		8.58504		0.27
RS	71.73033	2		35.86516		1.14
RC	4.33584	1		4.33584		0.14
RSC	56.31755	2		28.15877		0.90
ERROR	1567.42971	50		31.34859		

*p < .05

Fmax = 3.74

CSC-Response Scale

Dimension: Positive Explaining

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	49.81	5.17	49.78	4.65
	Low CL	47.89	5.45	46.96	4.22
Unstructured group	High CL	52.39	4.59	53.42	4.50
	Low CL	50.22	3.39	52.33	7.15
Control group	High CL	48.34	4.28	48.02	3.84
	Low CL	50.54	4.65	50.73	4.39

Analysis of Variance					
3 x 2 x 2					
Source	Sum of Squares	Degrees of Freedom	Mean Square	F	
MEAN	254649.36100	1	254649.36100	7466.33	
S	194.13953	2	97.06976	2.85	
C	6.74262	1	6.74262	0.20	
SC	140.74102	2	70.37051	2.06	
ERROR	1705.31784	50	34.10636		
R	2.96009	1	2.96009	0.33	
RS	17.26732	2	8.63366	0.96	
RC	0.33523	1	0.33523	0.04	
RSC	3.91857	2	1.95928	0.22	
ERROR	447.61485	50	8.95230		

*p < .05

Fmax = 4.45

CSC-Response Scale

Dimension: Positive Listening

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	47.36	1.43	53.21	4.95
	Low CL	48.19	1.89	48.11	2.42
Unstructured group	High CL	50.74	2.81	54.16	9.16
	Low CL	48.08	1.95	50.85	5.19
Control group	High CL	47.11	1.05	47.86	1.95
	Low CL	48.65	2.96	48.71	4.27

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom		Mean Square		F
MEAN	24808.10697	1		248408.10697		12386.55
S	150.65037	2		75.32518		3.76*
C	43.51963	1		43.51963		2.17
SC	99.40434	2		49.70217		2.48
ERROR	1002.73345	50		20.05467		
R	115.29825	1		115.29825		13.46*
RS	46.55189	2		23.27595		2.72
RC	37.37975	1		37.37975		4.36*
RSC	37.51677	2		18.75838		2.19
ERROR	428.25980	50		8.56520		

*p < .05

Fmax = 76.10

CSC-Response Scale

Dimension: Positive Interpreting

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	47.59	8.82	52.24	9.51
	Low CL	52.61	11.47	51.40	12.38
Unstructured group	High CL	55.71	10.29	49.45	8.37
	Low CL	60.18	13.49	50.75	10.70
Control group	High CL	47.05	8.57	51.55	12.44
	Low CL	48.19	8.68	46.65	7.43

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom		Mean Square		F
MEAN	265735.05808	1		265735.05808		1961.21
S	592.96833	2		296.48416		2.19
C	27.00148	1		27.00148		0.20
SC	134.13092	2		67.06546		0.49
ERROR	6774.76717	50		135.49534		
R	60.85958	1		60.85958		0.90
RS	457.86599	2		228.93300		3.39*
RC	160.19359	1		160.19359		2.37
RSC	10.19429	2		5.09715		0.08
ERROR	3377.28368	50		67.54567		

*p < .05

Fmax = 3.30

CSC-Response Scale

Dimension: Positive Taking Criticism

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	57.53	12.52	44.93	7.67
	Low CL	52.93	12.13	52.17	10.85
Unstructured group	High CL	47.07	8.28	52.17	10.84
	Low CL	51.95	12.10	55.56	10.48
Control group	High CL	49.55	9.09	49.83	10.27
	Low CL	47.49	8.51	47.83	9.51

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	261971.64224	1	261971.64224	1900.09
S	270.81949	2	135.40974	0.98
C	33.04427	1	33.04427	0.24
SC	181.66571	2	90.83286	0.66
ERROR	6893.64842	50	137.87297	
R	11.37038	1	11.37038	0.18
RS	455.28268	2	227.64134	3.54*
RC	76.44182	1	76.44182	1.19
RSC	209.94043	2	104.97021	1.63
ERROR	3214.08391	50	64.28168	

*p < .05

FMax = 2.66

CSC-Response Scale

Dimension: Positive Giving Feedback

Original Data

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	48.58	5.04	56.33	12.33
	Low CL	47.31	5.22	52.90	11.51
Unstructured group	High CL	52.91	10.05	55.35	10.39
	Low CL	51.83	11.55	46.47	4.30
Control group	High CL	49.64	8.32	46.25	4.17
	Low CL	48.19	6.34	47.12	5.27

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	256719.73861	1	256719.73861	3183.06
S	372.78311	2	186.39156	2.31
C	163.91774	1	163.91774	2.03
SC	101.43648	2	50.71824	0.63
ERROR	4032.59473	50	80.65189	
R	25.15536	1	25.15536	0.55
RS	410.49910	2	205.24955	4.47*
RC	41.44112	1	41.44112	0.90
RSC	117.99563	2	58.99782	1.28
ERROR	2295.96487	50	45.91930	

*p < .05

Fmax = 8.74

CSC-Response Scale

Dimension: Positive Giving Feedback

Logarithmic Transformations

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	3.88	.10	4.01	.21
	Low CL	3.85	.11	3.95	.19
Unstructured group	High CL	3.95	.18	4.00	.19
	Low CL	3.93	.20	3.83	.09
Control group	High CL	3.89	.16	3.83	.09
	Low CL	3.87	.12	3.85	.11

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	1550.15887	1	1550.15887	55624.55
S	0.12360	2	0.06180	2.22
C	0.05703	1	0.05703	2.05
SC	0.03681	2	0.01841	0.66
ERROR	1.39341	50	0.02787	
R	0.00695	1	0.00695	0.45
RS	0.12802	2	0.06401	4.18*
RC	0.01217	1	0.01217	0.80
RSC	0.03731	2	0.01865	1.22
ERROR	0.76490	50	0.01530	

*p < .05

Fmax = 5.44

CSC-Response Scale

Dimension: Positive Advice-Giving

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	52.20	4.48	48.07	6.26
	Low CL	50.54	6.95	48.36	6.35
Unstructured group	High CL	56.44	9.03	52.56	7.35
	Low CL	57.46	10.58	52.37	10.65
Control group	High CL	50.87	8.46	49.37	7.41
	Low CL	47.89	3.59	50.01	6.28

Analysis of Variance				
3 x 2 x 2				
Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	268136.34196	1	268136.34196	3890.01
S	534.56262	2	267.28131	3.88*
C	5.82759	1	5.82759	0.08
SC	11.54036	2	5.77018	0.08
ERROR	3446.47133	50	68.92943	
R	151.87046	1	151.87046	4.21*
RS	123.52176	2	61.76088	1.71
RC	13.29640	1	13.29640	0.37
RSC	26.64173	2	13.32087	0.37
ERROR	1803.56658	50	36.07133	

*p < .05

Fmax = 8.80

CSC-Response Scale

Dimension: Negative Interpreting

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	51.25	8.54	43.47	9.59
	Low CL	47.94	8.66	53.66	6.35
Unstructured group	High CL	51.25	11.72	46.45	8.90
	Low CL	47.94	10.03	50.19	6.62
Control group	High CL	48.70	8.34	52.98	11.75
	Low CL	51.25	14.90	50.34	11.13

Analysis of Variance				
3 x 2 x 2				
Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	250411.98107	1	250411.98107	1593.47
S	90.00631	2	45.00316	0.29
C	36.73212	1	36.73212	0.23
SC	63.48963	2	31.74481	0.20
ERROR	7857.44717	50	157.14894	
R	1.08939	1	1.08939	0.02
RS	56.02824	2	28.01412	0.44
RC	166.54791	1	166.54791	2.63
RSC	459.22751	2	229.61375	3.63*
ERROR	3165.67188	50	63.31344	

*p < .05

Fmax = 5.50

CSC-Response Scale

Dimension: Negative Advice-Giving

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	48.66	11.73	46.92	10.34
	Low CL	49.51	9.19	47.26	8.32
Unstructured group	High CL	46.97	8.68	44.07	6.33
	Low CL	52.05	11.13	54.98	10.23
Control group	High CL	51.26	11.58	49.66	8.25
	Low CL	54.47	12.42	54.67	12.06

Analysis of Variance				
3 x 2 x 2				
Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	254678.80991	1	254678.80991	1503.74
S	418.94297	2	209.47149	1.24
C	455.56177	1	455.56177	2.69
SC	195.65749	2	97.82875	0.58
ERROR	8468.17697	50	169.36354	
R	20.18896	1	20.18896	0.43
RS	15.19711	2	7.59856	0.16
RC	36.03489	1	36.03489	0.77
RSC	36.74144	2	18.37072	0.39
ERROR	2349.92867	50	46.99857	

*p < .05

Fmax = 3.85

CSC-GAIT

Dimension: Positive Self-Disclosure

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		49.66	8.33
	Low CL	8		46.03	2.44
Unstructured group	High CL	8		51.13	4.22
	Low CL	6		52.19	6.05
Control group	High CL	13		51.55	6.55
	Low CL	14		49.42	9.76

Analysis of Variance				
3 x 2 x 2				
Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	127113.05613	1	127113.05613	2524.34
S	113.22986	2	56.61493	1.12
C	31.27142	1	31.27142	0.62
SC	41.26300	2	20.63150	0.41
ERROR	2517.74869	50	50.35497	

*p < .05

Fmax = 16.00

CSC-GAIT

Dimension: Positive Listening

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		52.55	3.75
	Low CL	8		50.96	3.71
Unstructured group	High CL	8		50.16	2.38
	Low CL	6		50.63	2.16
Control group	High CL	13		48.32	3.42
	Low CL	14		49.38	7.07

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	128836.75615	1	128836.75615	6224.52
S	83.85997	2	41.92999	2.03
C	0.00525	1	0.00525	0.00
SC	17.19208	2	8.59604	0.42
ERROR	1034.91309	50	20.69826	

*p < .05

Fmax = 10.52

CSC-GAIT

Dimension: "Paraphrase" Sub-Component
of Positive Listening

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL				
	Low CL				
Unstructured group	High CL				
	Low CL				
Control group	High CL				
	Low CL				

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	0.43763	1	0.43763	46.11
S	0.01876	2	0.00938	0.99
C	0.01484	1	0.01484	1.56
SC	0.47450	2	0.00520	0.55
ERROR		50	0.00949	

*p < .05

Fmax = 1.49

CSC-GAIT

Dimension: Positive Interpreting

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		51.15	8.67
	Low CL	8		46.91	5.57
Unstructured group	High CL	8		48.32	5.93
	Low CL	6		54.29	9.42
Control group	High CL	13		45.77	4.06
	Low CL	14		54.23	15.79

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	127722.78705	1	127722.78705	1331.09
S	37.30780	2	18.65390	0.19
C	146.63412	1	146.63412	1.53
SC	398.38064	2	199.19032	2.08
ERROR	4797.66610	50	95.95332	

*p < .05

Fmax = 15.54

CSC-GAIT

Dimension: Positive Advice-Giving

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		49.85	8.27
	Low CL	8		47.60	4.80
Unstructured group	High CL	8		50.74	6.62
	Low CL	6		47.92	3.80
Control group	High CL	13		51.55	7.51
	Low CL	14		50.48	8.46

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	125568.97250	1	125568.97250	2454.53
S	58.15084	2	29.07542	0.57
C	53.41366	1	53.41366	1.04
SC	7.99972	2	3.99986	0.08
ERROR	2557.90710	50	51.15814	

*p < .05

Fmax = 4.96

CSC-GAIT

Dimension: Negative Self-Disclosure

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		50.48	6.17
	Low CL	8		46.27	1.05
Unstructured group	High CL	8		48.11	4.98
	Low CL	6		49.20	6.08
Control group	High CL	13		49.06	9.25
	Low CL	14		54.19	16.35

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	124884.36994	1	12884.36994	1225.47
S	135.66751	2	67.83376	0.67
C	5.74101	1	5.74101	0.06
SC	210.78154	2	105.39077	1.03
ERROR	5095.35344	50	101.90707	

*p < .05

Fmax = 242.47

CSC-GAIT

Dimension: Negative Interpreting

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		44.64	2.81
	Low CL	8		50.38	7.68
Unstructured group	High CL	8		49.18	7.10
	Low CL	6		46.19	5.44
Control group	High CL	13		55.12	14.72
	Low CL	14		49.81	10.01

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	123211.06568	1	123211.06568	1267.05
S	329.94091	2	164.97045	1.70
C	9.24004	1	9.24004	0.10
SC	300.14704	2	150.07352	1.54
ERROR	4862.11011	50	97.24220	

*p < .05

Fmax = 12.69

CSC-GAIT

Dimension: Negative Advice-Giving

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL			44.62	1.62
	Low CL			51.39	7.26
Unstructured group	High CL			46.33	4.14
	Low CL			47.94	4.49
Control group	High CL			52.97	15.12
	Low CL			52.11	11.18

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	123241.06095	1	123241.06095	1239.00
S	345.84321	2	172.92161	1.74
C	79.65793	1	79.65793	0.80
SC	140.36354	2	70.18177	0.71
ERROR	4973.39574	50	99.46791	

*p < .05

Fmax = 87.11

GAIT
Goodman's Peer Ratings of "Therapeutic Talent"

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL	7		5.21	.21
	Low CL	8		4.52	.48
Unstructured group	High CL	8		5.38	.21
	Low CL	6		5.03	.36
Control group	High CL	13		5.10	.46
	Low CL	14		4.91	.70

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	1283.94945	1	1283.94945	5412.58
S	0.84125	2	0.42062	1.77
C	2.14414	1	2.14414	9.04*
SC	0.60911	2	0.30455	1.28
ERROR	11.86079	50	0.23722	

*p < .01

Fmax = 11.11

Participant Ratings of
Intervention Enjoyableness

	N	PRETEST		POSTTEST	
		MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Structured group	High CL			4.14	1.07
	Low CL			4.25	.71
Unstructured group	High CL			4.62	.74
	Low CL			4.67	.52
Control group	High CL			3.77	.93
	Low CL			3.07	.83

Analysis of Variance

3 x 2 x 2

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
MEAN	849.70400	1	849.70400	1220.78
S	15.09142	2	7.54571	10.84*
C	0.42577	1	0.42577	0.61
SC	2.08579	2	1.04289	1.50
ERROR	34.80174	50	0.69603	

*p < .001

Fmax = 4.23

Participant Ratings of Intervention "Usefulness"
by Subjects Pre- and Posttested
on the GAIT

	POSTTEST		
	N	MEAN	STANDARD DEVIATION
Structured group	8	4.25	.53
Unstructured group	6	4.25	.42
Control group	12	3.58	.63

Analysis of Variance

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Between Groups	2.872	2	1.436	4.529*
Within Groups	7.292	23	.317	
Total	10.164	25		

*p < .05

Fmax = 2.25

Participant Ratings of Intervention "Usefulness"
by Subjects Tested at Posttest
only on the GAIT

	N	Mean	Standard Deviation
Structured group	7	3.79	.95
Unstructured group	8	3.94	.86
Control group	15	3.10	.74

Analysis of Variance

Source	Sum of Squares	Degrees of Freedom	Mean Square	F
Between Groups	4.494	2	2.247	3.325
Within Groups	18.247	27	.676	
Total	22.741	29		

*p < .05

Fmax = 1.81

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