COGNITIVE DIFFERENTIATION AND TASK LEADERSHIP

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ABSTRACT

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By

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The primary purpose of this study has been to test the hypothesis, based upon Kelly's Theory of Personal Constructs, that cognitive differentiation is positively correlated with task leadership in small groups. Some assumptions underlying Kelly's theory are also examined. It is hypothesized that ratings of others are influenced by familiarity and the desire of the rater to be socially agreeable. In addition, Kelly's assumption that constructive ability, defined here in terms of Bieri's concept of cognitive differentiation or the number of dimensions the individual has in his repertoire for description of other people, is independent of the type of the dimensions is examined.

The hypotheses were tested in groups consisting of a resident advisor and resident assistants on each floor of the Michigan State University resident halls. The number of groups, including male and female groups, totaled thirty-three. Findings of the study show that the

hypothesis relating cognitive differentiation, measured by a method which approximates Tripodi and Bieri's modification of the Kelly Role Construct Repertory Test, with task leadership, measured by the number of choices a person receives for having best ideas, is not supported. Familiarity is shown to positively correlate with cognitive differentiation, and cognitive differentiation is shown to be dependent upon type of dimensions. The lack of support for the cognitive differentiation-task leadership hypothesis is evaluated with suggestions for an improved test of the hypothesis.

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By

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CHAPTER I

INTRODUCTION

The general focus in this paper is on personality and position in small groups. The approach to personality and social structure relations taken by such authors as Inkeles (1963), Levinson (1963), Thomas (1968) and Heine (1971) provides the broad framework for this thesis. In this perspective, personality and social structure are viewed as interacting, yet separate systems where knowledge of one system can aid in the analysis of the other. Social systems can be studied more fruitfully through inclusion of psychological theory in the analysis. Inkeles (1963: 321) argues for this approach, contending that "sociological research has suffered from the failure to use psychological theory and established knowledge about personality as one element in the analysis."

A common meeting ground for psychological and sociological theory is small group research. In particular, the relationship of personality to the role position of leadership in small groups has been the subject of numerous research efforts (e.g., Mann, 1959; Geier, 1970). This

paper is a report of an investigation of the relationship of the personality trait of cognitive differentiation to task leadership in small groups. Specifically, drawing upon G. A. Kelly's (1955) theory of personal constructs, it is hypothesized that cognitive differentiation will be positively correlated with the number of sociometric choices received on best ideas, in a group of individuals with variation in levels of differentiation.

A review of the literature on cognitive differentiation raised questions regarding the validity of the concept (Vannoy, 1965; Wicker, 1969; Mitchell, 1970; and Crano and Bettinghaus, 1970). Because the validity of the concept and operationalization is believed to be a critical issue in correlating differentiation with task leadership, much of the research effort was directed toward this area. A substantial portion of the present paper is a description of the examination of the validity issues, with particular reference to the relationship of agreeableness to cognitive differentiation.

There are several concepts of cognitive differentiation in the literature (Bieri, 1966; Crockett, 1965; Harvey, Hunt and Schroder, 1961; and Schroder, Driver and Streufert, 1966). The definitions of these concepts are generally found in discussions of the larger concept of cognitive complexity. Cognitive complexity is the larger concept in the

sense that cognitive differentiation and cognitive integration together comprise cognitive complexity.

The definition of cognitive differentiation to be used in this project is the number of independent dimensions a person has available for ordering a set of stimuli (Bieri, 1966). These dimensions together form a cognitive system in the loose sense of a group of interrelated elements. Cognitive complexity is a term referring to particular aspects of the system of constructs or dimensions, including the number of constructs in the system, their independence of each other, and their hierarchal relationships to each other (Kelly, 1955).

The number of dimensions and the independence of these dimensions is cognitive differentiation, while the hierarchal relationships among the dimensions is cognitive integration. Independence of dimensions is considered an important aspect of cognitive differentiation by some authors (Bieri, 1966; Crockett, 1965) while writers such as Schroder, Driver and Streufert (1967) do not discuss independence of dimensions. Cognitive integration is referred to by various authors as the interconnection (Schroder, Driver and Streufert, 1967) or hierarchal integration (Crockett, 1965) of the elements of the cognitive system. The distinctions between cognitive differentiation, cognitive integration, and cognitive complexity are not always apparent in the literature which necessitates careful attention to the above authors' works.

As stated above, cognitive differentiation is the personality variable to be related to task leadership in this study, using Kelly's theoretical framework and Bieri's (1966) definition of cognitive differentiation, which stems from Kelly's work. Kelly's theory can be criticized for the vagueness of many of its terms. Consequently, due to a lack of clarity of the terms, some problems are likely in attempting to conduct research based on the theory. However, Kelly does formulate an interesting hypothesis relating constructive ability to leadership and provides a measure of his concept of constructive ability as well as suggestions for how he would operationalize leadership. As Bieri has clarified (perhaps with some conceptual slippage) Kelly's concept of constructive ability, and Bieri and Tripodi have refined Kelly's measure of constructive ability, Kelly's hypothesis can be adequately tested.

The measure of Bieri's concept of cognitive differentiation is Tripodi and Bieri's 1963 modification of the Kelly Role Construct Repertory Test. In addition to origination in Kelly's work, selection of Tripodi and Bieri's measure was based upon the secondary analysis nature of this project. As the data were collected for other purposes, this measure of cognitive differentiation is the only measure applicable to the data. Other measures

including Crockett's method (1965) where subjects generate their own constructs, and Harvey, Hunt and Schroder's sentence completion test (1961), cannot be applied to the data.

CHAPTER II

THEORY

The theoretical framework for this thesis is Kelly's Theory of Personal Constructs (1955). Kelly's theory is not a formal theory. Kelly himself notes (p. 46) that there are limitations in his theory-building efforts. He constructs his theory in terms of one "fundamental postulate" and several corollaries. The corollaries are described as little more than clarification of what is implicit in his fundamental postulate. Kelly comments further that he does not see his theoretical system as logic-tight, but that "rather, we shall strive to make our theoretical position provocative, and hence fertile, rather than legalistic."

The basis of Kelly's theoretical formulations is in his image of man in relation to his environment and his views on epistomology. Kelly's image of man is "man-the-scientist [p. 4]," whose ultimate aim is to predict and control his environment. Man-the-scientist is seen as referring to all mankind and not the class of men who are scientists.

To Kelly, the environment exists independently of the person or perceiver. This position is similar to what Garner (1973) terms an epistemological realist position where the concern is with a real world, rather than a world of people's thoughts (p. 6).

Prediction of the real world, the central motive in Kelly's image of man, is based upon man's ability to represent this world cognitively. The creative capacity of man to represent the environment, not merely respond to it, is emphasized. Representation of the world allows the person to place alternative constructions upon it. Kelly terms this process constructive alternativism, the central assumption in his theory.

Representing the environment cognitively, or construing the environment is described in the following terms: "Man looks at his world through transparent patterns or templets which he creates and then attempts to fit over the realities of which the world is composed [p. 9]." Kelly gives the name constructs to the patterns that are tried for fit to the world. Different constructs are tried, incorrect ones eliminated, and new ones added according to their effectiveness in predicting the environment.

The fundamental postulate in Kelly's theory is stated as: A person's processes are psychologically channelized by the ways in which he anticipates events.

Kelly's discussion of this postulate indicates that, more simply, this postulate states that a person's actions are guided by how he anticipates events. Anticipation of events is, in turn, determined by the construct system.

Kelly presents what he terms eleven corollaries to his fundamental postulate. Relevant to this paper in terms of the hypothesized relationship between cognitive differentiation and task leadership are his individuality and sociality corollaries. To clarify Kelly's term "construing," an integral part of these two corollaries, his construction corollary will be briefly discussed.

The construction corollary regards how people anticipate events in the environment. A person anticipates events by construing these events. The term construing, which is the critical term in Kelly's framework, refers to "placing an interpretation"; a person places an interpretation upon the environment. He erects a structure, within the framework of which the substance takes shape or assumes meaning (p. 50). By "substance" Kelly refers to the environment and "structure" refers to the system of constructs.

The individuality corollary states that individuals differ from each other in their construction of events. This corollary establishes Kelly's idea of individual differences in construction ability. Sharing of experience is possible as each person make construe likeness

and difference between the events in which he is involved, together with those in which another person is involved. While there are individual differences in the construction of events, people can find common ground through construing the experience of others along with their own.

The sociality corollary is where Kelly develops his social psychology and hypothesizes a relationship between the ability to construe other people's cognitive processes and leadership. The sociality corollary states: To the extent that one person construes the construction processes of another, he may play a role in a social process involving the other person.

In clarifying the corollary, Kelly comments that playing a constructive role in relation to another person involves seeing eye to eye with him and an acceptance of him and of his way of seeing things. In other words, the person must construe the other's viewpoint, not his actions, in order to relate to him.

Kelly argues that commonality of viewpoints is less important to playing a role with another person than is construing or subsuming or understanding or interpreting (terms which are used interchangeably) the viewpoint or construction system of the other person. Commonality between construction systems can increase the likelihood that one construct system can subsume another. However, commonality is incidental to role-playing in

cases where roles are played between people who have similar construction systems.

The emphasis on the construing or understanding of the other person's construction system provides the basis for Kelly's social psychology. Understanding other people's construing efforts is the basis for social interaction. In this respect, Kelly's position is similar to symbolic interactionism. To Kelly, social psychology "must be a psychology of interpersonal understandings, not merely a psychology of common understandings [p. 95]."

In addition to his emphasis on the construing process in social interaction, Kelly stresses his concept of role. He defines role as a "psychological process based upon the role player's construction of aspects of the construction systems of those with whom he attempts to join in a social enterprise [p. 97]." A role is seen to be an ongoing pattern of behavior that follows from a person's understanding of how others who are associated with him in his task are construing the situation.

Kelly elaborates his definition of role. Like other behavior, it is assumed to be tied to the person's construct system. Role is anchored in the construction system of the role player and does not necessarily follow from his relationship to other members of a group. Role is "a pattern of behavior emerging from the person's own

construction system rather than primarily out of his social circumstances [p. 98]."

Kelly's emphasis on cognition in defining role is prevalent in the social psychological literature (Levinson, 1963; Turner, 1969) as well as the literature with an ethnomethodological perspective (e.g., Hayek, 1942). Levinson discusses role-definition as opposed to structurally given role demands. He defines personal role-definition in terms of the individual's conceptualization of external reality.

Turner describes (pp. 216-17) the function of cognition in role-playing. Cognition is responsible for shaping the person's world into roles. The shaping of the phenomenal world into roles is, to Turner, the key to role-taking as a core process in interaction. Role is an "ideal conception which constrains people to render any action situation into more or less explicit collections of interacting roles [p. 216]."

Turner notes that an initial distinction is necessary between taking the existence of distinct and identifiable roles as the starting point in role theory, and postulating the conceptualizing of roles as the orienting process in interactive behavior. The latter approach, or Turner's approach, "has less interest in determining the exact roles in a group and the specific

content of each role than observing the basic tendency for actors to behave as if there were roles [p. 216]."

Another process of construction of roles similar to Kelly is described by Berger and Luckmann (1966: pp. 56-57). A person constructs the reality of social situations. He attributes to the other motives and viewpoints and plays a role vis-a-vis the other taking into account these motives and viewpoints. The cognitive element in role playing is also emphasized by Hayek, who points out that in studying social relations, the data must be man and the world as it appears to man.

Kelly utilizes this sociality corollary to relate individual differences in construing ability to leadership in small groups, forming the basis of the hypothesis in this study. Leadership is defined sociometrically in terms of what criterion the group members use for nominating a group leader. Nominators may make their selections of leaders differently, depending upon their understanding of what the situation demands. The person selected would be one who shows ability to meet the criterion for coping with situational demands. A leader is one who performs any of the jobs which are recognized as leadership (p. 101).

This definition of leadership is similar to the definition of leadership given by small group theorists and others, who define leadership in terms of a combination of personality and situational factors. Gibb (1970:

369) contends that leadership is always relevant to the situation as a certain kind of situation is required before leadership appears; and the particular set of circumstances existing determines which attributes of personality are important for leadership.

Selection of an individual to the leadership role is seen by Kelly to be dependent upon the group and upon the capacity of the individual to aid in the achievement of the goal. Heine (1971: 103) takes a similar position stating personal qualities are relevant to leadership selection, when these qualities meet the demands of the followers. The personality-social structure perspective can also be found in the conceptualization of leadership offered by Cartwright and Zander (1968) who note that traits of the leader necessary and effective in one group may be quite different from those required in a different group. The authors conclude that selection of a leader must take into account the type of functions to be performed in a given situation.

Bales (1950) categorizes these functions into task and socioemotional types. Task leadership relates to those behaviors in a group which are directed toward completion of the task while socioemotional leadership is conceptualized as behaviors in a group directed towards integration and maintenance of the group. Both types of

leadership are found in the group and the same person does not usually occupy both leadership roles.

Kelly discusses a type of leader which he terms the mobilizing type of leader. A mobilizing leader is briefly mentioned as one who accelerates the group's social progress. He does not clearly define what he means by the term "mobilization." Mobilization implies gathering forces with the purpose of achieving a goal. In a group, mobilization would seem to refer to moving the group towards attainment of the group goal. As working toward a goal is the primary characteristic of task groups, mobilizing leadership seems to essentially imply leadership in a task group. However, mobilizing could also involve moving a group towards better interpersonal relations, thus involving socioemotional leadership.

Mobilizing a group is used by other authors to refer to either a task or a socioemotional process. Carter (1954) refers to a similar process relating to carrying out the task of the group as group goal facilitation. Bosers and Seashore (1967) refer to mobilization processes under the terms interaction facilitation (socioemotional), work facilitation (task), and goal emphasis (task).

As noted above, Kelly does not clearly define mobilizing leadership as referring to task or socioemotional leadership and the term "mobilizing" is applicable to either task or socioemotional leadership

processes. Therefore, Kelly's hypothesized relationship between cognitive differentiation and mobilizing leadership can be specified as a relationship between cognitive differentiation and task leadership or between cognitive differentiation and socioemotional leadership.

In this paper, Kelly's mobilizing leadership will be used as referring to task leadership, or aspects of leadership related to task completion or goal attainment.* This decision is based upon research findings which provide some indication that cognitive differentiation is not associated with a preference for balance in social relations. Press and Crockett (1969) found that, when confronted with learning the social relations among people in a group, low cognitively complex people relied upon a balance principle while high cognitively complex people did not rely upon a balance scheme as a tool for organizing social relationships. Scott (1963) found high cognitively complex persons prefer unbalanced liking relations and liking is a less central concern for complex persons.

In the personality-social structure perspective on leadership offered by Kelly, the personality aspect is the quality of the individual relevant to his selection by the group to the role of mobilizing leader. The social

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*Cognitive differentiation will also be correlated with socioemotional leadership, measured by the number of votes a person receives on likeability.

structural element is the mobilizing leader role. The personality quality to which Kelly refers is the person's ability to construe other people's construction systems. One person may understand others better than they understand him. He may construe more of others' viewpoints. These individual differences in construing ability or differentiation, stated in the individuality corollary, are referred to by Bieri as the number of constructs a person has available for construing or interpreting or differentiating others' construction systems.

The greater the number of constructs a person possesses, the more likely he is to be able to construe or understand how various group members are construing a situation. Construing other peopples' construction systems involves interpreting their systems in terms of one's own constructs; therefore a large repertoire of constructs makes it more likely one can accurately construe the viewpoints of others' and consequently predict their behavior. The ability to understand various other group members' construction systems allows this person to better play roles vis-a-vis the group members. Construction of others' ideas and accurate prediction of others' behavior is seen as necessary for mobilizing a group toward a goal.

Kelly's hypothesized relationship between construction ability or differentiation and task leadership in a small group includes the following elements.

Initially, several assumptions are made: (a) that members of the group perceive the task orientation of the group; (b) members perceive the relevance of mobilization ability or task leadership ability for attaining the group's goal; (c) members perceive who in the group has the best ideas; and (d) members are utilizing the same criterion of best ideas for nominations of the person with best ideas. The greater the number of constructs in an individual's cognitive system, or the greater his differentiation ability, the greater is his ability to (a) see others' ideas, (b) predict others' behavior, and (c) play roles vis-a-vis others in the group, all of which are to Kelly components of mobilizing, or task, leadership. Therefore, the greater the cognitive differentiation of a group member, the greater is his task abilities.

A further assumption is necessary to relate cognitive differentiation to task leadership. The high cognitive differentiator not only construes or differentiates the various ideas of others. He also is assumed to integrate these ideas and therefore develop the best ideas in the group as to how to accomplish the task. In support of the assumption, Streufert and Schroder (1965) have found differentiation to correlate positively with integration.

Best ideas is the component of task leadership measured in this study. Given the above assumptions, the

higher the cognitive differentiation ability, the more likely this individual will give the best ideas in the group regarding task completion, and the more likely he is to be selected as group task leader. Specifically, constructive ability, or cognitive differentiation, is hypothesized to be positively correlated with task leadership, i.e., the number of nominations a group member receives for having the best ideas.

Several studies, using various measures of cognitive differentiation, have investigated aspects of Kelly's hypothesized relationship of differentiation and leadership. However, the relationship of differentiation and task leadership as specified above has not been examined. The relationship between differentiation and the prediction component of leadership has been examined by Bieri (1955). High differentiators were found to be more accurate in prediction of others' responses. Differentiation correlated positively .35 at the .05 level of significance with accuracy of prediction of others' behavior. Leventhal (1957) reports finding high differentiation to be correlated with accurate prediction of others' behavior but at a non-significant level.

A study by Mann (1959) linked accuracy of interpersonal perception, assumed to be associated with accuracy of prediction of others' behavior, to leadership. A significant, positive correlation was obtained.

Differentiation has also been correlated significantly with extroversion (Bieri and Messerly, 1961). Therefore, the high differentiator would have the force to get his ideas across to other group members. This factor would increase the likelihood of his selection as having best ideas in the group, or as task leader.

Other studies using small groups have related levels of cognitive complexity to information search behavior, communications, decision-making and productivity within the group (Streufert, Suedfeld, and Driver, 1965; Streufert and Schroder, 1965; Schroder, Driver and Streufert, 1967). Tuckman (1967) has correlated level of cognitive complexity in the group with task performance and role differentiation.

In testing the cognitive differentiation-task leadership hypothesis an important consideration is the degree of formal structure of the group. The hypothesized relationship would be expected to hold for groups lacking a designated leader and given role assignments, i.e., a formal structure. Variation in role behavior attributable to cognitive differences would be greatest in unstructured groups. Levinson (1963: 438) states that in formal organizations role-requirements can be narrowly defined and social control mechanisms are powerful. Turner (1969: 216) concurs with this view, stating that the "formal regulation system restricts the free operation of the role-making process. . . ."

Leadership in unstructured groups is "emergent," as opposed to formally designated leadership. It is this type of leadership that is to be examined, although it is the special case of emergent leadership in a group where formal leadership exists. The idea of leadership as dependent upon a criterion held by the group is an emergent leadership concept. A criterion of the group is much less relevant to formally designated leaders. By taking this definition, Kelly is implicitly assuming an emergent type of leadership.

Implicit in Kelly's theory are certain assumptions regarding differentiation of other people. Kelly seems to assume a differentiation of people in the abstract. What relationship the people have in relation to the differentiator is not seen as relevant, nor is how familiar the person is with the differentiator considered. Here all people are in the relationship of group member to one another; however perceived familiarity of persons to each other is quite variable.

Familiarity with others logically seems to be the result of amount of interaction. Wicker (1969) has shown indirectly that the amount of interaction with another is significantly, positively correlated with the degree of differentiation of him. If Newcomb's (1961) theory that interaction leads to increased information is correct, then a correlation between familiarity and differentiation

could be expected in the same way that a correlation between interaction and complexity is found. Increased interaction with another would mean increased information about the other or greater familiarity with him. This greater familiarity would be associated with increased differentiation of the other person. Therefore, it is hypothesized that the greater the familiarity with another, the more the differentiation of this person.

A further assumption made by Kelly and Bieri is that in the process of construing or differentiating other people's frames of reference, all dimensions are equally likely to be construed. That is, content of dimensions does not affect differentiation. Types of dimensions such as task and socioemotional would be equally differentiated as the process of construction or differentiation is seen by Kelly and Bieri to be independent of type of item.

It appears likely, as people seem to habitually use some dimensions more than others, that people would construe or differentiate some types of items more than others. If this position is taken, this assumption becomes questionable. Therefore, it is hypothesized that the content of dimensions affects the degree of differentiation of these dimensions. Task and socioemotional dimensions will not be differentiated to the same degree. That is,

a low positive correlation is expected between the amount of differentiation on task and socioemotional dimensions.

A final assumption of Kelly's regards the relationship of motives to differentiation. The motive Kelly employs to account for differentiation is prediction of the other's behavior. This motive leads to accurate construction or differentiation of the other. Another motive that could be involved in the process of differentiation of others is the need for approval of others, or "the approval motive" (Crowne and Marlowe, 1964). According to Crowne and Marlowe, people who are motivated by a need for approval are more likely to respond in a socially desirable manner. Approval is believed to be attained by responding in culturally accepted ways.

Responding in socially approved ways includes evaluative behavior, or the rating of others on dimensions. Crowne and Marlowe see agreeableness in the rating of others as designed to obtain social approval. Researchers studying rating behavior have dealt with an agreeing phenomenon under the label of acquiescence or yea-saying (Couch and Keniston, 1960). Couch and Keniston see what is generally viewed as a non-personality related response set of acquiescence, usually conceived in terms of an artifact in measurement, as a behavioral disposition of agreeableness. Acquiescence, or agreeableness, to Couch and Keniston is reflected in saying yes to all items on

an evaluative test regardless of content of item. Saying yes to socially devalued items is counted in Couch and Keniston's scoring of the number of yes responses to items.

If yea-saying is viewed in terms of a behavioral disposition of agreeableness, which serves the motive of desire for social approval, then agreeableness could interfere with differentiation of others in the following way. A person who shows a strong behavioral disposition of agreeableness would show less differentiation of others. High agreeableness would indicate that the rater, rather than considering each dimension independently to see if it applies to the person rated (differentiation), would agree (or disagree) that all dimensions aptly describe the person (lack of differentiation). Therefore, it is hypothesized that agreeableness is negatively associated with differentiation.

Since agreeableness is conceptually opposed to differentiation, and differentiation is hypothesized to correlate positively with task leadership, agreeableness is expected to correlate negatively with task leadership. Empirical support for this hypothesis is offered by Bales (1950), who found giving agreement is negatively associated with task leadership. A significant negative correlation between agreeableness and task leadership will, in addition, establish yea-saying as behavioral disposition rather

than as a measurement artifact for yea-saying will relate to a theoretically relevant variable.

CHAPTER III

METHODOLOGY

The task groups in this project are groups formed of the resident hall advisor and resident assistants on each floor of the residence halls at Michigan State University. Advisors from each hall, the total number of advisors being 312, are grouped into units ranging in size from 6-16 persons. The total population of groups consists of 36 groups. Three groups refused to participate, leaving a total of 33 groups. Fifteen of these groups are male, 16 are female, and 2 are combined male-female groups.*

The test of the differentiation-leadership hypothesis in this study depends upon establishing these groups as task groups. In the literature, studies of task groups frequently refers to groups similar in nature to Bales task groups. A Bales (1950) task group is a group whose purpose is the solution of a task through joint solving

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*Questionnaires employed in the study were given to each person in the resident hall groups (when the groups were assembled in regular weekly meeting). The response rate is moderately high with a great deal of inter-group variation in response rates.

efforts of members of the group. A group where the aim or main emphasis is on expressive personal interaction, such as therapy groups, meeting of friends, and play groups, is not considered to be a task group.

The groups used in this study are not as clearly task groups as are the Bales task groups. However, the groups can be shown to sufficiently conform to the nature of the Bales task groups so as to provide an adequate test of the hypothesis. One way in which these groups differ from Bales task groups lies in the emphasis on task-solution activities. The task in these groups is to discuss and solve mutual problems encountered in their roles of resident advisors. The groups are given this task by the Residence Hall Office and this task is the official function of the groups.

It would be expected that some activity in the groups would relate to dealing with members' feelings regarding handling of their roles of resident assistants. These activities would be of an expressive personal interaction nature which, according to Bales, are not task groups activities. However, Bales disqualifies a group from being a task group not on the basis of whether some activity of the group is of an expressive personal interaction nature, but rather if the aim or main emphasis of the group is on expressive personal interaction. To reiterate, the legitimate aim or function of these groups

is solving problems relating to methods of dealing with behavior of residents in the hall encountered in the role of resident assistant, not on members expressing their feelings regarding their performance in this role.

A conceivable line of argument against establishing these groups as task groups would concern the nature of the task of the groups. It would be argued that as the task of these groups concerns behavior, the task is socio-emotional and therefore the groups are socioemotional rather than task groups. In refutation of this argument, it can be noted that Bales (1968: 391) considers a group in which the task concerns behavior as a clear example of a task group. Specifically, he refers to a diagnostic council, where the task is for members to come to a decision regarding the patient.

Certain characteristics of these groups are relevant to the central hypothesis of this study. The resident advisor in each group, who usually has one or two graduate assistants, is the official leader of each group. Thus the groups possess a degree of formal structure. Within the groups, one or two leaders, sometimes more, generally emerge among the members of the group, selected according to the criterion of best ideas. However, in some groups, no one has high scores on number of choices on best ideas.

The amount of task ideas contributed by the official leader could relate to whether a leader emerges from

among the group members or resident assistants. The frequency of contribution of task-related ideas by the formal leader is a relevant condition for emergence of a task leader from the group. The formal leader may be a light or heavy contributor of good ideas. If the formal leader were to give a great many good ideas, it is conceivable that choices for best ideas would be fairly evenly distributed across all people in the group, indicating lack of emergence of a leader from among the group members.

Regarding this issue, Bowers and Seashore (1967) report that peer leadership (defined as leadership by peers in a group where a formally designated leader exists, or a type of emergent leadership) appears to be equal in strength to formally designated leadership. Consequently, the formally designated leader would not be expected to be the only group source of best ideas, and emergent leadership could develop in those groups where the formal leader contributed many task ideas, or where strong formal leadership as defined by contribution of task ideas exists. Factors other than strong formal leadership would be held by Bowers and Seashore to be responsible for lack of variation in choices on the criterion of best ideas, or emergence of leadership from the group.

Another relevant characteristic of these groups is the nature of the role of resident advisor. As differentiation will be measured in the interpersonal domain

(as opposed to differentiation of objects, for example) these subjects, due to the interpersonal nature of their role, would be expected to have more experience in this domain and therefore would have higher differentiation scores. Therefore, a smaller range in differentiation scores would occur among the resident advisors than among a non-resident advisor college population. Crockett's (1965) discussion of experience and level of differentiation lends support to this prediction.

A review of the literature on studies concerning cognitive differentiation indicates no article has reported the distribution of differentiation scores for the subjects studied. Thus no distribution is available for comparison with the present population to determine how these subjects differ from other subjects.

In this study, for reasons given above, differentiation is measured using Tripodi and Bieri's 1963 modification of the Kelly Role Construct Repertory Test. This test can fit the data with some modifications which will be presented following a description of the 1963 test.

The modified Repertory Test (1963) measures the degree to which an individual differentiates traits. This test provides the subject with a 10 x 10 matrix, consisting of ten columns of role types (mother, father, boss, etc.) and ten rows of bipolar traits (outgoing-shy, calm-excitable). The subject is asked to rate the individual

who corresponds to each role type for him on each set of bipolar traits, using a six-point Likert scale ranging from -3 to +3, so that each of the one hundred boxes in the derived matrix receives a score.

Total scores are calculated by comparing the similarity of ratings in every row of traits with the ratings of every other row of constructs. Every row is compared with every other row and a score of 1 is given to every instance of exact agreement between the two ratings on any one person, and these are added. Each rating is compared with every other rating once, i.e., the rating in row 1 (trait 1), column 1 (person 1) is compared to row 4, column 1 but not vice-versa. Rows are compared with each other on one person at a time so that there are subtotals for each person rated.

The highest possible score (if each person rated receives the same rating--subtotals would equal 45, times 10 people rated equals 450) is 450 and the lowest, assuming no omissions, is 40 (since there are six alternatives and 10 ratings to be made in each row, four must be repeated). Within this range, lower scores indicate greater differentiation.

In this manner, the degree to which an individual differentiates traits is measured by the test. If an individual were to always rate persons identically on two different traits, one could assume that he was making no

differentiation at all between these two dimensions. Therefore, the test examines the extent to which an individual uses dimensions discriminantly. Chance agreement of ratings on two different traits is not considered in this test. Previous research employing this measure has not considered the effect of chance agreement on scores obtained by this method of measurement.

In the study reported here, the comparisons-of-pairs-of-responses aspect of this measure is applied to a questionnaire consisting of one sheet per person rated containing 26 items (Bales, 1970), each requiring a rating of the person on a trait (see Figure 1). For purposes of this study, the terms trait, dimension, construct and item will be considered equivalent terms. Bale's items are designed to measure personality types associated with participation in groups. His items are, in general, of a task or socioemotional nature compared to Bieri's mainly non-task, interpersonal items.

Overlapping items in the two measures include, listing Bieri's (see Figure 2) and then Bales's items respectively, independent-feels independence is important, calm-calm and understanding, outgoing-extrovert, and to some degree interested in others-personally involved in the group and considerate-believes equality and humanitarian concern for others is important. A close examination of the items on the two tests reveals a fair degree

FIGURE 1

BALES 1970 QUESTIONNAIRE

MEMBER CODE NUMBER PHASE II CIBBA STUDY

INSTRUCTIONS: IN MAKING THESE RATINGS, PLEASE CHECK TO MAKE SURE THAT YOU ARE THINKING ONLY ABOUT THE PERSON WHOSE CODE NUMBER APPEARS AT THE TOP OF THIS SHEET. CIRCLE THE BEST ANSWER:

1. How well do you feel you know this person?
   INTIMATELY VERY WELL FAIRLY WELL NOT VERY WELL HARDLY AT ALL
2. How physically attractive do you feel this person is?
   EXTREMELY ATTRACTIVE QUITE ATTRACTIVE AVERAGE UNATTRACTIVE
3. Is his (her) rate of participation generally high? YES NO
4. Does he (she) seem personally involved in the group? YES NO
5. Does he (she) seem likely to be rated highly on "leadership?" YES NO
6. Is his (her) rate of giving suggestions on group tasks high? YES NO
7. Does he (she) make inhibitory demands and want to enforce discipline? YES NO
8. Does he (she) seem dominating? YES NO
9. Does he (she) receive a lot of laughter? YES NO
10. Does he (she) seem very extroverted? YES NO
11. Does he (she) seem warm and personal? YES NO
12. Does he (she) arouse your admiration? YES NO
13. Is his (her) rate of giving agreement generally high? YES NO
14. Does he (she) seem to stand for the most conservative ideas and beliefs of the group? YES NO
15. Does he (she) always seem to try to speak objectively? YES NO
16. Does he (she) seem to feel that his (her) individual independence is very important? YES NO
17. Does he (she) seem to feel that others are generally too conforming to conventional social expectations? YES NO
18. Does he (she) seem to reject religious belief generally? YES NO
19. Does he (she) seem to make others feel they are entertaining, warm? YES NO
20. Does he (she) seem calm, understanding? YES NO
21. Does he (she) seem to believe that equality and humanitarian concern for others is important? YES NO
22. Does he (she) seem very introverted, serious, shy, introspective? YES NO
23. Does he (she) seem to feel anxious, fearful of not conforming? YES NO
24. Does he (she) seem to participate only when others ask him (her) for his (her) opinion? YES NO
25. Does he (she) tend to believe that others dislike him (her)? YES NO
26. Does he (she) show many signs of tension and passive resistance? YES NO
27. Does he (she) seem to be appealing for understanding? YES NO
28. Does he (she) tend to devaluate himself (herself)? YES NO

FIGURE 2

BIERI AND TRIPODI 1963
MEASURE OF COGNITIVE DIFFERENTIATION

										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

+3	+2	+1		-1	-2	-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
+3	+2	+1		-1	-2	-3

of comparability; however, it should be noted that to Kelly and Bieri content of items is unimportant in the measurement of cognitive differentiation.

The number of response alternatives differs on the Bieri and Tripodi measure and the Bales-based measure employed in this study. The alternatives of Bieri and Tripodi are continuous, while the alternatives on the Bales-based measure (the measure employed here) are dichotomous. The response alternatives of Bieri and Tripodi do fall into positive and negative categories (+3, +2, +1, -1, -2, -3) and in this way the response categories could form a dichotomy if grouped by sign. Positive corresponds to "yes" and negative corresponds to "no" in the present test.

One could logically expect that to the rater, the polar positive or negative choice would precede the choice of a gradation number within the + or - side of the response scale. This would lead him to treat the alternative initially as a positive-negative dichotomy. Scale logic, however, assumes the choice is made on a continuous basis.

Further, in comparing two versus six response alternatives in measuring cognitive differentiation, there is no one right way. The important part of the measure is taken by Bieri and Tripodi as the comparison of pairs of responses, used to determine independence of dimensions.

This procedure is equally applicable to two or six response alternatives. Because there are two alternatives on the present measure instead of six, similarity of two item responses in rating a person is much more likely to occur, and therefore higher differentiation scores will be obtained.

Other differences between the present measure of cognitive differentiation and Bieri and Tripodi's measure include the number of dimensions upon which a person is rated (26 versus 10), number of people rated (a number ranging from 6-16 versus 10) necessitating equalizing for the effect of number of people rated on the differentiation score, and the identity of people rated (people in peer roles versus people in authoritative roles). Another difference is in the method of calculating the differentiation score. Rather than comparing each item by each other item for a person rated to determine response similarities as is done in the Bieri test, the number in each response category is determined and entered into the formula $n(n-1)/2$ to determine the number of co-occurrences of similar responses, or pairs.*

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*In addition to calculating differentiation scores by comparing across items for each person rated, a differentiation score was computed based upon responses given to one item compared across all people rated. The characteristics of this measure have not been explored.

The two possible response alternatives are yes and no, and a yes is coded 1 and a no is coded 0. The formula gives the total possible pairs among n objects, in a symmetrical matrix. One-half of the symmetrical matrix and the main diagonal are excluded. N here refers to the number of ones and the number of zeroes, each entered separately into the formula so that the number of pairs of "1" responses and the number of pairs of "0" responses are determined separately (see Figure 3).

The number of "1" and "0" pairs in each column (for each person rated) is calculated and these subtotals are added and divided by the number of people rated to get a mean differentiation score for the subject. The higher the score, the less the differentiation.

The lowest number of combined pairs (number of one and zero pairs combined) occurs when there are half ones and half zeroes on the items--13 ones and 13 zeroes on 26 items. In this case the number of one pairs is 13-1 x 13/2 or 78 and the number of zero pairs equals the same. The combined total becomes 156 for the lowest possible differentiation score. Results using this method and results employing Bieri and Tripodi's method derived from the same hypothetical data matrix were found to be identical. The same number of pairs was obtained through using the n(n-1)/2 method and using Bieri and Tripodi's method of item-by-item comparison. Thus the step of

FIGURE 3

MEASURE OF COGNITIVE DIFFERENTIATION

		Persons 1 2 3 4 5 6 7 8 9 10 Rated
1.	High rate of participation? Yes No	1
2.	Personally involved in group?	0
3.	Is leader?	1
4.	Gives suggestions?	1
5.	Makes inhibitory demands and wants discipline?	0
6.	Dominating?	0
7.	Receives laughter?	1
8.	Extroverted?	1
9.	Warm and personal?	0
10.	Arouses admiration?	0
11.	Gives agreement?	1
12.	Conservative?	0
13.	Speaks objectively?	0
14.	Independent?	1
15.	Feels others are too conforming?	1
16.	Rejects religious belief?	0
17.	Makes others feel they are warm, entertaining?	1
18.	Calm and understanding?	0
19.	Believes in equality and humanitarian concern?	0
20.	Introverted?	0
21.	Anxious, fearful of not conforming?	1
22.	Participates only when asked?	0
23.	Believes others dislike him (her)?	0
24.	Tense and passively resistive?	1
25.	Appeals for understanding?	0
26.	Devalues self?	0

13 ones (13 x 12)/2=78
13 zeroes (13 x 12)/2=78
subtotal= 156

item-by-item comparison is unnecessary, simplifying computation of the differentiation score through use of the n(n-1)/2 formula.

In the present measure, the number of pairs of one responses and the number of pairs of zero responses in the rating of a person are negatively correlated (r=-.80) because the number of zeroes going into the n(n-1)/2 formula is determined by the number of ones going into the formula and vice-versa. The number of pairs of a type of response is determined by the number of that type of response. The negative correlation occurs because ones and zeroes (yeses and nos) are the only possible response alternatives other than no response (blanks). Since there are 26 items, the number of ones and zeroes must sum to 26. Therefore, the more the ones, the fewer the zeroes and vice-versa.

As mentioned above, task leadership is measured sociometrically in terms of the number of choices on the item best ideas a person receives. Persons in the group were asked to respond to the question "which three members usually come up with best suggestions and ideas?" Number of choices (including first, second and third) for each person is then divided by the total number of votes cast in the group to standardize for differences in group size to allow for cross-group comparison.

Familiarity is measured by a question asking "how well do you feel you know this person?" The range of familiarity ratings is from one to five. The familiarity scores for each person rated is recorded.

Agreeableness (or disagreeableness) can be measured from the same questionnaire items used to measure cognitive differentiation; therefore the cognitive differentiation test is taken to measure more than the variable of cognitive differentiation. A "yes" response is taken to indicate agreeableness, regardless of item content (as previously stated, yea-saying and nay-saying are used by Couch and Keniston to measure agreeableness and disagreeableness). The ones and zeroes (yeses and nos) that go into the calculation of the differentiation score also are calculated as a measure of agreeableness and disagreeableness.

To measure agreeableness and disagreeableness, the number of pairs of ones and zeroes (which are directly determined by the number of ones and zeroes given by the subject scores all people he rates) are calculated separately and not combined into one score as they are in measuring differentiation. The number of ones is the measure of agreeableness, while the number of zeroes is the measure of disagreeableness. The larger the number, the more agreeable or disagreeable is the person.

To determine if content of dimensions affects differentiation of these items, that is, if cognitive structure exists independently of content, it is first necessary to establish clearly which items are of task or a socioemotional nature. A factor analysis (principal components, rotated with eigenvalue cut-off)* was conducted on the 26 items. Items loading high on factors interpreted as task and socioemotional were selected (4 of each).

Task items include rate of participation in the group, personal involvement in the group, leadership, and giving suggestions. Socioemotional items selected are "is warm and personal, arouses admiration, makes others feel they are warm and entertaining, and is calm and understanding." Differentiation scores were calculated separately for each of these sets of items in order to determine if both sets of items are equally differentiated.

Pearson product moment correlations were computed between differentiation and task leadership, differentiation and familiarity, differentiation scores on the two item sets, and agreeableness and task leadership. The distributions for the variables of familiarity and differentiation on the task set approximate normality. The distribution of differentiation approximates normality

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*Factors with eigenvalues greater than 1.0 were used, employing Varimax rotation.

and 90% of the subjects lie within a 10-point range on a scale of 156 to 325. Distributions for agreeableness and differentiation on the socioemotional set of items are slightly skewed (positively), while the distribution for best ideas or task leadership is very positively skewed, which would attentuate somewhat the correlation between differentiation and task leadership, and agreeableness and task leadership.

CHAPTER IV

RESULTS

Differentiation correlates .07 (non-significantly) with task leadership. Thus the hypothesis that differentiation correlates positively to task leadership is not supported.*

The hypothesis that differentiation is influenced by content of items rather than being solely a structural concept is supported. The low, positive correlation expected between differentiation scores on task and socioemotional item sets is found. The amount of differentiation on task content items correlates .11 with the degree of differentiation of socioemotional items. In other words, degree of differentiation on task items has little

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*Differentiation correlates .05 (non-significant) with socioemotional leadership. The second measure of differentiation (computed across people) correlates -.22 (significant) with task leadership and -.12 with socioemotional leadership, thus more strongly supporting the differentiation-task leadership hypothesis. It should be noted that a high differentiation score means low differentiation. Therefore the negative correlation between differentiation and task leadership supports the hypothesis.

relation to degree of differentiation on socioemotional items.

Familiarity was found to correlate -.23 with the co-occurrence score, thus supporting the hypothesis that familiarity correlates positively (read as follows) with differentiation. This correlation reads the higher the familiarity, the lower the co-occurrence score (the number of pairs of similar responses). A low co-occurrence score indicates high differentiation. Thus, the greater the familiarity, the greater the differentiation. Correlation ratio or eta is not significantly different from r for these two variables, nor for any of the other variable combinations. Thus, there is no significant departure from linearity among these variables.

Agreeableness can be shown mathematically to be an inverse function of differentiation. The number of ones (yeses) goes directly into the computations that determine the differentiation score. The higher the number of ones (the more the agreeableness as measured here), the higher the number of pairs of ones, one of the two components of the differentiation score. Therefore, a higher co-occurrence score results, or lower differentiation. It will be recalled that the lowest co-occurrence score, or the highest differentiation, occurs when there are 13 ones and 13 zeroes. In this case there are 78 pairs of ones

and 78 pairs of zeroes, or a co-occurrence score of 156 pairs for one person rated.

In a case where a rater gives 20 ones, indicating he scores high on agreeableness, and 6 zeroes, there would be 190 pairs of ones and 15 pairs of zeroes for a co-occurrence score of 220, or low differentiation. A similar score would be obtained if the rater scored high on disagreeableness, or gave 20 zeroes. Thus the more agreeable or disagreeable a person is, the less he differentiates others.

The discussion of the relationship between agreeableness and differentiation leads to the conclusion, implicit in the foregoing discussion of the measurement of differentiation, that this differentiation measure is a measure of variance in response alternatives chosen by the rater. It is apparent that the greater the variability of response, the lower the co-occurrence score and the higher the differentiation. Therefore, the present differentiation measure was correlated with a measure of differentiation (Crano and Bettinghaus, 1970) that is computed in terms of variance of responses. Computing Crano and Bettinghaus's measure in terms of the formula for binominal variance, or the average pq/n across all people rated by the subject (where p equals the number of ones, q equals the number of zeroes, and n equals the total possible responses or 26), a correlation of -.94 was

obtained. The binominal variance formula was employed to fit the measure to the two response alternative mode of this data.

As noted, a low co-occurrence score is reached through greater variability of responses. Thus a negative correlation (the higher the co-occurrence score, or lower differentiation, the lower the variance differentiation score, or lower differentiation) indicates both measures are variance measures. Both measures operationalize differentiation in terms of response variability. For these measures, continually using all dimensions to describe an object indicates lack of response variability or low cognitive differentiation.

In a test of the final hypothesis of this study, agreeableness was found to correlate -.16 with task leadership, significant at the .01 level. Therefore, the hypothesis that agreeableness correlates negatively with task leadership is supported, replicating Bales (1950) finding that giving agreement is negatively associated with task leadership. Further, this finding supports the use of yea-saying as a behavioral disposition rather than as a measurement artifact.

CHAPTER V

DISCUSSION

These results have several implications for Kelly's theory of personal constructs and the measurement of cognitive differentiation. First, Kelly's view of the process by which people perceive others is simplistic. The finding that differentiation of dimensions is influenced by the content of the dimensions indicates that people are more likely to perceive others in terms of certain kinds of dimensions, i.e., all dimensions are not equally relevant in perceiving others. Here, cultural or situational factors present in the group can influence what kinds of dimensions group members consider relevant.

Further, perception of others changes over time. Since differentiation is positively correlated with familiarity, which is a function of time, the longer one knows a person the more differentiated would be the perception of the person. Time would be assumed to represent interaction, and greater interaction would result in increased information about other persons. Greater familiarity represents increased information, thus leading to greater

differentiation of the other based upon accumulation of information.

Kelly's one-motive image of man is questionable in view of the finding that agreeableness, a behavioral disposition designed to gain social approval, is inversely related to differentiation. The approval motive conflicts with Kelly's motive to accurately predict others' behavior and leads to a lack of differentiation upon which prediction is based. Ample evidence of an approval motive exists in the literature, meaning this motive's effect on differentiation others is highly probable.

Finding that behavior designed to gain social approval, i.e., agreeableness, can be measured in the same test constructed to measure differentiation provides grounds for questioning the validity of this measure. Cronbach and Meehl (1967: 254) note that degree of construct validity can be stated as the proportion of variance in scores attributable to the construct variable. Since this test clearly measures at least one other variable, the proportion of variance in scores attributable to differentiation cannot be very high. Further, because the test measures variables other than differentiation, correlating scores on this test with best ideas in a test of the hypothesis relating differentiation to task leadership becomes problematic.

The importance of these measurement problems for other operationalizations of differentiation, or for a test of differentiation such as Bieri and Tripodi's, depends upon the degree to which agreeableness is also included in the measure. Couch and Keniston (1960) state that if agreeableness is a general personality variable, it should permeate tests that use Likert-scale response alternatives and those that use response categories that are similar in meaning to agreement and disagreement, i.e., two response alternatives of yes and no, as used in this study, or of true or false. Empirical support is offered showing that agreeableness permeates all types of response categories.

Couch and Keniston also show that in a Likert-scale response alternative situation, agreeableness is uniquely highly associated with the response categories of agree and disagree. Therefore, the effects of agreeableness and disagreeableness would be represented through an increase in these two response categories, rather than being distributed over all response categories. This would have the effect of numerically increasing either the agree or the disagree category relative to all other categories, resulting in a greater similarity of overall responses. The higher number of similar responses--agree response--would result in more pairs of these responses, thus

raising the co-occurrence score calculated on the basis of Likert-scale response alternatives.

In this way, agreeableness would affect co-occurrence scores computed in Bieri and Tripodi's test. Thus the same validity problems would appear, although probably not to the same degree.

It would seem likely that familiarity and content of items would influence differentiation measured by Bieri and Tripodi's test in the same way as the measure in this study is influenced by these factors. As the people rated in Bieri and Tripodi's test are in roles of varying social distance from the rater, familiarity would not be a constant. As noted above, the dimensions employed in Tripodi and Bieri's measure are of varying content.

In conducting this study, several conditions would have been ideally preferred. Groups in the general population of college students or groups in the community would have been preferred over the specialized population of college resident hall advisors. A wider range of co-occurrence or differentiation scores could be obtained in the preferred populations as members would be expected, if the co-occurrence measure is reliable, to have greater differences in amount of interpersonal experience, thus facilitating correlation of differentiation and best ideas.

Groups with no official leader, i.e., totally unstructured groups, would have better suited the differentiation-task leadership hypothesis. Emergent leadership would be more easily studied. Under conditions where there is no official leader, leadership is more likely to emerge from the group. The distribution on the variable of best ideas (strong, positive skew), while representing all of the groups, indicates many people in the groups received few choices. This distribution could be interpreted as reflecting lack of emergent leadership as everyone receives about the same number of votes for best ideas--perhaps partly due to the presence of formal leadership.

An alternative to studying groups without formal leadership would be to test Kelly's hypothesis with the formal leaders of these groups by measuring the level of cognitive differentiation of the formal leaders. It could be argued that formal leaders occupy their position due to their level of cognitive differentiation. It could also be argued that the role of formal leader leads to increased cognitive differentiation of the occupant. Therefore in a design to test the first line of argument, level of cognitive differentiation should be measured prior to assuming the role of formal leader.

Using groups which are clearly task groups and groups which are strongly socioemotional groups would

provide a better test of Kelly's hypothesis relating cognitive differentiation with mobilizing leadership. As previously noted, Kelly's concept of mobilizing leadership seems to apply to either task or socioemotional leadership. The results of this study indicate cognitive differentiation as measured with Bieri's method does not correlate with either task or socioemotional leadership (see footnote, p. 42). However, in testing the differentiation-task leadership hypothesis of this study, it should be noted that the groups, while predominately task groups, do have some characteristics of socioemotional groups. Relating cognitive differentiation with leadership in straight task and socioemotional groups would provide a better test of Kelly's hypothesis.

Utilizing straight task and socioemotional groups would improve the clarity of the assumptions in Kelly's theory. First, members of the group would more clearly perceive the task or socioemotional nature of the group, which would lead to increased clarity as to the criterion utilized by group members for assessing who has best ideas. In the present groups where both task and socio-emotional activities occur, whether the criterion for best ideas refers to ideas relates to task or socioemotional activity is less clear.

In general, the findings of this study provide grounds for questioning the current conceptualization and

operationalization of cognitive differentiation. It can be argued, based upon these data, that cognitive differentiation is not a cognitive structural variable that can be measured independently of the content of the cognitive system. Further, current measures of cognitive differentiation appear to tap more than the concept of cognitive differentiation, rendering problematic the testing of hypotheses involving the concept of cognitive differentiation.

Thus, the testing of the hypothesis relating cognitive differentiation to task leadership is not definitive. The test of this hypothesis is a test of the broader personality-social structural theoretical framework in the sense that cognitive differentiation is the personality variable and the leadership role, defined sociometrically as the number of nominations a person receives for having best ideas is the social structural variable. As the testing is not definitive, an evaluation of the broader personality-social structure theoretical framework in terms of the demonstrated lack of relationship between differentiation and task leadership in small groups is not feasible.

CHAPTER VI

SUMMARY

The primary objective of this study is to test the hypothesis, originating in Kelly's Theory of Personal Constructs, that constructive ability correlates positively with task leadership in small groups. Constructive ability, the central term in Kelly's theory, is defined in accordance with Bieri's use of the term. Bieri, who has tested Kelly's theory in research, defines constructive ability in terms of cognitive differentiation, or the number of independent dimensions an individual utilizes in describing others. Cognitive differentiation is measured here with an approximation of Tripodi and Bieri's modification of the Kelly Role Construct Repertory Test. Task leadership is defined, with reference to Bales, as having the best ideas in the group regarding task accomplishment.

The connection between constructive ability or cognitive differentiation and task leadership posited by Kelly is taken as the basis for the hypothesis. Using a personality-social structure framework similar to current theorists, Kelly sees constructive ability as the

individual personality variable which leads to selection by the group of the individual to the role, or social structural variable, of what Kelly terms the mobilizing leader. Better constructive ability enables the individual to, among other things, better perceive the ideas of members of the group, leading to his selection as mobilizing leader.

Certain assumptions underlying Kelly's theory are also examined. Kelly and Bieri assume that cognitive differentiation is not influenced by characteristics of the interpersonal relationship. It is hypothesized that cognitive differentiation is positively correlated with degree of familiarity with the person and a desire of the differentiator to be socially agreeable. In addition, Kelly's assumption that cognitive differentiation is independent of type of dimensions is tested.

The groups utilized in testing these hypotheses are groups composed of a resident advisor and resident assistants on each floor of the Michigan State University resident halls. The groups, including male and female groups range in size from 6-16 persons. The total number of groups is 33.

The findings of the study do not support the cognitive differentiation-task leadership hypothesis. This lack of support could be due to the formal leadership in the groups as the hypothesis examines cognitive

differentiation in relation to leadership emerging from among the group members, or to the fact that the groups are not straight Bales-type task groups. Familiarity is shown to correlate positively with cognitive differentiation, supporting this hypothesis. The desire to be socially agreeable is demonstrated to have an effect on the measurement of cognitive differentiation. Finally, cognitive differentiation is shown to be affected by the type of dimensions in the person's cognitive system.

REFERENCES

REFERENCES

Bales, R. F.

1950 Interaction Process Analysis. Reading, Massachusetts: Addison-Wesley.

1970 Personality and Interpersonal Behavior. New York: Holt, Rinehart and Winston.

Bales, R. F. and F. L. Strodtbeck

1968 "Phases in Group Problem-Solving." Pp. 389-398 in D. Cartwright and A. Zander (eds.), Group Dynamics. New York: Harper & Row.

Berger, P. L. and T. Luckmann

1966 The Social Construction of Reality. New York: Doubleday.

Bieri, J.

1955 "Cognitive complexity-simplicity and predictive behavior." Journal of Abnormal and Social Psychology, 51: 263-268.

1966 "Cognitive complexity and personality development." Pp. 13-39 in O. J. Harvey (ed.), Experience, Structure and Adpatability. New York: Springer.

Bieri, J. and D. Messerly

1961 Reported in J. Bieri, "Complexity-simplicity as a personality variable in cognitive and preferential behavior." Pp. 355-379 in D. W. Fiske and S. R. Maddi (eds.), Functions of Varied Experience. Homewood, Illinois.

Bowers, D. G. and S. E. Seashore

1967 "Peer leadership within work groups." Personnel Administration, 30: 45-50.

Carter, L. F.

1954 "Recording and evaluating the performance of individuals as members of small groups." Personnel Psychology, 7: 477-484.

Cartwright, D. and A. Zander

1968 Group Dynamics. New York: Harper & Row.

Couch, A. and K. Keniston

1960 "Yeasayers and naysayers: agreeing response set as a personality variable." Journal of Abnormal and Social Psychology, 60: 151-174.

Crano, W. D. and C. O. Bettinghaus

1970 "The generality of evaluative differentiation across diverse attitude domains." Paper presented at the American Psychological Association annual convention.

Crockett, W. H.

1965 "Cognitive complexity and impression formation." Pp. 47-90 in B. A. Maher (ed.), Progress in Experimental Personality Research, Vol. 2. New York: Academic.

Cronbach, L. J. and P. E. Meehl

1967 "Construct validity in psychological tests." Pp. 243-270 in W. A. Mehrens and R. L. Ebel (eds.), Principles of Educational and Psychological Measurement. Chicago: Rand McNally.

Crowne, D. P. and D. Marlowe

1964 The Approval Motive. New York: John Wiley & Sons.

Garner, W. R.

1973 Dimensions of cognitive structure. Guest Lecture at the University of Michigan, Ann Arbor.

Geier, J. G.

1970 "A trait approach to the study of leadership in small groups." Pp. 409-416 in R. S. Cathcart and L. A. Samovar (eds.), Small Group Communication. Dubuque, Iowa: William C. Brown.

Gibb, C. A.

1970 "The principles and traits of leadership." Pp. 366-375 in R. S. Cathcart and L. A. Samovar (eds.), Small Group Communication. Dubuque, Iowa: William C. Brown.

Harvey, O. J., Hunt, D. E. and H. M. Schroder

1961 Conceptual Systems and Personality Development. New York: John Wiley & Sons.

Hayek, F. A.

1942 "Scientism and the study of society." Economica, 9: 267-291.

Heine, P. J.

1971 Personality in Social Theory. Chicago: Aldine.

Inkeles, A.

1963 "Sociology and psychology," Pp. 317-387 in S. Koch (ed.), Psychology: A Study of a Science: Vol. 6. Hightstown, New Jersey: McGraw-Hill.

Kelly, G. A.

1955 The Psychology of Personal Constructs. New York: W. W. Norton.

Levanthal, H.

1957 "Cognitive processes and interpersonal prediction." Journal of Abnormal and Social Psychology, 55: 176-180.

Levinson, D. J.

1963 "Role, personality and social structure in the organization setting." Pp. 428-440 in N. J. Smelser and W. T. Smelser (eds.), Personality and Social Systems. New York: John Wiley & Sons.

Mann, R. D.

1959 "A review of the relationships between personality and performance in small groups." Psychological Bulletin, 56: 241-270.

Mitchell, T. R.

1970 "Leader complexity and leadership style." Journal of Personality and Social Psychology, 16: 166-174.

Newcomb, T. M.

1961 The Acquaintance Process. New York: Holt, Rinehart and Winston.

Press, A. N. and W. H. Crockett

1969 "Cognitive complexity and the learning of balanced and unbalanced social structures." Journal of Personality, 4: 540-553.

Schroder, H. M., Driver, M. J. and S. Streufert

1967 Human Information Processing. New York: Holt, Rinehart and Winston.

Scott, W. A.

1963 "Cognitive complexity and cognitive balance." Sociometry, 26: 66-74.

Streufert, S. and H. M. Schroder

1965 "Conceptual structure, environmental complexity, and task performance." Journal of Experimental Research in Personality, 1: 132-137.

Streufert, S., Suedfeld, P. and M. Driver

1965 "Conceptual structure, information search and information utilization." Journal of Personality and Social Psychology, 2: 736-740.

Thomas, E. J.

1968 "Role theory, personality, and the individual." Pp. 629-727 in E. F. Borgatta and W. W. Lambert (eds.), Handbook of Personality Theory and Research. Chicago: Rand McNally & Company.

Tripodi, T. and J. Bieri

1963 "Cognitive complexity as a function of own and provided constructs." Psychological Reports, 13: 26.

Tuckman, B. W.

1967 "Group composition and group performance of structured and unstructured tasks." Journal of Experimental Social Psychology, 3: 25-40.

Turner, R. H.

1969 "Role-taking: process versus conformity." Pp. 215-230 in A. R. Lindesmith and A. L. Strauss (eds.), Readings in Social Psychology. New York: Holt, Rinehart and Winston.

Vannoy, J. S.

1965 "Generality of cognitive complexity-simplicity as a personality construct." Journal of Personality and Social Psychology, 2: 385-396.

Wicker, A.

1969 "Cognitive complexity, school size, and participation in school behavior settings." Journal of Educational Psychology, 60: 200-203.