

SELF-CONCEPT, ROLE INTERNALIZATION, AND
SALIENCY IN RELATION TO
FOUR-H-LEADER EFFECTIVENESS

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ABSTRACT

SELF-CONCEPT, ROLE INTERNALIZATION, AND SALIENCY IN RELATION TO FOUR-H LEADER EFFECTIVENESS

by Delwyn A. Dyer

The basic purpose of this research was to explore the possibility of establishing an index for measuring or predicting 4-H leader effectiveness. From a practical point of view, if such an index is available it would have great utility for placement of leaders; for estimation of tenure; and further have implications for individual leader education. Establishment of such utility, on the other hand, would greatly enhance the theoretical frame upon which such an index rests.

The 4-H Club Leader is viewed as a volunteer, elected or appointed to fill a position in a voluntary organization. There are certain behaviors ascribed to that position and the basic role is seen as helping the group reach its purposeful goal.

Social scientists addressing themselves to the study of leadership in recent years have agreed that the phenomenon is best understood as a composite of characteristics of the individual and characteristics of the social situation. The basic theoretical position taken in this study is that one can predict behavior on the basis of knowledge about one's self-concept and that, given a measure of self-concept and knowledge of the role to be fulfilled, one can predict how well one would fulfill such a role. This research then attempted to measure characteristics of the individual; that individual's knowledge of behavior demanded for the role "4-H leader"; and effectiveness of the individual as a 4-H leader.

The Twenty Statements Test developed by Manford Kuhn and Thomas McPartland of Iowa State was used to measure self-concept. The scale score is reported in terms of locus scores (number of role-oriented statements given in response to the open-ended question, "Who am I?"). A modified Twenty Statements Test was used to assess the subject's knowledge of the role behavior demanded (the question "What do 4-H leaders do?"). A questionnaire entitled Michigan 4-H Leader Inventory contained items later scaled and summed to yield an effectiveness score.

The basic question of this research was: can one predict effectiveness of a person in the role of 4-H Leader using the Twenty Statements Test and/or its complement the Role Internalization Test? Such a question is not directly testable, however, if significant relationship could be shown between--the variables identified in the Twenty Statements Test, the Role Internalization Test--and effectiveness the answer could be inferred.

The variables identified were: (1) Locus score; (2) Role Internalization score (representing the number of relevant role statements the individual made on the Role Internalization Test); (3) Saliency score (the numerical position at which the reply "I am a 4-H Leader" was given); and (4) Effectiveness score.

Two additional variables were leader tenure and type. Tenure was dicotomized at three years (those under, and over). Type was dicotomized to Project Leaders (limited sphere and specific subject matter teaching) and Community or Mixed Club Leaders (extended sphere, many projects, administrative responsibilities). Other variables were examined and related as they became evident in the analysis (i. e., number of formal organizational statements made on the Twenty Statements Test).

Hypothesis dealing with interrelatedness of the four main variables: locus; role internalization; saliency; and effectiveness; all were supported

at, or below, the five percent level of significance. That is, there was significant positive relationships between each of the first three variables, to one another, and each in turn to effectiveness. The statistic test used was the chi-square. The above holds true for all variables, but role internalization in relation to saliency (this relationship significant at about .10 level).

Significant and positive relation was also established between number of organization statements on the T.S.T. and effectiveness.

Other hypotheses tested were:

- (1) Leaders with high locus and high role internalization will have high effectiveness. Supported.
- (2) Leaders with high saliency and high role internalization will have high effectiveness. Only partially supported.
- (3) Leaders with high saliency and low role internalization, if a leader of more than three years will have low effectiveness. Not supported.
- (4) Leaders with low locus will have low effectiveness if they are mixed or community club leaders. Not supported. However, high locus for this group means high effectiveness.
- (5) Leaders with high effectiveness scores and less than three years service will have a lower 4-H leader saliency score than effective leaders of more than three years. Supported.

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CHAPTER I

INTRODUCTION AND CONTEXT OF PROBLEM

In the course of human activity certain ideas, skills, and modes of conduct become important. They endure to the point where they become considered goals desirable for attainment by most every member of a given society.

In order to preserve and transmit these patterns of behavior, human activity must be organized in a way which will best accomplish those things considered important. Americans look upon voluntary associations as a very desirable method of formal social organization, through which, by voluntary membership and participation, they can perpetuate a set of ideas, skills, and modes of conduct. Many voluntary organizations rely heavily on lay people for local unit leadership and indeed these lay people are charged with the teaching, advising, programming of these units. Such an organization is the 4-H Club, a program national in scope but local in its organization and orientation.

This dissertation concerns itself with two problems of major importance to the 4-H Club program, that of local 4-H leader tenure and effectiveness. The research proposed herein will be directed toward methods in measurement of these pertinent variables. Is it possible to measure effectiveness of volunteer 4-H leader performance, and what instruments now in use by social psychologists could be applicable?

It is believed that such research will have far reaching effects not only in 4-H Club work but other agencies and organizations working with and through volunteer leaders as well. Further, if the social psychological instruments used in this research can indeed differentiate between those

that are effective and those that are not, support will have been given to the rationale upon which they were constructed, and, to the utility of the instruments themselves.

The Context

Expectations are that this manuscript will attract readership beyond the confines of the Cooperative Extension Service and its immediate associates. Further it is assumed by this writer that many publics could profitably use a point of reference in study of this research. The following section is therefore offered.

Four-H Clubs are social groups of boys and girls between the ages of 10 and 21, organized to furnish a vehicle for the development of their members, through self-help programs, and the improvement of farm, home, and neighborhood practices in such a way that both rural and urban youth are brought into touch with the best in each environment and helped to make of themselves efficient, public-spirited and useful citizens.¹

The members of each club either live in the same neighborhood or come from the same school district, township, village, town, or city ward.

The 4-H Club movement is national in scope, having well developed symbols and rituals. The program is a noncompulsory (voluntary membership), out-of-school educational organization directed by professional educators and under the leadership (advisorship) of local lay people in the various communities. It is administered through the Cooperative Extension Service, a branch of the United States Department of Agriculture, and in cooperation with the individual states through their land grant colleges or universities. Most counties in the United States have a staff of Cooperative Extension Agents to serve the county, and certain

¹T. T. Martin, The 4-H Leaders Handbook, Harper and Brothers, 1956, p. 2.

of these agents are assigned work with the 4-H Club program. Guidance, then, comes from a full range of hierarchy; however, each club is free to organize on its own basis and for its own needs.

The real backbone of the total 4-H movement is the volunteer local lay leader. In Michigan, 12,000 local 4-H leaders conduct the local activities of 70,000 4-H members, annually holding more than 60 thousand local 4-H Club meetings.

Local 4-H leaders, like other volunteer youth workers, are leaders by consent, in that members of the group, and/or their parents, have invited, elected, or in some way requested that the adult act as their leader. In actuality, this so-called leader is more like an advisor for he is selected from outside the membership group. The local 4-H leader must be an adult. He is designated "leader" by tradition.² As leaders by consent, or "volunteers" these adults will continue to serve only so long as they have a feeling of satisfaction in doing a community service, or are satisfying some personal need, and/or are capable of effectively helping the group to reach its goals.³

The effectiveness of any educational institution is in large measure controlled by that institution's ability to maintain well-trained educators over a sustained period of time. The continuity of a 4-H Club is likewise governed by the ability of the adult leader to assist and direct the membership toward its designated goal.

To find persons who will become 4-H leaders and who will continue for several years, is one of the major problems of the 4-H Club movement. Since the leader is not bound by contract it is reasonable to assume

²Ibid., p. 39.

³John Hemphill, Pauline Pepinsky, R. N. Shevitz, W. E. Jaynes, and C. A. Christner, "Leadership Acts: 1. An Investigation of the relation between possession of task relevant information and attempts to lead." Columbus: Ohio State University, 1954, mimeo.

that he will continue to lead only so long as the group has some kind of significance for him. Average tenure of 4-H leaders (national sample) in 1950 was 3.4 years, with approximately one-third of them serving only one year; one-third for two years; and the remainder for four or more years.⁴ Accordingly a study made in New York State⁵ revealed an annual loss of 4-H leaders of 40 to 60 per cent, with average tenure in that state of 2.8 years even though many leaders served seven or more years.

The Problem

The development of procedures for selecting "good" leaders has gone hand in hand with efforts to train leaders. To the extent that the characteristics found in "good" leaders can be instilled through training, it becomes possible through such means to increase the supply and quality of leaders in any group or institution.⁶

The training of this lay leadership has long been a paramount concern of professional 4-H Club workers--paramount, that it, in the recognized need for training in a successful 4-H Club program. While the need for training is recognized relatively little has been done to meet the need up to this point as a quick look at recent studies readily indicates. A study of "How Connecticut 4-H Agents Spend Their Time,"⁷ for example, shows leader training as at the top of the list of essentials for a year's work. However, actual time spent in training was less than one per cent of the agent's total time.

⁴Helen Honma, "Increasing Length of Service of 4-H Club Leaders," unpublished M.A. Thesis, Colorado A & M, 1950.

⁵Robert C. Clark, "Factors Associated with Performance of 4-H Volunteer Leaders in New York State," Ph. D. Thesis, Iowa State College, 1950.

⁶Dorwin Cartwright and Alvin Zander, Group Dynamics, Row Peterson and Co., 1953, pp. 536-37.

⁷Laurel K. Sabrosky, "The Use of Club Agents' Time in Connecticut," 1953-54, Washington, D. C., U. S. Federal Extension Service.

The kind of training is another part of the same problem. While it is known from leadership tenure studies⁸ that people discontinue their leadership role for other than "subject matter competence" or "availability of time" reasons, Extension continues by and large to present training on a wide-range subject matter basis.

If leaders do not discontinue for the above reasons it is evident than that there is a need for a different emphasis in the established training programs.

In the framework of the above it appears there is a real need for methods and techniques to assess specific needs of individuals in the leadership role and along with this a training program geared to meet these needs.

Another feasible alternative and one that, as Cartwright and Zander says, "goes hand in hand" with training, is exploration into methods of selection and placement of volunteers.

It would seem that the major problem, then, is to find some method of determining the effectiveness of an individual at any given point in time and, at the same time assess the training needs of that individual.

If such instrument can assess the training needed, and Extension can provide it; whether it be a course in program planning or a lecture on personal worth, then, leadership tenure should also be increased.

Orientation

It is the thesis of this writer that the Twenty Statements Test ("Who Am I") developed by Kuhn and McPartland⁹ to measure "self concept"

⁸Honma, op. cit.

⁹Manford M. Kuhn and Thomas S. McPartland, "An Empirical Investigation of Self-Attitudes," American Sociological Review, Vol. 19, No. 1, February, 1954, pp. 68-76.

and its derivatives such as the "role internalization" test together with an assessment of organizational goals will provide a framework for measuring effectiveness and assessing training needs of specific individuals. If relationships can be established between these three variables one can be encouraged to further explore the utility of such instruments in adequately placing and training volunteers in any organization having fairly well defined positions and specifiable goals. Such is the purpose of this research.

Basically it will be argued that the greater the number of roles the individual sees himself in (measured by number of consensual [role oriented] statements on the Twenty Statements Test) and the greater the role internalization (the more the individual knows what 4-H Leaders do) the more effective will be that individual as a 4-H Club leader. Further, remembering that a leader will lead only as long as the role is "important and personally satisfying" saliency of the role of 4-H leader will be treated as a relevant variable in this research. While a measure of saliency in this sense would give an indication of tenure, the variable "4-H leader" saliency will have a more complex meaning and be relevant as a measure of effectiveness as the rationale is developed in the next chapter.

The variables under consideration in this study are: 1) the locus score (derived from the number of consensual--role oriented--statements made on the "Who Am I?" test); 2) 4-H leader saliency score (derived from numerical position on the "Who Am I?"), 3) role internalization score (from the "What Do 4-H Leaders Do?"); and 4) the leader effectiveness score (derived from items in Michigan 4-H Leader Inventory).

While it is not in the scope of this research to test the applicability of these instruments for assessing educational needs of persons in the role of "4-H leader," it can be readily argued that content analysis of

individual responses to the Role Internalization test could serve directly to this purpose. Further, if work by Dr. Brookover and others in the Bureau of Educational Research¹⁰ continues to be validated, tenure and effectiveness of 4-H club leaders could be directly affected by assisting the individual in change of self-concept. This method holds great promise if it can be shown that certain constellations (ways of viewing the "self") are more desirable than others in the role of the 4-H leader.

¹⁰Wilbur B. Brookover, "The Relationships of Self-Images to Achievement of Jr. High School Subjects," Bureau of Educational Research, Cooperative Research Project No. 845, Michigan State University, 1961.

CHAPTER II

THEORY AND HYPOTHESES

Purpose of the Chapter. The purpose of this chapter is threefold: first to examine the various ways researchers and philosophers have looked at leadership; second, to develop a theoretical framework for the research to be reported herein; and third, to set forth specific hypotheses linking self-concept, role internalization and 4-H leader effectiveness.

Leadership^{*}

Leadership has long been of concern to the social scientist. It has been considered as an inborn trait or privilege,¹ as a product of a great event,² dependent solely on the personality of the individual³ and as a shared phenomenon belonging to many people and dependent on the

* The reader is directed to the bibliography and works of Laird, Browne and Cohn, Hemphill, Bonner, and Tannenbaum, for extensive presentations on the development of this "leadership" concept.

¹Sir Francis Galton is the most influential proponent of this view. These proponents argue that certain people are born to lead whereas others could not possibly acquire this social role. See Hubert Bonner, Group Dynamics, New York, The Ronald Press Company, 1960, p. 165.

²This view known as the Situational Approach or "environmentalists" approach. A leader from this point of view can emerge only if "the times" are such as to permit him to use whatever skills and ambitions he might possess.

³Cartwright and Zander, op. cit., p. 535.

situation at hand.⁴ In this latter view "Leadership is then conceived of as the product of the interaction between the total personality of the leader and the dynamic social situation in which he has his being."⁵

From such a review of the literature we can conclude that a definition of leadership must include both characteristics of the social situation and the characteristics of the individual. If we approach the problem of leadership in an operational manner, leadership may be said to be the behavior of an individual while he is involved in directing group activities. Such a definition will, in practice, imply that such an individual can be identified.⁶

A second conclusion seemingly implied in the many criteria selected by investigators in the study of leadership is that the adequacy of leadership is an evaluation of the correspondence between the individual's behavior and the behavior demanded by the situation. This view of leadership is broad in scope, bringing into consideration the group situation, the behavior of the leader, and the judgment of leadership adequacy.⁷

Theoretical Development

If this individual can be identified and his behavior is particular to the situation (that of directing a group in their activities), then we can

⁴Simmel, Pigors, Gouldner, Cattell, Hemphill, Stodgill, Bonner and the majority of current students of leadership prescribe to this view. "From this vantage point the leader is not endowed with mystical power, and he is not independent of the group of which he is a part. While he controls the group it also controls him." (Bonner) (Full citations of these authors appear in the bibliography of this dissertation.)

⁵Bonner, op. cit., p. 165.

⁶John Hemphill, "Situational Factors in Leadership," Bureau of Educational Research, Monograph Number 32, Ohio State University, Columbus, Ohio, 1949, p. 5.

⁷Ibid., p. 6.

look upon this individual as occupying a position within the group and therefore having a definable role in a social structural system. Such is the case of a local 4-H leader. Here position refers to the location of an actor or class of actors in a system of social relationships.⁸ Role, says Cottrell,⁹ "is an internally consistent series of conditioned responses by one member of a social situation which represents the stimulus pattern for the similarly internally consistent series of conditioned responses of the other(s) in that situation."

Gross, Mason, and McEachern¹⁰ have categorized role definers into three areas. The first which they call--"Defined to include normative cultural patterns," is best represented by Linton.¹¹ Linton refers to role as ". . . the sum total of culture patterns associated with a particular status. A status, as distinct from the individual who may occupy it, is simply a collection of rights and duties. A role represents the dynamic aspect of status. . . . When (the individual) puts the rights and duties which constitute the status into effect, he is performing a role." It consists of ". . . attitudes, values, and behavior ascribed to any and all persons occupying the given status." This conceptualization seems most appropriate for our concern at the moment. However, with an eye to theory expansion the other two categories will here be mentioned, for in view of our eventual measurement of 4-H leader role internalization, the following senses of role may have real utility.

⁸Neal Gross, Ward S. Mason, and Alexander W. McEachern, Explorations in Role Analysis, New York: John Wiley and Sons, Inc., 1958, p. 48.

⁹Leonard Cottrell, "The Analysis of Situational Fields in Social Psychology," American Sociological Review, 1942, 7: 370-382.

¹⁰Gross, et al., op. cit., Chapter 2.

¹¹Ralph Linton, The Study of Man and The Cultural Background of Personality, New York: Appleton-Century Co., 1936 and 1945 respectively.

The second category has to do with "defining as the individual's definition of the situation, with reference to his and other social positions." This is Sargent's view, as he says, "a person's role is a pattern of social behavior which seems situationally appropriate to him in terms of the demands and expectations of those in his group."¹² Parson and Shils have a similar view:

A role . . . is a sector of the total orientation system of an individual actor which is organized about expectations in relation to a particular interaction context, that is integrated with a particular set of value-standards which govern interaction with one or more alters in the appropriate complementary roles.¹³

The third category is "definitions which deal with role as the behavior of actors occupying social positions." Role in this sense is not defined as normative patterns, nor as the actor's orientation to the situation, but to what actors actually do in the role. This latter notion corresponds to what Newcomb calls "role behavior" and to Sarbin's "role enactment."

Hemphill¹⁴ has shown that an individual will attempt to lead if he feels he alone has the information required for the solution of the group's problem or if he feels that the group task is important, both to the group and to the individual. Whether or not the individual will attempt further leadership acts is dependent on the reaction of the group to the first attempts. Through this activity the individual will develop certain attitudes concerning the group in which the leadership has been attempted. If the leadership acts have been well received, the individual will likely come to identify with the group, and if considered important

¹²S. S. Sargent, in Social Psychology at the Crossroads, M. Sherif and Rohrer (eds.) New York: Harpers, 1951, p. 360.

¹³Talcott Parson and E. A. Shils, Toward a General Theory of Action, Cambridge: Harvard University Press, 1951, p. 53.

¹⁴Hemphill, op. cit.

to the individual, he will take on the attitudes and values of this group.

Sherif and Cantril¹⁵ describe the referential nature of attitudes as follows: "Major attitudes are . . . derived from groups which we learn to relate ourselves to, or which we regard ourselves as members of. . . . 'My' identification and allegiances, 'my' statuses and positions are determined with respect to these references and membership groups." Sherif¹⁶ says, "The individual's directive attitudes, viz., ego-attitudes, which define and regulate his behavior to other persons, other groups, and to an important extent even to himself, are formed in relation to values and norms of his reference groups. They constitute an important basis of his self identity, of his sense of belongingness, of his core of social ties."

Regarding the organization of attitudes within the individual, Krech and Crutchfield¹⁷ point out that "some attitudes and opinions are more salient than others for the individual, in the sense that they are more easily elicited, more readily verbalized, more prominent in the cognitive field. Under many circumstances it is probable that the more important the beliefs and attitudes the more salient they are. In these circumstances, therefore, saliency can be taken as a measure of importance." Saliency, according to Newcomb,¹⁸ refers to a person's readiness to respond in a certain way. In measurement of saliency, Krech and Crutchfield say, "This mention must first and naturally come from the respondent, in his own words and in his own frame of reference. Those attitudes which appear readily and frequently are considered

¹⁵Muzafer Sherif and H. Cantril, The Psychology of Ego-Involvement, New York: John Wiley and Sons, 1947.

¹⁶Muzafer Sherif, in Group Relations at the Crossroads, edited by M. Sherif and M. O. Wilson, New York: Harper, 1953.

¹⁷David Krech and R. S. Crutchfield, Theory and Problems of Social Psychology, New York: McGraw-Hill, 1948, p. 254.

¹⁸Theodore Newcomb, Social Psychology, New York: The Dryden Press, 1950.

salient; those which appear only after a considerable time or after direct probing by the interviewer are considered less salient."¹⁹ It can be assumed that this would also be true of an individual's membership in organized groups. For, if attitudes are held in some order of saliency, and if we derive attitudes from groups to which we aspire, then, it seems logical that we would hold these groups in the same order of saliency. It should also follow, that the more an individual's attitudes are derived from, or are in tune with a particular group the longer will be the affiliation with that group.

If leadership is a product of the social situation and the characteristics of the individual, and, if roles are defined as a set of prescribed actions for a particular position within a social structure, then some measurement of role internalization should give an indication of leadership effectiveness. The basic assumption being made here, of course, is that which an individual has in his psychological awareness will be reflected in his overt behavior. We should be able to hypothesize that the individual will be judged to be an "excellent," "fair," or "poor" leader in terms of an adjudged estimate of the social situation on the one hand and an observation of the leader's behavior on the other. If there is a high degree of correspondence between the behavior demanded by the situation and the leader's perception of that role (behavior required for the situation), he will be judged an excellent leader. If an individual's attitudes and values are derived from those groups with which he identifies and these are held in some order and range of saliency, then measurement of the individual's attitudes should give an indication of leadership tenure within the group in question. A second hypothesis apparent, then, is that the higher the degree of correspondence between the behavior demanded and the actual behavior observed, then the closer

¹⁹Krech and Crutchfield, op. cit., p. 255.

will be the alignment of the individual and group attitudes and the stronger will be the tendency to continue affiliation in leadership of that group. While this latter assumption will not be directly tested in this thesis, it is important to the larger organizational question of which this research is a part.

We have been using attitudes here to mean "a plan of action toward a social object." A social object is that part of a social structure that is described in terms of the attitudes held toward it. A social object need not be a material thing, but may be any identifiable pattern or part of the system, such as a particular position or status. A social object may also be the self. In this regard, then, an individual has attitudes toward the self, or self-attitudes. We acquire these self attitudes in the same way that we acquire any attitude, through interaction in the social system in which we operate. As the individual interacts and comes to have predispositions of action toward specified social objects and comes to regard himself in terms of these expectations, we have development of the "self."²⁰ This self is systematically organized and stable over time.

Kuhn and McPartland²¹ have shown that self attitudes have predictive power, and that they can be measured on the Twenty Statements Test. Two basic assumptions in their method are: 1) that human behavior is organized and directed, and 2) that this organization and direction is supplied by the individual's attitudes towards himself. They found, for example, that respondents, in answer to the question "Who am I?" (asked as if to, and answered as if for, themselves), provided solid knowledge of the attitudes which organize and direct that respondent. Further, they found that a particular referent (such as 4-H leader) was hierarchically positioned in the Twenty Statements as to the

²⁰Entire paragraph constructed from class notes given by Dr. Fred B. Waisanen, Sociology 567a, Spring term, 1960, Michigan State University.

²¹Kuhn and McPartland, op. cit.

relative spontaneity with which that referent would be used as an orientation in the organization of behavior.

In this theoretical orientation the self is viewed fundamentally as a social object, and is further viewed as an internalization and organization of past trains of events which a person has experienced as referring to himself. In short, we assume that the self conception is an organization of past social experience. . . . That individuals organize and direct their behavior in terms of "their subjectively defined identifications" which are seen as internalizations of the objective social statuses they occupy. . . . And, since attitudes are organized and stable over time, and since self is a set of guides to ongoing social behavior, then self-attitudes should yield significant predictive power in prediction and understanding of human behavior.²² It is a further assumption that self attitudes can be identified and measured and that empirical studies may be planned which treat self as attitudes.²³

The Twenty Statements Test lends itself to Guttman scaling and is attributed with reproducibility of .903 with reliability (test-retest) of the scale scores at approximately +.85. Thus it seemed to this researcher that the Twenty Statements Test had real utility for this dissertation.

Twenty Statements Test

The Twenty Statements Test is an open-ended question in which the respondent is asked to write twenty answers to the question, "Who Am I?" as if asked by, and answered for, himself. Whatever statements the respondent makes become the items of the test, and whatever scales are possible are those which emerge from a content classification of

²²Kuhn and McPartland, op. cit.

²³McPartland, Manual for the Twenty Statements Problem, dittoed.

these items after they have been made.²⁴ The replies are content analyzed and are amenable to Guttman scaling.²⁵ Responses are categorized into consensual (positional) and non-consensual. Consensual responses refer to groups and classes whose limits and conditions of membership are common knowledge, such as student, girl, husband, Baptist, or daughter.²⁶ They imply involvement in more or less explicitly structured social situations--references to statuses which are socially defined and can be validated.²⁷

Non-consensual responses refer to groups, classes, attributes, traits and other matters which would require interpretation by the respondent to be precise or to place him relative to other people. Responses might include happy, bored, pretty, good student, good wife, interesting conversationalist, etc.²⁸

Scores on the Twenty Statement Test are most often reported as locus scores. This represents the number of consensual references made on the Twenty Statements Test in the consensual area. The consensual area was established by noting that respondents made all the consensual statements they could before making non-consensual ones. A high locus score means that the individual has high consensual responses and few non-consensual ones. Therefore, the locus variable represents a consensual-non-consensual relationship.

A further modification of the Twenty Statements Problem is the question "What does an (occupant of a particular position) do?"²⁹ From

²⁴Manford Kuhn, "Self Attitudes by Age, Sex, and Professional Training," Midwest Sociological Quarterly, January, 1960, Vol. 1, pp. 39-55.

²⁵Kuhn and McPartland, op. cit., p. 70.

²⁶T. S. McPartland, op. cit., p. 7.

²⁷Ibid.

²⁸Ibid.

²⁹Fred B. Waisanen, "Some Correlations of Student Role Internalization," Paper read at Ohio Valley Sociological Society Meetings, Michigan State University, May, 1962.

this it is possible to get a role internalization score which can be compared with a hypothetical "model" or "optimum" condition for that role. In view of our earlier distinction between role definitions it may be advisable to state this question "what should" or "what do you as position occupant do?"

If this method has utility for measurement of 4-H leader tenure and/or effectiveness it will provide the professional 4-H worker with a handy tool for the determination of individual training or guidance which may mean continued or more productive, effective leadership. Not only will it be applicable to 4-H leadership, but should be utilizable for all organizations operating on a voluntary basis of leadership. Further, if there is some practical tool with which we could assess an individual's self orientation toward the organization for which he volunteered his services we could make far more productive use of his time and guide him to a more positive experience than is now possible.

Summary of Rationale

Prior to the statement of hypotheses under test in this research it may be helpful to review some of the basic elements in our rationale:

- 1) A definition of leadership must include both characteristics of the social situation and characteristics of the individual.
- 2) The adequacy of leadership is an evaluation of the correspondence between the individual's behavior and the behavior demanded by the situation.
- 3) The role "4-H Club Leader" is a definable position within a social structural system.
- 4) Roles are defined, for our purposes, as a set of prescribed actions for a particular position within a social structure.
- 5) Attitudes constitute an important basis of self identity.
- 6) The self is systematically organized and stable over time.
- 7) The more an individual's attitudes are derived from, or in tune with, a particular voluntary group, the longer will be the affiliation with that group.

- 8) The higher the degree of correspondence between the behavior demanded and the actual behavior put forth then the closer will be the alignment of the individual and group attitudes and the stronger will be the tendency to continue affiliation in leadership of that group.
- 9) Human behavior is organized and directed.
- 10) This organization of behavior and direction is supplied by the the individual's attitudes toward himself.

Hypotheses

The basic hypotheses under test in this research are derived from the above rationale and this writer's experiences in working in the 4-H program, and are stated in terms of the variables identified in the research instruments. They are as follows:

- 1) Leaders with high locus and high role internalization scores will have high leader effectiveness scores.
- 2) Leaders with a high locus score will have a high leader effectiveness score.
- 3) Leaders with a high locus score will have a high role internalization score.
- 4) Leaders with high role internalization score will have a high leader effectiveness score.
- 5) Leaders with high saliency for "I am a 4-H leader" will have high effectiveness scores.

Sub-Hypotheses

In view of what we know about leader roles in 4-H it seems desirable to consider at least two categories when analyzing data. These categories are: 1) the project club leader--this leader has from five to ten members, all of whom work on the same kind of project; this leader's sphere of influence is limited and his teachings tend to be directed primarily at developing a skill or an ability; and 2) the mixed club leader or community leader--the mixed club leader has usually a larger number

of members, and the members are involved in a multitude of different activities. This leader, in a sense, behaves like a teacher in a one-room country school. The community leader is very similar to the mixed club leader and for this research they have been combined into one category. This leader acts in many respects like the principal of a school, in that he oversees the community 4-H organization. The members of this club are many in number (25 to 100) and are organized into project clubs for their work activity, coming together under the community leader for the many other aspects of the total 4-H program. The community leader or mixed project leader then needs special skills in organization and administration to assure that all project leaders and their members have a share in the operation of the total club on a community basis.

Further, based on our experience, it will also be desirable to dichotomize the leaders in the sample into those with less than 3 years service and those with 3 or more years, when one looks at saliency scores. First it is likely that "4-H Leader" is not a social object for many first and second year leaders, and second, it can be assumed that saliency for a particular group will be strengthened over time and association.

In view of the above reasoning, the following hypotheses are also offered:

- 6) Leaders with high 4-H leader saliency scores and high role internalization will have high effectiveness scores.
- 7) Leader with high saliency and low role internalization, if a leader of more than three years, will have a low leader effectiveness score.
- 8) Leaders with low locus scores will have low leader effectiveness scores, if they are mixed club or community leaders.
- 9) Leaders with high effectiveness scores and less than three years service will have a lower 4-H leader saliency score than effective leaders of three years or more service.

If the above are substantiated it will lend strength to the possibility of administering only the "Who am I?" and this along with the county workers personal (by record) evaluation of the local 4-H leader's effectiveness would allow him to make some insightful judgments regarding the type of individual training needed by that individual.

CHAPTER III

METHODS AND PROCEDURES

Purpose of this Chapter. In this chapter the methodological questions of instrument development, pretesting, sampling procedures, and data collection will be presented.

The three instruments employed were the Twenty Statements Test, Role Internalization Test, and the Michigan 4-H Leader Inventory. Copies of these appear in Appendix B.

Twenty Statements Test

When this research project was first conceived the original data collection plan called for individual interviews beginning with the administration of the "Who am I?" followed by "What do 4-H leaders do?" and then, finally, a questionnaire designed to get at leader effectiveness. Rationale for this suggested approach hinged on our belief (with Kretch and Crutchfield)¹ that the saliency of "4-H club leader" as a social object would be affected by identity of the research as a study of 4-H club leaders. This, even though Kuhn and McPartland² had noted that responses on the "Who am I" had a high reproducibility, with individual responses at two points in time reading nearly identical, response for response, item 1 to 20.

The funds to finance individual interviews for the desired size sample (at least 200) were not readily available. Before dropping the saliency measure from our list of variables under test, however, it was

¹Kretch and Crutchfield, op. cit.

²Kuhn and McPartland, op. cit.

decided to test Kuhn and McPartland's instrument, specifically, for this saliency of an organizational referent.

Arrangements were made with the Ingham County Extension Agent in Home Economics, Annette Schaffer, to pretest this instrument at a series of lay leader training meetings. She was to have these meetings in the spring of 1961. The big question to be answered was: will these lay leaders, called together expressly because they are lay leaders, have the response "I am a Home Demonstration leader" (or words to this effect) at greater saliency because they are at a training meeting than they would otherwise have (say, than if the instrument was administered at home or away from this context).

One-hundred ninety-four Twenty Statements Tests were administered to these groups. Subjects were told they were helping in the pretest of an instrument later to be used in a 4-H leader study. Further, the researcher was identified as a 4-H club agent (on study leave) and the Home Agent encouraged the women as Home Demonstration members to participate in this pretest. The researcher attempted to strengthen the tie of the subjects to their organization by speaking to the good work they were doing on their lesson.

Visual inspection of these completed instruments was most encouraging. "I am a Home Demonstration member" or "I am a project leader for my Home Demonstration club" did not appear on all instruments. Nor did such responses appear only in the first few blanks of the instrument. Rather, they appeared to be distributed over the whole instrument, including the category of did not say "I am a Home Demonstration member."

With this encouragement a group of 4-H leaders meeting for training were asked to "pretest" the Twenty Statements Test and the same procedure was followed with them as with the first groups. Again there was wide variation in use of the statement, "I am a 4-H leader."

Informal interview with this group added support to Kuhn and McPartland's finding with respect to the ordering of statements. The leaders having a good deal of their lives wrapped up in 4-H tended to make this statement early in their responses while those for which 4-H held less value listed this response later, if at all. Twenty-one leaders were in this pretest.

It was decided, on the basis of these pretests and with an awareness of the statistics to be applied, that data could indeed be secured by group interview, subjects to convene at a common meeting at request of County Extension workers. Subjects in the actual sample were requested to participate in a Michigan 4-H leader inventory.³ No mention was made as to the nature or structure of the inventory.

Role Internalization Instrument

No pretest of the modified Twenty Statements Test "What do 4-H leaders do?" was deemed necessary from an analytical point of view. This instrument was used primarily because it was a compliment to the basic Twenty Statements Test. Responses were to be scored as to their germaneness to the acceptable performance in the role 4-H club leader.

A more relevant methodological question in relation to this instrument was the wording of the question, and the accompanying instrument. Would one really get the kind of data needed by asking, "What do 4-H leaders do?" or should the question be stated in another way?

The many limitations of the questionnaire method in research have been carefully pointed out by Jenkins⁴ and Lazarsfeld.⁵ Among these

³See letter Appendix B, p. 140.

⁴John G. Jenkins, "Characteristics of the Question as Determinants of Dependability," Journal of Consulting Psychology, V, July-August, 1941, pp. 164-169, and "The Questionnaire as a Research Instrument," Transactions of the New York Academy of Science, II, February, 1940, pp. 118-40 (Series 2).

⁵Paul F. Lazarsfeld, "The Art of Asking Why in Marketing Research," National Marketing Review, I, 1935, pp. 1-13.

limitations may be listed the following: first, a question may be interpreted in an entirely different manner by two individuals; second, the answers to the questions are in part, at least, a function of the way the questions are asked; third, a respondent may not have the necessary information to answer the questions; and fourth, there may be good reasons that prompt a respondent to give an answer which he knows to be inaccurate. He may, for instance, give a socially acceptable rather than an accurate answer.

These objections to the use of the questionnaire method may be overcome to a considerable extent by formulating the questionnaire after thorough preliminary investigation. Preliminary work would include the pre-testing of trial questionnaires on samples of respondents similar to those from whom the information was desired. The questionnaires used in the present study were constructed with the limitations of the method in mind.

Two strong positive arguments arose from the methodological inquiry. First, testing alternative questions on fellow graduate students and a few 4-H leaders, it became evident that the original wording was the one needed to determine what a subject knew about the appropriate behavior for playing out a given role. Secondly, following Sarbin⁶ and the earlier theoretical orientation put forth in this dissertation,⁷ and, realizing the variable under test, there was no alternative. We had to ask the question in such a way that the subject would spell out what he thought to be the role of the 4-H club leader.

⁶T. R. Sarbin, "Role Theory," in Gardner Lindzey (ed.) Handbook of Social Psychology, Vol. I, Cambridge: Addison-Wesley, 1954. (Sees self as organization of qualities and roles as organization of acts.)

⁷Particularly as delineated by Gross et al., and Ralph Linton.

A basic assumption in this approach, of course, is that what the individual knows to be part of the role will be reflected in that individual's performance of the role.

A Measure of Leader Effectiveness

A third methodological question to be resolved dealt with the formation of an instrument to measure 4-H leader effectiveness.

Four criteria were established early. The instrument was to be so constructed that it would provide: (1) a measure of leader role performance; (2) attitudes toward philosophies and creeds of the organization; (3) a measure of the subject's attitudes and actions regarding goal directedness and group integration; and (4) a measure of those variables shown by previous research and/or field experience to have relationship to effectiveness.⁸

At about this point in the development of the project, Michigan was one of eight states named by the Federal Extension Service to receive special help in establishing a longitudinal Leadership Development project. This has bearing on this research in that the state 4-H Club staff became more than casually interested in its development, for part of the Leadership Development program was concerned with field research.

Working closely with this group it was decided to make the instrument designed to measure effectiveness serve a dual purpose. This decision came about when it became evident that Michigan could profit by including in this schedule questions used by researchers in other geographical areas of the United States. The questionnaire, then, took on the form of a Michigan 4-H Leader Inventory,⁹ embodying: (1) the effectiveness scale questions; (2) those questions from other study

⁸While no 4-H leader research actually measured effectiveness the variables under study were similar to the operationalization of effectiveness for this research. For example, Joy established eight "essential" qualifications, Clark and Skelton measured "satisfaction."

⁹This questionnaire is included, see Appendix B, pages 142-162.

questionnaires for which we wanted data specifically for Michigan;¹⁰ and (3) questions deemed necessary as an assessment of Michigan's 4-H leadership. Those items dealing with effectiveness would be assigned scale scores within each item (explained in detail in the next chapter) and the measure of effectiveness would be reported as an effectiveness score.

Much of this data (dealing with what could be thought of as a retest of these studies) is as yet unanalyzed. At the late stages of development of this project a supplemental or auxiliary survey was appended. This survey, under the direction of Joe Waterson, Program Specialist, 4-H, dealt with the State 4-H Club Show and was used in 12 of the 14 counties in our sample.

It should be noted here that these criteria of effectiveness parallel those used by Stogdill in establishing a rationale for the measurement of interaction and group performance (Stogdill included the first three and two additional factors).¹¹

The Stogdill factors were accepted from work done by Borgatta, Cottrell and Meyer.¹² They had compared and matched the factorial dimensions found by Borgatta and Cottrell¹³ and Cattell, Saunders and Stice,¹⁴ with the a priori dimensions prepared by Hemphill and Westie.¹⁵

¹⁰Such questions were taken principally from studies of Clark, Clark and Skeleton, Honma, Joy and Copp. See complete citations in the bibliography.

¹¹Ralph M. Stogdill, Individual Behavior and Group Achievement, New York: Oxford University Press, 1959, p. 58. (The other factors were differentiated role structure and within group interaction facilitation.)

¹²E. F. Borgatta, L. S. Cottrell, and H. J. Meyer, "On the Dimensions of Group Behavior," Sociometry, 19, 1956, pp. 223-240.

¹³Ibid., "On the Classification of Groups," in J. L. Moreno, Sociometry and the Science of Man, New York: Beacon House, 1956.

¹⁴R. B. Cattell, D. R. Saunders and G. F. Stice, "The Dimensions of Syntality in Small Groups," Human Relations, 6, 1953, pp. 331-56.

¹⁵J. K. Hemphill and C. M. Westie, "The Measurement of Group Dimensions," Journal of Psychology, 29, 1950, pp. 325-42.

Sampling Procedure

Two primary concerns in sample selection were sample size and population representation. These always must be dealt with in relation to available resources of dollars and time. Dr. Fred B. Waisanen¹⁶ suggested a sample of at least 250¹⁷ and Dr. Russell G. Mawby suggested utilization of cooperative Extension Service Administrative districts¹⁸ as a basis for area representation. Both of these suggestions were utilized in sample selection.

Specifically the sample included two counties per conference district, selected on a random draw (no replacement), for a total of 14 counties. The selected counties were then contacted and asked to participate.¹⁹ All 14 counties agreed to cooperate and forwarded leader rosters (listing of all 4-H leaders in their county) from which the individual subjects for study could be drawn. These rosters (organized in many ways, i. e., alphabetical, alphabetical by mailing address, by years of service, etc.) were accepted as they were and individuals were numbered chronologically. Then working from a table of random numbers²⁰ subjects from a given county were identified.

¹⁶Dr. Waisanen has had considerable experience with the primary instrument used. He made this suggestion while counseling this writer in the original draft of the research proposal submitted to him in Sociology 967a, Spring, 1960.

¹⁷This original sample size would allow for the expected loss due to: inability to interview, subject no longer a leader, etc., and still give a workable size sample.

¹⁸These administrative districts are delineated on a map, Appendix B.

¹⁹See letter sent to counties selected (Appendix B, pages 137-38.)

²⁰Table of random numbers in Wilfred Dixon and Frank Massey, Introduction to Statistical Analysis, New York: McGraw-Hill, 1957, pp. 366-70.

The number of subjects per county varied with the number of available subjects in that county in relation to the total state, with an intervening variable being the total number of subjects in the district in relation to the state population.

For example, Michigan 4-H Club Leader enrollment, 1960, was 12,728. The Upper Peninsula Conference District 4-H leader enrollment was 875 or 7% of the total. For purposes of study we then took this percentage of the total sample to be selected (7% of 250). Thus 18 of the total 250 sample was to be drawn from the 2 counties in the Upper Peninsula. Each of the 2 counties in the district were apportioned sample totals on the bases of the relative enrollment of those 2 counties.

Marquette (a county in the sample) has 48 leaders, representing 64 per cent of the 2 county total which in turn is 7% of the Michigan total. Marquette, then, had 11 leaders in the sample. Table 1 shows sample distribution and per cent sample completed (i. e., Marquette 11-10-99% completed).

Table 1. Sample Distribution and Per Cent Sample Completed

| County | Number in Sample | Number Interviewed | Schedules Completed | Per Cent of Sample |
|------------|------------------|--------------------|---------------------|--------------------|
| Marquette | 11 | 10 | 10 | 99 |
| Alger | 7 | 6 | 4 | 57 |
| Mason | 21 | 17 | 16 | 76 |
| Leelanau | 5 | 5 | 5 | 100 |
| Otsego | 4 | 4 | 4 | 100 |
| Charlevoix | 13 | 11 | 9 | 69 |
| Branch | 22 | 20 | 19 | 86 |
| Ingham | 37 | 32 | 29 | 78 |
| Isabella | 19 | 17 | 17 | 89 |
| Huron | 20 | 17 | 17 | 85 |
| Livingston | 10 | 8 | 8 | 80 |
| Monroe | 21 | 18 | 18 | 86 |
| Berrien | 21 | 20 | 20 | 95 |
| Kalamazoo | 41 | 39 | 32 | 78 |
| Totals | 252 | 224 | 208 | 82% |

Sample Replacements

The voluntary nature of the 4-H Club Leader position, the fact that this writer worked from the 1960 county leader rosters, and the fact that actual interviewing was done in spring and summer, 1961, made it necessary to replace by further randomization those people no longer associated with 4-H in the leader role. Mechanically, this came about when each county involved was sent a list of people in their county selected for the study. Counties were asked to compare this list with their currently active roster and advise as to the status of those involved (i. e., currently leaders--non leaders). Those no longer on county active lists as of March, 1961, were replaced. It was felt that the nature of the general population, and the randomization process used, would tend to give us balance in this respect. It was interesting to note the following.

Table 2. Distribution of Subjects Over the Leader Categories

| Category | Tenure | Number | Per Cent (N = 208) |
|--------------------|--------|--------|-----------------------|
| Community or Mixed | +3 | 84 | 40.4 |
| Community or Mixed | -3 | 19 | 9.1 |
| Project Club | +3 | 54 | 26.0 |
| Project Club | -3 | 51 | 24.5 |
| | | 208 | 100.0 |

This distribution is about as it would be found in the Michigan population of 4-H club leaders. No special attempt was made in the original delineation to get a proportionate number of subjects in each of the leader categories.

Data Collection

State 4-H staff members, trained by the writer, were assigned data collection in their administrative areas. Each interviewer arranged with the county Extension Agent in the county involved to have those leaders in the sample meet at a common meeting place for purposes of participating in this 4-H leader inventory (as it was called).²¹

The interviewer opened the meeting with comments about the necessity for current data on 4-H club leaders and the state 4-H staff's interest in this research project. Subjects were then given the Twenty Statements Test, "Who Am I?" The interviewer read through the instructions with the subjects, emphasizing the notion of writing answers as they occurred to them. The subjects were told they would have eight minutes to complete this part of the inventory. Second, they were given the "Role Internalization Test," with similar instructions. Finally, they were given the interview schedule and each section was explained as the group and the interviewer read and each individual answered this form.

All schedules were not completed at this initial appointment. The follow-up was handled in basically two ways: (1) rescheduled meetings in some counties, and (2) personal visits to the subject's home. The follow-up was conducted by the writer and varied from the original interview procedure in that the subject was asked to complete the Twenty Statements Test and Role Internalization Test at the time of interview and the longer questionnaire was left with the subject, together with a return envelope. This latter only after the interviewer and subject had gone over the schedule together clarifying questions and meanings.

²¹See Appendix B for a form of the letter sent to leaders. This was a letter form which the writer suggested and which most of the counties used.

The interviewer, on the basis of the earlier group experiences, was aware of areas where others had needed clarification and made certain these areas were clear with each subject.

A further variation in the data collection method needs to be mentioned here. At the time of the data analysis it was noted that entire pages of the questionnaire were not completed in about 25 of the schedules. A sound rationale seemed to be that the subject would flip two pages instead of one when working through the nineteen pages and due to the unorthodox numbering of the items would not be aware of so doing. The researcher decided at that time to return those incomplete pages to the subject with a cover letter putting forth this rationale and asking to have the one or two pages completed and returned. (Note: we did not send the entire questionnaire, but only those pages needing completion.

Through the above procedures 224 of the original sample ($N = 252$) were interviewed. The greatest single reason for non-interview was "subject no longer a 4-H leader." The second reason was "subject not home at time of visit." (Each address was visited at least twice.) Of the 224 interviewed 208 schedules were completed. Ten of the sixteen (224 minus 208) did not mail in their completed "4-H Leader Inventory" even though they were contacted by personal letter or telephone. Six schedules returned to subjects for completion (those mentioned above who had not answered some of the questions) were not returned.

The findings reported in this thesis, then, are based on the replies of 208 4-H leaders from 14 counties in Michigan. Two counties from each of seven Extension Conference Districts. The sample represents 1.6 per cent of the 4-H leaders of Michigan.

Summary of Chapter

In this chapter we have attempted to analyze the methodological problems confronted in the research; to present the reader with a clear picture of the decisions made in regard to the problems; to spell out the sampling procedure; and, to outline the data collection procedures.

Primary methodological problems were in relation to: (1) could the interviews be done in a group; (2) what should be the wording of the Role Internalization question; and (3) what will be the method of assessing effectiveness. The paragraphs below summarize the decisions made relative to each of the above questions. The paragraphs are numbered to correspond to the question being dealt with.

- (1) Primary concern on this point was, would we get a range of saliency for the role if the organization in which they played the role was responsible for convening the group. A pretest of this question supported Kuhn and McPartland's notion that subjects would make responses in about the same order of saliency under varying conditions.

With this information we decided to do group interviews using state 4-H staff members as interviewers and (as a result of state staff involvement) broaden the sample area from mid-Michigan to selected counties in all corners of Michigan.

- (2) Realizing, after exploration and meditation, that what we really needed here was a measure of what the subject knew the role to be (not what he personally did in the role) we decided to use the question, "What do 4-H leaders do?"
- (3) The effectiveness measure came to be a scale score, based on scaling of responses to specific questions from the Michigan 4-H Leader Inventory.²² The questions were designed to measure: (1) objective measure of leader role performance;

²²See Appendix B, pages 142-162.

(2) attitudes toward organization and its philosophies;
(3) attitudes and actions relative to goal directedness and group integration; and (4) those variables that research and field experience have shown are related to effectiveness.

The sampling procedure was shown to be one whereby 2 counties of each of Michigan's Cooperative Extension's seven administrative districts were randomly drawn from a universe of all counties in the district. Subjects were then selected (table of random numbers) for each county in relation to that county's (and district's) proportion of the total volunteer leader population.

Data was collected by group interview (interviewers trained by this researcher) and by individual interview (for those who did not respond by attending the group's session). By these methods 208 of the 252 in the sample completed all parts of the interview.

Actual scoring procedures and data analyses will be presented in the next chapter.

CHAPTER IV

ANALYSIS OF DATA

Demographic Data

The sample contained 42 men and 166 women, ranging in age from 21 to over 60. The ratio of males and females, in the sample is slightly biased toward women if one takes as a referent the 1957 relationships of men to women 4-H leaders (men = 3400; women 7000, in round numbers). Graph 1 below shows the age distribution in 5-year intervals.

Graph 1. Age Distribution of 4-H Leaders in Sample.

| Age | Percent | 10 | 20 | 30 | 40 | 50 | Number |
|-------|---------|----|----|----|----|----|--------|
| 20-25 | 6 | | | | | | 12 |
| 26-30 | 3 | | | | | | 6 |
| 31-35 | 17 | | | | | | 36 |
| 36-40 | 23 | | | | | | 47 |
| 41-45 | 21 | | | | | | 44 |
| 46-50 | 17 | | | | | | 37 |
| 51-55 | 8 | | | | | | 16 |
| 56-60 | 2 | | | | | | 4 |
| 60 + | 1 | | | | | | 3 |

Other studies have shown that individuals who are 4-H leaders are likely to have others in their families in 4-H either as members or as leaders. Analyses of these variables in the sample shows that 84% of the subjects had youngsters in 4-H, and that 44% had other family members who were 4-H leaders.

Looking at level of education, one finds that 48% are either high school graduates or have attended 3 or more years of high school (a fault of our questionnaire was that it did not ask specifically, "Are you a high school graduate?"). Thirteen percent had one year of college, eleven per cent had 2 or 3 years of advanced training in formal education and ten per cent were college graduates (B. S. or B. A.) or beyond.

Four-H leader tenure in our sample is expressed in the chart below. Line one of the chart lists the years of 4-H leadership (tenure). Line two gives the number in the sample for each tenure category. And the last line gives per cent that category is of the total. For example, 26 subjects or 12 per cent of the sample have been 4-H leaders for four years.

Chart 1. 4-H Leader Tenure: Number and Percent by Year.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10-14 | +15 | Tenure |
|----|----|----|----|----|----|----|----|----|-------|-----|----------|
| 36 | 34 | 24 | 26 | 12 | 16 | 13 | 5 | 9 | 22 | 11 | Number |
| 17 | 16 | 12 | 12 | 06 | 08 | 06 | 02 | 04 | 11 | 05 | Per Cent |

Fifty-two per cent of the subjects said they lived on a farm when asked places of residence (see question 15, page 2 of Michigan 4-H Leader Inventory) and another 21% were rural non-farm. Fifteen per cent lived in small towns or villages, and 12% in cities of 10,000 or more.

Twenty Statements Test

The Twenty Statements Test is an open-ended question in which the respondent is asked to write twenty answers to the question, "Who Am I?" as if asked by, and answered for, himself. As pointed out in Chapter II, whatever statements the respondent makes become the items of the test, and whatever scales are possible are those which emerge from a content classification of these items after they have been made.¹ The replies are content analyzed and are amenable to Guttman scaling.² Responses are categorized into consensual (positional) and non-consensual. Consensual responses refer to groups and classes whose limits and conditions of membership are common knowledge, such as student, girl, husband, Baptist, or daughter.³ They imply involvement in more or less explicitly structured social situations--references to statuses which are socially defined and can be validated.⁴

Non-consensual responses refer to groups, classes, attributes, traits and other matters which would require interpretation by the respondent to be precise or to place him relative to other people. Responses might include happy, bored, pretty, good student, good wife, interesting conversationalist, etc.⁵

Scores on the Twenty Statement Test are most often reported as locus scores. This represents the number of consensual references

¹Manford Kuhn, "Self Attitudes by Age, Sex, and Professional Training," Midwest Sociological Quarterly, January, 1960, Vol. 1, pp. 39-55.

²Kuhn and McPartland, op. cit., p. 70.

³McPartland, op. cit., p. 7.

⁴Ibid.

⁵Ibid.

made on the Twenty Statements Test in the consensual area. The consensual area was established by noting that respondents made all the consensual statements they could before making non-consensual ones. A high locus score means that the individual has high consensual responses and few non-consensual ones. Therefore, the locus variable represents a consensual-non-consensual relationship.

Four other measures were taken from the Twenty Statements Test in the original analysis. Along with the locus score, analysis centered on: the total number of statements; the number of errors; the saliency of role--"I am a 4-H leader"; and, the number of formal organization referents.

1. Total number of statements.--Simply the number of different answers the subject gave to the question, "Who Am I?" in the eight minutes allowed.

2. Number of errors.--This score represents the number of responses that fall outside the scale pattern, by Guttman criteria. We were primarily interested in this score as a test of the instrument. Kuhn and McPartland noted the subjects made all the consensual statements they could before making non-consensual. Errors then represented the number of times the individual violated this observation, i. e., made a non-consensual statement in the midst of consensals and/or vice versa.

In the sample 57% (118 of the 208) had no errors; 13% had only one error; 24% had 2-4 errors arranged on a decreasing scale of 22 with 2 errors, 17 with 3 errors, and 11 with 4 errors. Of the remaining subjects, 7 had 5 errors, 3 had 6 errors, and one each had a total of 7 and 9 errors respectively. Table 3 shows these results. A complete distribution of scores on all five indices can be found in Table 2, Appendix A, page 101.

Table 3. Number of Errors^{*} Made by Subjects on "Who Am I?"

| Number of Errors | Number of Subjects | Per Cent of Total (N = 208) |
|------------------|--------------------|-----------------------------|
| 0 | 118 | 56.7 |
| 1 | 28 | 13.4 |
| 2 | 22 | 10.6 |
| 3 | 17 | 8.2 |
| 4 | 11 | 5.3 |
| 5 | 7 | 3.4 |
| 6 | 3 | 1.4 |
| 7 | 1 | .5 |
| 8 | 0 | .0 |
| 9 | 1 | .5 |

* Number of times the individual wrote non-consensual statements in a run of consensuals and/or vice versa.

3. Saliency of role--"I am a 4-H Leader."--The score assigned an individual on this index is simply the numerical position on the Twenty Statements Test at which the subject said "I am a 4-H leader." Sixty-one or 29% of the total sample did not make the statement, "I am a 4-H leader" as part of their response to the Twenty Statements Test. Of those sixty-one, twenty-seven (44%) were Project Club leaders with less than 3 years service.

Table 4 shows the leader type and number of respondents in each type who did not say "I am a 4-H leader." Chi-square represents goodness of fit (hypothesis of no difference expected in any category).

4. Number of formal organizational statements.--This score was computed by giving one point for each formal organizational referent. For example if the subject said "I am a Grange member" then he was awarded one point toward his Formal Organizational Referent score. For this analysis the statement, "I am a 4-H Club leader" was counted as an organizational referent.

Table 4. Number per Leader Category. No Response. "I am a 4-H Leader."^{*}

| Leader Category | Tenure | Number | Per Cent of Total (N = 61) |
|------------------------------|--------|--------|----------------------------|
| Mixed or Community | +3 | 12 | 19.7 |
| Mixed or Community | -3 | 8 | 13.0 |
| Project Club | +3 | 14 | 23.0 |
| Project Club | -3 | 27 | 44.3 |
| $X^2 = 13.32 \quad p < .001$ | | | |

* Goodness of fit. Null Hypothesis > no difference

The numerical distribution of this index is given in Table 1, Appendix A, page 100.

Thirty-seven respondents mentioned no formal organizational referent. Approximately one-fourth of the sample mentioned only one, with another one-fourth listing two formal organizational referents.

Since the response "I am a 4-H Leader" was counted as an organizational statement the thirty-seven mentioning no formal organization are also 37 of the 61 who did not respond, "I am a 4-H leader, " They are unlike the sixty-one, however, in that the non-response, "I am a member of _____ organization, " is spread rather evenly over all leader-tenure categories.

A further analysis of the Twenty Statements Test utilized Wasianen's⁶ classification of responses, which enables a detailed analysis of consensual responses.

⁶Fred B. Wasianen, Assistant Professor, Department of Sociology and Anthropology, Michigan State University.

The reader will recall that in the first paragraphs of this section reference was made to McPartland's orientation to analyses of the Twenty Statements Test in which he said, "whatever scales are possible are those which emerge from a content classification of these items."⁷

Dr. Waisanen's classification attempts to make use of all responses, consensual and non-consensual. His categorization has three major divisions: (1) consensual (with the same meaning and limitations as set down by Kuhn and McPartland); (2) evaluative consensual (consensual, meaning role oriented, but evaluative as well. For example, instead of just saying, "I'm a man" the response in this category might be, "I'm a handsome man" or "a good man"); and (3) idiosyncratic (or nonconsensual).

Then within each of the first 2 categories there are 5 sub-categories:

- (1) Personal (the statements relate to physical characteristics such as "I'm a blonde, " "5'2" tall, " etc.).
- (2) Primary (these statements are of the kind that involve continuing intimate relationships, i. e., "I am a mother, " "a sister, " "a wife, " etc.).
- (3) Secondary (represent associational, segmentalized, specialized interaction, statements like "I am a Grange member, " "PTA member, " "member of X church, " etc.).
- (4) Categorical ("man, " "citizen, " "white, " "American, " are statement examples for this category).
- (5) Residual (all statements that do not fit the above four categories).

Results of this analysis can be seen in Table 3, Appendix A, page 109. Statistical analysis of this data will be covered in the next chapter.

Role Internalization Instrument

The Role Internalization instrument is an adaptation of the Twenty Statements Test. Like the T.S.T., it also must be content analyzed and

⁷Kuhn and McPartland, op. cit.

scored on the basis of this analysis. Unlike the T.S.T., in which there are no "correct" answers (except as they are correct for that individual), the Role Internalization questionnaire was scored against a role model. That is, members of the State 4-H Staff of Michigan State University were asked to spell out the "role of a 4-H Club Leader." This "model" together with the "role of a 4-H Club Leader" presented by the study group of State 4-H Extension workers at the 1960 National 4-H Club Conference⁸ became the basis of scoring this instrument.

The subject was given one point for each role aspect of the total role. Each aspect was counted only once even though it may have re-occurred in the subject's list of responses. Scoring was done by three judges independently and any serious disagreement in the scoring was talked through by the same three judges acting as a panel.⁹

The range of the scoring was from 0-16, and the median was 7, with one-third of the scores falling between 6 and 10 correct role responses and two-thirds of the scores were within the range 5-11. The complete distribution of scores is shown in Table 1, Appendix A, page 100.

4-H Leader Inventory

The 4-H leader inventory served at least a dual purpose. First it was a vehicle for the items of the effectiveness scale. And second, it contained many items from questionnaires used in 4-H leader research in other states. While no doubt analysis of the latter would be interesting, it is the effectiveness scale that holds primary concern in this research.

⁸"Set for the Sixties," 1960 National Conference State 4-H Leaders, Federal Extension Service, United States Department of Agriculture, Washington, 25, D.C., pp. 9-17.

⁹Judges were Dr. Russell G. Mawby, Assistant Director, 4-H; Mr. Joe Waterson, Program Specialist, 4-H; and the researcher himself.

Effectiveness Scale

As stated earlier in Chapter II, effectiveness of an individual filling a position in a social organization can be measured by assessing the extent to which that individual fulfills the requirements of that position.

While certain items included in the effectiveness scale are assessment of club performance they are a direct measure of leader effectiveness for they reflect the leader's competency in aspects of the role. The following paragraphs list the items, and rationale for said items, used in the effectiveness scale. The scaler weightings assigned each response on the questions used in this scale are written directly on the questionnaire (red ink) see Appendix B.

Per cent of members completing their projects. -- (Item 27, page 3.) This and other questions concerning activities of the club and/or its members were answered in the framework of the "last completed project year." Our basic definition of leadership is "the ability to help the group reach its goal." If we take as the basic goal of the member that of completing the year's work (incidentally, this is also a basic goal of the organization) then one should have as one of his criteria of effectiveness per cent members completing. The scale values were originally established on completion figures of Michigan 4-H clubs over five-year period, 1955-1960.¹⁰ This survey indicated the average completion rate to be between 85 and 95 per cent. With this data the scale was established with a plus four value for 91-99% completions and a reduction of one point for every 10 per cent reduction in per cent completion. When it came to actual scoring of the questionnaire and it was discovered that the sample contained some 100% completions it was decided, on the afore established rationale, to award a plus five for one

¹⁰See Michigan 4-H Summaries, mimeographed, Cooperative Extension Service, Michigan State University, years 1955-1960.

hundred per cent completion. This is the only question in the scale with a possible plus five value.

Number of meetings held by club.--(Item 33, page 4.) A second paramount purpose of 4-H club work is to teach democratic principles. The 4-H club meeting is viewed as a primary teaching tool in this regard. Thus the number of meetings held by the club is an important component of our effectiveness scale. Michigan 4-H literature suggests that each 4-H club should have at least five meetings.¹¹ In assessing values to this question a negative one (-1) was assessed to those leaders reporting less than five meetings, and, on the basis of professional judgment (state 4-H staff) a plus four to sixteen or more meetings.

Member participation in demonstrations and judging.--(Items 37-44, page 5.) One of the essential roles for the 4-H leader is that of so conducting themselves and guiding their 4-H clubs, that each member has opportunity to learn to "show others" (demonstrate)¹² and to evaluate (make meaningful decisions based on recognized and desirable criteria). This question on the extent to which members participate in demonstration and judging, then, is an excellent one to include in the scale. As it was originally constructed, however, it did not lend itself to direct transfer. The table inserted in the Michigan 4-H Leader Inventory, page 4, Appendix B, shows the relative weighting of raw scores in the demonstration and judging question. Orientation for the assigned weighting was that of influence of leader and potential opportunity for the individual member. Scale weighting assigned on quartile range of actual distribution of raw scores. Frequency distribution of demonstration and judging scores can be seen in Table 9, Appendix A, page 130.

¹¹See Michigan 4-H Leader Guide, Extension Bulletin 13-A, Michigan State University, 1955.

¹²Ibid.; also, see Demonstration Leader Guide, Extension Bulletin 311, Michigan State University.

Community activity by 4-H club.--(Item 34, page 5.) A part of the national 4-H club pledge says, "I pledge my hands to larger service." Subjects were awarded a plus four if their club had completed one or more community activities. A more desirable measure would have been one that would have allowed scalar weighting of the responses. The fact that this schedule did not allow for such an analysis is a recognized weakness in the resulting effectiveness scale score.

Participation of members in county-wide events.--(Items 56, 57, page 6.) County events are planned and conducted to afford members educational opportunity and social experience broader in scope than the local program can provide. Part of the 4-H members' developmental program, then, should include participation in county-wide events. These events are usually non-restrictive and programmed for all members. The leader, if he is a "good" (effective) leader, will encourage his members' attendance at such events. Thus items 56 and 57 are included in the scale.

Use of junior leaders (Item 58, page 6) and number of adults influenced to assume 4-H leadership roles (Item 72, page 9).--Shared leadership and leadership development are two concepts measured in these two questions. These two concepts are emphasized in leader training and leader education. Their inclusion in this scale attempts to measure the leader's fulfillment of this important role as a 4-H leader.

Planned 4-H club program (Item 59, page 7) and Who Plans (Item 61, page 7).--"Members will have greater commitment to, and greater interest in, these programs which they themselves have helped to plan." Secondly, "there will be greater involvement and more active participation on the part of membership when they know what the program will be."

These two¹³ along with the emphasis on democratic procedures are rationale for including items 59 and 61 on effectiveness scale. Further, if we would refer to Stogdill's¹⁴ or Tannenbaum's¹⁵ measures of effectiveness we would attempt to assess "integration." We see these two questions as such an assessment.

What makes a 4-H club successful (Item 64, page 8) and criteria leader personally uses when assessing the success of his work (Item 64, page 13). --A leader cannot assist a group toward its goals unless he sees the goal. These two items were used in the effectiveness scale to test the clarity of the goal. Scaler value for each response is, as are the others in the scale, based on professional opinion of what the organizational goals are. These two items are directed at leader opinion. Item 15, p. 14 and item 19, p. 18 measure leader's orientation to member goals.

Participation in organized groups other than the leader of a 4-H club (Items 73-75, page 9). --The rationale for including this item in our scale comes from two sources. First, the assumption that leaders are made and not born, and the further assumption that learnings in one situation can be transferred to another leads us to believe this question to be relevant to our scale. Secondly, Clark and Skeleton¹⁶ found the extent of participation in other organizations to be directly correlated with satisfaction and tenure of 4-H leaders in New York state. Following our basic

¹³These two statements represent two rather commonly held axioms on which many action programs of community and neighborhood development are founded. See "Achieving Change in People," Dorwin Cartwright, Human Relations, Vol. IV, No. 4, 1951.

¹⁴Stogdill, op. cit.

¹⁵Tannenbaum, op. cit.

¹⁶Clark and Skeleton, op. cit.

definition of leadership we could expect satisfaction of the leader and leader effectiveness to be closely allied. Thus the inclusion of items 73-75, page 9.

As in items 37-44 (members participating in 4-H club demonstrations and judging), this item could not be scaled directly from raw data. Quartile distribution of raw scores was used as rationale for assigning scaler scores, plus one to plus four. Distribution of raw scores and scale value assigned are given in Table 8, Appendix A, page 129. The scale values were established on the basis of returned questionnaires as of September 21, 1961. Twelve schedules returned after that date were not plotted on this frequency. Scaler values for the twelve were, however, assigned on the basis of this distribution.

Familiarity with Michigan 4-H Leader Guide (Item 78, page 10). -- The 4-H Leaders Guide is a resource book for 4-H leaders and provides answers to many of the common questions leaders have asked over the years. It also provides guides to understanding youth, planning programs, project selection and completion, how to work with parents, and many other areas of 4-H club programming. Again, the assumption here is that if they are familiar with the content they will be able to do a more effective job. This item has a maximum of plus 3. This limit was set by the fact that the item contains only three positive responses.

Four-H leader's evaluation of individual members (Item 65, page 14) and "The most important goal I strive for as a 4-H leader" (Item 19, page 18). -- As stated in the section above dealing with leader attitudes, these two items assess the leader's orientation to "what are the goals of the member."

Parents' role in the 4-H club program (Item 11, page 17). -- This item was selected to represent the 4-H leader's orientation to relevant referent groups with which that leader must work. It was assumed that

the orientation displayed here (as forced by the responses) would give an effectiveness measure regarding the subject's view of working relationships with these relevant groups. The most desirable orientation is where the leader expects parents to take an active part in the total club program. Experience and research has shown that those clubs with active parent participation are more stable in terms of membership and member and leader satisfaction and tenure.

In helping the member decide what project to take (Item 13, page 17). --A good teacher needs to be involved in setting the learning goal of the student. Likewise, if the student is to direct his energies toward his goal he must know the goal. To set a realistic goal he must have counsel from the teacher. The teacher in turn must know the capabilities of his student.¹⁷ Item 13, then, is included in the effectiveness scale to give weight to this very important aspect of the 4-H leader's role.

Another important aspect of teaching is knowing when and how to give praise. Item 14, page 18, attempts to get at this aspect of the 4-H leader's role. This item was originally established as a minus 2 to a plus 4 scale. However, leader subjects repeatedly said they could not see significant differences between responses 5, 6, or 7 and it was decided to assign all three of these responses a high of plus 3.

Treatment of Data in Test of Hypotheses

Frequency distributions were run on all scales. These distributions are shown in Appendix A, Tables A-1, A-3, A-6, and A-8. To give consistency to the analysis all distributions were divided into tertiary units. The upper one-third was labeled "high," the middle unit "medium," and the lower one-third "low." Theoretically such a division would mean exactly one-third in each category, in practice, however, this was not

¹⁷ Paraphrased from various orientations to teaching. See for example, Asahel D. Woodruff, The Psychology of Teaching, New York: Longmans and Green and Co., 1948.

always possible. The tertiary units utilized in this research are as close to being one-third as the distribution of subjects would allow.

Chi-square was the primary statistical test employed.

$$X^2 = \sum \frac{(fo - fe)^2}{fe}$$

where fo and fe refer respectively to the observed and expected frequencies for each cell. In words, Chi-square is obtained by first taking the square of the difference between the observed and expected frequencies in each cell. We divide this figure by the expected number of cases in each cell in order to standardize it so that the biggest contributions do not always come from the largest cells. The sum of these non-negative quantities for all cells is the value of chi-square.¹⁸

In all cases where directionality was stated the one-tail test was used (significance = .05, one-tail test, $X^2 = 7.77$ when $df = 4$).

Pearson's contingency coefficients were computed on most of the chi-squares as a measure of association between the variables under test.

$$C = \sqrt{\frac{X^2}{X^2 + N}}$$

Since most of our tables were 3 x 3 tables we employed the correction factor (divide the obtained C by .822) which then allows us to talk of association on a 0 to unity continuum--zero when there is absolutely no relationship; unity (1) when the relationship between the two variables is perfect.¹⁹

¹⁸Hurbert N. Blalock, Social Statistics, McGraw-Hill, New York, 1960, p. 213 ff.

¹⁹Ibid., pp. 228-230.

Summary to Analyses of Data

This chapter has presented the measurements performed on the data and outlined the rationale and scale values for the measure of effectiveness.

The five measures taken on the Twenty Statements Test were: locus; error; salience "I am a 4-H leader"; number of organizational scores; and, total number of statements. Also, the Waisanen categories were employed in final analysis. You will remember that these categories broke the data up into consensual, evaluative consensual and idiosyncratic, and that the first two categories were further divided into personal, primary, secondary, categorical and residual responses.

Sixty-one leaders did not say "I am a 4-H leader." Almost 70% of these were project club leaders.

Role internalization scores were derived by allowing one point for each role relevant statement made on the modified Twenty Statements Test. A "model" role description was used as a guide in this scoring.

Scale values were assigned responses to the nineteen questions used to assess effectiveness. An individual's effectiveness score, then, is the sum total of values assigned to his responses on those 19 questions.

Chi-square was utilized as the primary statistic. Pearsonian contingency coefficients were used to show relative strengths of relationships within the individual contingency tables.

Chapter IV has presented the methods of analysis. Chapter V is devoted to statement of the hypotheses, presentation of the data necessary to test a given hypothesis, statistical tests of significance, and, narrative interpretation of the results of such tests.

CHAPTER V

TESTING OF HYPOTHESES

The primary question to be answered by this research is:
Can one predict effectiveness of a person in the role of 4-H Leader using the Twenty Statements Test and/or its compliment, the Role Internalization Test?

While this question is not directly testable, investigation of the individual variables involved will provide data on which to base a studied reply. If significant relationships can be shown between the variables, identified in the T.S.T. and R.I. instruments, and effectiveness one could be encouraged to study the interrelationships further.

It should be recalled that locus score represents, in one sense the different number of role-statuses the individual thinks of himself as occupying. Role Internalization scores represent the number of relevant role statements the individual gave in reply to "What do 4-H leaders do?" The Saliency score is simply the numerical position at which the subject said "I am a 4-H club leader" on the Twenty Statements Test. And the Effectiveness score is the total points awarded the individual as a result of his answers on the Michigan 4-H leader inventory.

Two additional variables to be utilized in testing secondary hypotheses are 4-H leader type and tenure. The type variable is dicotomized into Project Leaders and Community or Mixed Club Leaders and the tenure variable divides leaders into "less than" and "more than" three years service.

Table 5 shows the distribution of subjects on all six variables. The four variables of Locus, Role, Saliency and Effectiveness are arranged on the margins, and, tenure and type are represented by the series of numbers along the left side of each individual cell. As explained in the footnote to the table the first number in each cell represents those Project Leaders with three or more years service. The second number, those Project Leaders with less than three years; the third number, those Community or Mixed Club Leaders with more than three years service; and the last number, those Community or Mixed Club Leaders with less than three years service.

Analysis of such a multivariate contingency table is, from a practical standpoint, almost impossible. Therefore, as was pointed out above, analysis will be limited to two and three variant analysis. Before looking at these less complicated tables, however, it may be well to point out one observation fairly evident in the distribution of subjects over the total table above.

It appears that Community or Mixed Club Leaders of more than three years experience are concentrated in the upper left hand section of the table and that Project Leaders with less than three years service more often fall in the lower right. Project Leaders of more than three years and Community or Mixed Club Leaders of less than three years do not show a concentration in any area of the table.

Several alternative methods are available for the presentations of any research findings. Two alternatives seem particularly appropriate to this dissertation. First, there is concern for the interrelatedness of the variables under test and, therefore, one could present those data relevant to this concern. Such an approach has merit. It leaves, however, the task of accepting or rejecting the hypothesis under test.

A still more confounding problem arises in proceeding on the first alternative. This problem centers around the inability to control simultaneously for several variables in contingency table data.

Table 5. Scores of All Subjects with Relation to Saliency, Role Internalization, Locus, Effectiveness, Leader Type and Tenure

| | HIGH SALIENCY | | | | MEDIUM SALIENCY | | | | LOW SALIENCY | | | | Line Totals | | | | | | |
|----------------------|---------------|-------------|----------|---|-----------------|-------------|----------|---|--------------|-------------|----------|---|-------------|---|---|---|---|---|------|
| | High Role | Medium Role | Low Role | | High Role | Medium Role | Low Role | | High Role | Medium Role | Low Role | | | | | | | | |
| HIGH EFFECTIVENESS | 0* | 1 | 6 | 5 | 0 | 1 | 0 | 6 | 4 | 1 | 1 | 0 | 3 | 0 | 1 | 2 | 0 | 0 | 33 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| MEDIUM EFFECTIVENESS | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 19 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| HIGH EFFECTIVENESS | 0 | 1 | 0 | 5 | 3 | 1 | 0 | 2 | 4 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 5 | 20 |
| | | | | | | | | | | | | | | | | | | | (72) |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| MEDIUM EFFECTIVENESS | 1 | 0 | 3 | 1 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 4 | 0 | 1 | 25 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| MEDIUM EFFECTIVENESS | 1 | 0 | 2 | 0 | 1 | 1 | 2 | 5 | 3 | 0 | 2 | 1 | 0 | 2 | 0 | 4 | 1 | 0 | 27 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| MEDIUM EFFECTIVENESS | 0 | 1 | 0 | 5 | 3 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 2 | 4 | 18 |
| | | | | | | | | | | | | | | | | | | | (70) |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

| LOW EFFECTIVENESS | | 20 | 26 | 26 | 22 | 27 | 10 | 25 | 25 | 27 | 208 |
|-------------------|---|----|----|----|----|----|----|----|----|----|------|
| High Locus | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | |
| | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | |
| | 1 | 0 | 2 | 1 | 1 | 0 | 3 | 0 | 1 | 2 | 16 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |
| Medium Locus | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | |
| | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 3 | 2 | 4 | |
| | 1 | 1 | 4 | 3 | 2 | 4 | 1 | 0 | 4 | 5 | 30 |
| | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | |
| Low Locus | 1 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 20 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | (66) |
| Column Totals | | 20 | 26 | 26 | 22 | 27 | 10 | 25 | 25 | 27 | 208 |

* The first number in the row in each box represents those Project Leaders with more than three years tenure; the second number, those Project Leaders with less than three years; the third, those Community or Mixed Club Leaders with more than three years tenure; and the fourth, those Community or Mixed Club Leaders with less than three years service.

One of the major advantages of interval scales over either nominal or ordinal scales is that as yet no techniques have been developed in the case of the latter scales which are comparable to regression analysis or analysis of covariance.¹

Blalock² goes on to suggest that it is possible to compute partial and multiple coefficients for contingency tables but he does not offer any concrete examples.

Certain procedures comparable to factor analysis have been developed for use on nominal or ordinal scales, but these techniques are so new that they have seldom, if ever, been used in the sociological literature. Latent structure analysis is a multivariate technique developed by Lazarsfeld and others and is theoretically a generalization of factor analysis for the case of nominal scales. . . . When more than one dimension is postulated and when nominal scales with more than two categories are used, the computations apparently become quite involved, so that for all practical purposes the method is of limited use at the present time.³

Thus, while the first alternative would perhaps be the more desirable method, one cannot pursue it at this point in time.

Locus, Role Internalization, and Effectiveness

Hypothesis 1. Leaders with high Locus scores and high Role Internalization scores will have high leader Effectiveness.

Table 6 shows a significant relationship between Role Internalization and Effectiveness at high Locus. There is not a significant relationship between these two variables at either medium or low Locus, however.

When one holds Role Internalization constant in comparing Locus and Effectiveness there is a significant relationship only under medium Role. See Table 7.

¹Blalock, op. cit., pp. 389-390.

²Ibid.

³Ibid.

Table 6. Relationship of Role Internalization to Effectiveness, Controlling for Locus

| | HIGH LOCUS | | | | MEDIUM LOCUS | | | | LOW LOCUS | | | |
|---------------|--|---------------|-------------|-------|---|---------------|---------------|-------|---|---------------|---------------|-------|
| | High Effect | Medium Effect | Low Effect | Total | High Effect | Medium Effect | Low Effect | Total | High Effect | Medium Effect | Low Effect | Total |
| High | 16 (13.38) | 8 (10.14) | 6 (6.48) | 30 | 9 (6.50) | 8 (9.24) | 9 (10.26) | 26 | 4 (3.79) | 4 (3.41) | 3 (3.80) | 11 |
| Medium | 16 (14.72) | 14 (11.15) | 3 (7.13) | 33 | 5 (7.25) | 12 (10.30) | 12 (11.45) | 29 | 6 (5.52) | 7 (4.97) | 3 (5.51) | 16 |
| Low | 1 (4.90) | 3 (3.71) | 7 (2.39) | 11 | 5 (5.25) | 7 (7.46) | 9 (8.29) | 21 | 10 (10.69) | 7 (9.62) | 14 (10.69) | 31 |
| Column Totals | 33 | 25 | 16 | 75 | 19 | 27 | 30 | 76 | 20 | 18 | 20 | 58 |
| | $X^2 = .51 + .45 + .04$ $.11 + .73 + 2.39$ $3.10 + .13 + 9.28 = 16.74$ $p < .001 \quad C = .35$ | | | | $X^2 = .96 + .17 + .15$ $.70 + .28 + .04$ $.11 + .03 + .23 = 2.67$ Not significant $C = .15$ | | | | $X^2 = .09 + .10 + .17$ $.04 + .83 + 1.14$ $.05 + .71 + 1.03 = 4.16$ $.20 > p > .15 \quad C = .21$ | | | |

Table 7. Relationship of Locus to Effectiveness Holding Role Internalization Constant

| Effect. → | HIGH ROLE | | | | MEDIUM ROLE | | | | LOW ROLE | | | |
|-----------|---------------|-------------|-------------|--|---|---------------|--------------|-------|---|-------------|---------------|-------|
| | High | Medium | Low | Total | High | Medium | Low | Total | High | Medium | Low | Total |
| High | 16 (12.99) | 8 (8.96) | 6 (8.05) | 30 | 16 (11.42) | 14 (13.96) | 3 (7.62) | 33 | 1 (2.79) | 3 (2.97) | 7 (5.24) | 11 |
| Medium | 9 (11.25) | 8 (7.76) | 9 (6.99) | 26 | 5 (10.04) | 12 (12.27) | 12 (6.69) | 29 | 5 (5.33) | 7 (5.67) | 9 (10.00) | 21 |
| Low | 4 (4.76) | 4 (3.28) | 3 (2.96) | 11 | 6 (5.54) | 7 (6.77) | 3 (3.69) | 16 | 10 (7.88) | 7 (8.36) | 14 (14.76) | 31 |
| | 29 | 20 | 18 | 67 | 27 | 33 | 18 | 78 | 16 | 17 | 30 | 63 |
| Locus | | | | | | | | | | | | |
| | | | | $X^2 = .70 + .04 + .52$ $.45 + .01 + .58$ $.12 + .17 + 0 = 2.59$ | $X^2 = 1.84 + 0 + 2.80$ $2.53 + 0 + 4.22$ $.04 + .02 + .13 = 11.58$ | | | | $X^2 = 1.15 + 0 + .59$ $.02 + .31 + .10$ $.57 + .22 + .04 = 3.00$ | | | |
| | | | | Not significant C = .15 | p < .01 C = .30 | | | | Not significant C = .17 | | | |

Those with high Locus and high Role more often have high Effectiveness than medium or low Effectiveness. Also those with medium Role and high Locus are more often highly or mediumly Effective than low Effective. The reverse of the latter does not appear to be the case however. Medium Locus and high Role is no more likely to be Effective than not Effective, according to the data presented here (9, 8, 9 for high, medium, and low Effectiveness respectively).

Those leaders with low Locus and low Role, according to this data, are a little more likely to have low Effectiveness than they are to have high, while those with high Locus and low Role are much more likely to have low Effectiveness. The reverse of this combination, high Role and low Locus does not show this same relationship. (The former shows Effectiveness scores from high to low to be 1, 3, 7, while the latter shows 4, 4, 3).

Locus and Effectiveness

Hypothesis 2. Leaders with high Locus scores will have high leader Effectiveness scores.

In view of the expressed concern for finding an instrument that could be used to predict effectiveness, and further the expressed hope that the Twenty Statements Test would be that instrument, one may view the following analysis with great interest.

Table 8 shows this relationship to be significant at the .05 level ($X^2 = 8.18$). Looking at the table one can see that for high Locus in relation to Effectiveness there is a descending number of cases in categories high to low. The same relationship holds for high Effectiveness and the Locus categories. The obverse relationships of low Locus in relation to Effectiveness and low Effectiveness in relation to Locus do not display the expected directionality.

Table 8. Relation of Locus to Effectiveness

| Effectiveness | Locus | | | |
|--|---------------|---------------|-----------------|-----|
| | Hi(+13) | Med (8-12) | Low (7 or less) | |
| Hi + 41 | 33 (25.62) | 19 (26.30) | 20 (20.08) | 72 |
| Med. 33-40 | 25 (24.90) | 27 (25.58) | 18 (19.52) | 70 |
| Low 32 or less | 16 (23.48) | 30 (24.12) | 20 (18.40) | 66 |
| | 74 | 76 | 58 | 208 |
| $X^2 = 8.18 \quad p < .05 \quad C = .15$ | | | | |

Locus, according to this data, then, is not as strong a predictor of effectiveness as would be desirable in that there does not appear to be a direct linear relationship.

Locus and Role Internalization

Hypothesis 3. Leaders with high Locus scores will have high Role Internalization.

These two variables have the strongest relationship of any two variables under study in this research. As Table 9 shows, not only is the hypothesis confirmed as stated but the relationship holds for low Locus as well (those with low Locus will have low Role).

Table 9. Relationship of Locus and Role Internalization

| Role Internalization | Locus | | | |
|------------------------------------|---------------|---------------|---------------|-----|
| | High | Medium | Low | |
| High | 30 (23.84) | 26 (24.48) | 11 (18.68) | 67 |
| Medium | 33 (27.75) | 29 (28.50) | 16 (21.75) | 78 |
| Low | 11 (22.41) | 21 (23.02) | 31 (17.57) | 63 |
| | 74 | 76 | 58 | 208 |
| $X^2 = 23.63$ $p < .001$ $C = .25$ | | | | |

Role Internalization and Effectiveness

Hypothesis 4. Leaders with high Role Internalization will have high Effectiveness scores.

The data in Table 10 support the relationship predicted. Again, as in Table 9 above the relationship is one which would have allowed one to state the hypothesis: leaders with low Role Internalization will have low Effectiveness scores.

Saliency and Effectiveness

Hypothesis 5. Leaders with high Saliency for "I am a 4-H Leader" will have high Effectiveness.

The above hypothesis is offered, and the variable saliency treated as a relevant index to effectiveness, on the rationale presented in Chapter II.

Table 10. Relation of Role Internalization and Effectiveness

| Effective- ness | Role Internalization | | | |
|---|----------------------|---------------|---------------|-----|
| | High | Medium | Low | |
| High | 29 (23.19) | 27 (27.00) | 16 (21.81) | 72 |
| Medium | 20 (22.55) | 33 (26.25) | 17 (21.20) | 70 |
| Low | 18 (21.26) | 18 (24.75) | 30 (19.99) | 66 |
| | 67 | 78 | 63 | 208 |
| $X^2 = 12.73 \quad p < .01 \quad C = .20$ | | | | |

If an individual sees an organization as a relevant reference group and holds this group at a high level of saliency, then he ought to have attitudes consonant with that organization and be effective in it. Table 11 shows a significant relationship does exist, however, the C value of .17 suggests that this is not a real strong relationship. It would appear from Table 11, on the following page, that a stronger relationship exists between low Saliency and low Effectiveness than between high Saliency and high Effectiveness. One, treating a single row or column, does not get a significant relationship between either high Saliency in relation to Effectiveness or high Effectiveness in relation to Saliency. Looking at low Saliency in relation to Effectiveness and low Effectiveness in relation to Saliency, however, one does get a significant direct relationship of low Saliency, then, low Effectiveness. Treating the row or column as a unit of analysis and calculating chi-square with 2 degrees of freedom (actual against expected; expected just as it appears in

Table 11. Relationship of Saliency and Effectiveness

| Effective- ness | Saliency | | | |
|--|---------------|---------------|---------------|-----|
| | High | Medium | Low | |
| High | 25 (24.92) | 27 (20.42) | 20 (26.66) | 72 |
| Medium | 28 (24.23) | 18 (19.86) | 24 (25.91) | 70 |
| Low | 19 (22.85) | 14 (18.72) | 33 (24.43) | 66 |
| | 72 | 59 | 77 | 208 |
| $X^2 = 9.53 \quad p < .05 \quad C = .17$ | | | | |

Table 11) one gets chi-squares of 4.81 and 4.85, respectively. Significant at the five per cent level (one-tail test).

Saliency in Relation to Locus and Role Internalization

At the outset of this chapter it was stated that, in an attempt to deal with the interrelatedness of the variables under test, certain data would be presented beyond that directly related to the hypothesis stated for this research. The following tables dealing with the relationship of Saliency and Locus, and, Saliency and Role are presented to this end.

On the basis of the data presented in Table 12 it appears that there is a direct linear relationship between Locus and Saliency. The C value of .21 would seem to indicate that this is not a real strong relationship even though the X^2 of 15.58 is significant at the one per cent level of confidence.

Table 12. Relationship of Locus and Saliency

| Saliency | Locus | | | |
|-----------------------------------|---------------|---------------|---------------|-----|
| | High | Medium | Low | |
| High | 28 (25.62) | 27 (26.31) | 17 (20.07) | 72 |
| Medium | 26 (20.99) | 25 (21.56) | 8 (16.45) | 59 |
| Low | 20 (27.39) | 24 (28.13) | 33 (21.48) | 77 |
| | 74 | 76 | 58 | 208 |
| $X^2 = 15.58$ $p < .01$ $C = .21$ | | | | |

Recognizing the difficulty of interpreting the full meaning of multi-variate tables, Tables 13 and 14 are given below to further look at the relation of Saliency and Locus to Effectiveness.

As the following table shows Saliency and Effectiveness have significant relationships, greater than chance, only in combination with medium Locus scores. This relationship is not a linear one, however. It appears here, as it did for Saliency and Effectiveness, that the relationship is stronger for low Saliency in relation to Effectiveness than for high Saliency. That is, the distribution (low Saliency) is more the kind that one could expect, based on the theoretical frame developed for this research.

Table 14 in which the same three variables are involved, this time holding Saliency constant, does not produce a significant chi-square under any of the conditions of Saliency.

Table 13. Relationship of Saliency to Effectiveness at Three Levels of Locus Scores

| Effect. → | HIGH LOCUS | | | | MEDIUM LOCUS | | | | LOW LOCUS | | | |
|-----------|---|--------------|-------------|-------|---|--------------|--------------|-------|---|---------------|---------------|-------|
| | High | Medium | Low | Total | High | Medium | Low | Total | High | Medium | Low | Total |
| High | 12 (12.49) | 11 (9.46) | 5 (6.05) | 28 | 6 (6.75) | 13 (9.59) | 8 (10.66) | 27 | 7 (5.86) | 4 (5.28) | 6 (5.86) | 17 |
| Medium | 15 (11.59) | 7 (8.78) | 4 (5.63) | 26 | 10 (6.25) | 7 (8.88) | 8 (9.87) | 25 | 2 (2.76) | 4 (2.48) | 2 (2.76) | 8 |
| Low | 6 (8.92) | 7 (6.76) | 7 (4.32) | 20 | 3 (6.00) | 7 (8.53) | 14 (9.47) | 24 | 11 (11.38) | 10 (10.24) | 12 (11.38) | 33 |
| Totals | 33 | 25 | 16 | 74 | 19 | 27 | 30 | 76 | 20 | 18 | 20 | 58 |
| | $X^2 = .02 + .25 + .18$ $1.00 + .36 + .47$ $.95 + .01 + 1.66 = 4.90$ $.20 > p > .15 \quad C = .21$ | | | | $X^2 = .08 + 1.21 + .66$ $2.25 + .40 + .35$ $1.50 + .27 + 2.17 = 8.89$ $p < .05 \quad C = .26$ | | | | $X^2 = .22 + .31 + .01$ $.21 + .93 + .21$ $.01 + .01 + .03 = 1.94$ Not significant $C = .15$ | | | |

Table 14. Relationship of Locus and Effectiveness with Saliency Held Constant

| Effect. → | HIGH SALIENCY | | | | MEDIUM SALIENCY | | | | LOW SALIENCY | | | |
|--|---------------|---------------|-------------|-------|-----------------|-------------|-------------|-------|--------------|---------------|---------------|-------|
| | High | Medium | Low | Total | High | Medium | Low | Total | High | Medium | Low | Total |
| High | 12 (9.72) | 11 (10.89) | 5 (7.39) | 28 | 15 (11.90) | 7 (7.93) | 4 (6.17) | 26 | 6 (5.19) | 7 (6.23) | 7 (8.58) | 20 |
| Medium | 6 (9.38) | 13 (10.50) | 8 (7.12) | 27 | 10 (11.44) | 7 (7.63) | 8 (5.93) | 25 | 3 (6.23) | 7 (7.48) | 14 (10.29) | 24 |
| Low | 7 (5.90) | 4 (6.61) | 6 (4.49) | 17 | 2 (3.66) | 4 (2.44) | 2 (1.90) | 8 | 11 (8.58) | 10 (10.29) | 12 (14.13) | 33 |
| Totals | 25 | 28 | 19 | 72 | 27 | 18 | 14 | 59 | 20 | 24 | 33 | 77 |
| $X^2 = .53 + 0 + .77$ $1.22 + .60 + .11$ $.21 + 1.03 + .51 = 4.98$ $.20 > p > .15 \quad C = .21$ | | | | | | | | | | | | |
| $X^2 = .81 + .11 + .76$ $.18 + .05 + .72$ $.75 + 1.13 + .01 = 4.52$ $.20 > p > .15 \quad C = .22$ | | | | | | | | | | | | |
| $X^2 = .13 + .09 + .29$ $1.67 + .03 + 1.34$ $.68 + .01 + .32 = 4.56$ $.20 > p > .15 \quad C = .20$ | | | | | | | | | | | | |

Two things can be noted in both Table 13 and 14. First, for conditions of the high category of the control variable more cases appear in the high-high category than appear in either high-low or low-low. For example: in Table 14 there are 12 cases in high-high; only 7 and 5 respectively in high-low (high Effectiveness, low Locus, and, high Locus low Effectiveness; and 6 in low-low.

While it appears that the inverse is true, that there are more cases in low-low under the low control category this relationship is not as clear. For example, this is not the case for low Locus and Low Saliency in relation to Effectiveness. There are about equal numbers of cases in all categories of Effectiveness under these conditions.

Table 15 is the first table relating one variable under test, to one other variable under test, which has not shown a significant relationship at the five per cent level of confidence. It appears from looking at the table that there is very little relationship between Role Internalization and Saliency taken alone.

Table 15. Relation of Role Internalization and Saliency

| Saliency | Role Internalization | | | |
|----------|----------------------|---------------|---------------|-----|
| | High | Medium | Low | |
| High | 20 (23.19) | 26 (27.00) | 26 (21.81) | 72 |
| Medium | 22 (19.00) | 27 (22.12) | 10 (17.88) | 59 |
| Low | 25 (24.81) | 25 (28.88) | 27 (23.31) | 77 |
| | 67 | 78 | 63 | 208 |

$$X^2 = 7.41 \quad .10 > p > .05 \quad C = .15$$

Hypothesis 6. Leaders with high 4-H Leader Saliency scores and high Role Internalization will have high Effectiveness scores.

Again one runs into the problem of multivariant analysis.

Table 16 shows relation of Saliency to Effectiveness with Role Internalization constant. Under these conditions one can seek from the table significant relationships for Saliency and Effectiveness under conditions of high Role and low Role.

When one controls for Saliency in this three variable table one gets a significant difference from the expected under Medium Saliency only (X^2 for medium Saliency = 13.03 with a $C = .35$). Substantively one could interpret this combination of significant relationships to say a leader will be more often effective under conditions of medium Saliency and high Role. Further, if one looks only at the row high Role under high Saliency (Table 17) he can see that there is a decreasing number in each category high to low Effectiveness, admitting that the difference between 9 and 8 cases is slight. If one looks down the column under high Effectiveness, high Saliency he can see no appreciable difference, and, for Table 16, looking down the column one sees more cases in medium Saliency than in high.

Looking at the right side of the tables one can see that those with low Role and low Saliency do have low Effectiveness, but not in direct linear relation of most cases in low category least in high (rather for low low in relation to Effectiveness the cases are 14, 5, 8).

While it is difficult to say statistically (by use of X^2) whether or not hypothesis 6 is supported, one can say substantively that it is at least partially supported. More exact test will have to wait for more precise instruments or new nominal multivariate techniques.

Table 16. Relationship of Saliency and Effectiveness with Role Held Constant

| | | HIGH ROLE | | | | MEDIUM ROLE | | | | LOW ROLE | | | |
|-----------|---|-------------|--------------|-------|--|--|---------------|-------------|-------|--|-------------|---------------|-------|
| Effect. → | High | Medium | Low | Total | | High | Medium | Low | Total | High | Medium | Low | Total |
| High | 9 (8.66) | 8 (5.97) | 3 (5.37) | 20 | | 9 (9.00) | 11 (11.00) | 6 (6.00) | 26 | 7 (4.06) | 9 (7.02) | 10 (14.92) | 26 |
| Medium | 14 (9.52) | 4 (6.57) | 4 (5.91) | 22 | | 12 (9.35) | 11 (11.42) | 4 (6.23) | 27 | 1 (2.54) | 3 (2.70) | 6 (4.76) | 10 |
| Low | 6 (10.82) | 8 (7.46) | 11 (6.72) | 25 | | 6 (8.65) | 11 (10.58) | 8 (5.77) | 25 | 8 (9.40) | 5 (7.28) | 14 (10.32) | 27 |
| Totals | 29 | 20 | 18 | 67 | | 27 | 33 | 18 | 78 | 16 | 17 | 30 | 63 |
| | $X^2 = .01 + .69 + 1.05$ $2.11 + 1.00 + .62$ $.93 + .04 + 2.73 = 9.18$ $C = .26 \quad p < .05$ | | | | | $X^2 = .75 + .02 + .79$ $.81 + .02 + .86 = 3.25$ $C = .17$ Not significant | | | | $X^2 = 2.13 + .56 + 1.62$ $.93 + .03 + .32$ $.21 + .71 + 1.31 = 7.82$ $C = .27 \quad p < .05$ | | | |

SALIENCY

Table 17. Relation of Role Internalization and Effectiveness Under Three Categories of Saliency

| | | HIGH SALIENCY | | | | MEDIUM SALIENCY | | | | LOW SALIENCY | | | |
|-----------|--|---|---------------|--------------|-------|---|--------------|-------------|-------|--|--------------|---------------|-------|
| Effect. → | | High | Medium | Low | Total | High | Medium | Low | Total | High | Medium | Low | Total |
| High | | 9 (6.94) | 8 (7.77) | 3 (5.29) | 20 | 14 (10.07) | 4 (6.71) | 4 (5.22) | 22 | 6 (6.49) | 8 (7.79) | 11 (10.72) | 25 |
| Medium | | 9 (9.03) | 11 (10.11) | 6 (6.86) | 26 | 12 (12.36) | 11 (8.24) | 4 (6.40) | 27 | 6 (6.49) | 11 (7.79) | 8 (10.72) | 25 |
| Low | | 7 (9.03) | 9 (10.12) | 10 (6.85) | 26 | 1 (4.57) | 3 (3.05) | 6 (2.38) | 10 | 8 (7.02) | 5 (8.42) | 14 (11.56) | 27 |
| Totals | | 25 | 28 | 19 | 72 | 27 | 18 | 14 | 59 | 20 | 24 | 33 | 77 |
| | | $X^2 = .63 + .01 + .99$ $0 + .10 + .10 +$ $.46 + .12 + 1.45 = 3.86$ | | | | $X^2 = 1.52 + 1.09 + .29$ $.01 + .92 + .90$ $2.79 + 0 + 5.50 = 13.03$ | | | | $X^2 = .04 + .01 + .01$ $.14 + 1.39 + .51$ $.04 + 1.32 + .69 = 4.15$ | | | |
| | | Not significant C = .19 | | | | p < .05 C = .35 | | | | Not significant C = .19 | | | |

Number of Organizational Statements and Effectiveness

A relationship not predicted prior to the research but one that became evident by cursory analysis of the data is this:

Leaders who mentioned a high number of formal organizations in their reply to the Twenty Statements Test are more effective than those who did not.

The reader will recall that the response "I am a 4-H Leader" was also counted as a formal organizational statement. Other examples of organization responses were: Methodist, Granger, P.T.A., Home Demonstration Member, Kiwanian, and so on.

The spread of scores was very narrow with more than half the subjects scoring from one to three on this variable. Rather than split the sample into high, medium and low it was decided to expand the table and look at responses in categories 0, 1, 2, 3 and 4 or more statements. Table 18 presents this data.

Table 18. Relation of Number of Formal Organizational Statements on Twenty Statements Test and Effectiveness

| | Organizational Statements | | | | |
|-----------------------------------|---------------------------|--------------|---------------|---------------|---------------|
| | 4 or more | 3 | 2 | 1 | 0 |
| High Effective | 24 (15.58) | 5 (8.30) | 14 (15.92) | 17 (19.38) | 12 (12.80) |
| Medium Effective | 17 (15.14) | 10 (8.07) | 17 (15.48) | 16 (18.84) | 10 (12.46) |
| Low Effective | 4 (14.28) | 9 (7.63) | 15 (14.60) | 23 (17.78) | 15 (11.74) |
| Totals | 45 | 24 | 46 | 56 | 37 |
| $X^2 = 18.29$ $p < .01$ $C = .23$ | | | | | |

If one looks at the column "4 or more" statements in relation to effectiveness he can readily see that those who made 4 or more statements are more often highly effective than low, thus one could say the hypothesis has been confirmed. There is not a systematic relationship such that those with 3 statements have more high Effective than those with two or one, or such that those with zero statements are more often low effective than those with one, two or three organizational statements.

Waisanen Categories and Effectiveness

The Waisanen categories, the reader will recall, are another way of cataloging responses on the Twenty Statements Test. The three main categories are consensual (role oriented), evaluative consensual (those statements such as "I'm a good husband"), and ideosyncratic (nonconsensual such as "I'm tired, " "bored, " etc.). The first two categories are further divided into: (1) "A" type or physical statements such as "I'm five foot tall"; (2) "B" type or primary relationships ("I'm a sister of X"); (3) "C" type or secondary relationships ("I'm a 4-H Club Leader, " "Bowling team member, " or the like); and (4) "D" type or categorical statements such as "I'm a man" or "citizen of U.S. "

One hypothesis that seemed logical was the following:

Those leaders making fifty per cent or more of their statements in consensual B and C categories will be more effective than those making less than 50 per cent of their statements in these two categories.

Categories B and C contain consensual primary and secondary relationships and it seemed logical to expect that those leaders who saw themselves in these roles would be more effective on two counts. One, these roles hold real meaning and saliency for this group, and two, leaders having association with many groups and people ought to be more experienced in group action.

Table 19 gives the data for this analysis. The chi-square of 7.21 is not significant at the accepted level of significance. We could, however, accept the hypothesis as stated and expect to be wrong about seven times out of one hundred.

Table 19. Relation of Waisanen Categories Consensual B and C to Effectiveness

| Categories B and C | Effectiveness | | | |
|--|---------------|---------------|---------------|-----|
| | High 41 | Medium 33-40 | Low - 32 | |
| +50% | 29 (26.65) | 32 (25.91) | 16 (24.44) | 77 |
| 49% or less | 43 (45.35) | 38 (44.09) | 50 (41.56) | 131 |
| | 72 | 70 | 66 | 208 |
| $X^2 = 7.21$ $.10 > p > .05$ $C = .15$ | | | | |

At first glance, the hypothesis looks like it was not supported even at the 10 per cent level. That is, there are more cases with less than 50 per cent of these statements in B and C categories that have high Effectiveness than of those who have 50 per cent or more of these statements in B and C. Looking at percentages of the total, however, one can see that 39 per cent of the respondents in the category plus 50 per cent in B and C have high Effectiveness as compared with only 32 per cent of those in category minus 50 per cent. Also, 38 per cent in category minus 50 per cent are low Effective as compared with 20 per cent of those in plus 50 per cent category.

The distribution of responses over the total Waisanen analysis matrix (see Table 3, Appendix A), shows that consensual categories B, C and D contain large numbers of the total responses and also that these three categories have the most normal distribution of scores over the range. Table 20 presents the relationship of each of these categories to Effectiveness.

Category C (secondary relationships) is the only category showing significant relationships to Effectiveness.

To this point in the analysis, three variables (Locus, Role Internalization, Saliency), have been investigated for interrelatedness to one another and to the dependent variable Effectiveness. As the data has shown, there is significant relationships between each of the three variables and Effectiveness, when one compares them one at a time with Effectiveness. Also there is significant relationships between the three taken any two at a time, with the exception of the relationship Role Internalization and Saliency ($.10 > p > .05$).

Hypotheses involving two variables in relation to Effectiveness were not as easily tested. Statistical test for multivariate nominal data has not been developed. Therefore, statistical analysis was limited to saying, according to the data, that there was significant relationship between variable one and Effectiveness under category "X" of variable two. The confounding thing was that when one reversed the position of variable one and two the relationships between the two in relation to Effectiveness changed (or seemed to, in that different categories now appeared significant).

Acceptance or rejection of the multivariate hypothesis was not firmly established. Certain observed data, however, tended either to support or not support the relationships predicted. The hypothesis "high Locus and high Role . . . high Effectiveness" was supported while the hypothesis "high Saliency and high Role. . . high Effectiveness" was only partially supported, if at all.

Table 20. Relationship of Waisanen Categories B, C, and D to Effectiveness

| Waisanen Categories | | | | | | | | | | | | |
|-----------------------------------|--|---------------|---------------|-------|--|---------------|---------------|-------|---|---------------|---------------|-------|
| B | | | | | C | | | | | D | | |
| EFFECTIVENESS | | | | | EFFECTIVENESS | | | | | EFFECTIVENESS | | |
| | High | Medium | Low | Total | High | Medium | Low | Total | High | Medium | Low | Total |
| 30%+ | 17 (20.08) | 21 (19.52) | 20 (18.40) | 58 | 24 (16.96) | 18 (16.49) | 7 (15.55) | 49 | 27 (25.96) | 22 (25.24) | 26 (23.80) | 75 |
| 15-29% | 29 (28.38) | 28 (27.60) | 25 (26.02) | 82 | 18 (22.50) | 22 (21.88) | 25 (20.62) | 65 | 15 (19.04) | 22 (18.51) | 18 (17.45) | 55 |
| 0-14% | 26 (23.54) | 21 (22.88) | 21 (21.58) | 68 | 30 (32.54) | 20 (31.63) | 34 (29.83) | 94 | 30 (27.00) | 26 (26.25) | 22 (24.75) | 78 |
| Totals | 72 | 70 | 66 | 208 | 72 | 70 | 66 | 208 | 72 | 70 | 66 | 208 |
| Per cent of Total Statements Made | $X^2 = .47 + .11 + .14 + .07 + 0$ $+ .04 + .26 + .15 + 0 =$ 1.42 | | | | $X^2 = 2.92 + .14 + 3.57 +$.90 + 0 + .93 + .20 + 4.28 + .58 = 13.52 | | | | $X^2 = .34 + .42 + .20 +$.86 + .66 + .04 + .33 + 0 + 31 = 3.16 | | | |
| | Not significant C = .01 | | | | p < .01 C = .21 | | | | Not significant C = .02 | | | |

The hypothesis in the next section of this dissertation deals with the effect of leader type and tenure on Effectiveness, still in the framework of the variables investigated above.

Secondary Hypotheses

The hypotheses in this section deal with combinations of leader types and tenures in relation to the primary variables under study. Rationale for these hypotheses was put forth in Chapter II. It should be emphasized here again (as it was in the earlier chapter) that the hypotheses under test are not necessarily the most germane ones to the total problem. They do, however, represent statements which are logically coherent based on our theoretical orientation and knowledge of how the organization operates.

Admitting that there are others we could have tested, those under test will serve to give some indication of the versatility of the instruments employed.

Hypothesis 7: Leaders with high Saliency and low Role Internalization, if a leader for more than 2 years, will have a low leader Effectiveness score.

As Table 21 shows, this hypothesis was not supported at the accepted level of significance. The table shows that those leaders with high Saliency and low Role Internalization as often have high Effectiveness as they do low. Those with Medium Saliency and low Role on the other hand, are more apt to have low Effectiveness, while those with low Saliency and low Role show a pattern similar to those with high Saliency and low Role.

If one looks at the distribution of the low Effectiveness scores he can see that more of the cases fall in the low Role Internalization category than in any other. Particularly is this true for High and Low Saliency.

The table also shows that those with medium Saliency and high or medium Role are more often Effective than those with either high or low Saliency.

Table 21. Relationship of Saliency, Role Internalization, and Effectiveness for Leaders of 3 Years or More

| | HIGH SALIENCY | | | | MEDIUM SALIENCY | | | | LOW SALIENCY | | | |
|---------------|---|------------------|------------------|-------|-------------------------------------|--------------------|------------------|-------|---|------------------|------------------|-------|
| | High Role | Medium Role | Low Role | Total | High Role | Medium Role | Low Role | Total | High Role | Medium Role | Low Role | Total |
| High Effect | 7* 0 (6.61) | 6 1 (6.61) | 4 3 (7.78) | 21 | 11 3 (11.06) | 10 1 (12.17) | 1 0 (2.77) | 26 | 1 4 (4.40) | 2 2 (5.20) | 4 1 (4.40) | 14 |
| Medium Effect | 5 2 (6.61) | 5 3 (6.61) | 3 3 (7.78) | 21 | 0 3 (5.11) | 4 4 (8.62) | 1 0 (1.27) | 12 | 3 2 (4.09) | 2 4 (6.83) | 2 0 (2.08) | 13 |
| Low Effect | 2 1 (3.78) | 1 1 (3.78) | 2 5 (7.44) | 12 | 2 1 (3.83) | 2 1 (4.21) | 1 2 (0.96) | 9 | 0 1 (2.51) | 1 2 (2.97) | 2 2 (4.52) | 8 |
| Totals | 17 | 17 | 20 | 54 | 20 | 22 | 5 | 47 | 11 | 13 | 11 | 35 |
| | $X^2 = 2.84$ Not Significant $C = .18$ | | | | $X^2 = 8.82$ $p < .05$ $C = .32$ | | | | $X^2 = 4.13$ Not Significant $C = .26$ | | | |

* The first number in the upper left hand corner represents Community Club Leaders; the second, Project Leaders.

Finally, while the table does not show significant relationship in the predicted direction there appears to be a trend in that direction. That is, in all cases of low Role and low Effectiveness there are more cases than would be expected statistically. It is also the case that these categories account for large amounts of the total chi-square. For the high Saliency analysis the category contributes 1.60 of the total; for Medium Saliency, 4.33; and for Low Saliency, 0.87.

Up to this point the discussion has been in relation to the total leaders with three or more years tenure. If one looks at the Community or Mixed Club leaders in relation to Project Leaders for this same hypothesis there is some interesting data (see Table 21, and the numbers in the upper left hand corner of each cell).

The first thing to be noted is that of the total number of cases in the high Saliency, low Role, low Effectiveness cell, five of the seven are Project Leaders. In the medium Saliency grid two of the three in the low Role low Effectiveness cell are Project Leaders. Apparently the hypothesis would be more appropriate for Project Leaders with three or more years tenure than for all leaders. The table also shows that Community or Mixed Club Leaders are more often high on Effectiveness, Role, and Saliency than are Project Leaders. This relationship holds true for the three categories of Role through both high and medium Saliency.

Hypothesis 8: Leaders with low Locus scores will have low leader Effectiveness scores, if they are mixed or community club leaders.

Table 22 shows the data for testing this hypothesis.

As Table 22 shows this hypothesis is not supported. Not only is the chi-square not significant but, it can be seen from a look at low Locus and low Effectiveness that the cases are not arrayed in the predicted direction.

Table 22. Relationship of Locus and Effectiveness for Mixed and Community Club Leaders

| Effective- ness | Locus | | | |
|--|---------------|---------------|---------------|-----|
| | High | Medium | Low | |
| High | 24 (19.80) | 16 (19.80) | 11 (11.40) | 51 |
| Medium | 13 (12.43) | 12 (12.43) | 7 (7.14) | 32 |
| Low | 3 (7.77) | 12 (7.77) | 5 (4.46) | 20 |
| Totals | 40 | 40 | 23 | 103 |
| $X^2 = 6.99$ $.10 > p > .05$ $C = .21$ | | | | |

Looking at high Locus in relation to Effectiveness one sees that those mixed or community club leaders with high locus are more often effective than not. Also, those who are effective more often have high Locus than low Locus.

The large number of cases in cell a (high Locus, high Effectiveness) may be indicative of the fact that community or mixed club leaders do indeed see themselves in a wide range of roles, and, more importantly, only those who have a broad self-concept (as measured by the Twenty Statements Test), attempt community club leadership. In terms of this rationale, and that put forth in the theoretical chapter, it might be interesting to look at the relationship of Locus to Effectiveness for project leaders. Table 23 contains this data.

Table 23. Relationship of Locus and Effectiveness for Project Leaders

| Effective- ness | Locus | | | |
|--------------------|--|------------------------------|-----------------------------|-----|
| | High | Medium | Low | |
| High | 6 3 9 (6.80) | 3 0 3 (7.20) | 6 3 9 (7.00) | 21 |
| Medium | 7 5 12 (12.30) | 9 6 15 (13.02) | 5 6 11 (12.68) | 38 |
| Low | 5 8 13 (14.90) | 5 13 18 (15.78) | 8 7 15 (15.32) | 46 |
| Totals | 34 | 36 | 35 | 105 |
| | $X^2 = 4.81$ Not significant $C = .17$ | | | |

As the table above shows there is no apparent relationship between Locus and Effectiveness for Project Leaders. It appears, according to the data, that those Project Leaders who have low Locus more often have low Effectiveness. Unlike the Community or Mixed Club group those with high Locus do not have high Effectiveness nor do those with high Effectiveness more often have high Locus than they do low.

Hypothesis 9: Leaders with high Effectiveness and less than 3 years service will have lower 4-H leader Saliency than effective leaders of more than 3 years.

Table 24 presents the relationship of Saliency to Tenure under three conditions of Effectiveness. There is a significant relationship of Saliency to Effectiveness under both high Effectiveness and low Effectiveness categories. It is interesting to note that for conditions of high Saliency and high Effectiveness the direction is as predicted, and, under low Saliency and low Effectiveness those with less than three years tenure have the wide majority of cases.

For all categories of Effectiveness a greater percentage of all subjects 3 years and over have higher Saliency than those with less than 3 years. Also for all categories of Effectiveness a greater percentage of all subjects in the category "less than 3 years" have low Saliency than is the case for those over 3 years. Thus the hypothesis is supported.

A hypothesis suggested from the field interviews and from inspection of the data for this last hypothesis is as follows:

Of those Leaders with more than 3 years tenure, Community or Mixed Club Leaders have higher Saliency for "I am a 4-H Leader" than do project leaders.

It seemed apparent from the field interviews that Project Leaders did not think of themselves as leaders, but only as helpers or subject matter teachers. If this is the case it seemed to this writer that Extension ought to be aware of this.

Table 25 shows a significant relationship between leader type and Saliency for those leaders with more than three years tenure, although this relationship is not as strong as field analysis would have made it seem. Community and Mixed Club leaders do have higher Saliency for "4-H Leader" than do Project Leaders.

Table 24. Relation of Saliency to Tenure at Three Levels of Effectiveness

| | | HIGH EFFECTIVENESS | | | | MEDIUM EFFECTIVENESS | | | | LOW EFFECTIVENESS | | | |
|-----------|---------------------|--------------------|-------------------|-------------------------------------|---|----------------------|-------------------|-------|-------------------------------------|-------------------|-------------------|-------|--|
| Saliency | High | Medium | Low | Total | High | Medium | Low | Total | High | Medium | Low | Total | |
| + 3 Years | 4* 17 (21.18) | 4 22 (22.87) | 7 7 (16.95) | 61 | 8 13 (18.00) | 7 5 (11.57) | 6 7 (15.42) | 46 | 7 5 (8.92) | 4 5 (6.57) | 7 3 (15.5) | 31 | |
| - 3 Years | 3** 1 (3.82) | 0 1 (4.13) | 2 4 (3.05) | 11 | 3 4 (10.00) | 2 4 (6.43) | 2 9 (8.58) | 24 | 2 5 (10.08) | 0 5 (7.43) | 5 18 (17.5) | 35 | |
| Totals | 25 | 27 | 20 | 72 | 28 | 18 | 24 | 70 | 19 | 14 | 33 | 66 | |
| | | | | $X^2 = 6.16$ $p < .05$ $C = .23$ | $X^2 = 2.22$ Not significant $C = .15$ | | | | $X^2 = 7.37$ $p < .05$ $C = .26$ | | | | |

* The first number represents Project Leader; the second, Community or Mixed Club Leaders.

** For less than three years, the first number is for Community or Mixed Club Leaders; the second is for Project Leaders.

Table 25. Relationship of Saliency to Leader Type for Leaders with Three Years or More Service

| Three or more years | Saliency | | | |
|--------------------------------|----------------------------------|---------------|---------------|-----|
| | High | Medium | Low | |
| Community or Mixed Club Leader | 35 (32.87) | 32 (28.61) | 17 (22.52) | 84 |
| Project Leader | 19 (21.13) | 15 (18.39) | 20 (14.48) | 54 |
| Totals | 54 | 47 | 37 | 138 |
| | $X^2 = 4.82$ $p < .05$ $C = .15$ | | | |

Effectiveness and Tenure

Table 26 shows data correlating Tenure with Effectiveness. Previous studies of 4-H leadership have pointed up a direct relationship between the "success" of 4-H clubs and the length of service of leaders.⁴ We have stated earlier that Clark and Skelton⁵ found relationship between "satisfaction" and tenure. Our working hypothesis with relation to the data below was:

Leaders with more than three years Tenure will be more Effective than those with less than three.

As Table 26 shows, those leaders with three or more years Tenure are more often Effective than those with less than three years. Nearly

⁴Volunteer Leaders are Essential to the 4-H Program, United States Department of Agriculture, Extension Service Circular 347, 1951.

⁵Clark and Skelton, op. cit.

Table 26. Relationship of Effectiveness and Tenure

| Tenure | Effectiveness | | | Totals |
|---|---------------|---------------|---------------|--------|
| | High | Medium | Low | |
| More than 3 years | 61 (47.77) | 46 (46.44) | 31 (43.79) | 138 |
| Less than 3 years | 11 (24.23) | 24 (23.56) | 35 (22.21) | 70 |
| Totals | 72 | 70 | 66 | 208 |
| $X^2 = 22.00 \quad p < .001 \quad \text{one-tailed test} \quad C = .25$ | | | | |

half of those with three or more years Tenure have high Effectiveness, whereas, half of those with less than three years Tenure have low Effectiveness.

Summary

The basic question posed at the opening of this chapter was: Can one predict effectiveness of a person in the role of 4-H Leader using the Twenty Statements Test and/or its compliment, the Role Internalization Test? As it was pointed out this is not an easy question to answer. It was suggested that demonstration of significant relationships between the variables of Locus (role oriented, consensual statements), Role Internalization, Saliency, and Effectiveness would provide at least a partial answer to this question.

The problem of multivariate analysis of nominal data was discussed and it was pointed out that such analysis was not well developed for complex contingency tables. Nevertheless the data was presented, first

showing the total six variables in relation to one another (Table 5), and then either one variable in relation to another, or, one variable in relation to another with a third held constant. Each set of analysis is reported either as a direct test of, or complementary to, the hypotheses under test in this research.

Below in summary form are the findings presented in the chapters.

1. High Locus and high Role Internalization, then high Effectiveness. Holding Locus constant there is a significant relationship between high Role and high Effectiveness at High Locus. Holding Role constant there is a significant relationship between Locus and Effectiveness only under medium Role. Those with high Locus and high Role more often have high Effectiveness than they do medium or low Effectiveness. This hypothesis, then, is at least partially supported.

2. High Locus, then high Effectiveness. $X^2 = 8.18$, $p < .05$

3. High Locus, then high Role Internalization. $X^2 = 23.63$, $p < .001$.

4. High Role, then high Effectiveness. $X^2 = 12.73$, $p < .01$.

5. High Saliency for "I am a 4-H Leader," then high Effectiveness. $X^2 = 9.53$, $p < .05$.

6. High Saliency, then high Locus. $X^2 = 15.58$, $p < .01$.

When one looks at combinations of the above variables in relation to Effectiveness it appears that certain variables account for more variation than others. For example, both Locus and Saliency, taken alone, are related to Effectiveness. However, when combined there is a significant relationship between Saliency and Effectiveness only under medium Locus and when holding Saliency constant one does not get a significant chi-square between Locus and Effectiveness at any level of Saliency.

7. High 4-H Leader Saliency, then high Role Internalization.

$X^2 = 7.41$, $.10 > p > .05$ not significant.

8. High Saliency and high Role, then effective. At least partially supported. In the multivariant of Role, Saliency and Effectiveness a significant chi-square is produced for Saliency and Effectiveness at the high and low Role categories. Controlling for Saliency there is a significant relationship of Role and Effectiveness only at medium Saliency.

9. High formal organization score, then high Effectiveness. This hypothesis was supported (Table 18). There is not a systematic relationship, however, such that those with a high medium score are more effective than those with medium or low medium scores.

10. Fifty per cent or more replies in Waisanen categories B and C more effective than those with less than 50 per cent. Chi-square of 7.21 is not significant ($.10 > p > .05$). Comparing a subjects percentage of his total responses in a given category, "B," "C" or "D," one finds a significant relationship between responses in "C" category and Effectiveness. A suggested hypothesis would be: high percentage of statements in category "C," than high Effectiveness.

11. Leaders of more than two years having high Saliency and low Role Internalization will have low Effectiveness. Not supported for all leaders with three or more years. Apparently, according to the data the hypothesis would be more correct for Project Leaders than for Community or Mixed Club Leaders.

12. Mixed or Community Club Leaders with low Locus will have low Effectiveness. Not supported. On the other hand, it appears that those Mixed or Community Club Leaders with high Locus are far more often effective than not.

13. Leaders with high Effectiveness and less than three years service will have lower Saliency for "I am a 4-H Leader" than effective Leaders of more than three years Tenure. Supported at all levels of Effectiveness (Table 24).

14. For all Leaders with more than three years service Community or Mixed Club Leaders have higher Saliency than do Project Leaders. Supported ($X^2 = 4.82$, $p < .05$).

15. Leaders with more than three years Tenure will be more effective than those of less than three years. Supported. Nearly half of those with three years or more have high Effectiveness, whereas, half of those with less than three years have low Effectiveness.

The data presented in this chapter and the summary above support the theoretical rationale, and the hypotheses generated therefrom. The findings are indeed encouraging. It is recognized, however, that any given research activity is, in and of itself, not an end but a minute particle (or segment) in the establishment of knowledge.

This is not to say that any segment of research, such as the one herein reported, is sterile, or non-utilizable--save as incorporated into the whole--for as Braithwaite,⁶ Hempel,⁷ and other philosophers of science point out theory is not built from the top down (entirely) nor from the bottom up (entirely) but rather from a combination of the two in which field testing and high level deduction go hand in hand. Not only is this the case in terms of the generation of testible hypotheses, but this is also true in verification of the findings. As we generate hypotheses from a deductive rationale system we also attempt to stretch the system to include hypotheses themselves not directly deducible from the theoretical framework, but which if proven, will add strength to the explanation power of the rationale.

⁶R. B. Braithwaite, Scientific Explanation, New York: Harper and Brothers, Harper Torchbook, 1960. Particularly Chapters 5 and 6.

⁷Carl G. Hempel, Fundamentals of Concept Formation in Empirical Science, Foundations of the Unity of Science, University of Chicago Press, 1952, Vol. 11, No. 7, especially section 14.

Further, one does not wait for complete and final (whatever this may mean) development of a body of knowledge before one utilizes that which has been verified. This suggests that one can apply that which one believes to be true, recognizing that all truth is relevant and that we need to continually test inferences and systems.

With the above as an orientation the next chapter will be devoted to implications for: (1) application of this knowledge; (2) further analysis of the data currently collected, and (3) further research.

CHAPTER VI

IMPLICATIONS

Purpose of the Chapter. The purpose of this chapter is threefold, and attention will be directed to three questions: first, what implications are there for application of the Twenty Statements Test as an instrument for measuring 4-H leader effectiveness, and, more generally, what are the implications of the total research project for social science in general and voluntary associations in particular; second, what further analysis could have been, and needs to be, done on the current data, including an alternative way of approaching our analysis; and third, what recommendations are there for further research.

Implications from this Research Project

It is not recommended that Extension, or any other voluntary association, rush out and administer Twenty Statements Tests to every 4-H leader in the land and then establish their effectiveness or non-effectiveness on the basis of these results. 'Not yet anyway. The findings do, however, suggest a significant relationship between the range of ways one sees himself and effectiveness. 'The Twenty Statements Test does, or so it appears, have utility for such application. Before strong confidence can be placed in its utility, however, replication must be done. The findings must be reaffirmed. This preliminary work must be followed by a composite of related research, including experiments in prediction, based on current development of the instruments if we are to operationalize the suggested program with confidence.

*Analysis of the modified Twenty Statements Test, "What do 4-H leaders do?" supports the thesis that content analysis of the responses for a given individual could point to the kind of education needed to have this individual become more effective. While this question was not directly under test in this project, nevertheless such a procedure is perfectly feasible. †Further, there was support for the notion of pre-leader or intensified leader education in the first years of involvement. As Table 26 shows, under the current system of letting the leader grow into the position (very few planned education sessions for new leaders), those leaders with 3 or more years of tenure are far more effective than those of less than 3 years. This implies, it would seem, that earlier and more intensified training is needed, and, as suggested above, the use of the Role Internalization Test would provide an inventory of just what areas are missing in the role repertoire of the leader.

† An implication of a broader scope concerns the notion of actor-in-a-role measurement. The above findings support the theoretical frame advanced for this research: i. e., one can, given social system, position, role, and organizational goals, meaningfully measure how well the behavior demanded for a given situation is provided by a given actor occupying that position. Such assessment can be made by comparing on a scale score basis the behavior of one actor as over and against another in the same position and situation. Further, coupling a measure of self-concept with a measure of how one sees the situation the observer can begin to predict the degree of effective enactment of the role.

The above should have utility for all social organizations, and particularly voluntary associations. Such associations often face the dilemma of not being able to dismiss the volunteer from a position and yet the volunteer is not as effective as he should be. In this respect several more desirable alternatives seem to be emerging. First, measurement of the individual's self-concept and his knowledge of the

role or roles in an organization could make possible placement in that organization so as to maximize his efforts on its behalf. Secondly, given the above, educational training could aim at assisting the individual to see the role more clearly and provide tools to carry out the job. A third alternative might be to change the self-concept as proposed in the research proposal "Improving Academic Achievement Through Student's Self-Concept Enhancement," Michigan State University, Bureau of Educational Research.⁸

Further Analysis of Current Data

In view of the crudeness of the measuring devices and the basic purpose of this reported research it did not seem wise at the present time to proceed to a more refined analysis of the relationships by means of multiple correlation or the like. This research has served well in establishing relationship and direction; more refined analysis awaits more precise measure. There is, however, opportunity for refinement within the current data.

First, it is recognized that scales based on item analysis have been subject to a considerable amount of criticism with regard to the assumption of unidimensionality. We could (although this was not done) re-examine the effectiveness scale to determine the possibility of constructing Guttman, or similar type scales.

While the Waisanen categories provided an alternate analysis of the Twenty Statements Test data, it by no means exhausted the analytic possibilities for utilization of this data. Other methods such as factor analysis (or a similar method of establishing clusters) could be employed and tests made to see which clusters of self-concepts related to effectiveness. Such method could be modified by establishing effectiveness first

⁸Wilbur Brookover, et al., "Improving Academic Achievement Through Student's Self-Concept Enhancement," U. S. Office of Education, Cooperative Research Branch Project 1636.

and examining the Twenty Statements Tests of those in a given category of effectiveness, with regard to clusters of responses.

Problems for Further Research

Every researcher needs to be concerned with continual refinement and modification of his measuring instruments; with the reliability and validity of his work; and with how his work adds to the total body of knowledge in his field of concentration.

The research reported herein has shown significant relationships between indices taken from the Twenty Statements Test and Role Internalization Test and Effectiveness of 4-H Leaders. Few other studies have been concerned with measuring effectiveness of people in leadership roles in voluntary associations. There is little opportunity to compare the findings of this study with similar ones. Replication, then is very important. If similar findings occur with replication (samples of other 4-H Leaders), the original findings and assumptions made from them will be strengthened.

Along with replication in 4-H, studies in other similar voluntary associations shall be made to determine whether or not the findings are peculiar to 4-H, only, or if they hold for other organizations as well.

The effectiveness index used in this research was based on the organizations notion of what a leader ought to do or ought to believe. One interesting question for research would be, how closely related is this measure of effectiveness to the group measures of "syntality" used by Cattell⁹ to determine leader effectiveness. Or what is the relationship of effectiveness of leaders as defined herein and Hemphill's¹⁰ indices

⁹Raymond B. Cattell, "New Concepts for Measuring Leadership in Terms of Group Syntality," Human Relations, Vol. 4, 1951, pp. 161-84.

¹⁰John Hemphill, op. cit., p. 100.

of "hedonic tone" and "viscidity." Hemphill found that "almost without exception items of behavior which were related to leadership adequacy were also related to the group dimensions of hedonic tone and viscidity."

It is assumed that continual refinement of the instruments would go hand in hand with continued research of the question. For example, one could address himself to scaling of the response items on the Twenty Statements Test and the Effectiveness instrument in such a way that assumptions for parametric analysis could be met. Secondly, is it necessary for respondents to make twenty statements or would some lesser number do as well. The same question can be raised for the Role Internalization Test.

It has been pointed out that the Twenty Statements Test is an open-ended question instrument. Can we determine what kinds of response clusters are significant for effective organization leadership and how these are, or can be, effected by leader education. In this regard research designed to test a group, administer education, and retest, is deemed desirable. With the basic concern, is it possible to change self-concept and/or role internalization by education relevant to leadership roles in organizations.

The basic concern of the research reported in this dissertation was: is it possible to use social-psychological instruments, currently developed, to predict effectiveness of a person in a given voluntary association leadership role? This study reports on the use of one such instrument. Further research should be directed to the use of other currently developed instruments or techniques. There is mounting evidence that those techniques involving projection of "self" have real value in determining one's behavior in real life. Such techniques as the Thematic Apperception Test, sentence completions, story completion, and the like, would appear to have fruitful application.

If one accepts the thesis that the individual is a product of his social environment (and the research orientation herein holds this view), then the above proposed research should support the thesis that a measure of self-concept and role internalization will provide information on which to predict effectiveness of leaders in voluntary association such as 4-H Clubs. Further, such research would give insight into the question: Is it possible to change self-concept and/or role internalization through education?

Further research needs to be done in relation to what are the variety and constellations of group characteristics which the leader may expect to encounter. The present research indicates that perhaps there ought to be a separate role analysis of the Project Leader as compared to the Community or Mixed Club Leader, and indeed perhaps the latter two should not have been combined. If one knew this more precisely, leader education curriculum could be pointed to teaching modes of behavior likely to result in effective leadership.

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APPENDICES

APPENDIX A

SUMMARY TABLES OF DATA

Table A-1. Frequency Distribution of Variables

| Score Value | Total Score on T.S.T. (f) | Locus Score | Error (f) | Positional "4-H Ldr" (f) | Organizations Score | Total R.I. Responses (f) | R. I. Score (f) |
|-------------|---------------------------|-------------|-----------|--------------------------|---------------------|--------------------------|-----------------|
| 0 | 0 | 4 | 118 | 62 | 37 | 0 | 0 |
| 1 | 0 | 5 | 28 | 13 | 56 | 0 | 3 |
| 2 | 0 | 4 | 22 | 18 | 46 | 1 | 5 |
| 3 | 1 | 6 | 17 | 24 | 24 | 1 | 19 |
| 4 | 2 | 8 | 11 | 19 | 16 | 3 | 40 |
| 5 | 3 | 5 | 7 | 23 | 15 | 5 | 65 |
| 6 | 6 | 16 | 3 | 11 | 6 | 10 | 91 |
| 7 | 9 | 12 | 1 | 5 | 6 | 7 | 119 |
| 8 | 4 | 14 | 0 | 7 | 0 | 17 | 142 |
| 9 | 9 | 9 | 1 | 6 | 1 | 13 | 159 |
| 10 | 13 | 23 | | 6 | 1 | 17 | 179 |
| 11 | 16 | 15 | | 2 | 0 | 23 | 191 |
| 12 | 18 | 15 | | 1 | 0 | 19 | 197 |
| 13 | 10 | 7 | | 3 | 0 | 18 | 199 |
| 14 | 15 | 8 | | 4 | 0 | 13 | 205 |
| 15 | 11 | 8 | | 0 | 0 | 15 | 206 |
| 16 | 13 | 9 | | 1 | 0 | 9 | 208 |
| 17 | 14 | 17 | | 0 | 0 | 8 | 0 |
| 18 | 11 | 5 | | 0 | 0 | 5 | 0 |
| 19 | 7 | 7 | | 1 | 0 | 4 | 0 |
| 20 | 46 | 12 | | 2 | 0 | 20 | 0 |
| Total | 208 | | | | | | |

(f) = Cumulative frequency.

Table A-2. Scores of Primary Variables by Individual Subject

| Sample | Type and # | Total | Locus | Error | Position | Organization | Role | Role | Effective- |
|--------|------------|--------|-------|-------|-----------|--------------|------------|-------|------------|
| Number | Tenure | T.S.T. | Score | Score | "4-H Ldr" | Score | Statements | Score | ness |
| 1 | a | 19 | 12 | 2 | 5 | 2 | 10 | 7 | 46 |
| 2 | a | 9 | 9 | 0 | 5 | 2 | 13 | 6 | 28 |
| 3 | a | 15 | 14 | 1 | 3 | 7 | 13 | 9 | 61 |
| 4 | d | 10 | 10 | 1 | 3 | 1 | 11 | 5 | 40 |
| 5 | a | 11 | 11 | 0 | 2 | 2 | 12 | 11 | 36 |
| 6 | d | 11 | 10 | 0 | 2 | 7 | 10 | 8 | 31 |
| 7 | a | 20 | 3 | 2 | - | - | 20 | 11 | 48 |
| 8 | a | 20 | 4 | 5 | 10 | 2 | 16 | 5 | 30 |
| 9 | c | 20 | 8 | 6 | 6 | 1 | 20 | 14 | 48 |
| 10 | b | 14 | 4 | 2 | - | - | 7 | 6 | 30 |
| 11 | c | 16 | 11 | 3 | 6 | 1 | 15 | 10 | 31 |
| 12 | d | 20 | 6 | 4 | - | - | 17 | 2 | 30 |
| 15 | c | 10 | 10 | 0 | 4 | 1 | 8 | 6 | 39 |
| 16 | b | 10 | 10 | 0 | - | 1 | 8 | 6 | 32 |
| 20 | d | 18 | 9 | 4 | - | 2 | 12 | 7 | 35 |
| 21 | c | 15 | 3 | 0 | 2 | 1 | 12 | 5 | 22 |
| 22 | d | 20 | 17 | 1 | 1 | 1 | 11 | 9 | 42 |
| 23 | a | 20 | 2 | 4 | - | - | 20 | 6 | 48 |
| 24 | d | 7 | 7 | 0 | - | 2 | 2 | 2 | 21 |
| 25 | a | 20 | 16 | 2 | 8 | 3 | 20 | 8 | 43 |
| 26 | c | 19 | 0 | 5 | 3 | 1 | 11 | 6 | 39 |
| 27 | d | 10 | 9 | 0 | 3 | 1 | 11 | 7 | 37 |
| 29 | c | 12 | 10 | 0 | 3 | 3 | 11 | 7 | 39 |
| 30 | d | 15 | 15 | 0 | 2 | 1 | 7 | 4 | 32 |
| 31 | a | 17 | 17 | 0 | 1 | 5 | 15 | 6 | 38 |
| 32 | c | 11 | 11 | 0 | 3 | 3 | 14 | 4 | 40 |
| 33 | d | 10 | 2 | 0 | - | - | 5 | 3 | 42 |
| 34 | d | 6 | 6 | 0 | - | 2 | 5 | 3 | 24 |

a = comm. or mixed, + 3 yrs; b = comm. or mixed, - 3 yrs; c = project club, + 3 yrs; d = project club, - 3 yrs.

Table A-2 - Continued

| Sample | Type and Total | Locus | Position | | | Organization | | Role | Effective- |
|--------|----------------|--------------|----------|-----------|-------|--------------|-------|------|------------|
| Number | Tenure* | T.S.T. Score | Error | "4-H Ldr" | Score | Statements | Score | ness | |
| 73 | c | 14 | 13 | 0 | 3 | 5 | 8 | 37 | |
| 74 | a | 8 | 8 | 0 | 2 | 6 | 6 | 33 | |
| 75 | c | 10 | 7 | 3 | 10 | 1 | 17 | 56 | |
| 76 | a | 20 | 20 | 3 | 2 | 3 | 8 | 43 | |
| 77 | a | 13 | 11 | 3 | 13 | 1 | 12 | 48 | |
| 78 | c | 12 | 9 | 0 | - | 1 | 9 | 26 | |
| 79 | a | 18 | 18 | 0 | 5 | 10 | 14 | 51 | |
| 80 | c | 18 | 17 | 2 | 5 | 3 | 12 | 27 | |
| 81 | d | 12 | 12 | 1 | 5 | 4 | 8 | 35 | |
| 82 | a | 16 | 16 | 2 | 3 | 1 | 10 | 34 | |
| 83 | c | 8 | 8 | 0 | 3 | 3 | 12 | 34 | |
| 84 | a | 10 | 10 | 0 | 7 | 2 | 17 | 48 | |
| 85 | c | 18 | 10 | 0 | 5 | 2 | 18 | 39 | |
| 86 | a | 7 | 0 | 0 | - | - | 15 | 29 | |
| 87 | d | 9 | 3 | 0 | - | 1 | 9 | 37 | |
| 88 | a | 14 | 14 | 0 | 5 | 5 | 18 | 62 | |
| 89 | c | 21 | 11 | 6 | 21 | 2 | 19 | 35 | |
| 90 | a | 16 | 6 | 3 | - | - | 11 | 38 | |
| 91 | c | 18 | 17 | 6 | 11 | 2 | 15 | 40 | |
| 92 | c | 8 | 8 | 0 | 6 | 4 | 20 | 39 | |
| 93 | d | 18 | 18 | 0 | - | 3 | 13 | 41 | |
| 94 | c | 20 | 6 | 9 | 14 | 2 | 20 | 32 | |
| 95 | c | 13 | 13 | 1 | 5 | 3 | 15 | 36 | |
| 96 | a | 20 | 14 | 2 | 5 | 2 | 20 | 41 | |
| 97 | d | 11 | 5 | 0 | 4 | 1 | 7 | 40 | |
| 98 | d | 13 | 2 | 0 | - | - | 8 | 28 | |
| 99 | c | 7 | 7 | 2 | - | - | 10 | 41 | |

Table A-2 - Continued

| Sample Number | Type and Tenure* | Total T, S, I, | Locus Score | Error | Position "4-H Ldr" | Organization Score | Role Statements | Role Score | Effective- ness |
|------------------|---------------------|-------------------|----------------|-------|-----------------------|-----------------------|--------------------|---------------|--------------------|
| 100 | a | 6 | 4 | 0 | 3 | 1 | 12 | 5 | 41 |
| 104 | d | 19 | 10 | 2 | - | 1 | 11 | 10 | 21 |
| 105 | b | 12 | 4 | 6 | 4 | 2 | 11 | 6 | 45 |
| 106 | b | 17 | 1 | 5 | - | 1 | 16 | 5 | 49 |
| 107 | a | 20 | 17 | 4 | 4 | 1 | 15 | 11 | 51 |
| 108 | d | 20 | 19 | 0 | 19 | 2 | 10 | 7 | 38 |
| 109 | d | 16 | 14 | 0 | 9 | 4 | 14 | 6 | 44 |
| 110 | b | 14 | 7 | 0 | - | - | 7 | 4 | 43 |
| 111 | b | 13 | 10 | 1 | 3 | 1 | 8 | 6 | 31 |
| 112 | d | 11 | 11 | 0 | - | - | 6 | 4 | 9 |
| 113 | c | 8 | 8 | 0 | 3 | 1 | 11 | 5 | 48 |
| 119 | a | 15 | 9 | 0 | 5 | 5 | 5 | 3 | 43 |
| 120 | a | 20 | 19 | 0 | 5 | 2 | 14 | 9 | 44 |
| 121 | a | 20 | 20 | 0 | 14 | 4 | 20 | 5 | 36 |
| 122 | a | 20 | 20 | 0 | 13 | 4 | 20 | 7 | 42 |
| 123 | a | 12 | 8 | 1 | 2 | 2 | 14 | 12 | 40 |
| 124 | d | 20 | 20 | 0 | 8 | 5 | 10 | 10 | 38 |
| 125 | a | 20 | 20 | 0 | 2 | 4 | 20 | 8 | 53 |
| 126 | a | 6 | 6 | 0 | 1 | 1 | 8 | 6 | 45 |
| 127 | a | 3 | 3 | 0 | - | - | 4 | 3 | 36 |
| 128 | a | 16 | 16 | 0 | 4 | 4 | 13 | 10 | 44 |
| 131 | c | 18 | 15 | 1 | 11 | 3 | 11 | 7 | 33 |
| 132 | c | 15 | 15 | 1 | - | 2 | 10 | 8 | 34 |
| 133 | c | 7 | 6 | 0 | - | - | 6 | 3 | 28 |
| 134 | c | 6 | 6 | 0 | 4 | 1 | 9 | 5 | 32 |
| 135 | a | 7 | 7 | 0 | 4 | 4 | 8 | 3 | 44 |
| 136 | a | 13 | 6 | 0 | 5 | 2 | 11 | 5 | 34 |
| 137 | d | 11 | 11 | 2 | - | - | 9 | 4 | 30 |
| 138 | a | 7 | 7 | 0 | 7 | 6 | 11 | 8 | 41 |

Table A-2 - Continued

| Sample Number | Type and Tenure* | Total T.S.T. | Locus Score | Error | Position "4-H Ldr" | Organization Score | Role Statements | Role Score | Effective-ness |
|---------------|------------------|--------------|-------------|-------|--------------------|--------------------|-----------------|------------|----------------|
| 140 | a | 10 | 10 | 3 | 6 | 2 | 9 | 7 | 46 |
| 141 | a | 15 | 15 | 0 | 2 | 4 | 14 | 10 | 38 |
| 142 | a | 19 | 19 | 5 | 8 | 1 | 12 | 8 | 48 |
| 143 | c | 11 | 1 | 2 | - | - | 14 | 11 | 41 |
| 144 | a | 17 | 17 | 0 | 4 | 4 | 14 | 10 | 47 |
| 145 | a | 13 | 13 | 0 | 6 | 2 | 16 | 11 | 49 |
| 146 | b | 19 | 19 | 0 | 6 | 1 | 9 | 7 | 38 |
| 147 | b | 16 | 16 | 3 | 4 | 1 | 12 | 8 | 35 |
| 148 | c | 11 | 11 | 0 | 5 | 2 | 11 | 7 | 31 |
| 149 | a | 16 | 12 | 5 | 3 | 2 | 20 | 14 | 48 |
| 150 | a | 8 | 8 | 3 | - | 1 | 6 | 4 | 48 |
| 152 | d | 20 | 16 | 0 | - | 3 | 15 | 10 | 21 |
| 153 | d | 20 | 8 | 7 | 7 | 4 | 8 | 6 | 32 |
| 154 | b | 14 | 14 | 0 | 4 | 3 | 20 | 10 | 40 |
| 155 | a | 14 | 1 | 2 | 8 | 3 | 13 | 7 | 37 |
| 156 | c | 6 | 6 | 1 | 2 | 1 | 6 | 3 | 18 |
| 161 | c | 6 | 6 | 0 | 1 | 2 | 9 | 3 | 46 |
| 162 | c | 20 | 17 | 0 | 10 | 5 | 15 | 7 | 44 |
| 163 | a | 16 | 16 | 0 | 3 | 1 | 11 | 10 | 37 |
| 164 | a | 10 | 10 | 1 | 1 | 2 | 18 | 9 | 44 |
| 165 | a | 17 | 17 | 0 | 4 | 9 | 17 | 11 | 38 |
| 166 | d | 14 | 14 | 0 | 7 | 1 | 10 | 6 | 37 |
| 167 | a | 14 | 8 | 1 | 8 | 1 | 12 | 6 | 39 |
| 168 | a | 12 | 11 | 0 | 10 | 2 | 10 | 6 | 48 |
| 169 | a | 11 | 11 | 0 | 3 | 2 | 9 | 5 | 28 |
| 170 | d | 18 | 18 | 0 | - | - | 6 | 4 | 37 |
| 171 | b | 12 | 11 | 1 | 3 | 2 | 9 | 9 | 42 |

Table A-2 - Continued

| Sample | Type and Tenure* | Total T.S.T. | Locus Score | Error | Position "4-H Ldr" | Organization Score | Role Statements | Role Score | Effective-ness |
|--------|------------------|--------------|-------------|-------|--------------------|--------------------|-----------------|------------|----------------|
| 172 | a | 16 | 16 | 0 | 6 | 5 | 13 | 6 | 47 |
| 173 | d | 15 | 14 | 2 | 5 | 2 | 10 | 3 | 17 |
| 174 | a | 17 | 17 | 0 | 5 | 4 | 14 | 8 | 45 |
| 175 | a | 11 | 7 | 1 | - | - | 6 | 4 | 6 |
| 176 | a | 15 | 12 | 1 | 5 | 2 | 13 | 12 | 52 |
| 177 | d | 20 | 10 | 3 | - | 2 | 11 | 4 | 27 |
| 178 | a | 20 | 10 | 4 | 3 | 3 | 12 | 5 | 31 |
| 179 | b | 11 | 7 | 1 | - | 1 | 12 | 9 | 36 |
| 180 | a | 20 | 20 | 0 | 1 | 3 | 12 | 4 | 37 |
| 181 | a | 10 | 10 | 0 | 1 | 5 | 8 | 5 | 37 |
| 182 | b | 20 | 19 | 0 | 2 | 4 | 12 | 7 | 47 |
| 183 | a | 17 | 17 | 2 | 4 | 7 | 11 | 6 | 50 |
| 184 | a | 12 | 12 | 0 | 1 | 2 | 19 | 5 | 36 |
| 185 | a | 14 | 12 | 1 | 4 | 5 | 13 | 9 | 31 |
| 189 | c | 12 | 12 | 0 | 9 | 3 | 10 | 1 | 24 |
| 190 | a | 20 | 20 | 0 | - | - | 15 | 3 | 45 |
| 191 | a | 12 | 12 | 0 | - | - | 16 | 12 | 37 |
| 192 | c | 20 | 20 | 0 | 2 | 1 | 15 | 8 | 44 |
| 193 | a | 14 | 10 | 1 | 8 | 5 | 16 | 10 | 45 |
| 194 | c | 17 | 16 | 5 | 3 | 1 | 13 | 8 | 26 |
| 195 | c | 20 | 19 | 0 | 9 | 5 | 17 | 14 | 49 |
| 196 | a | 19 | 19 | 0 | 5 | 6 | 17 | 12 | 48 |
| 197 | c | 4 | 4 | 0 | 2 | 1 | 4 | 4 | 32 |
| 198 | b | 11 | 11 | 0 | 3 | 3 | 18 | 6 | 29 |
| 199 | c | 12 | 12 | 0 | 10 | 6 | 10 | 7 | 36 |
| 200 | a | 22 | 6 | 5 | 21 | 1 | 13 | 10 | 39 |

Table A-2 - Continued

| Sample | Type and Total | Locus | Error | Position | Organization Role | | Role | Effective- |
|--------|---------------------|--------------|-------|------------|-------------------|------------|-------|------------|
| Number | Tenure [#] | T.S.T. Score | Error | "4-H Ldr." | Score | Statements | Score | ness |
| 201 | a | 9 | 9 | 0 | 1 | 4 | 3 | 41 |
| 202 | a | 9 | 0 | 3 | - | - | 4 | 16 |
| 203 | a | 20 | 20 | 0 | 5 | 4 | 8 | 43 |
| 204 | c | 13 | 6 | 2 | 1 | 2 | 9 | 11 |
| 205 | c | 12 | 12 | 0 | - | - | 10 | 40 |
| 206 | a | 11 | 9 | 2 | 8 | 3 | 13 | 45 |
| 207 | c | 10 | 6 | 3 | 10 | 2 | 9 | 37 |
| 208 | c | 14 | 14 | 0 | 14 | 1 | 5 | 31 |
| 209 | a | 12 | 10 | 1 | 2 | 5 | 8 | 35 |
| 211 | a | 12 | 12 | 0 | 5 | 2 | 14 | 46 |
| 212 | c | 20 | 8 | 4 | - | 2 | 7 | 18 |
| 213 | b | 14 | 12 | 1 | - | - | 9 | 24 |
| 214 | d | 10 | 10 | 0 | 2 | 1 | 4 | 29 |
| 215 | d | 20 | 20 | 2 | - | 1 | 9 | 29 |
| 216 | b | 17 | 17 | 0 | 2 | 3 | 3 | 36 |
| 217 | a | 19 | 11 | 3 | 5 | 1 | 11 | 29 |
| 218 | d | 5 | 4 | 0 | 3 | 1 | 4 | 29 |
| 219 | d | 16 | 15 | 0 | 12 | 6 | 10 | 36 |
| 220 | d | 20 | 7 | 3 | - | - | 6 | 42 |
| 221 | c | 20 | 17 | 1 | - | - | 14 | 48 |
| 222 | d | 17 | 17 | 0 | - | 1 | 10 | 26 |
| 223 | d | 20 | 17 | 2 | - | 2 | 9 | 32 |
| 226 | c | 20 | 3 | 3 | - | - | 5 | 44 |
| 227 | b | 9 | 0 | 0 | - | - | 5 | 35 |
| 228 | a | 15 | 15 | 0 | 9 | 5 | 7 | 50 |
| 229 | d | 16 | 4 | 0 | - | - | 7 | 36 |

Table A-2 - Continued

| Sample Number | Type and Tenure* | Total T.S.T. | Locus Score | Error | Position "4-H Ldr" | Organization Score | Role Statements | Role Score | Effectiveness |
|---------------|------------------|--------------|-------------|-------|--------------------|--------------------|-----------------|------------|---------------|
| 230 | C | 9 | 8 | 0 | - | 1 | 16 | 7 | 43 |
| 231 | d | 9 | 9 | 0 | - | 3 | 7 | 6 | 27 |
| 233 | c | 17 | 3 | 2 | - | - | 15 | 8 | 32 |
| 234 | a | 13 | 13 | 1 | 6 | 3 | 13 | 9 | 30 |
| 237 | c | 13 | 13 | 1 | 3 | 2 | 11 | 11 | 36 |
| 238 | a | 19 | 15 | 2 | - | 7 | 16 | 12 | 37 |
| 241 | a | 15 | 15 | 0 | 9 | 6 | 6 | 6 | 37 |
| 242 | d | 10 | 10 | 0 | - | 1 | 15 | 10 | 32 |
| 244 | d | 14 | 12 | 2 | - | - | 10 | 9 | 24 |
| 245 | d | 13 | 9 | 4 | 4 | 2 | 8 | 4 | 40 |
| 246 | d | 17 | 17 | 1 | 3 | 2 | 13 | 7 | 19 |
| 247 | a | 20 | 11 | 4 | - | - | 13 | 8 | 39 |
| 248 | c | 7 | 6 | 0 | 2 | 1 | 8 | 5 | 45 |
| 249 | c | 12 | 8 | 3 | 5 | 1 | 6 | 1 | 35 |
| 251 | a | 5 | 5 | 0 | - | - | 5 | 4 | 48 |
| 252 | c | 7 | 7 | 0 | 4 | 1 | 8 | 5 | 40 |

N = 208; Locus Lo = 1-7, Hi = 13+; R.I. Lo = 0-5, Hi = 9+; Organization scores Lo = 0, Hi = +4; Saliency = Lo = 12 thru 0, Hi = 1-4.

Table A-3. Frequency Distributions, Waisenen Categories (% in each Category)

| % | I | | | | II | | | | III | |
|--------|-----|----|----|----|-----|-----|-----|----|-----|----------|
| | A | | B | | C | | D | | E | |
| | A | B | C | D | A | B | C | D | E | |
| 0-4 | 102 | 19 | 38 | 33 | 121 | 116 | 178 | 90 | 207 | 0% = 136 |
| 5-9 | 28 | 22 | 24 | 17 | 32 | 43 | 21 | 21 | 0 | 41 |
| 10-14 | 18 | 27 | 30 | 25 | 17 | 26 | 2 | 23 | 1 | 17 |
| 15-19 | 13 | 33 | 21 | 16 | 11 | 13 | 2 | 21 | 0 | 7 |
| 20-24 | 4 | 24 | 19 | 26 | 11 | 4 | 3 | 16 | 0 | 6 |
| 25-29 | 3 | 24 | 25 | 13 | 7 | 2 | 0 | 11 | 0 | 5 |
| 30-34 | 2 | 22 | 18 | 16 | 4 | 1 | 2 | 2 | 0 | 3 |
| 35-39 | 0 | 11 | 9 | 12 | 2 | 0 | 0 | 5 | 0 | 0 |
| 40-44 | 0 | 8 | 4 | 11 | 0 | 3 | 0 | 8 | 0 | 2 |
| 45-49 | 0 | 4 | 2 | 4 | 2 | 0 | 0 | 2 | 0 | 0 |
| 50-54 | 1 | 4 | 7 | 10 | 0 | 0 | 0 | 4 | 0 | 0 |
| 55-59 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 2 | 0 | 1 |
| 60-64 | 0 | 3 | 1 | 2 | 1 | 0 | 0 | 3 | 0 | 0 |
| 65-69 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75-79 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80-84 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85-89 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90-94 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95-100 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

III

100

11

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Table A-4. Number* of Statements in Waisen^{en} Categories by Individual Subject

| Subject | Total State-ments | I | | | | II | | | | III | |
|---------|-------------------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|
| | | A | | B | | C | | D | | E | |
| | | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % |
| 1 | 19 | 1 .05 | 5 .26 | 3 .16 | 10 .53 | | | | | | |
| 2 | 9 | 1 .11 | 6 .67 | 2 .22 | - | | | | | | |
| 3 | 15 | 1 .07 | 4 .26 | 7 .47 | 2 .13 | | | | | | 1 .07 |
| 4 | 10 | - | 2 .20 | 1 .10 | 6 .60 | | | | | | 1 .20 |
| 5 | 11 | - | 5 .45 | 2 .18 | 4 .36 | | | | | | |
| 6 | 11 | - | 4 .36 | 4 .36 | 2 .18 | | | | | | 1 .09 |
| 7 | 20 | 2 .10 | 4 .20 | - | 1 .05 | | | 2 .10 | 5 .25 | | 6 .30 |
| 8 | 20 | 6 .30 | 3 .15 | 2 .10 | 4 .20 | | | - | 2 .10 | | - |
| 9 | 20 | 5 .25 | 1 .05 | - | 7 3.5 | | | 3 .15 | 1 .05 | | 1 .05 |
| 10 | 14 | 5 .33 | 2 .13 | 2 .13 | 5 .33 | | | - | - | | 1 .07 |
| 11 | 16 | 2 .12 | 5 .31 | - | 9 .56 | | | 1 .06 | - | | - |
| 12 | 20 | - | 4 .19 | - | 8 .38 | | | - | 8 .38 | | 1 .07 |
| 15 | 10 | 1 .10 | 1 .10 | - | 2 .20 | | | - | 6 .60 | | - |
| 16 | 10 | 5 .50 | 3 .30 | 1 .10 | 1 1.0 | | | - | - | | - |
| 20 | 18 | - | 1 .06 | 5 .28 | 4 .22 | | | - | 2 .11 | | 4 .22 |
| 21 | 15 | - | 2 .13 | - | 2 .13 | | | 1 .06 | 2 .13 | | 6 .40 |
| 22 | 20 | - | - | - | 18 .90 | | | 1 .07 | 2 .10 | | - |
| 23 | 20 | 3 .15 | 3 .15 | 2 .10 | 1 .05 | | | - | 4 .20 | | 5 .25 |
| 24 | 7 | 0 | 2 .28 | 2 .23 | 3 .43 | | | - | - | | - |
| 25 | 20 | - | 9 .45 | 2 .10 | 2 .10 | | | - | 3 .15 | | 2 .10 |
| 26 | 19 | - | 2 .10 | 1 .05 | 3 .16 | | | 1 .05 | 12 .63 | | - |
| 27 | 10 | - | 2 .20 | 1 .10 | 3 .30 | | | - | 4 .40 | | - |
| 29 | 12 | 2 .17 | 2 .17 | 6 .50 | - | | | - | - | | 2 .17 |
| 30 | 15 | 4 .27 | 1 .07 | 4 .27 | 3 .20 | | | 1 .07 | 3 .20 | | - |
| 31 | 17 | 4 .24 | 5 .29 | 4 .24 | 4 .24 | | | - | - | | - |
| 32 | 11 | - | 3 .27 | 4 .36 | 4 .36 | | | - | - | | - |
| 33 | 10 | - | - | - | 2 .20 | | | - | 5 .50 | | 2 .20 |
| 34 | 6 | 1 .17 | 1 .17 | 2 .34 | 1 .17 | | | 1 .10 | - | | - |
| 36 | 11 | - | 3 .27 | 1 .09 | 4 .36 | | | 1 .17 | 3 .27 | | - |

Number of statements in each subcategory and percent of subjects total number of statements.

Table A-4 - Continued

| Subject | Total State- ments | I | | | | II | | | | III | |
|---------|-----------------------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| | | A | | B | | C | | D | | A | |
| | | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % |
| 38 | 20 | 4 .20 | 1 .05 | 7 .35 | 5 .25 | - | 1 .05 | - | - | - | 3 .15 |
| 39 | 14 | 1 .07 | 2 .13 | - | 9 .64 | - | - | - | 1 .07 | - | 1 .07 |
| 40 | 20 | - | 3 .15 | 2 .10 | 17 .85 | - | - | - | - | - | - |
| 41 | 16 | - | 3 .19 | 1 .06 | 12 .75 | - | - | - | - | - | - |
| 42 | 11 | - | 2 .18 | 2 .18 | 2 .18 | - | 1 .09 | - | 1 .09 | - | 3 .27 |
| 43 | 11 | 1 .09 | 1 .09 | 3 .27 | 6 .54 | - | - | - | - | - | - |
| 44 | 20 | 3 .15 | 5 .25 | 2 .10 | 9 .45 | - | 1 .05 | - | 1 .05 | - | - |
| 45 | 20 | - | 2 .10 | 3 .15 | 4 .20 | - | - | - | 3 .15 | - | 6 .30 |
| 46 | 13 | - | 4 .31 | 3 .24 | 4 .31 | - | - | - | 1 .08 | - | 1 .08 |
| 47 | 15 | - | 5 .33 | 5 .33 | 1 .07 | - | - | - | 3 .21 | - | 1 .07 |
| 48 | 20 | - | 5 .25 | 4 .20 | 4 .20 | - | 1 .05 | - | 1 .05 | - | 2 .10 |
| 49 | 20 | - | 5 .25 | 5 .25 | 5 .25 | - | - | - | 3 .15 | - | - |
| 52 | 5 | - | 3 .60 | - | 2 .40 | - | - | - | - | - | - |
| 53 | 8 | 1 .13 | 1 .13 | - | 3 .38 | - | - | - | 3 .38 | - | - |
| 54 | 18 | - | 6 .34 | 1 .06 | 10 .56 | - | - | - | - | - | 1 .06 |
| 55 | 10 | 1 .10 | 2 .20 | 3 .30 | 5 .50 | - | - | - | - | - | - |
| 56 | 20 | - | 4 .20 | 7 .35 | 2 .10 | - | 1 .05 | - | 4 .20 | - | 2 .10 |
| 57 | 17 | 1 .06 | 2 .12 | 1 .06 | 5 .30 | - | 2 .12 | 1 .06 | 3 .18 | - | 2 .12 |
| 60 | 17 | - | 5 .30 | 1 .06 | 10 .59 | - | 1 .06 | - | - | - | - |
| 61 | 12 | - | 4 .33 | 2 .16 | - | - | 4 .34 | - | 2 .16 | - | - |
| 64 | 14 | - | 3 .21 | - | 2 .13 | - | 1 .07 | - | 5 .33 | - | 4 .29 |
| 66 | 9 | - | 1 .11 | 5 .56 | 2 .22 | - | - | - | - | - | - |
| 67 | 20 | - | - | 1 .05 | 2 .10 | - | 2 .60 | - | 2 .10 | - | 1 .05 |
| 68 | 17 | 1 .06 | 4 .24 | 2 .12 | 2 .12 | - | 1 .06 | - | 2 .12 | - | 3 .19 |
| 69 | 18 | 3 .17 | 1 .06 | 1 .06 | 2 .11 | - | 2 .11 | - | 8 .44 | - | - |
| 70 | 4 | - | - | 2 .50 | 2 .50 | - | - | - | - | - | - |
| 71 | 12 | 1 .08 | 2 .16 | 7 .58 | 1 .08 | - | 1 .08 | - | - | - | - |
| 72 | 12 | - | 1 .08 | 4 .33 | - | - | 4 .33 | 1 .08 | - | - | - |
| 73 | 14 | - | 2 .13 | 7 .50 | 2 .13 | - | 2 .13 | - | 1 .07 | - | - |
| 74 | 8 | 1 .13 | - | 7 .86 | - | - | - | - | - | - | - |

Total
State

A

B

I

C

D

A

B

C

D

E

III

IV

Table A-4 - Continued

| Subject | Total State- ments | I | | | | II | | | | III | |
|---------|-----------------------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|
| | | A | | B | | C | | D | | A | |
| | | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % | No. % |
| 75 | 10 | - | 3 .30 | 3 .30 | 3 .30 | - | - | 1 .10 | 2 .20 | - | 1 .10 |
| 76 | 20 | 1 .05 | 6 .30 | 5 .25 | 3 .15 | 3 .15 | 1 .05 | 1 .05 | 3 .15 | - | - |
| 77 | 13 | - | 5 .39 | 4 .31 | - | - | - | - | 2 .15 | - | 2 .15 |
| 78 | 12 | - | 2 .16 | 1 .08 | 6 .50 | 6 .50 | 1 .08 | - | 1 .08 | - | 1 .08 |
| 79 | 18 | 1 .06 | 5 .28 | 13 .72 | - | - | - | - | - | - | - |
| 80 | 18 | 1 .06 | 7 .39 | 5 .28 | 4 .22 | 4 .22 | 1 .06 | - | - | - | - |
| 81 | 12 | 1 .08 | 5 .41 | 6 .50 | - | - | - | - | - | - | - |
| 82 | 16 | - | 8 .50 | 1 .06 | 6 .38 | 6 .38 | - | - | - | - | 1 .06 |
| 83 | 8 | - | 3 .38 | 3 .38 | 2 .25 | 2 .25 | - | - | - | - | - |
| 84 | 10 | - | 6 .60 | 2 .20 | 2 .20 | 2 .20 | - | - | - | - | - |
| 85 | 18 | - | 5 .28 | 2 .11 | 2 .11 | 2 .11 | 3 .17 | - | 5 .28 | - | 1 .06 |
| 86 | 7 | 1 .14 | - | - | - | - | 1 .14 | 3 .43 | 2 .29 | - | 1 .14 |
| 87 | 9 | - | 2 .22 | - | 1 .10 | 1 .10 | 2 .22 | 3 .33 | 1 .10 | - | - |
| 88 | 14 | - | 4 .29 | 4 .29 | 6 .43 | 6 .43 | - | - | - | - | - |
| 89 | 21 | - | 4 .19 | 2 .095 | 9 .43 | 9 .43 | 1 .05 | 4 .19 | 1 .05 | - | - |
| 90 | 16 | - | 3 .19 | - | - | - | 2 .12 | 2 .12 | 8 .50 | - | - |
| 91 | 18 | - | 1 .06 | 3 .17 | 1 .06 | 1 .06 | 1 .06 | 3 .17 | 8 .45 | 1 .06 | 1 .06 |
| 92 | 8 | - | 3 .37 | 5 .62 | - | - | - | - | - | - | - |
| 93 | 18 | - | 6 .34 | 6 .34 | 6 .34 | 6 .34 | - | - | - | - | - |
| 94 | 20 | 1 .05 | 2 .10 | 5 .25 | 1 .05 | 1 .05 | 4 .20 | - | 3 .15 | 3 .15 | - |
| 95 | 13 | - | 4 .31 | 3 .23 | 5 .38 | 5 .38 | - | - | 1 .08 | - | - |
| 96 | 20 | 1 .05 | 3 .15 | 2 .10 | 6 .30 | 6 .30 | 6 .30 | - | 2 .10 | - | - |
| 97 | 11 | 2 .18 | 2 .18 | 2 .18 | - | - | 1 .09 | 1 | 3 .27 | - | - |
| 98 | 13 | - | 1 .08 | - | - | - | 6 .46 | 3 .23 | 2 .15 | - | 1 .08 |
| 99 | 7 | - | 2 .28 | - | 1 .14 | 1 .14 | 2 .28 | 2 .28 | 3 .43 | - | - |
| 100 | 6 | - | 2 .34 | 1 .17 | 1 .17 | 1 .17 | - | 1 .17 | 1 .17 | - | - |
| 104 | 19 | - | 1 .05 | 2 .10 | 4 .21 | 4 .21 | 2 .10 | 2 .10 | 7 .37 | - | 1 .05 |
| 105 | 12 | - | 1 .08 | 2 .16 | 1 .08 | 1 .08 | 2 .16 | 1 .08 | - | - | 4 .33 |
| 106 | 17 | - | 1 .06 | 1 .06 | 1 .06 | 1 .06 | 3 .18 | 2 .12 | 7 .41 | - | 2 .14 |
| 107 | 20 | - | 2 .10 | 2 .10 | 1 .05 | 1 .05 | 3 .15 | 2 .10 | 10 .50 | - | - |

三

一

...

Table A-4 - Continued

| Subject | Total State-ments | I | | | | | | II | | | | | | III | | | | | |
|---------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | A | | B | | C | | D | | A | | B | | C | | D | | E | |
| | | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| 108 | 20 | 2 | .10 | 3 | .15 | 3 | .15 | 9 | .45 | 1 | .05 | - | - | - | - | 2 | .10 | - | - |
| 109 | 16 | 3 | .19 | 1 | .06 | 6 | .38 | 1 | .06 | 3 | .19 | - | - | - | - | 1 | .06 | - | .06 |
| 110 | 14 | - | - | 2 | .13 | - | - | 2 | .13 | 5 | .36 | 1 | .07 | - | - | 3 | .21 | - | .07 |
| 111 | 13 | - | - | 2 | .15 | 1 | .08 | - | - | 6 | .46 | 1 | .08 | - | - | 3 | .23 | - | .08 |
| 112 | 11 | - | - | 8 | .73 | 1 | .09 | 2 | .18 | - | - | - | - | - | - | - | - | - | - |
| 113 | 8 | - | - | 1 | .12 | 1 | .12 | - | - | - | - | - | - | 1 | .12 | 5 | .62 | - | - |
| 119 | 15 | - | - | 1 | .07 | 5 | .33 | 3 | .20 | 3 | .20 | - | - | 3 | .20 | - | - | - | - |
| 120 | 20 | - | - | 3 | .15 | 2 | .10 | 11 | .55 | 4 | .20 | - | - | - | - | - | - | 1 | .05 |
| 121 | 20 | - | - | 10 | .50 | 6 | .30 | 4 | .20 | - | - | - | - | - | - | - | - | - | - |
| 122 | 20 | - | - | 5 | .25 | 4 | .20 | 11 | .55 | - | - | - | - | - | - | - | - | - | - |
| 123 | 12 | 2 | .17 | 2 | .17 | 4 | .33 | 1 | .08 | - | - | 2 | .17 | - | - | - | - | 1 | .08 |
| 124 | 20 | 1 | .05 | 9 | .45 | 5 | .25 | 5 | .25 | - | - | - | - | - | - | - | - | - | .05 |
| 125 | 20 | - | - | 3 | .15 | 4 | .20 | 13 | .65 | - | - | - | - | - | - | - | - | - | - |
| 126 | 6 | - | - | 2 | .33 | 2 | .33 | 2 | .33 | - | - | - | - | - | - | - | - | - | - |
| 127 | 3 | - | - | 2 | .66 | - | - | 1 | .34 | - | - | - | - | - | - | - | - | - | - |
| 128 | 16 | 1 | .06 | 4 | .25 | 6 | .38 | 2 | .12 | 1 | .06 | 1 | .06 | - | - | 1 | .06 | - | - |
| 131 | 20 | 3 | .15 | 9 | .45 | 5 | .25 | 3 | .15 | - | - | - | - | 1 | .05 | - | - | - | - |
| 132 | 15 | 2 | .13 | - | - | 3 | .20 | 2 | .13 | - | - | 1 | .07 | - | - | 7 | .47 | - | - |
| 133 | 7 | - | - | 3 | .43 | - | - | - | - | - | - | 3 | .43 | - | - | 1 | .14 | - | - |
| 134 | 6 | - | - | 2 | .34 | 1 | .17 | 3 | .50 | - | - | - | - | - | - | - | - | - | - |
| 135 | 7 | - | - | 3 | .43 | 4 | .57 | - | - | - | - | - | - | - | - | - | - | - | - |
| 136 | 13 | - | - | 3 | .23 | 2 | .15 | 3 | .23 | 1 | .08 | 1 | .08 | - | - | 3 | .23 | - | .08 |
| 137 | 11 | - | - | 4 | .36 | 1 | .09 | 3 | .27 | - | - | - | - | - | - | 3 | .27 | - | - |
| 138 | 7 | - | - | 1 | .14 | 6 | .86 | - | - | - | - | - | - | - | - | - | - | - | - |
| 141 | 15 | - | - | 3 | .20 | 4 | .27 | 8 | .53 | - | - | - | - | - | - | - | - | - | - |
| 142 | 19 | 1 | .05 | 3 | .15 | 2 | .10 | 9 | .47 | 2 | .10 | - | - | - | - | 1 | .05 | - | .05 |
| 143 | 11 | - | - | 1 | .09 | - | - | 3 | .27 | 3 | .27 | - | - | - | - | 2 | .18 | - | .18 |
| 144 | 17 | - | - | 3 | .18 | 5 | .29 | 9 | .53 | - | - | - | - | - | - | - | - | - | - |
| 145 | 13 | - | - | 3 | .23 | 2 | .15 | 7 | .54 | - | - | - | - | - | - | - | - | - | - |
| 146 | 17 | - | - | 8 | .42 | 3 | .15 | 8 | .42 | - | - | - | - | - | - | - | - | - | - |

[illegible]

Table A-4 - Continued

| Subject | Total State-ments | I | | | | | | II | | | | | | III | | | | | | | |
|---------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|---|-----|
| | | A | | B | | C | | D | | A | | B | | C | | D | | E | | | |
| | | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| 147 | 16 | - | | 4 | .25 | 2 | .12 | 5 | .31 | 1 | .06 | - | | 1 | .06 | 2 | .12 | - | | 1 | .06 |
| 148 | 11 | 2 | | 3 | .27 | 2 | .18 | 4 | .36 | - | | - | | - | | - | | - | | - | |
| 149 | 16 | 2 | | 1 | .06 | 2 | .12 | 5 | .31 | 2 | .12 | 2 | .12 | 1 | .06 | 1 | .06 | - | | - | |
| 150 | 8 | - | | 2 | .25 | 1 | .13 | 1 | .13 | 2 | .25 | - | | - | | 2 | .25 | - | | - | |
| 152 | 20 | 3 | .15 | 5 | .25 | 3 | .15 | 3 | .15 | - | | 4 | .20 | 1 | .05 | 1 | .05 | - | | - | |
| 153 | 20 | 3 | .15 | 3 | .15 | 5 | .25 | 2 | .10 | - | | 1 | .05 | 1 | .05 | 2 | .10 | - | | 3 | .15 |
| 154 | 14 | 1 | .07 | 2 | .13 | 4 | .29 | - | | 1 | .07 | 1 | .07 | - | | 5 | .36 | - | | - | |
| 155 | 14 | - | | - | | - | | 3 | .21 | 2 | .13 | 3 | .21 | - | | 3 | .21 | - | | 2 | .13 |
| 156 | 6 | 1 | | - | | 1 | .17 | 2 | .34 | - | | 1 | .17 | - | | 1 | .17 | - | | - | |
| 160 | 5 | - | | - | | 4 | .80 | 1 | .20 | - | | - | | - | | - | | - | | - | |
| 161 | 6 | - | | 2 | .34 | 2 | .34 | 2 | .34 | - | | - | | - | | - | | - | | - | |
| 162 | 20 | - | | 4 | .20 | 4 | .20 | 2 | .10 | - | | 3 | .15 | 1 | .05 | 3 | .15 | - | | 1 | .05 |
| 163 | 16 | - | | 5 | .31 | 2 | .12 | 6 | .38 | 1 | .06 | 1 | .06 | - | | - | | - | | 1 | .06 |
| 164 | 10 | - | | 3 | .30 | 2 | .20 | 4 | .40 | - | | 1 | .10 | - | | 1 | .10 | - | | - | |
| 165 | 17 | - | | 3 | .18 | 9 | .53 | 1 | .06 | - | | 1 | .06 | - | | 3 | .18 | - | | - | |
| 166 | 14 | 1 | .07 | 5 | .36 | 2 | .13 | 2 | .13 | 2 | .13 | - | | - | | 2 | .13 | - | | - | |
| 167 | 14 | 3 | .21 | 6 | .43 | 3 | .21 | - | | - | | 1 | .07 | - | | - | | - | | - | |
| 168 | 12 | - | | 1 | .08 | 2 | .17 | 1 | .08 | 4 | .33 | 1 | .08 | 1 | .08 | 3 | .25 | - | | - | |
| 169 | 11 | - | | 4 | .36 | 2 | .18 | 3 | .27 | 1 | .09 | - | | - | | 1 | .09 | - | | - | |
| 170 | 18 | 2 | .11 | 2 | .11 | - | | 6 | .33 | 2 | .11 | 2 | .11 | - | | 4 | .22 | - | | - | |
| 171 | 12 | - | | 2 | .17 | 3 | .25 | 3 | .25 | 1 | .08 | - | | - | | 2 | .17 | - | | 1 | .08 |
| 172 | 16 | 2 | .12 | 4 | .25 | 7 | .44 | 3 | .19 | - | | - | | - | | - | | - | | - | |
| 173 | 15 | 1 | .07 | 3 | .20 | 3 | .20 | 2 | .13 | - | | 2 | .13 | 1 | .07 | 2 | .13 | - | | 1 | .07 |
| 174 | 17 | 1 | .06 | 4 | .24 | 7 | .41 | - | | - | | 1 | .06 | - | | 3 | .18 | - | | - | |
| 175 | 11 | - | | 3 | .27 | 1 | .09 | 2 | .18 | 2 | .18 | 1 | .09 | - | | 3 | .27 | - | | - | |
| 176 | 15 | - | | 6 | .40 | 2 | .13 | 3 | .20 | - | | - | | - | | - | | - | | - | |
| 177 | 20 | 2 | .10 | 1 | .05 | 1 | .05 | 3 | .15 | 3 | .20 | 2 | .10 | - | | 10 | .50 | - | | 1 | .05 |
| 178 | 20 | 1 | .05 | 1 | .05 | 3 | .15 | 2 | .10 | 4 | .20 | 3 | .15 | - | | 4 | .20 | - | | 2 | .10 |
| 179 | 11 | - | | 1 | .09 | 1 | .09 | 2 | .18 | 3 | .27 | 2 | .18 | - | | 1 | .09 | - | | 1 | .09 |

Table A-4 - Continued

| Subject | Total State-ments | I | | | | | | | | II | | | | | | | | III | |
|---------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| | | A | | B | | C | | D | | A | | B | | C | | D | | E | |
| | | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| 180 | 20 | - | | 8 | .40 | 5 | .25 | 5 | .25 | - | | 1 | .05 | 1 | .05 | 1 | .05 | - | |
| 181 | 10 | 1 | .10 | 1 | .10 | 5 | .50 | 2 | .20 | - | | - | | - | | - | | - | |
| 182 | 20 | 4 | | - | | 8 | .40 | 5 | .25 | 1 | .05 | - | | 1 | .05 | 1 | .05 | - | |
| 183 | 17 | 1 | .06 | 3 | .18 | 8 | .47 | 2 | .12 | 2 | .12 | - | | - | | - | | - | |
| 184 | 12 | - | | 9 | .75 | 3 | .25 | - | | - | | - | | - | | - | | - | |
| 185 | 14 | - | | 3 | .21 | 4 | .29 | 1 | .07 | - | | 1 | .07 | 2 | .13 | 2 | .13 | - | |
| 189 | 12 | - | | 2 | .17 | 3 | .25 | 7 | .58 | - | | - | | - | | - | | - | |
| 190 | 20 | - | | 1 | .05 | - | | 16 | .80 | - | | - | | - | | - | | - | |
| 191 | 12 | - | | 2 | .17 | 1 | .08 | 8 | .75 | - | | - | | - | | - | | - | |
| 192 | 20 | - | | 4 | .20 | 1 | .05 | 14 | .70 | - | | - | | - | | - | | - | |
| 193 | 14 | - | | 3 | .21 | 6 | .43 | - | | 2 | .13 | - | | 1 | .07 | - | | - | |
| 194 | 17 | - | | 2 | .12 | 1 | .06 | - | | 3 | .18 | 4 | .29 | 1 | .06 | 6 | .35 | - | |
| 195 | 20 | 1 | .05 | 5 | .25 | 5 | .25 | 4 | .20 | 1 | .05 | - | | - | | 4 | .20 | - | |
| 196 | 19 | 1 | .05 | 6 | .32 | 7 | .37 | 5 | .26 | - | | - | | - | | - | | - | |
| 197 | 4 | - | | 1 | .25 | 1 | .25 | 2 | .50 | - | | - | | - | | - | | - | |
| 198 | 11 | - | | 4 | .36 | 3 | .27 | 4 | .36 | 1 | .09 | - | | - | | - | | - | |
| 199 | 12 | - | | 3 | .25 | 4 | .33 | 3 | .25 | - | | 1 | .08 | 1 | .08 | - | | - | |
| 200 | 21 | 1 | .05 | 7 | .33 | 1 | .05 | 4 | .19 | 1 | .05 | 1 | .05 | - | | 5 | .24 | - | |
| 201 | 9 | - | | 1 | .11 | 2 | .22 | 6 | .66 | - | | - | | - | | - | | - | |
| 202 | 9 | - | | - | | - | | - | | - | | 4 | .44 | 3 | .33 | 1 | .11 | - | |
| 203 | 20 | - | | 2 | .10 | 5 | .25 | 12 | .60 | - | | - | | - | | - | | - | |
| 204 | 13 | - | | 2 | .15 | 3 | .23 | - | | 1 | .08 | - | | 3 | .23 | 1 | .08 | - | |
| 205 | 12 | 3 | .25 | - | | - | | 1 | .08 | 1 | .08 | 1 | .08 | - | | 7 | .58 | - | |
| 206 | 11 | - | | 6 | .54 | 3 | .27 | - | | - | | 2 | .18 | - | | - | | - | |
| 207 | 10 | - | | - | | - | | 2 | .20 | - | | 1 | .10 | 3 | .30 | 4 | .40 | - | |
| 208 | 14 | - | | 3 | .21 | 1 | .07 | 10 | .72 | - | | - | | - | | - | | - | |

Table A-4 - Continued

| Subject | Total State-ments | I | | | | | | II | | | | | | III | |
|---------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | | A | | | B | | | C | | | D | | | E | |
| | | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| 209 | 12 | - | | 2 | .18 | 6 | .50 | 3 | .25 | - | | 1 | .08 | - | - |
| 211 | 12 | - | | 5 | .42 | 2 | .13 | 6 | .50 | - | | - | | - | - |
| 212 | 20 | 3 | .15 | 2 | .10 | 3 | .15 | 3 | .15 | - | | 1 | .05 | - | 2 .10 |
| 213 | 14 | - | | 5 | .35 | 2 | .13 | 3 | .21 | 2 | .13 | - | | - | - |
| 214 | 10 | - | | 6 | .60 | 1 | .10 | 3 | .30 | - | | - | | - | - |
| 215 | 20 | - | | 6 | .30 | 4 | .20 | 8 | .40 | - | | - | | - | 2 .10 |
| 216 | 17 | 2 | .12 | 2 | .12 | 2 | .12 | 8 | .47 | - | | 1 | .06 | - | - |
| 217 | 19 | - | | 7 | .37 | 1 | .05 | 2 | .10 | 2 | .10 | - | | - | - |
| 218 | 5 | - | | - | | 1 | .20 | 2 | .40 | - | | - | | - | 2 .40 |
| 219 | 16 | 2 | .12 | 2 | .12 | 9 | .56 | - | | 2 | .12 | 1 | .06 | - | - |
| 220 | 20 | - | | 2 | .10 | - | | 9 | .45 | 3 | .15 | - | | - | 5 .25 |
| 221 | 20 | - | | 3 | .10 | 1 | .05 | 8 | .40 | 4 | .20 | 1 | .05 | - | - |
| 222 | 17 | 2 | .12 | 3 | .18 | 2 | .12 | 7 | .43 | - | | 1 | .06 | - | - |
| 223 | 20 | 3 | .15 | 4 | .20 | 2 | .10 | 1 | .05 | 2 | .10 | 1 | .05 | - | 1 .05 |
| 226 | 20 | - | | 4 | .20 | - | | 4 | .20 | 4 | .20 | 2 | .10 | - | 4 .20 |
| 227 | 9 | - | | - | | - | | - | | 2 | .23 | 1 | .11 | - | 5 .56 |
| 228 | 15 | - | | - | | 2 | .13 | 9 | .60 | 1 | .07 | - | | - | - |
| 229 | 16 | 1 | .07 | 3 | .19 | - | | 2 | .12 | 3 | .19 | 1 | .07 | - | 2 .13 |
| 230 | 9 | 1 | .11 | 2 | .22 | - | | - | | 2 | .22 | - | | - | - |
| 231 | 9 | - | | - | | 3 | .33 | - | | - | | 1 | .11 | - | - |
| 233 | 17 | 1 | .06 | 2 | .12 | - | | 1 | .06 | 6 | .35 | 1 | .06 | - | - |
| 234 | 13 | 2 | .15 | 3 | .23 | 4 | .31 | 4 | .31 | - | | 1 | .08 | - | - |
| 238 | 19 | - | | 3 | .15 | 6 | .32 | 7 | .37 | - | | 1 | .05 | - | 1 .05 |
| 241 | 15 | 3 | .20 | 3 | .20 | 3 | .20 | 7 | .47 | - | | - | | - | - |
| 242 | 10 | 1 | .10 | 3 | .30 | - | | 2 | .20 | - | | - | | - | - |
| 244 | 14 | - | | 3 | .21 | - | | 2 | .13 | - | | 2 | .13 | - | - |
| 245 | 13 | - | | 4 | .31 | 3 | .23 | 1 | .08 | - | | 1 | .08 | - | - |
| 246 | 17 | 1 | .06 | 6 | .35 | 6 | .35 | 3 | .18 | 1 | .06 | - | | - | - |
| 247 | 20 | 1 | | 1 | .05 | - | | 4 | .20 | 5 | .25 | 2 | .10 | - | 4 .20 |
| 248 | 7 | 1 | .14 | - | | 5 | .71 | - | | - | | - | | - | - |

Table A-4 - Continued

| Total State- ments | I | | | | | | II | | | | | | III | |
|--------------------------|-----|-------|-------|-------|-------|-----|-------|-------|-----|-----|-----|-----|-------|-----|
| | A | B | C | D | A | B | C | D | E | A | B | C | D | E |
| Subject | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. |
| 249 | - | 2 .18 | - | 5 .42 | 3 .25 | - | 1 .09 | - | - | - | - | - | 1 .09 | - |
| 251 | - | 2 .40 | - | 1 .20 | - | - | - | 1 .20 | - | - | - | - | - | - |
| 252 | - | 5 .71 | 1 .14 | 2 .29 | - | - | - | - | - | - | - | - | - | - |

Table A-5. Scale Values Assigned Items in Effectiveness Scale

| Question Number | Responses | | | | | | | |
|--------------------|--|----|----|----|----|----|---------------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 27 | -1 | -1 | 0 | +1 | +2 | +3 | +4 | +5 |
| 23 | -1 | +2 | +3 | +4 | +4 | +4 | | |
| 37 | 0 = -2/1 or 2 = +1/3 or 4 = +2/5-7 = +3/8+ = +4 | | | | | | | |
| 45 | +4 for comm. activity | | | | | | | |
| 56 | -2 | +1 | +1 | +2 | +2 | +2 | +2 | +2 |
| 57 | +2 | +2 | +2 | +1 | +1 | +1 | 0 | 0 |
| 58 | /+2 if Jr.'s used in specific way | | | | | | | |
| 59 | +1 | +1 | +2 | +3 | +4 | +4 | +4 | -2 |
| 61 | -1 | -1 | -1 | +3 | 0 | +3 | +3 | +4 evaluate number 9 and score accord. |
| 64 | +2 | +2 | +4 | +1 | +3 | +2 | 0 | +3 +2 +1 |
| 72 | +1 | +1 | +2 | +3 | +3 | 0 | | |
| 73 | 1-6 = +1/7-12 = +2/13-21 + +3/21+ = +4 participation score | | | | | | | |
| 78 | +3 | +2 | +1 | 0 | | | | |
| 64 | -2 | -2 | +1 | +2 | +3 | +3 | +3 | - |
| 65 | +1 | +1 | +3 | +4 | -2 | | | |
| 11 | 0 | 0 | +2 | +2 | +4 | +4 | +4 | -2 +1 -3 |
| 13 | -1 | +3 | 0 | +1 | +3 | -1 | eval. "other" | |
| 14 | -1 | -2 | 0 | +2 | +3 | +3 | +3 | |
| 19 | +3 | +3 | +1 | +1 | 0 | -1 | | |

Table A-6. Distribution of Effectiveness Scores

| Score | Frequency | Cumulative Frequency | Score | Frequency | Cumulative Frequency |
|-------|-----------|-------------------------|-------|-----------|-------------------------|
| 6 | 1 | 1 | 36 | 14 | 97 |
| 9 | 1 | 2 | 37 | 14 | 111 |
| 11 | 1 | 3 | 38 | 7 | 118 |
| 13 | 0 | 3 | 39 | 9 | 127 |
| 15 | 0 | 3 | 40 | 9 | 136 |
| 16 | 2 | 5 | 41 | 9 | 145 |
| 17 | 1 | 6 | 42 | 7 | 152 |
| 18 | 3 | 9 | 43 | 6 | 158 |
| 19 | 1 | 10 | 44 | 8 | 166 |
| 21 | 4 | 14 | 45 | 7 | 173 |
| 22 | 1 | 15 | 46 | 4 | 177 |
| 23 | 1 | 16 | 47 | 4 | 181 |
| 24 | 6 | 22 | 48 | 14 | 195 |
| 25 | 1 | 23 | 47 | 3 | 198 |
| 26 | 5 | 28 | 50 | 2 | 200 |
| 27 | 3 | 31 | 51 | 3 | 203 |
| 28 | 4 | 35 | 52 | 1 | 204 |
| 29 | 8 | 43 | 53 | 1 | 205 |
| 30 | 6 | 49 | 56 | 1 | 206 |
| 31 | 8 | 57 | 61 | 1 | 207 |
| 32 | 10 | 67 | 62 | 1 | 208 |
| 33 | 3 | 70 | | | |
| 34 | 4 | 74 | | | |
| 35 | 9 | 83 | | | |

Table A-7. Effectiveness Scores by Individual Subject*

| Subject → | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 15 | 16 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 29 | 30 | 31 | 32 | 33 | 34 | 36 |
|-----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| W | +4 | +4 | +3 | +5 | +5 | +5 | +5 | +4 | +4 | +4 | +5 | +4 | +2 | +5 | +5 | -1 | +5 | +3 | +5 | +5 | +5 | +5 | +5 | +4 | -1 | +5 | +5 | +3 | +5 |
| W | +4 | +4 | +4 | +4 | +2 | +4 | +4 | 0 | +4 | +2 | +3 | +2 | +2 | +4 | +4 | +4 | +4 | +3 | +4 | +4 | +4 | 0 | +4 | 0 | +4 | +2 | +3 | +4 | +2 |
| W | +1 | +3 | +2 | +3 | +1 | -2 | +3 | +2 | -2 | +2 | +1 | +2 | +2 | +4 | -2 | -2 | +2 | +4 | -2 | +3 | +2 | -2 | -2 | +2 | +1 | +2 | +2 | +4 | +2 |
| W | +4 | 0 | +4 | 0 | +4 | 0 | +4 | 0 | +4 | 0 | 0 | 0 | 0 | 0 | +4 | 0 | +4 | +4 | 0 | 0 | +4 | +4 | 0 | +4 | 0 | +4 | +4 | 0 | 0 |
| W | -2 | -2 | +2 | +1 | -2 | +1 | +1 | +1 | +1 | 0 | 0 | 0 | +1 | +1 | -2 | +1 | +1 | +1 | -2 | +1 | +1 | +1 | -2 | +2 | +2 | -2 | +1 | -2 | -2 |
| W | +2 | 0 | +2 | +2 | 0 | +2 | +2 | 0 | +2 | +1 | +2 | 0 | +2 | +2 | 0 | 0 | 0 | +2 | +2 | +2 | +2 | 0 | +2 | 0 | 0 | +1 | +2 | +2 | +2 |
| W | +2 | +2 | +2 | 0 | +2 | 0 | +2 | 0 | +2 | 0 | +2 | +2 | +2 | 0 | 0 | +2 | +2 | +2 | 0 | +2 | 0 | +2 | 0 | 0 | +2 | 0 | 0 | 0 | 0 |
| W | +2 | +4 | +4 | +2 | +2 | +1 | +4 | -2 | +2 | -2 | -2 | -2 | +4 | -2 | +2 | -2 | +2 | +1 | -2 | +2 | -2 | +4 | +3 | +3 | +4 | +4 | +1 | -2 | -2 |
| W | +4 | +3 | +4 | +3 | +3 | -1 | +3 | -1 | +3 | +3 | +3 | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | +3 | +3 | +3 | -1 | +3 | +3 | -1 | +3 |
| W | +4 | +2 | +4 | +2 | +2 | +2 | +3 | +2 | +4 | +3 | +3 | +2 | +3 | +3 | +2 | +4 | +1 | +3 | +2 | +4 | +2 | +3 | +3 | +2 | +4 | +2 | +2 | +4 | +2 |
| W | +3 | 0 | +3 | 0 | +1 | 0 | +1 | +1 | +1 | +1 | 0 | 0 | 0 | 0 | 0 | +1 | +1 | +3 | 0 | +1 | +1 | 0 | 0 | +1 | 0 | +1 | +1 | 0 | 0 |
| W | +2 | +2 | +4 | +2 | +1 | +2 | 0 | +2 | +2 | +2 | +3 | +1 | +2 | +2 | +3 | +1 | 0 | +2 | +2 | +3 | +3 | +1 | +1 | +1 | +3 | +2 | +2 | +1 | +2 |
| W | +1 | +1 | +3 | +3 | +1 | +3 | +2 | +3 | +2 | +1 | +2 | +2 | +2 | 0 | +1 | +1 | 0 | +1 | +1 | +3 | 0 | +2 | 0 | +2 | +1 | +2 | 0 | 0 | 0 |
| W | +2 | +1 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +2 | +1 | +3 | +3 | +1 | +3 | +2 | +3 | +3 | +1 | +3 | +2 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +2 |
| W | +3 | +1 | +4 | +3 | +3 | +3 | +3 | +4 | +3 | +4 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | 0 | +4 | +3 | +3 | +3 | -1 |
| W | +4 | 0 | +4 | +1 | +2 | +2 | +1 | +1 | +4 | 0 | +1 | +4 | +1 | +1 | +2 | +1 | +2 | +1 | +1 | +1 | +1 | +2 | +3 | +2 | +1 | +1 | +1 | +3 | +2 |
| W | +3 | -1 | +3 | 0 | +3 | +2 | +1 | +3 | +3 | +1 | -1 | +1 | +3 | +3 | +3 | 0 | +3 | +3 | -1 | +1 | +1 | +1 | +1 | +3 | +1 | +3 | +1 | -1 | +3 |
| W | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 |
| W | +3 | +1 | +3 | +3 | +1 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | +1 | -1 | +3 | +1 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | +1 | +3 | +1 | +3 |
| Total | 46 | 28 | 61 | 40 | 36 | 31 | 48 | 30 | 48 | 30 | 31 | 30 | 39 | 32 | 35 | 22 | 42 | 48 | 21 | 43 | 39 | 37 | 39 | 32 | 38 | 40 | 42 | 24 | 26 |

* Each value represents the subjects score on the items in chronological order as they appear in the Michigan 4-H Leader Inventory (refer Appendix B; also, see Table A-5, Appendix A).

Table A-7 - Continued

| Subject | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 52 | 53 | 54 | 55 | 56 | 57 | 60 | 61 | 64 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | | |
|----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| S H R O U S | +4 | +1 | +1 | +5 | +5 | +2 | +1 | +5 | +5 | +3 | +1 | +5 | +4 | +3 | +5 | +2 | +2 | +3 | +5 | +3 | +4 | +5 | +5 | +4 | +5 | +4 | +5 | +5 | +4 | +5 | |
| | +3 | +3 | +3 | +4 | +4 | +2 | +3 | +4 | +4 | +4 | +2 | +3 | +4 | +2 | +3 | +3 | +4 | +4 | +4 | +4 | +2 | +3 | +2 | +3 | +4 | +3 | +3 | +2 | +3 | +3 | |
| | -2 | -2 | -2 | -2 | -2 | -2 | +1 | +4 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | +1 | +4 | +4 | -2 | +1 | +2 | +2 | +3 | +3 | +2 | +4 | -2 | -2 | -2 | |
| | 0 | 0 | 0 | +4 | +4 | 0 | +4 | +4 | 0 | 0 | 0 | 0 | 0 | +4 | 0 | 0 | 0 | +4 | 0 | 0 | +4 | +4 | 0 | +4 | +4 | 0 | 0 | 0 | 0 | 0 | |
| | +1 | 0 | -2 | +1 | +1 | -2 | -2 | -2 | -2 | -2 | +1 | +1 | -2 | -2 | -2 | +1 | +1 | -2 | +1 | -2 | -2 | 0 | -2 | -2 | +1 | -2 | -2 | -2 | -2 | -2 | |
| | +2 | 0 | 0 | +2 | +2 | +2 | +2 | 0 | 0 | +2 | 0 | +2 | +1 | +2 | 0 | +2 | +2 | 0 | +2 | 0 | 0 | 0 | 0 | 0 | +2 | +2 | +2 | +2 | +2 | +2 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | +2 | 0 | +2 | 0 | 0 | +2 | 0 | +2 | +2 | 0 | +2 | +2 | +2 | +2 | +2 | 0 | 0 | |
| | -2 | -2 | -2 | -2 | -2 | +2 | +4 | +4 | -2 | +3 | -2 | +2 | +4 | -2 | -2 | -2 | +3 | +2 | -2 | -2 | -2 | +3 | +1 | +2 | -2 | -2 | -2 | -2 | +4 | +3 | |
| | -1 | -1 | +3 | +3 | +3 | +3 | +3 | -1 | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +4 | +4 | +3 | -1 | +4 | +3 | -1 | +4 | -1 | +3 | +4 | +3 | +3 | +3 |
| | +2 | +4 | +2 | +2 | +1 | +4 | +1 | +3 | +2 | +2 | +3 | +2 | +2 | +2 | +4 | +2 | +4 | +3 | +2 | +2 | +1 | +4 | +3 | +2 | +2 | +3 | +4 | +3 | +4 | +3 | +2 |
| | 0 | +2 | 0 | 0 | 0 | 0 | +2 | +1 | +2 | 0 | 0 | +1 | 0 | +1 | 0 | 0 | +3 | 0 | +1 | 0 | +3 | +3 | 0 | 0 | +3 | +1 | +2 | 0 | +1 | +1 | |
| | +4 | +2 | +3 | +4 | +4 | +2 | +1 | +4 | +3 | +3 | +2 | +4 | +2 | +1 | +1 | +1 | +4 | +4 | +1 | 0 | +2 | +4 | +2 | +4 | +2 | +4 | +4 | +4 | +4 | +4 | +4 |
| +1 | +1 | +2 | +2 | +1 | +2 | 0 | +2 | +2 | +2 | +3 | +1 | +2 | 0 | 0 | 0 | +1 | +3 | 0 | 0 | +1 | +2 | +1 | +1 | +2 | +2 | +2 | +2 | +2 | +2 | +2 | |
| +3 | +2 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +2 | +3 | +3 | +2 | +2 | +2 | +2 | +1 | +2 | +3 | +2 | +2 | +3 | +2 | +2 | +3 | +3 | +3 | +3 | +2 | +2 | +3 | |
| +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +4 | +1 | +4 | +3 | +3 | +3 | |
| +4 | +1 | +4 | +2 | +2 | +4 | +1 | +1 | +1 | +1 | +1 | 0 | +1 | +4 | +1 | +1 | +4 | +4 | +2 | +4 | +1 | +4 | +4 | +1 | +4 | +4 | +4 | +2 | +1 | +1 | +1 | |
| +3 | +3 | +1 | -1 | 0 | +1 | +3 | +3 | +3 | +1 | +3 | 0 | +3 | +3 | +3 | +1 | +3 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | 0 | +3 | +3 | +1 | +1 | +1 | +3 | |
| +3 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | 0 | +3 | +2 | +3 | +3 | +3 | +3 | +2 | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | |
| +3 | +3 | +3 | +3 | +3 | +3 | +1 | +1 | +3 | -1 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +1 | +1 | +3 | +3 | +1 | +3 | +3 | +3 | |
| Total | 30 | 23 | 25 | 36 | 35 | 29 | 32 | 39 | 21 | 33 | 24 | 34 | 37 | 31 | 18 | 29 | 47 | 42 | 41 | 16 | 42 | 48 | 29 | 35 | 51 | 36 | 41 | 36 | 37 | 37 | |

Table A-7 - Continued

| Subject | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| S | +5 | +5 | +3 | +3 | +5 | +3 | +5 | +2 | +5 | +5 | +4 | +5 | +5 | +5 | +5 | +5 | 0 | +4 | +4 | +5 | +4 | +5 | +4 | +5 | +5 | +5 |
| H | +2 | +2 | +4 | +3 | +2 | +3 | +4 | +2 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +2 | +2 | +2 | +3 | +4 | +4 | +3 | +2 | +3 | 0 | +3 |
| R | +2 | +4 | +3 | +2 | -2 | +2 | +1 | +1 | +1 | +2 | +2 | +3 | -2 | -2 | +4 | +4 | +2 | +1 | +2 | +3 | +4 | -2 | +4 | +2 | +1 | +1 |
| O | 0 | +4 | 0 | 0 | 0 | +4 | +4 | +4 | 0 | +4 | 0 | 0 | +4 | 0 | +4 | +4 | 0 | +4 | 0 | 0 | 0 | +4 | 0 | 0 | 0 | 0 |
| U | -2 | +2 | +1 | +2 | -2 | +2 | -2 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | +2 | 0 | +1 | +2 | +1 | -2 | -2 | +1 | +2 | -2 | -2 | -2 |
| S | +2 | +2 | 0 | +1 | 0 | +1 | 0 | 0 | +2 | +2 | +2 | 0 | +2 | +1 | +2 | 0 | 0 | +1 | 0 | +2 | +2 | 0 | 0 | 0 | 0 | 0 |
| S | +2 | +2 | 0 | +2 | +2 | +2 | 0 | 0 | 0 | +2 | +2 | +2 | 0 | 0 | +2 | 0 | 0 | 0 | +2 | 0 | +2 | +2 | +2 | 0 | 0 | +2 |
| S | +2 | +4 | +4 | +3 | -2 | +3 | -2 | +2 | +1 | +2 | +4 | +2 | -2 | +4 | +4 | +3 | +4 | +4 | -2 | +3 | +3 | +4 | +3 | +4 | +4 | +4 |
| S | +3 | +3 | +3 | +3 | -1 | +3 | -1 | -1 | -1 | +3 | +2 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | +3 | -1 | +4 |
| S | +4 | +2 | +3 | +3 | +3 | +2 | +3 | +3 | +2 | +2 | +2 | +3 | +1 | +2 | +4 | +3 | +3 | +2 | +2 | +2 | +1 | +2 | +2 | +3 | +2 | +3 |
| S | 0 | +1 | +1 | 0 | +1 | +1 | 0 | 0 | +1 | +1 | +1 | 0 | 0 | 0 | +3 | 0 | +3 | 0 | 0 | 0 | 0 | +1 | +3 | 0 | +1 | +3 |
| S | +2 | +4 | +4 | +4 | +1 | +4 | +2 | +4 | +1 | +2 | +3 | +3 | +2 | +2 | +4 | +2 | +2 | +3 | +3 | +4 | +3 | +1 | +1 | +4 | +2 | +1 |
| S | +2 | +2 | +2 | +3 | +2 | +2 | +2 | 0 | +2 | 0 | +2 | +1 | +2 | 0 | +2 | 0 | +2 | +1 | +2 | 0 | +3 | +2 | +3 | +2 | +2 | +1 |
| S | +1 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +1 | +2 | +1 | +3 | +3 | +2 |
| S | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | +1 | +4 | +3 | +3 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | +1 | +4 | +3 | +3 | +3 | +3 |
| S | +1 | +4 | +4 | +4 | +4 | +4 | +4 | +2 | +4 | 0 | +4 | +1 | +1 | +4 | +4 | +1 | +4 | +1 | +4 | +2 | +1 | +1 | +4 | +4 | +4 | +4 |
| S | +1 | +3 | -1 | +3 | +1 | +3 | -1 | +3 | +3 | 0 | +3 | +1 | -1 | +3 | +3 | +1 | +1 | +1 | +3 | +3 | +1 | +1 | 0 | 0 | +1 | +3 |
| S | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | 0 | +3 | +3 | 0 | +3 | +3 | 0 | +3 | +2 | +3 | +3 | 0 | +3 | +3 | +3 | +2 | +3 |
| S | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +1 | +1 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | +1 | +3 | +1 | +1 |
| Total | 33 | 56 | 43 | 48 | 26 | 51 | 27 | 35 | 34 | 34 | 48 | 39 | 29 | 37 | 62 | 35 | 38 | 40 | 39 | 41 | 32 | 36 | 41 | 40 | 28 | 41 |

Table A-7 - Continued

| Subject | 100 | 101 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| S | +5 | +4 | +4 | +5 | +5 | +5 | +5 | +5 | +5 | +5 | +3 | +4 | +4 | +4 | +5 | +3 | +2 | +4 | +4 | +5 | +4 | +5 |
| M | +3 | +2 | +2 | +2 | +2 | +4 | +4 | -1 | +4 | +2 | +4 | +4 | +3 | +3 | +3 | +2 | +3 | +2 | +4 | +3 | +3 | +4 |
| R | +1 | +1 | -2 | +3 | +3 | +1 | +3 | +2 | +2 | +2 | -2 | +3 | +1 | +2 | +2 | +3 | +1 | +2 | +4 | +2 | +1 | +4 |
| O | 0 | 0 | 0 | 0 | 0 | +4 | 0 | 0 | 0 | +4 | 0 | +4 | +4 | +4 | +2 | 0 | +4 | +4 | +4 | +4 | +4 | +4 |
| C | -2 | -2 | -2 | +2 | +2 | +2 | -2 | +1 | +1 | +1 | -2 | +2 | +1 | -2 | 0 | +1 | -2 | +1 | +2 | +1 | +1 | -2 |
| S | 0 | 0 | 0 | +1 | +1 | +2 | +2 | +2 | 0 | 0 | 0 | +1 | +2 | 0 | 0 | 0 | 0 | +1 | +1 | 0 | +2 | 0 |
| | +2 | 0 | 0 | +2 | +2 | 0 | 0 | +2 | +2 | 0 | 0 | +2 | +2 | +2 | 0 | +2 | +2 | +2 | +2 | +2 | +2 | 0 |
| | +4 | -2 | +1 | +4 | +4 | +2 | +1 | +3 | +4 | -2 | -2 | +4 | -2 | +3 | -2 | +2 | +1 | -2 | +2 | +4 | -2 | -2 |
| | +4 | +4 | +3 | +3 | +3 | +3 | +4 | +3 | +3 | +3 | -1 | +4 | +3 | +3 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | +4 |
| | +3 | +2 | +4 | +2 | +4 | +2 | +2 | +3 | +2 | +2 | +3 | +3 | +2 | +2 | +2 | +3 | +3 | +4 | +1 | +2 | +2 | +3 |
| | +3 | +1 | 0 | +1 | +1 | +2 | 0 | +1 | 0 | 0 | 0 | +3 | +1 | +1 | +3 | 0 | +2 | 0 | +3 | +3 | +2 | +3 |
| | +1 | +4 | +1 | +2 | +4 | +4 | +3 | +1 | +2 | +2 | +2 | +2 | +4 | +2 | +4 | +4 | +2 | +4 | +4 | 0 | +1 | +2 |
| | +1 | 0 | +1 | +2 | +2 | +3 | +2 | +2 | +2 | +2 | +2 | 0 | +2 | +1 | +2 | +2 | +3 | +1 | +3 | +1 | +2 | +3 |
| | +2 | 0 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +2 | +1 | 0 | +2 | +2 | +1 | +3 | +3 | +3 | +3 | +2 | +3 | +2 |
| | +3 | 0 | +1 | +3 | +3 | +3 | +3 | +4 | +3 | +1 | +1 | +1 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +4 | +3 |
| | +4 | +1 | +1 | +1 | +2 | +4 | +4 | +4 | +1 | +1 | -3 | +4 | +4 | +4 | +1 | +4 | +1 | +1 | +1 | +4 | +1 | +4 |
| | +3 | +3 | 0 | +3 | +2 | +2 | +3 | +3 | +3 | +1 | -1 | +3 | +1 | +3 | +1 | +1 | +3 | +1 | +3 | +3 | +1 | +1 |
| | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | 0 | +3 | +3 |
| | +1 | +3 | +1 | +3 | +3 | +3 | -1 | +3 | +3 | +2 | +1 | +1 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | -1 | +3 |
| Total | 41 | 24 | 21 | 45 | 49 | 51 | 38 | 44 | 43 | 31 | 9 | 48 | 43 | 44 | 36 | 42 | 40 | 38 | 53 | 45 | 36 | 44 |

Table A-7 - Continued

| Subject | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 152 | 153 | 154 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 5 | +5 | +5 | +4 | +4 | +3 | +5 | +4 | +5 | +5 | +5 | -1 | +5 | +4 | +5 | +5 | +5 | +5 | +4 | +4 | +4 | +4 | +4 |
| 1 | +2 | +2 | +4 | +4 | +3 | -1 | +4 | +4 | 0 | 0 | +3 | +4 | +4 | +4 | +3 | +3 | +3 | +2 | +4 | +4 | +4 | +4 |
| 2 | +4 | +1 | +3 | +3 | +3 | -2 | +2 | +2 | +3 | +4 | +4 | +1 | +2 | +3 | -2 | +3 | -2 | +3 | +3 | -2 | +1 | +4 |
| 3 | +4 | 0 | 0 | 0 | +4 | +4 | 0 | 0 | +4 | +4 | +4 | +4 | +4 | 0 | +4 | +4 | +4 | +4 | +4 | 0 | 0 | 0 |
| 4 | +1 | -2 | -2 | -2 | -2 | +1 | -2 | 0 | +1 | +2 | -2 | +1 | +1 | +2 | +1 | -2 | +1 | +1 | +1 | -2 | +1 | +2 |
| 5 | +2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | +1 | +1 | +2 | +2 | +2 | +2 | +2 | 0 | +2 | +2 | +2 | 0 | +2 | +2 |
| 6 | 0 | +2 | 0 | 0 | +2 | 0 | 0 | +2 | +2 | +2 | +2 | 0 | 0 | 0 | 0 | 0 | +2 | +2 | 0 | 0 | 0 | +2 |
| 7 | -2 | +1 | +3 | +3 | +3 | -2 | +3 | +1 | +2 | +2 | +4 | +1 | +4 | +4 | +1 | +1 | -2 | -2 | +3 | -2 | -2 | +2 |
| 8 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | +3 | 0 | 0 | +3 | +3 | +3 | +4 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | 0 |
| 9 | +2 | +2 | +2 | +2 | +3 | +2 | +2 | +2 | +4 | +4 | +4 | +2 | +2 | +2 | +1 | +2 | +3 | +2 | +2 | +2 | +2 | +4 |
| 0 | +1 | +3 | +1 | +3 | +1 | +3 | +1 | 0 | +2 | +2 | 0 | +1 | +1 | +1 | 0 | 0 | 0 | +2 | +1 | 0 | +1 | +1 |
| 1 | +4 | +2 | 0 | +1 | +2 | +2 | +1 | +4 | +2 | +2 | +4 | +2 | +4 | +2 | +2 | +3 | +2 | +4 | +3 | +3 | +4 | +3 |
| 2 | +1 | +1 | 0 | 0 | +2 | +2 | 0 | +3 | +2 | +2 | +3 | +1 | +1 | +2 | +1 | +1 | 0 | +3 | +2 | 0 | 0 | +3 |
| 3 | -2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +2 | +2 | +2 | +2 | +2 | +3 | +3 | +2 | +3 | +3 | +2 | +1 | +2 |
| 4 | +1 | +3 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +1 | +4 | +3 | +4 | +3 | +3 | 0 | +3 | +4 | +3 | +3 | +3 | +3 |
| 5 | +2 | +1 | +1 | +1 | +4 | +4 | +1 | +1 | +4 | +1 | +3 | +1 | +1 | +4 | +2 | +2 | +1 | +4 | +1 | +1 | +5 | +4 |
| 6 | +3 | +3 | 0 | +1 | +3 | +2 | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +1 | +1 | +3 | +3 | -1 | -1 |
| 7 | +3 | 0 | +2 | +2 | +3 | +2 | +2 | +2 | +3 | +2 | +3 | +2 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | 0 |
| 8 | -1 | +3 | +1 | +1 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | +3 | +3 | +1 | +1 |
| Total | 33 | 34 | 28 | 32 | 44 | 34 | 30 | 41 | 46 | 38 | 48 | 41 | 47 | 49 | 38 | 35 | 31 | 48 | 48 | 21 | 32 | 40 |

S E R O U S

Table A-7 - Continued

| Subject | 155 | 156 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| S | +4 | +5 | +5 | +1 | 0 | +5 | +4 | +5 | +5 | +2 | +5 | +4 | +3 | +3 | +5 | +3 | -1 | +4 | +5 | +2 | +3 | +3 |
| H | +3 | +3 | +2 | +4 | +4 | +3 | +2 | +2 | +2 | +3 | +3 | +3 | +3 | +4 | 0 | +3 | +4 | +3 | +2 | +3 | +3 | +4 |
| R | -2 | -2 | +2 | +4 | +2 | +4 | +2 | -2 | +2 | +2 | -2 | +4 | +3 | +2 | +1 | +1 | -2 | +3 | +2 | +1 | +2 | +2 |
| O | 0 | 0 | 0 | 0 | 0 | +4 | +4 | +4 | 0 | +4 | 0 | 0 | +4 | 0 | 0 | +4 | 0 | +4 | 0 | 0 | +4 | 0 |
| C | +2 | -2 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | +1 | 0 | +2 | +1 | -2 | +1 | -2 | +1 | +1 | -2 | -2 | +1 |
| S | +2 | 0 | +2 | +1 | +1 | +1 | 0 | +2 | 0 | 0 | +2 | +2 | 0 | +2 | 0 | +2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | +2 | 0 | 0 | 0 | 0 | +2 | +2 | +2 | 0 | +2 | +2 | +2 | +2 | 0 | 0 | 0 | 0 | +2 | 0 | +2 | +2 | +2 |
| | +1 | -2 | +2 | +2 | +1 | +3 | -2 | +2 | +1 | +4 | +1 | +4 | +1 | +4 | -2 | +2 | +2 | +4 | -2 | +1 | +1 | +1 |
| | +3 | -1 | +3 | +3 | +3 | +3 | +3 | 0 | +3 | +3 | +3 | -1 | +3 | -1 | 0 | +3 | 0 | +3 | -1 | +3 | +3 | +3 |
| | +4 | +2 | +3 | +3 | +4 | +3 | +4 | +2 | +2 | +4 | +2 | +3 | +2 | +4 | 0 | +4 | +2 | +2 | +3 | +2 | +3 | +2 |
| | +2 | 0 | +3 | +1 | +1 | +1 | 0 | +1 | +1 | +3 | 0 | 0 | 0 | +2 | 0 | +3 | 0 | +3 | +1 | +1 | 0 | +1 |
| | +4 | +3 | +4 | +4 | +2 | 0 | +2 | +3 | +3 | +2 | +2 | +1 | +4 | +3 | +3 | +2 | 0 | +3 | +1 | +4 | +2 | +2 |
| | +1 | +2 | +3 | +3 | +2 | +3 | +2 | +2 | +2 | +2 | 0 | 0 | 0 | +2 | +1 | +2 | +1 | +3 | 0 | +2 | 0 | +3 |
| | +1 | +2 | +3 | +2 | +3 | +2 | +2 | +3 | +3 | +3 | +1 | +3 | +2 | +3 | +1 | +3 | -2 | +3 | +2 | 0 | +3 | +2 |
| | +3 | +1 | +4 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +4 | 0 | +3 | +3 | +3 | +3 | +1 |
| | +1 | +2 | +2 | +4 | +1 | +2 | +4 | +1 | +4 | +1 | +4 | +4 | +1 | +4 | +1 | +2 | +1 | +4 | +1 | 0 | 0 | +1 |
| | +3 | +1 | +1 | +3 | +1 | +1 | -1 | +1 | +1 | +3 | +3 | -1 | +3 | +3 | 0 | +3 | +1 | +1 | +3 | +3 | +3 | +3 |
| | +2 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | 0 | +3 | +3 | +3 | +3 | +3 | +3 |
| | +1 | +1 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | +3 | +3 | +3 | +3 |
| Total | 37 | 18 | 46 | 44 | 37 | 44 | 38 | 37 | 39 | 48 | 28 | 37 | 42 | 47 | 17 | 45 | 6 | 52 | 27 | 31 | 36 | 37 |

Table A-7 - Continued

| Subject | 181 | 182 | 183 | 184 | 185 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| S | +3 | +3 | +3 | +4 | +3 | +2 | +5 | +3 | +5 | +5 | +5 | +5 | +4 | +2 | +5 | +4 | +3 | +5 | +2 | +5 | +4 | +3 |
| H | +3 | +3 | +4 | +3 | +3 | +2 | +3 | +3 | +4 | +4 | +2 | +4 | +4 | +3 | +2 | +2 | +4 | +3 | - | +4 | - | +3 |
| R | -2 | +2 | +4 | +1 | +1 | -2 | +1 | +1 | +4 | +1 | +2 | +3 | +2 | -1 | +2 | -2 | +3 | +3 | +1 | +1 | -2 | +2 |
| O | +4 | +4 | +4 | +4 | 0 | +4 | +4 | +4 | 0 | +4 | 0 | +4 | +4 | +4 | 0 | +4 | +4 | +4 | 0 | +4 | 0 | 0 |
| U | +1 | +2 | +2 | +1 | -2 | -2 | +2 | +1 | +1 | 0 | -2 | +2 | +1 | -2 | -2 | +2 | - | +2 | -2 | +1 | -2 | +1 |
| S | +2 | +1 | +1 | 0 | 0 | 0 | +1 | 0 | 0 | 0 | +2 | +1 | 0 | 0 | +2 | +1 | 0 | +2 | 0 | +2 | 0 | +2 |
| | +2 | +2 | +2 | +2 | 0 | 0 | 0 | +2 | +2 | +2 | 0 | +2 | +2 | 0 | 0 | +2 | +2 | +2 | 0 | 0 | 0 | +2 |
| | -2 | +2 | -2 | -2 | 0 | -2 | +4 | -2 | +3 | +4 | +1 | +1 | +1 | +1 | +2 | - | +1 | +2 | +1 | -2 | -2 | +1 |
| | +3 | +3 | +3 | +3 | +3 | +3 | -1 | -1 | +4 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 |
| | +2 | +4 | +3 | +3 | +3 | +3 | +4 | +2 | +2 | +2 | +3 | +2 | +4 | +3 | +3 | +3 | +3 | +3 | +2 | +2 | +2 | +4 |
| | +3 | 0 | +3 | +1 | 0 | +1 | +3 | +2 | 0 | +1 | +1 | +1 | +1 | +1 | 0 | +1 | 0 | +2 | 0 | +1 | 0 | +1 |
| | +2 | +4 | +4 | +3 | +3 | +3 | +2 | +3 | +3 | +4 | +2 | +4 | +2 | +1 | +1 | +4 | +1 | +2 | +2 | +3 | 0 | 0 |
| | +2 | +2 | 0 | +1 | +2 | +2 | +1 | +3 | +2 | 0 | 0 | 0 | +2 | +1 | 0 | +3 | 0 | +2 | +2 | +2 | 0 | +3 |
| | +3 | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +3 | +1 | +3 | +3 | +2 | -2 | +2 | +3 | -2 | -2 | +2 | +1 | +2 |
| | +4 | +2 | +3 | +1 | +3 | +1 | +2 | +3 | +3 | +4 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | +3 | +4 | +3 | +3 |
| | +1 | +4 | +4 | +1 | +1 | +1 | +4 | +1 | +4 | +1 | +2 | +4 | +4 | +4 | +1 | +1 | +1 | +1 | +1 | +2 | +1 | +2 |
| | +1 | +3 | +3 | +1 | +3 | +1 | +1 | +3 | +3 | +1 | -1 | +1 | +3 | +3 | +3 | +1 | +2 | 0 | 0 | +3 | +1 | +3 |
| | +2 | +3 | +3 | +3 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +2 | +3 | +3 | +3 | +3 | +2 | +3 | +3 | +2 |
| | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | -1 | +3 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | +1 | +1 | +3 | -1 | +3 |
| Total | 37 | 47 | 50 | 36 | 31 | 24 | 45 | 37 | 44 | 45 | 26 | 49 | 48 | 32 | 29 | 36 | 39 | 41 | 16 | 43 | 11 | 40 |

S H R O U S

Table A-7 - Continued

| Subject | 206 | 207 | 208 | 209 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 226 | 227 | 228 | 229 | 230 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| S | +4 | +4 | +4 | +4 | +4 | +5 | +4 | +4 | +2 | +4 | +1 | +5 | +4 | +5 | +3 | +5 | +5 | +5 | +5 | +4 | +5 | +4 |
| E | +3 | +2 | +3 | +4 | +3 | +2 | +2 | +3 | +2 | +4 | +3 | 0 | +3 | +3 | +4 | +4 | +3 | +4 | +3 | +3 | +3 | +2 |
| R | +2 | +2 | -2 | +1 | +3 | -2 | -2 | -2 | +2 | +1 | +1 | -2 | -2 | +2 | +4 | -2 | -2 | +2 | +4 | +3 | +2 | +2 |
| O | +4 | +4 | 0 | 0 | +4 | 0 | 0 | 0 | 0 | +4 | 0 | +4 | 0 | +4 | 0 | 0 | +4 | 0 | 0 | 0 | 0 | +2 |
| C | +1 | -2 | -2 | -2 | +2 | 0 | -2 | -2 | +1 | +2 | -2 | 0 | +1 | +2 | +2 | 0 | +1 | +1 | -2 | +2 | +2 | +1 |
| O | 0 | 0 | 0 | 0 | +2 | 0 | 0 | 0 | 0 | +2 | 0 | 0 | 0 | +2 | +1 | 0 | 0 | +2 | 0 | +2 | +1 | +1 |
| U | +2 | 0 | +2 | 0 | +2 | 0 | 0 | 0 | +2 | +2 | +2 | +2 | 0 | +2 | +2 | +2 | +2 | +2 | +2 | +2 | +2 | +2 |
| S | -2 | +1 | -2 | +2 | +4 | -2 | +1 | +1 | -2 | +2 | +1 | +2 | +2 | +4 | +3 | - | 0 | -2 | +3 | +4 | +1 | +4 |
| | +3 | +3 | +3 | +3 | +3 | -1 | +4 | +4 | -1 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +4 | -1 | +3 | +3 | +3 |
| | +3 | +2 | +4 | +2 | 0 | +3 | +2 | +2 | +4 | 0 | +2 | +2 | +4 | +3 | +4 | +2 | +2 | +2 | +2 | +4 | +1 | +4 |
| | +3 | +2 | +3 | +2 | +3 | 0 | +3 | 0 | 0 | 0 | +3 | 0 | 0 | 0 | +2 | 0 | 0 | +2 | 0 | +1 | 0 | +2 |
| | +3 | +4 | +1 | +3 | +2 | +3 | +1 | +1 | +3 | +1 | +1 | 0 | +2 | +1 | +2 | +1 | +3 | +1 | +2 | +3 | +3 | +1 |
| | +3 | +3 | +2 | +2 | +2 | 0 | +2 | +2 | 0 | 0 | +2 | +1 | +2 | +2 | 0 | 0 | 0 | +2 | +1 | +2 | 0 | 0 |
| | +2 | +1 | +3 | +3 | +2 | +2 | +1 | +3 | +2 | +3 | +1 | +3 | +2 | +2 | +2 | +2 | +2 | +3 | +3 | +3 | +2 | +3 |
| | +3 | +3 | +3 | +3 | +4 | +1 | +3 | +3 | +4 | +3 | +3 | +4 | +4 | +2 | +3 | +3 | +3 | +3 | +4 | +3 | +3 | +3 |
| | +4 | +1 | +4 | +2 | +2 | +1 | +1 | +1 | +2 | 0 | +1 | +1 | +2 | +1 | +4 | +1 | +1 | +4 | +2 | +2 | +1 | +2 |
| | +1 | +1 | 0 | +3 | +1 | 0 | +1 | +3 | +2 | -1 | +1 | 0 | +3 | 0 | +3 | +1 | +1 | +3 | +1 | +3 | +1 | +1 |
| | +3 | +3 | +2 | +2 | +2 | +3 | 0 | +3 | +3 | +3 | +3 | 0 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 |
| | +3 | +3 | +3 | +1 | +1 | +3 | +3 | +3 | +3 | +3 | +3 | +1 | +3 | +1 | +3 | +1 | +1 | +3 | +3 | +3 | +3 | +3 |
| Total | 45 | 37 | 31 | 35 | 46 | 18 | 24 | 29 | 29 | 36 | 29 | 26 | 36 | 42 | 48 | 26 | 32 | 44 | 35 | 50 | 36 | 43 |

S E R O C S

Table A-7 - Continued

| Subject | 231 | 233 | 234 | 237 | 238 | 241 | 242 | 244 | 245 | 246 | 247 | 248 | 249 | 251 | 252 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| S | +4 | +5 | +3 | +3 | +2 | +3 | +5 | -1 | +3 | -1 | +4 | +4 | +4 | +4 | +5 |
| H | -1 | +3 | +3 | +2 | +3 | +3 | +3 | +2 | +2 | +3 | +2 | +3 | +3 | +3 | +4 |
| R | +1 | +1 | -2 | -2 | +2 | +1 | +2 | -2 | +3 | +2 | +1 | +1 | +3 | +2 | +1 |
| O | 0 | 0 | +4 | 0 | 0 | +4 | 0 | 0 | +4 | 0 | +4 | +4 | +4 | +4 | +4 |
| C | -2 | +1 | -2 | +2 | 0 | +2 | +1 | -2 | +1 | -2 | +1 | - | +2 | +2 | +1 |
| C | 0 | +1 | 0 | 0 | 0 | 0 | 0 | 0 | +2 | +2 | +1 | +2 | 0 | 0 | +1 |
| S | 0 | 0 | +2 | +2 | +2 | +2 | 0 | 0 | 0 | 0 | +2 | +2 | 0 | +2 | +2 |
| | -2 | +1 | +1 | +1 | -2 | +1 | +4 | -2 | -2 | -2 | +1 | +2 | +1 | +3 | +2 |
| | - | -1 | -1 | +3 | +3 | +3 | +3 | +3 | +3 | -1 | +3 | +4 | +3 | +3 | 0 |
| | +2 | +3 | +2 | +2 | +3 | +4 | +2 | +1 | +2 | +2 | +3 | +2 | +2 | +4 | +1 |
| | +3 | +1 | +3 | +2 | +2 | 0 | 0 | +1 | +1 | 0 | +3 | +3 | 0 | 0 | 0 |
| | +3 | +3 | +1 | +2 | +3 | +1 | +1 | +4 | +2 | +2 | +1 | +4 | +2 | 0 | +1 |
| | +2 | +3 | +3 | +2 | +3 | +2 | 0 | +1 | +2 | +1 | +2 | +2 | 0 | +2 | +2 |
| | +3 | +2 | +1 | +2 | +3 | 0 | -2 | +3 | +3 | +2 | +2 | +1 | -2 | +3 | +3 |
| | +3 | +4 | +3 | +4 | +3 | +3 | +2 | +3 | +3 | +3 | +1 | +3 | +3 | +3 | +3 |
| | +4 | +1 | +4 | +2 | +4 | +2 | +4 | +4 | +4 | +1 | +2 | +2 | +2 | +4 | +1 |
| | +1 | +1 | +1 | +3 | 0 | 0 | +3 | +3 | +1 | +1 | 0 | +3 | +3 | +3 | +3 |
| | +3 | +2 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +3 | +2 | +2 | +3 | +3 |
| | +3 | +1 | +1 | +3 | +3 | +3 | +1 | +3 | +3 | +3 | +3 | +1 | +3 | +3 | +3 |
| Total | 27 | 32 | 30 | 36 | 37 | 37 | 32 | 24 | 40 | 19 | 39 | 45 | 35 | 48 | 40 |

S H R O C S

Table A-8. Frequency Distribution of Organizational Participation Scores and Scale Scores Assigned* (Question 73-75, Page 9)

| Raw Score | Frequency | Cum. Freq. | Scale Score Assigned |
|-----------|-----------|------------|----------------------|
| 1-3 | 18 | 18 | +1 |
| 4-6 | 22 | 40 | |
| 7-9 | 28 | 68 | +2 |
| 10-12 | 35 | 103 | |
| 13-15 | 20 | 123 | +3 |
| 16-18 | 14 | 137 | |
| 19-21 | 10 | 147 | +4 |
| 22-24 | 16 | 163 | |
| 25-27 | 7 | 170 | |
| 28-30 | 10 | 180 | |
| 31-33 | 5 | 185 | |
| 34-36 | 6 | 191 | |
| 37-39 | 2 | 193 | |
| 40+ | 1 | 194 | |
| Totals | | 194** | |

* Scale scores assigned on quartiles of raw scores (as near as possible)

** 14 had no score

Table A-9. Frequency Distribution of Demonstration and Judging Scores and Scale Scores Assigned* (Question 37-44, Page 5)

| Raw Score | Frequency | Cum. Freq. | Scale Score Assigned |
|-----------|-----------|------------|----------------------|
| 0 | 55 | 55 | -2 |
| 1 | 24 | 79 | +1 |
| 2 | 14 | 93 | |
| 3 | 19 | 112 | +2 |
| 4 | 35 | 147 | |
| 5 | 10 | 157 | |
| 6 | 11 | 168 | +3 |
| 7 | 10 | 178 | |
| 8 | 13 | 191 | |
| 9 | 2 | 193 | |
| 10 | 1 | 194 | +4 |
| 12 | 2 | 196 | |
| 13 | 1 | 197 | |
| 14 | 2 | 199 | |
| 16 | 2 | 201 | |
| 18 | 1 | 202 | |
| 202** | | | |

* Scale scores assigned on quartile basis (as near as the data would allow.

** 6 questionnaires had been returned to subjects for completion of this section and therefore were not included in this analysis.

Table A-10. Demonstration and Judging and Organizational Participation Scores by Individual Subject*

| Subject | Demonstration and Judging | Organizational Participation | Board Member and Officer |
|---------|------------------------------|---------------------------------|-----------------------------|
| 1 | 1 | 7 | 0 |
| 2 | 7 | 9 | 4 |
| 3 | 4 | 30 | 12 |
| 4 | 5 | 7 | - |
| 5 | 2 | 4 | - |
| 6 | 0 | 10 | - |
| 7 | 6 | 3 | - |
| 8 | 3 | 10 | - |
| 9 | - | 7 | 0 |
| 10 | 3 | 10 | 4 |
| 11 | 1 | 13 | - |
| 12 | 4 | 4 | 0 |
| 15 | 4 | 7 | 4 |
| 16 | 8 | 11 | 8 |
| 20 | 0 | 16 | 4 |
| 21 | 0 | 3 | - |
| 22 | 4 | - | - |
| 23 | 11 | 8 | - |
| 25 | 6 | 15 | 8 |
| 26 | 3 | 14 | 4 |
| 27 | - | 2 | - |
| 29 | - | 3 | - |
| 30 | 4 | 4 | - |
| 31 | 1 | 16 | 8 |
| 32 | 4 | 12 | - |
| 33 | 4 | 11 | 4 |
| 34 | 8 | 6 | - |
| 36 | 4 | 10 | 4 |
| 38 | - | 23 | 8 |
| 39 | 0 | 12 | 4 |
| 40 | 0 | 14 | 4 |
| 41 | 0 | 24 | 12 |
| 42 | 0 | 22 | 12 |
| 43 | 0 | 10 | 4 |
| 44 | 3 | 3 | - |
| 45 | 16 | 32 | 20 |
| 47 | 0 | 18 | 8 |
| 48 | - | 10 | 4 |
| 49 | - | 26 | 8 |
| 52 | 0 | 8 | 4 |

*See Mich. 4-H Leader Inventory (Appendix B) Item 37-44, 73-74, and 75 respectively for individual score assigned each item in the question.

Table A-10 - Continued

| Subject | Demonstration and Judging | Organizational Participation | Board Member and Officer |
|---------|------------------------------|---------------------------------|-----------------------------|
| 53 | - | 5 | - |
| 54 | 0 | 3 | - |
| 55 | - | 1 | - |
| 56 | 2 | 32 | 8 |
| 57 | 14 | 36 | 16 |
| 60 | 18 | 3 | 0 |
| 61 | 0 | - | - |
| 66 | 4 | 24 | 16 |
| 67 | 3 | 12 | 4 |
| 68 | 7 | 23 | 8 |
| 69 | 5 | 8 | 4 |
| 70 | 3 | 21 | 12 |
| 71 | 12 | 31 | 16 |
| 72 | - | 26 | 16 |
| 73 | - | 28 | 16 |
| 74 | 4 | 10 | - |
| 75 | 16 | 27 | 8 |
| 76 | 7 | 30 | 20 |
| 77 | 4 | 21 | 8 |
| 78 | 0 | 4 | - |
| 79 | 4 | 24 | 12 |
| 80 | 1 | 12 | 4 |
| 81 | 1 | 38 | 20 |
| 82 | 1 | 4 | 0 |
| 83 | 3 | 12 | 4 |
| 84 | 4 | 15 | 8 |
| 85 | 5 | 17 | 8 |
| 86 | - | 7 | - |
| 87 | - | 11 | 0 |
| 88 | 13 | 27 | 12 |
| 89 | 8 | 12 | 0 |
| 90 | 3 | 7 | 4 |
| 91 | 1 | 20 | 8 |
| 92 | 3 | 17 | 8 |
| 93 | 7 | 22 | 8 |
| 94 | 8 | 17 | 8 |
| 95 | - | 2 | - |
| 96 | 8 | 3 | - |
| 97 | 3 | 24 | 8 |
| 98 | 2 | 10 | - |
| 100 | 1 | 5 | - |

Table A-10 - Continued

| Subject | Demonstration and Judging | Organizational Participation | Board Member and Officer |
|---------|------------------------------|---------------------------------|-----------------------------|
| 101 | 1 | 29 | 8 |
| 104 | - | 3 | - |
| 105 | 5 | 10 | 4 |
| 106 | 5 | 23 | 8 |
| 107 | 2 | 30 | 16 |
| 108 | 7 | 14 | 8 |
| 109 | 4 | 2 | 0 |
| 110 | 4 | 12 | - |
| 111 | 4 | 12 | - |
| 112 | 0 | 12 | - |
| 113 | 6 | 11 | 8 |
| 119 | 1 | 31 | 16 |
| 120 | 4 | 9 | - |
| 121 | 4 | 36 | 24 |
| 122 | 5 | 28 | 16 |
| 123 | 2 | 8 | - |
| 124 | 2 | 34 | 16 |
| 125 | 8 | 36 | 20 |
| 126 | 4 | - | - |
| 127 | 2 | 2 | - |
| 128 | 10 | 8 | - |
| 131 | 14 | 26 | 12 |
| 132 | 1 | 10 | 4 |
| 133 | 7 | - | - |
| 134 | 6 | 6 | 4 |
| 135 | 6 | 7 | - |
| 136 | 0 | 12 | 4 |
| 137 | 6 | 2 | - |
| 138 | 3 | 24 | 12 |
| 140 | 5 | 7 | 4 |
| 141 | 9 | 10 | - |
| 142 | 8 | 22 | - |
| 143 | 1 | 0 | 4 |
| 144 | 4 | 22 | 12 |
| 145 | 7 | 7 | - |
| 146 | - | 8 | 0 |
| 147 | 5 | 18 | - |
| 148 | - | 12 | - |
| 149 | 7 | 24 | 12 |
| 150 | 6 | 13 | 8 |

Table A-10 - Continued

| Subject | Demonstration and Judging | Organizational Participation | Board Member and Officer |
|---------|------------------------------|---------------------------------|-----------------------------|
| 152 | 0 | 17 | 0 |
| 153 | 1 | 38 | 20 |
| 154 | 12 | 16 | - |
| 155 | - | 29 | 8 |
| 156 | 0 | 16 | 8 |
| 157 | 5 | | |
| 161 | 4 | 32 | 20 |
| 162 | 8 | 35 | 20 |
| 163 | 3 | 10 | - |
| 164 | 8 | - | - |
| 165 | 3 | 9 | 4 |
| 166 | 0 | 21 | 8 |
| 167 | 4 | 16 | 0 |
| 168 | 4 | 10 | 0 |
| 169 | 0 | 8 | 4 |
| 170 | 8 | 6 | 0 |
| 171 | 6 | 26 | 8 |
| 172 | 3 | 18 | 4 |
| 173 | 1 | 13 | 4 |
| 174 | 1 | 11 | - |
| 175 | - | - | - |
| 176 | 5 | 21 | 8 |
| 177 | 4 | 4 | - |
| 178 | 1 | 23 | 8 |
| 179 | 4 | 7 | 0 |
| 180 | 4 | 7 | - |
| 181 | - | 12 | 8 |
| 182 | 3 | 29 | 20 |
| 183 | 9 | 30 | 12 |
| 184 | 1 | 20 | 8 |
| 185 | 2 | 20 | 8 |
| 189 | - | 18 | 8 |
| 190 | 1 | 7 | 0 |
| 191 | 2 | 15 | 8 |
| 192 | 8 | 15 | 4 |
| 193 | 2 | 43 | 20 |
| 194 | 3 | 15 | 8 |
| 195 | 6 | 36 | 28 |
| 196 | 4 | 14 | - |
| 197 | - | 4 | 0 |
| 198 | 4 | 3 | - |
| 199 | - | 24 | 16 |

Table A-10 - Continued

| Subject | Demonstration and Judging | Organizational Participation | Board Member and Officer |
|---------|------------------------------|---------------------------------|-----------------------------|
| 200 | 6 | 4 | - |
| 201 | 5 | 7 | - |
| 202 | 1 | 10 | 4 |
| 203 | 2 | 20 | 8 |
| 204 | - | - | - |
| 205 | 4 | - | - |
| 206 | 4 | 14 | 8 |
| 207 | 4 | 27 | 20 |
| 208 | - | 3 | - |
| 209 | 1 | 14 | 8 |
| 211 | 7 | 7 | 0 |
| 212 | - | 15 | 8 |
| 213 | - | 3 | 0 |
| 214 | - | 5 | - |
| 215 | 2 | 13 | - |
| 216 | 1 | - | - |
| 217 | - | 4 | - |
| 219 | - | 9 | 0 |
| 220 | 3 | 4 | 0 |
| 221 | 8 | 8 | 0 |
| 222 | - | 3 | - |
| 223 | - | 19 | 8 |
| 224 | 3 | 17 | 4 |
| 226 | 4 | 5 | - |
| 227 | 8 | 8 | - |
| 228 | 7 | 14 | 8 |
| 229 | 4 | 20 | 8 |
| 230 | 4 | 4 | - |
| 231 | - | 13 | - |
| 233 | 1 | 13 | 4 |
| 234 | - | 4 | - |
| 237 | - | 12 | - |
| 241 | 1 | 5 | - |
| 242 | 4 | 4 | - |
| 244 | - | 22 | 12 |
| 245 | 6 | 11 | - |
| 246 | 3 | 10 | - |
| 248 | 2 | 28 | 16 |
| 249 | 6 | 11 | 8 |
| 251 | 2 | - | - |
| 252 | 1 | 5 | 0 |

APPENDIX B

RESEARCH INSTRUMENTS AND DEVICES

Dear _____:

Are you interested in more productive use of your volunteer leaders? Would you like to be able to predict the effectiveness of a 4-H leader? Would you like to have an index of this leader's training needs? If so, you and I have things in common. Further, I intend to do research on this matter, in the belief that tools can be developed which will allow us to utilize volunteers in such a way that they and we get the most mileage from their interests and efforts.

Your county is one of fourteen in the state, selected on a random basis, in which I would like to collect data for this project. Will you cooperate with me in our joint interest? Here is what your participation would involve:

1. I will need a complete list of your current 4-H leaders (construed as those on your summer list as well as this winter's program, assuming that you have some few leaders who are active only one or the other).

2. From this list I will randomly select the group of leaders to be included in the study. The exact number is governed by your total leader enrollment (based on 1959 E.S. -21) in relation to the total state. Since at that time you had leaders, the number to be selected from your county is .

3. After these leaders have been selected, I would want you to inform the leaders of their having been selected, and to encourage them to participate in this project. If you feel that the job of getting out such a letter would be a burden on your office staff, we can prepare the letter here and mail it to you for your signature and mailing. At any rate I will provide some clues as to what to say, or rather, what not to say in this letter (you of course know the type of communication that best works in getting action in your county, I simply want to suggest some things in the interest of control).

4. In conjunction with the State 4-H Program Specialist responsible for your district, we would want you to set up a meeting of this selected group for the purpose of collecting the information needed for this study. This meeting should be scheduled sometime between March 15th and June 1st, 1961.

This study has sanction from the Michigan Cooperative Extension Service and the enthusiasm of the State 4-H club staff. The total effort is being advised by Dr. Ed. Moe, Extension Sociologist.

Will you please advise me of your cooperation. If you answer in the affirmative do not forget to enclose the leader list requested. If you are

on campus for Farmers' Week I would appreciate visiting with you. Call me at ED 2-1511 or the University extension 3498 or 2995.

Thank you for your consideration. It will be a pleasure working with you on our common problem.

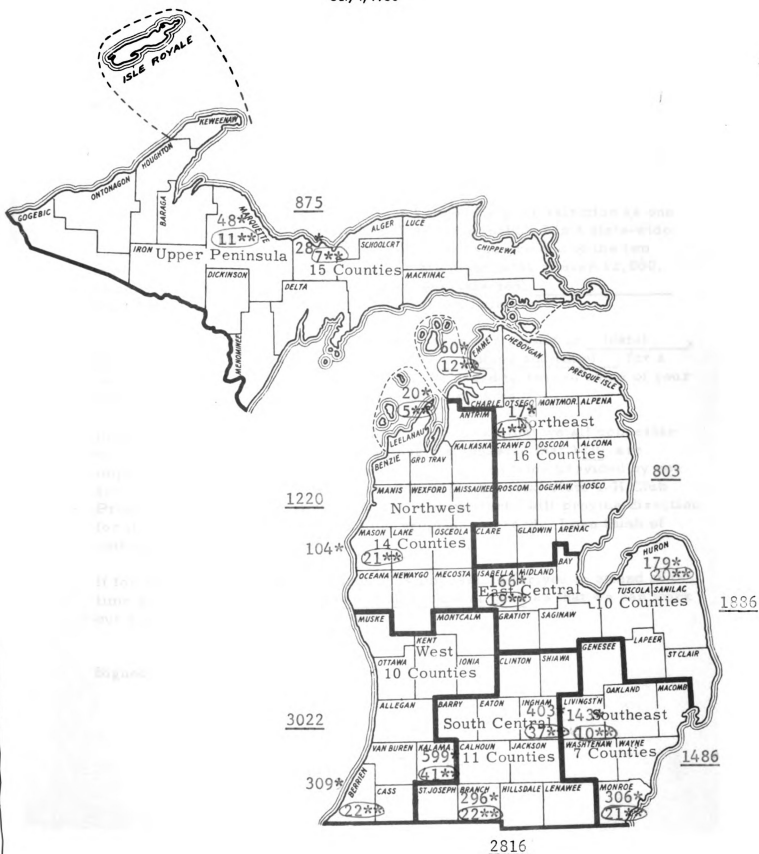
Sincerely yours,

Delwyn A. Dyer
County Extension Agent, 4-H (on leave)

CC: Russ Mawby
County Director

437

July 1, 1960



Number of 4-H Leaders in each District
Number of 4-H Leaders in a given county
Number in sample from a given county

(Suggested letter to your 4-H Leaders--Del Dyer Research Project)

Mr. (s) 4-H
1961 Green Street
White, Michigan

Dear _____,

It is with great pleasure and pride that I announce your selection as one of the (number) (county) 4-H leaders to be included in a state-wide Leader Evaluation Project. In a broader set, you are one of the two hundred fifty leaders selected from our Michigan total of over 12,000. In setting up the program, 14 counties were selected, _____ County is proud to be included as one of these fourteen.

 (Name of Interviewer) will be in our county on (date) , to visit with us. We ask that you come to (place and time) for a two hour session, at which time you will be asked to record some of your 4-H experiences by way of a prepared questionnaire.

In a project of this kind it is of utmost importance that we all cooperate to the fullest extent. I cannot too strongly emphasize that YOU are important to this state-wide endeavor. The information provided by you and the other 249 leaders will be used to guide the total state 4-H Club Program, and from my view, even more important, will provide direction for the kinds of 4-H Leader Training programs needed. I can think of nothing more important than this.

If for some very important reason it is impossible for you to attend at the time and place designated, please contact me at once so that we can work out some satisfactory arrangement.

Signed,

"WHO AM I?"

There are twenty numbered blanks on the page below. Please write twenty answers to the simple question "Who am I?" in the blanks. Just give twenty different answers to yourself, not to somebody else. Write the answers in the order that they occur to you. Don't worry about logic or "importance." Go along fairly fast, for time is limited.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

TWENTY STATEMENTS PROBLEM

ROLE INTERNALIZATION

As in the previous case of "Who Am I?" there are twenty blanks on the page below. This time, please write twenty answers to the question "What do 4-H Leaders do?" As before, write these answers as if to yourself.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

MICHIGAN 4-H LEADER INVENTORY

General Information about the Michigan 4-H Leader

Section I

1-3 Schedule Number _____

4-5 County _____

Name of Local 4-H Club _____

Name of 4-H Leader (your name) _____

6 Man: 1 _____ Woman: 2 _____

7 How old are you? (place check below proper age group)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 20-25 | 26-30 | 31-35 | 36-40 | 41-45 | 46-50 | 51-55 | 56-60 | 60+ |
| | | | | | | | | |

8 How do you classify yourself as a leader?

1. _____ Local Leader

2. _____ Co-leader

3. _____ Assistant Leader

4. _____ Other: Specify _____

9 What is your occupation? _____

10 Your husband's (wife's) occupation is _____

11 Is any one else in your family in 4-H?

1. _____ yes

2. _____ no

12 Is any one else in your family a 4-H Leader?

1. _____ yes

2. _____ no

13 What was the highest grade of school completed by you?

1. _____ Less than eighth grade

2. _____ Eighth grade

3. _____ One to two years of high school

4. _____ Three to four years of high school

5. _____ One year beyond high school

6. _____ Two to three years college or university

7. _____ Graduate of College or University

8. _____ More than four years of college.

14 How many years have you served as a 4-H Leader?

(check the appropriate box below the second row of numbers)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | x | y |
|---|---|---|---|---|---|---|---|---|---------|------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 - 14 | 15 or more years |
| | | | | | | | | | | |

- 15 Place of residence
1. ____ Farm
 2. ____ Open Country Non-farm
 3. ____ Village (up to 2500)
 4. ____ Town (2500 to 10,000)
 5. ____ City (10,000 or more)
- 16 Have you served as a 4-H Club leader in the same community for the entire period of your leadership?
1. ____ Yes, the same community
 2. ____ No, two different communities
 3. ____ No, three or more different communities
 4. ____ Other: Specify _____
- 17 How many years have you lived in the community you are now in?
1. ____ Less than three years
 2. ____ Four to six years
 3. ____ Seven to ten years
 4. ____ Eleven to fifteen years
 5. ____ More than fifteen years but not all my life
 6. ____ All my life
- 18 What other persons assisted you with your 4-H Club leadership responsibilities during the past twelve months?
1. ____ Leader
 2. ____ Co-leader
 3. ____ Assistant Leader
 4. ____ Project Leader
 5. ____ Junior Leader
 6. ____ Other Specify _____
 7. ____ None
- 19 Please check the Project grouping in which the majority of your members are enrolled.
1. ____ Agriculture (crops and livestock including dairy & poultry)
 2. ____ Home Economics
 3. ____ Conservation
 4. ____ Safety
 5. ____ Crafts and Arts (including electricity)
 6. ____ Gardening (including vegetable, flower and landscape)
 7. ____ Other. Specify _____
- 20 What kind of 4-H Club did you Lead in the most recent project year?
1. ____ A single project (you as the only leader)
 2. ____ A single project (more than one leader in the club)
 3. ____ Mixed project club (several projects in the same club, with you as the only leader)
 4. ____ Mixed project club (several projects in the same club, with more than one leader)
 5. ____ A single project club within the Community Club
 6. ____ A community Club, you as the community leader
 7. ____ Other. Specify _____

GENERAL INFORMATION ABOUT THE 4-H CLUB - SECTION II

21 Including the 1960 Club year, how many years has the Club been organized?

1. ____ Less than 2 years
2. ____ 2 to 3 years
3. ____ 4 to 5 years
4. ____ 6 to 7 years
5. ____ 8 to 9 years
6. ____ 10 or more years

22-23 How many boys and girls were there in the club during the last completed project year: (official enrollment)

- | <u>Boys</u> | <u>Girls</u> | |
|-------------|--------------|--------------------|
| 1. ____ | 1. ____ | 5 or fewer members |
| 2. ____ | 2. ____ | 6 to 10 members |
| 3. ____ | 3. ____ | 11 to 15 members |
| 4. ____ | 4. ____ | 16 to 20 members |
| 5. ____ | 5. ____ | 21 to 25 members |
| 6. ____ | 6. ____ | 26 or more |

24 What were the ages of the members -- how many in each of the age groups during the last completed project year:

| | under 10 | 10-11 | 12-13 | 14-15 | 16-17 | 18-19 | 20-21 |
|-------|----------|-------|-------|-------|-------|-------|-------|
| Boys | | | | | | | |
| Girls | | | | | | | |

25-26 How many of your members dropped out during the project year reported above:
Total number dropping out: _____

Give number who dropped out for each of these reasons:

1. ____ moved away
2. ____ didn't like 4-H
3. ____ didn't like projects selected
4. ____ sickness
5. ____ joined another 4-H Club
6. ____ too busy
7. ____ didn't like other members
8. ____ to join another club (non-4-H)

27 How many of the members of this club completed their projects during the period reported above. Number: _____

Percentage of completions

- | | | |
|-----|---------|-----------|
| - / | 1. ____ | 0% |
| - / | 2. ____ | 1 to 50% |
| o | 3. ____ | 51 to 60% |
| + / | 4. ____ | 61 to 70% |
| + 2 | 5. ____ | 71 to 80% |
| + 3 | 6. ____ | 81 to 90% |
| + 4 | 7. ____ | 91 to 99% |
| + 5 | 8. ____ | 100% |

- 28 How many different projects are carried in your club during the project year? (give a fair average)
1. ☐ One project
 2. ☐ Two to three projects
 3. ☐ Four to five projects
 4. ☐ Six to seven projects
 5. ☐ Eight to nine projects
 6. ☐ Ten or more
- 29 How many Junior Leaders do you have in your club?
1. ☐ One
 2. ☐ Two to three
 3. ☐ Four to five
 4. ☐ Six to seven
 5. ☐ More than seven
- 30 From what general territory do most of your 4-H Club members come?
1. ☐ Just from the nearby neighborhood of well acquainted families
 2. ☐ From a larger community, with more than one neighborhood
 3. ☐ From all over our school district
 4. ☐ From all over the township
 5. ☐ Just from our village
 6. ☐ Other. Specify: _____
- 31 How often does the 4-H Club hold its meetings?
(please answer by checking one of the major headings and one of the sub-headings)
- ☐ Meets only during the school year
1. ☐ weekly
 2. ☐ every other week or twice per month
 3. ☐ monthly
- ☐ Meets only during the summer months
4. ☐ weekly
 5. ☐ Twice per month or every other week
 6. ☐ monthly
- ☐ Meets the whole year round
7. ☐ weekly
 8. ☐ twice per month or every other week
 9. ☐ monthly
- 32 Does the club attempt to set meeting frequency to meet seasonal requirements?
(for example, having fewer meetings when there is little to prepare for and then stepping up the pace prior to big events)
1. ☐ Yes
 2. ☐ No
- 33 How many meetings were held by the club during the past completed project year?
- 1 1. ☐ 5 or fewer
 - +2 2. ☐ 6 to 10
 - +3 3. ☐ 11 to 15
 - +4 { 4. ☐ 16 to 20
 5. ☐ 21 to 25
 6. ☐ more than 26
 7. ☐ don't remember

Code for Scoring Question 37-44, Page 5

| | <u>Demonstrations</u> | <u>Judging</u> |
|----------------|-------------------------|----------------|
| Local Level | 75 - 100% = +4 | same |
| | 50 - 74% = +3 | same |
| | 25 - 49% = +2 | same |
| | 0 - 24% = +1 | |
| County Level | 50 - 100% = +3 | same |
| | 25 - 49% = +2 | same |
| | 0 - 24% = +1 | same |
| District Level | 25 - 100% = +3 | same |
| | 10 - 24% = +2 | same |
| | 0 - 9% = +1 | same |
| State Level | +1 for whatever percent | |

Relative values assigned on bases of leader influence possible at each level and opportunity for member participation. (Table , Appendix A gives the distribution of scale scores).

- 34 Where were the meetings usually held?
1. ____ Your home (leaders)
 2. ____ Members' homes
 3. ____ School buildings
 4. ____ Leaders' and Members' homes
 5. ____ Members' homes and school buildings
 6. ____ Grange hall
 7. ____ Community or Town Hall
 8. ____ Other. Specify _____

- 35 We plan our 4-H Club program
1. ____ One month in advance
 2. ____ Two months in advance
 3. ____ At the beginning of the club year we plan our entire years program
 4. ____ Do not have a planned program, as such

- 36 Members were aware of the time and place of the meetings by
1. ____ Members were told of the time and place of the next meeting just before the current meeting was adjourned
 2. ____ Members were called or a written notice was sent prior to each meeting telling them where to meet
 3. ____ Each member had a complete program of all meetings planned for the year, including the time and place of all meetings
 4. ____ We did not have a regular time for our meeting and we seldom knew the place very much prior to the actual meeting

- 37-44 What percent of your members have participated in
- | | <u>Demonstrations</u> | <u>Judging</u> |
|---|-----------------------|----------------|
| Local level (within the club) | _____ | _____ |
| County (at county elimination or training days) | _____ | _____ |
| District (training or eliminations) | _____ | _____ |
| State (training or eliminations) | _____ | _____ |

- 45 What community activity has your 4-H Club completed in the past twelve months?
- + 4 {
- if {
- an {
- act. {
- Comp. {
1. ____ Holiday gifts to needy children or families
 2. ____ Community beautification such as planting shrubbery or painting park equipment
 3. ____ Community service such as painting and labeling mailboxes
 4. ____ Community beautification such as cleanup of parks or cemeteries
 5. ____ Entertaining at veterans hospital or home for the aged
 6. ____ Solicitation for the Red Cross or March of Dimes
 7. ____ Other. Specify _____
 8. ____ We have completed no community project in the past 12 months

- 46-47 How many awards has your club won as a club during

The past twelve months _____

What was the award _____

The past three years _____

What was the award _____

- 48-55 How many of your members have won any of the following:
(list the number in each space, using "0" if you have had no members in that category)

| | <u>In the past year</u> | <u>In the past 3 years</u> |
|--|-------------------------|----------------------------|
| County Award Medals | _____ | _____ |
| All blue ribbons in exhibit of their 4-H projects | _____ | _____ |
| More blue ribbons than red or white ribbons | _____ | _____ |
| Trip to a State 4-H Club Event or to a District 4-H Camp (Camp Shaw for example) | _____ | _____ |
| County sponsored Award trip | _____ | _____ |
| District Contests (such as Share the Fun, Demonstrations and Judging) | _____ | _____ |
| State Contest of any kind | _____ | _____ |

- 56 How many county-wide 4-H events did your members attend during the past twelve months? (Base your answer on all events sponsored by the Cooperative Extension Service for 4-H Members in your county. Do not include exhibit at achievement days or fairs.)
- 2 1. _____ None of our members attending any county-wide event other than achievement days and fairs
- +1 { 2. _____ Members attended one event other than achievement day and Fair
3. _____ Members attended two events other than achievement day and Fair
- +2 { 4. _____ Members attended three events other than achievement day and Fair
5. _____ Members attended four events other than achievement day and Fair
6. _____ Members attended five events other than achievement day and Fair
7. _____ Members attended six events other than achievement day and Fair
8. _____ Members attended more than seven events other than achievement day and Fair
- 57 What percentage of your total membership attended at least one County-wide event during the past twelve months?
- +2 { 1. _____ 100 percent (all members attended at least one county-wide event)
2. _____ 90 percent (nine out of ten attended at least one other event)
3. _____ 75 to 90 percent
4. _____ 60 to 75 percent
- +1 { 5. _____ 45 to 60 percent (about half of the membership)
6. _____ 30 to 45 percent (about one third of the membership)
- 0 { 7. _____ 15 to 30 percent (about one quarter of the membership)
8. _____ Less than one quarter of the membership
- 58 How are 4-H Junior Leaders used in your 4-H Club?
- +2 { 1. _____ As project teachers for the younger members
2. _____ As assistant to the local leader without any specific part of the program assigned to them (they help out where needed)
- if { 3. _____ Responsible for club programming and special events
used { 4. _____ Responsible for recreation and games
in { 5. _____ Responsible for the training of local club officers
Spec. { 6. _____ Responsible for training members in judging and demonstrations
way { 7. _____ Responsible for planning and carrying out a community project
8. _____ Responsible for keeping the members in line and under control
9. _____ Responsible for training in records and reports
x. _____ Our club does not have a Junior Leader

- 59 The yearly planned program for our club contained information on (Please read all items before you choose. Note that by answering any particular one you answer all above it.)
- +1 { 1. ___ Time and place of each meeting only
 - 2. ___ Only the regular business and work meetings
 - +2 3. ___ All meetings necessary to fulfill the requirements of the 4-H project plus the time and place of each meeting
 - +3 4. ___ All meetings, including parties and special events, their time and place, plus the major topic or purpose of the meeting
 - +4 { 5. ___ All meetings, including parties and special events, their time and place, the major topic or purpose of the meeting, plus the members in charge of the various segments or activities of the meeting
 - 6. ___ All of the things mentioned above, plus special guests or activities for each meeting
 - 7. ___ All of the above, plus inclusion of major county events of interest to the club as a whole or to its individual members
 - 2 8. ___ We did not have a yearly planned program
- 60 How often do your 4-H Club meetings include all three phases (Business, Education, and Recreation)?
- 1. ___ Always
 - 2. ___ More often than not
 - 3. ___ About equally as often as not
 - 4. ___ Seldom
 - 5. ___ Never
 - 6. ___ I can't answer this question. Specify _____
- 61 How were the majority of the 4-H Club activities and events planned or selected for the 1960-61 club year? (How is basic planning done?)
- 1 { 1. ___ By members of the club (without leader or agent help)
 - 2. ___ By the local leader
 - 3. ___ By the County Extension Agent 4-H
 - +3 4. ___ Jointly by the members and local leaders
 - 0 5. ___ Jointly by the local leader and County Extension Agent 4-H
 - +3 6. ___ Jointly by the local leader and members
 - +3 7. ___ By committee from 4-H Club Executive committee
 - +4 8. ___ Leaders, members and parents
 - eval. 9. ___ Other Specify _____

ASSESSMENT OF 4-H CLUB MEMBERS, PARENTS, AND COMMUNITY - SECTION III

- 62 How interested would you say most of the 4-H Club members were in the Club and its program during the past project year?
- 1. ___ Very much interested
 - 2. ___ Fairly interested
 - 3. ___ Not very interested
 - 4. ___ Not at all interested
 - 5. ___ No opinion concerning their interest
- 63 How interested would you say the County Extension Agent 4-H, or other Extension Agent responsible for 4-H in your county, was in your 4-H Club Program during the past project year?
- 1. ___ Very much interested
 - 2. ___ Fairly interested
 - 3. ___ Not very interested
 - 4. ___ Not at all interested
 - 5. ___ No opinion concerning his interest

64-65 In your opinion what are the three most important factors that make a 4-H Club successful? After you have chosen the three items will you please assign a 1 to the most important of the three, a 2 to the next important, and a 3 to the last.

- +2 { 1. ____ Leader who is interested in members and their progress
 - 2. ____ Leader who, is a good teacher, inspires interest
 - +4 3. ____ Well-rounded and varied program of project work, other educational features, social and recreational activities
 - +1 4. ____ Holds regular meetings throughout the year
 - +3 5. ____ Members interested in 4-H Club work and willing to work
 - +2 6. ____ Members get along well with each other, cooperate
 - 0 7. ____ Members select their own projects
 - +3 8. ____ Members participate in management of the club
 - +2 9. ____ Parents are informed, interested and cooperative
 - +1 x. ____ Interest, cooperation, and help of 4-H Club Agent
- Other: Specify _____
- _____
- _____
- _____

66 How interested would you say most parents of the 4-H Club members were in your 4-H Club during the past twelve months?

- 1. ____ Very much interested
- 2. ____ Fairly interested
- 3. ____ Not very interested
- 4. ____ Not at all interested
- 5. ____ No opinion

67-68 In what ways have the parents of the 4-H Club members shown an interest in your 4-H Club program during the past twelve months?

- 1. ____ Driving members to meetings
 - 2. ____ Driving members to special county and area events
 - 3. ____ Assisting with the supervision of the project work
 - 4. ____ Assisting with community projects and activities
 - 5. ____ Participating in the 4-H Club meetings and activities on a regular basis
 - 6. ____ Participating on the parents advisory committee of the club
 - 7. ____ Assisting in the program planning for the club
 - 8. ____ Have not shown an interest
 - 9. ____ Other: Specify _____
- _____

69 In which way was the most interest shown? (Go back to the question above and star (*) the one in which most interest was shown.)

70 How interested would you say most of the people in the community were in the 4-H Club and its program during the past twelve months?

- 1. ____ Very much interested
- 2. ____ Fairly interested
- 3. ____ Not very interested
- 4. ____ Not at all interested
- 5. ____ No opinion

71 In what ways have the people of the community shown interest?

1. _____ By supporting the activities of the 4-H Club
2. _____ By joining in the events sponsored by the Club
3. _____ By offering to help in the operation of the 4-H Club
4. _____ By personal inquiry concerning the activities of the Club
5. _____ The people of the community have not shown any interest.
6. _____ Other: Specify _____

72 How many adults did you influence to become 4-H Leaders in the past three years?

- +1 { 1. _____ One
2. _____ Two
- +2 3. _____ Three
- +3 { 4. _____ Four
5. _____ Five
- 0 6. _____ None

73-75 To what extent have you participated in the following organized groups during the past twelve months?

| Name of Organization | Member during past 12 mon? (x) if yes | Attendance past 12 mon (x) one column only | | | Board member during past 12 months | Officer during past 12 months |
|----------------------------------|---------------------------------------|--|-------|------|------------------------------------|-------------------------------|
| | | Reg | Occas | None | | |
| Farm Bureau | | | | | | |
| Home Demon. Group | | | | | | |
| Agri. Council | | | | | | |
| 4-H Leaders Assoc. | | | | | | |
| 4-H Leaders Council | | | | | | |
| Grange | | | | | | |
| Dairymans League | | | | | | |
| MMPA | | | | | | |
| DHIA | | | | | | |
| PTA or PTSA | | | | | | |
| Church | | | | | | |
| Sunday School | | | | | | |
| Church Clubs | | | | | | |
| Service Clubs (i.e., Lions, etc) | | | | | | |
| Breed Assoc. | | | | | | |
| Marketing Assoc. | | | | | | |
| Women's Clubs | | | | | | |
| Community Assoc. | | | | | | |
| Professional Assoc. | | | | | | |
| Political Organ. | | | | | | |
| Other: | | | | | | |

Total Participation Score _____ (to be computed by researcher)

Total Board and Officership Score _____ (to be computed by researcher)

4-H LEADER ACTIVITIES - SECTION IV

- 76 When you first became a 4-H Leader what kind of help were you lead to expect you would get to aid you in doing the job of leading a 4-H Club? Answer in your own words.
-
-
-
-
- 77 When were you informed concerning the specific duties of the 4-H Club Leader?
1. ____ Before becoming a leader
 2. ____ Within two months after becoming a leader
 3. ____ From three months to one year after becoming a leader
 4. ____ Have never been informed as to the specific duties
- 78 How familiar are you with your 4-H Leaders Handbook (Michigan 4-H Club Leader's Guide)?
- +3 1. ____ I am very familiar with its contents
 - +2 2. ____ I am fairly familiar with it
 - +1 3. ____ I am not very familiar with it
 - 0 4. ____ I am not at all familiar with it
 5. ____ I do not have a Michigan 4-H Club Leader's Guide
- 79 How often do you refer to the Michigan 4-H Leader's Guide?
1. ____ I refer to it often
 2. ____ I refer to it occasionally
 3. ____ I refer to it seldom
 4. ____ I never refer to it
- 80 How often do you refer to the 4-H Project Leaders Guide for the projects you are leading?
1. ____ I refer to them often
 2. ____ I refer to them occasionally
 3. ____ I seldom refer to them
 4. ____ I never refer to them
 5. ____ I do not have a 4-H Project Leaders Guide for any projects
- 1 Do you read the National 4-H Club News?
1. ____ Yes
 2. ____ No
- 2 Do you read any other magazines that carry 4-H Club Stories (such as the Michigan Farmer, Hoard's Dairyman, etc)?
1. ____ Yes
 2. ____ No
- 3 What is the most important duty of the County Extension Agent 4-H, on the County level? (be sure to read all answers before checking one)
1. ____ Supplying information and bulletins to the 4-H Clubs
 2. ____ Organizing 4-H Clubs in the County
 3. ____ Organizing programs and events for 4-H Clubs in the County
 4. ____ Explaining 4-H Club work to you and others in the County
 5. ____ Organizing and Coordinating the 4-H Club program in the County in such a way that all who want to be 4-H'ers can be
 6. ____ Working with all youth in the County
 7. ____ Other: Specify _____

- 4 What is the most important duty of the County Extension Agent 4-H, in regard to your own Local 4-H Club?
1. _____ Providing bulletins and information about 4-H Projects
 2. _____ Keeping our Club informed about the County and State 4-H Club Program and events
 3. _____ Visiting our 4-H Club meetings
 4. _____ Helping our Club to plan its 4-H Club program
 5. _____ Seeing that I get the necessary training, from whatever source, to enable me to do a good job with the 4-H Club
 6. _____ Providing me with personal training on how to operate most effectively as a 4-H Leader
 7. _____ Other: Specify _____
-

What kind of 4-H Leader training have you had during the past twelve months? From the table below read each item and mark an (x) in every box that is appropriate to explain the extent of your training.

| | Subject of training received | Had | Did not have | How received | | | | | | By whom | | | | Was this training adequate | | |
|-------|--|-----|--------------|---------------|-----------------------|---------------------|----------------------|----------------------|----------------|--------------|------------|---------------------|--------------------------|----------------------------|-----|----|
| | | | | Attended meet | Indiv. Personal visit | Telephone or letter | Bulletin or Pamphlet | Informal small group | Extension Agt. | Project Chr. | 4-H Leader | Other Gov't. Agency | Business or Indus. Repr. | Other youth Organization | YES | NO |
| 5-8 | Project sub- ject matter | | | | | | | | | | | | | | | |
| 9-12 | How to help mem- bers with Project work | | | | | | | | | | | | | | | |
| 13-16 | Recreation for the Club | | | | | | | | | | | | | | | |
| 17-20 | How to inform and work with Parents | | | | | | | | | | | | | | | |
| 21-24 | Knowledge of ob- jectives & Philos- ophy of 4-H Club work | | | | | | | | | | | | | | | |
| 25-28 | How 4-H fits into the total Exten- sion program, County, State, and Nat'l. | | | | | | | | | | | | | | | |
| 29-32 | How to teach 4-H Members | | | | | | | | | | | | | | | |
| 33-36 | How to plan the Club Program | | | | | | | | | | | | | | | |
| 37-40 | Knowledge of Con- tests and Awards | | | | | | | | | | | | | | | |
| 41-44 | Help with Demon- strations | | | | | | | | | | | | | | | |
| 45-48 | Help with Judging | | | | | | | | | | | | | | | |
| 49-52 | Help with Project Requirements & records | | | | | | | | | | | | | | | |
| 53-56 | Understanding & working with young people | | | | | | | | | | | | | | | |
| 57-60 | How to inform & work with people in the community | | | | | | | | | | | | | | | |

- 61 In what part of your work do you need training the most?
1. _____ Subject matter as related to projects
 2. _____ Administrative duties of the 4-H Leader
 3. _____ Recreation for the local club
 4. _____ Understanding of young people
 5. _____ How to inform Parents and community about the 4-H Club
 6. _____ Planning the 4-H Club Program
 7. _____ Organizing the 4-H Club
 8. _____ Understanding how groups work & how to handle small crises that arise in person to person interaction
 9. _____ Keeping records and making project reports
 - x. _____ Other: Specify _____
-
- 62 How important is it that you receive additional training in the area selected above?
1. _____ Of the utmost importance
 2. _____ Very important
 3. _____ Not very important
 4. _____ Not at all important
 5. _____ Don't have an opinion
- 63 Taking all things into account what do you consider the most important job of the 4-H Club Leader? (check one)
1. _____ Helping members with their projects - selecting, developing and completing
 2. _____ Interesting members in 4-H Club work
 3. _____ Advancing 4-H Club work in the community
 4. _____ Teaching young people practical skills
 5. _____ Developing desirable character traits in young people
 6. _____ Supervising constructive activity for young people in the community
 7. _____ Keeping the 4-H Club functioning smoothly
 8. _____ Assisting members in planning and developing 4-H Club activities
 9. _____ No opinion
 - x. _____ Others: Specify _____
-
- 64 What are the criteria you personally use when assessing the success of your work as a 4-H Club Leader? (check one)
- 2 { 1. _____ Number of blue ribbon winners in your club
 2. _____ Number of County, State, and National Awards won by your members
 - +1 3. _____ Percent of your members completing their projects
 - +2 4. _____ Progress made by each member in becoming skilled in their chosen project field
 - +3 { 5. _____ Success you had in having each member be satisfied with their years work
 6. _____ The value of 4-H Club work to the community and its future
 7. _____ The overall change in youth development as measured by attention to each individual member
 8. _____ Other: Specify _____
-

- 65 4-H Club Leaders should evaluate individual member progress by:
- +1 { 1. ____ Primarily on the excellence of the article made or project completed
 - 2. ____ Primarily on the basis of the lesson learned in project completion
 - +3 3. ____ Primarily on the basis of that individual member's over-all progress during the project year
 - +4 4. ____ Observation of the member's participation in all club activities, visitation to the member's home, examination of the project work
 - 2 5. ____ Relying on others' judgements
 - 6. ____ Other: Specify_____
-
- 66 How often do you visit the Cooperative Extension Service Office?
- 1. ____ Less than four times per year
 - 2. ____ Four to six times per year
 - 3. ____ Six to eight times per year
 - 4. ____ Eight to ten times per year
 - 5. ____ Ten to twelve times per year
 - 6. ____ Twelve or more times per year
 - 7. ____ I have never visited the Cooperative Extension Office
- 67 How often do you telephone the Cooperative Extension Service Office? (on the average)
- 1. ____ Less than six times per year
 - 2. ____ Six to ten times per year
 - 3. ____ Eleven to fifteen times per year
 - 4. ____ Sixteen to twenty times per year
 - 5. ____ Twenty to twenty-five times per year
 - 6. ____ More than twenty-five times per year
 - 7. ____ I never telephone the Cooperative Extension Service Office
- Reason for never calling_____
-
- 68 How often do you telephone other leaders concerning some part of the 4-H Club program of your club or county?
- 1. ____ Less than six times per year
 - 2. ____ Six to ten times per year
 - 3. ____ Eleven to fifteen times per year
 - 4. ____ Sixteen to twenty times per year
 - 5. ____ Twenty to twenty-five times per year
 - 6. ____ More than twenty-five times per year
 - 7. ____ I never telephone other leaders
- 69 How often do you see your County Extension Agent (responsible for 4-H in your county). Base your answer on the past twelve months and include ALL contacts with this person or persons either at some 4-H function or elsewhere in the community.
- 1. ____ Less than two times per year
 - 2. ____ Two to three times per year
 - 3. ____ Four to five times per year
 - 4. ____ Six to seven times per year
 - 5. ____ Eight to nine times per year
 - 6. ____ Ten to eleven times per year
 - 7. ____ Twelve to thirteen times per year
 - 8. ____ Fourteen to fifteen times per year
 - 9. ____ More than 15 times per year

When you have a question concerning some problem in operation of your 4-H Club, whom do you usually call on for help? (please consider each item and elect the proper response, including "don't call on anyone" and/or "don't have the problem")

| Type of Information Needed | Who I call on | | | | | | | | | |
|--|---------------------|---------------------|-----------------------|---------------------|---------------------|--------------------|--------------------|-----------------------------|------------------------|--------|
| | Extension Agent 4-H | Other Ext. Personal | Other 4-H local ldrs. | Other Gov. Agencies | Business Indus Repr | Friend Or Neighbor | Parents of 4-H'ers | I usually don't call anyone | Don't have the problem | Other: |
| 70 On project Requirements | | | | | | | | | | |
| 71 Subject matter for projects | | | | | | | | | | |
| 72 Info on Ach. Days & Exhibits | | | | | | | | | | |
| 73 Help in arranging tours | | | | | | | | | | |
| 74 Suggestions on Club Activities | | | | | | | | | | |
| 75 Tips on how to handle personal relations problems | | | | | | | | | | |
| 76 Tips on how to involve parents | | | | | | | | | | |
| 77 Information on where to get needed materials | | | | | | | | | | |
| 78 Info on Awards and Contests | | | | | | | | | | |
| 79 Other | | | | | | | | | | |

80 What would you say was the most important reason for your continuing as a 4-H Club Leader? (check one)

1. ____ Enjoy working with young people
2. ____ See 4-H as a worthwhile educational program for young people in the community
3. ____ My own children are benefitting from the 4-H Club program
4. ____ No other leaders available in the community
5. ____ Desire to keep in contact with the 4-H Club program
6. ____ Leader considers job a worthwhile and useful experience
7. ____ Members desire that leader continues
8. ____ No opinion
9. ____ Other: Specify _____

1 How did you become a leader in your 4-H Club? (check one)

1. ____ Selected by the club members
2. ____ Selected by the sponsoring organization of the Club
3. ____ Selected by the parents of club members
4. ____ Selected by the 4-H Club Agent (County Extension Agent)
5. ____ Volunteered to lead the Club
6. ____ Don't know how I was selected
7. ____ Asked by former leader of the club
8. ____ Other: Specify _____

- 2 As you look back on your experiences as a 4-H Club leader how do you feel about the recognition you have received for your efforts?
1. ____ Have received hardly any recognition
 2. ____ Have not received quite enough recognition
 3. ____ Have received the right amount of recognition
 4. ____ Not interested in receiving recognition
- 3 What kind of recognition gives you the most satisfaction? (check one)
1. ____ Leader recognition banquets
 2. ____ Spontaneous recognition by members, parents and community
 3. ____ Recognition from the 4-H Club Agent or other County Extension worker that I am doing a good job
 4. ____ Publicity on radio and in newspapers
 5. ____ Being selected to go on tours and trips
 6. ____ Being elected to county and state Councils or Leader Associations
 7. ____ Other: Specify _____
- 4 How many hours do you spend per month (on the average) as a leader on your 4-H Club duties (include: attendance at meetings, training meetings, tours, Ldr. Assoc's, and the like)
Number of hours _____
- 5 How do you feel about giving this much time to 4-H?

ADDITIONAL INFORMATION - SECTION V

- 6 How much of the actual work on a member's project do you think the parents are justified in doing?
1. ____ As much as parent sees fit to do
 2. ____ Enough to encourage the youngster
 3. ____ Whatever the member is too small or young to be able to do
 4. ____ None of the project work
- 7 How much of the actual work on a member's project do you think a LEADER is justified in doing?
1. ____ Enough to encourage the member
 2. ____ Enough so member will know how to proceed by himself
 3. ____ Enough to maintain high standards of workmanship
 4. ____ None of the actual work of the project
- 8 Which of these qualities do you think most important for the 4-H Leader to have: (check only one)
1. ____ patience
 2. ____ understanding of youth
 3. ____ good judgement
 4. ____ democratic attitude
 5. ____ fairness
 6. ____ skill in teaching
 7. ____ pleasant appearance
 8. ____ ability to speak well
 9. ____ poise in groups
 - x. ____ intelligence
 - y. ____ kindness

- 9 Being a 4-H leader has special relation to which of the following: (check only one)
1. ____ liking of personal publicity
 2. ____ being a community leader
 3. ____ being well liked by children
 4. ____ wanting to be with the right people
 5. ____ the kind of life one leads
 6. ____ being well thought of by neighbors
- 10 How are people in the community encouraged to take interest in your 4-H Club? (check only one)
1. ____ They were invited to our 4-H Club meetings
 2. ____ They were asked for donations toward our community activities
 3. ____ Members spoke to community civic groups about our 4-H Club
 4. ____ Non-parents and non-members were invited to join with us in our community activities and recreation events
 5. ____ Our club consistently placed newspaper articles concerning our activities
 6. ____ People in the community were encouraged to join our 4-H Club and/or to start a 4-H Club of their own
 7. ____ The people in the community were not encouraged to take interest in 4-H
- 11 What part do you personally expect Parents to play in the 4-H Club program? (check only one)
- 0 { 1. ____ Drive members to meetings
 2. ____ Drive to special events
 - +2 { 3. ____ Assist in supervising project work
 4. ____ Assist with community projects and activities
 - +4 { 5. ____ Participate in the 4-H Club meetings and activities on a regular basis
 6. ____ Participate in the Parents Advisory committee of the club
 7. ____ Assist in the program planning of the club
 - 2 8. ____ Not to come to the 4-H Club meeting, except by special invitation of the club members
 - +1 9. ____ Provide the materials for their own children in the 4-H Club and see that the member does his homework assigned
 - 3 x. ____ Do not encourage parents to help in the club in any way
- 12 4-H Club leaders should not attempt to work with youngsters who: (check one)
1. ____ Cannot win blue ribbons on their project work
 2. ____ Do not have interested parents (parents interested in what the child is doing in 4-H)
 3. ____ Cannot complete a project in the original time allowed
 4. ____ Cannot afford to buy the project materials necessary
 5. ____ Would be a bad influence on the rest of the members in the club
 6. ____ Feel they want to do something different than the 4-H Project Requirement Book outlines
 7. ____ Are below average intelligence
 8. ____ Other: Specify _____
- 13 In helping the member to decide what project to do for any given year, the 4-H Club leader should: (check only one)
- 1 1. ____ Follow the 4-H Requirement Book to the letter
 - +3 2. ____ Fit the member to the project by taking into account the background, ability, interests and family situation of the member
 - 0 3. ____ Let the member choose and decide for themselves
 - +1 4. ____ Leave the selection of a project up to the member and his parents
 - +3 5. ____ Assess each member on their degree of knowledge concerning the project area they have chosen and assign project work accordingly
 - 1 6. ____ Let the group select one project which everyone in the club will enroll in
 7. ____ Other: Specify _____

- 14 I praise my 4-H Club members for their progress or achievement (check one)
- 1 1. ____ Only when they have been publicly honored by an award
 - 2 2. ____ Only at local or county 4-H achievement programs
 - 0 3. ____ Make it a habit not to praise individual members, but to always praise the club
 - +2 4. ____ When they have made substantial achievement in their work
 - +3 { 5. ____ When they have accomplished even the smallest hurdle
 - 6. ____ When they have satisfactorily completed whatever the task assigned them
 - 7. ____ Use praise to encourage members, sometimes even when they don't deserve it
- 15 How do you train 4-H Club officers for their role as officers in the local 4-H Club? (check one)
- 1. ____ We have a policy that only older members can be officers and the younger members learn by observation before they are old enough to be officers
 - 2. ____ Provide bulletins on parliamentary procedure and order of business
 - 3. ____ Have special executive meetings for training and coordination of the officers responsibilities
 - 4. ____ Train them as we go along in the actual meetings
 - 5. ____ Other: Specify _____
-
- 16 How do you participate in the Business meeting of your 4-H Club?
-
-
- 17 Have you ever expelled a club member from a meeting?
- 1. ____ Yes
 - 2. ____ No
- How many have been expelled? _____ Reasons: _____
-
-
- 18 In general where would you say is the best place to have meetings of the Club? (check one)
- 1. ____ Your home (leader's)
 - 2. ____ Members homes
 - 3. ____ School building
 - 4. ____ Leaders' and members' homes
 - 5. ____ Members homes and school building
 - 6. ____ Grange Hall
 - 7. ____ Community or civic center
 - 8. ____ Other: Specify _____
-
-
- 19 The most important goal I strive for as a 4-H Leader is? (check one)
- +3 { 1. ____ Instilling a sense of citizenship and fairplay in the members
 - 2. ____ Seeing that each member has the most meaningful experience possible
 - +1 { 3. ____ Teaching a skill to every member in the club
 - 4. ____ Seeing that every member completes every project they undertake in the allotted time for that project
 - 0 5. ____ Having our club be the top club in the county in every event we enter
 - 1 6. ____ Getting the members through to achievement day and the Fair
 - 7. ____ Other: Specify _____
-
-

20-30 How many times were each of the following used at your club meetings during the past twelve months? (consider every item, using "0" when you have not used the item during the past 12 months)

1. ___ Demonstrations by you
2. ___ Slides
3. ___ Tours
4. ___ Talks by a guest
5. ___ Charts
6. ___ Photographs
7. ___ Samples shown (such as commercial items available to help in your project work)
8. ___ Demonstrations by another Adult (Non-leader)
9. ___ Movies
- x. ___ Flannelboard presentations
- y. ___ Blackboard illustrations

31 How many of your members wear a 4-H emblem such as a pin, ring, jacket, T - shirt, etc?

1. ___ All of our members
2. ___ Most of our members
3. ___ Not many of our members
4. ___ Very few of our members
5. ___ None of our members

31 Our 4-H Club members wear their 4-H pins, rings, jackets, etc?

1. ___ Only to 4-H Events
2. ___ Most every where they go
3. ___ Only to events where they can be sure that others know what 4-H is
4. ___ They do not wear 4-H Emblems anywhere they go, including to 4-H events

32 How many of your members have "4-H Club member Lives here" signs or otherwise mark their homes as the home of 4-H'ers?

1. ___ All of our members
2. ___ Most of our members
3. ___ About half of our members
4. ___ Very few of our members
5. ___ None of our members

33 What do you feel are the most important jobs for a leader to do at a 4-H Club meeting? In the left hand column, write a "1" by the job you feel most important; a "2" by the one next most important and so on until you have rated all ten of the items

Most Imp.

| | | |
|-------|-------|--|
| _____ | _____ | Disciplining club members |
| _____ | _____ | Leading games |
| _____ | _____ | Overseeing business meeting |
| _____ | _____ | Reading announcements |
| _____ | _____ | Teaching members to lead singing and games |
| _____ | _____ | Serving refreshments |
| _____ | _____ | Helping and advising members on projects |
| _____ | _____ | Leading group singing |
| _____ | _____ | Giving demonstrations |
| _____ | _____ | Getting members ready for contests |

34 In the question above, in the right hand column, place a double plus sign (++) by those jobs which take most of your time at club meetings; place a plus sign (+) by those jobs that take less time; and, leave unmarked any job that you do not do.

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