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A discriminant analysis of urban attitudes toward consumer cooperatives

John Harp
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A DISCRIMINANT ANALYSIS OF URBAN ATTITUDES TOWARD CONSUMER COOPERATIVES

by

John Harp

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of The Requirements for the Degree of DOCTOR OF PHILOSOPHY

Major Subject: Rural Sociology

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

Head of Major Department

Signature was redacted for privacy.

Dean of Graduate College

Iowa State College

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INTRODUCTION

The present dissertation is part of a larger study the purposes of which were to discover the attitudes of the urban residents of Superior, Wisconsin, toward consumer cooperatives, to discover the social and personal factors related to these attitudes and to point out their significance in programs of organization and education in the field of consumer marketing.

The problem of measuring attitudes toward cooperatives has long been an area of study for Rural Sociologists. For example, as early as 1926, Zimmerman and Black addressed themselves to the problem of studying farmers attitudes toward marketing institutions (100). More recently, in 1943, John conducted research designed to establish factors influencing farmers' attitudes toward a cooperative marketing organization (51). One observes that rural sociologists were among the first, along with social psychologists to conduct research utilizing the concept of attitude; a concept which first gained recognition through the works of the psychoanalysts, especially Freud, Jung, and Adler. It was introduced into social psychology by Thomas and Znaniecki (90), and was regarded by some as the "keystone in the edifice of American social psychology (3)."

Many sociologists and social psychologists were of the opinion that with this concept they had discovered something basic in the study of human social behavior. Attitudes were called the basic units of personality (60). Since the early nineteen twenties many studies of
attitudes have been made, and numerous attitude tests and measuring
devices have been developed (26) (40) (59) (91).

A theoretical contribution

With the realization by social psychologists that the human mind
was not a passive responding agent, at the mercy of external stimuli,
the study of attitudes acquired theoretical importance. This earlier
realization had underlain the use of such terms as "predisposition",
"mental set" and "apperceptive mass" (6) (20) (83). The concept of
attitude gradually came to be used as an overall term referring to all
manner of predisposing tendencies, which the reacting person brings to
a situation.

The concept of attitude acquired importance therefore, as a means
of taking into account the directive and dynamic phases of the human
mind. Social psychologists have stated that the mind is not an auto­
matic reflection of its environment, but an active agent performing an
interpretative function (89). An eclectic definition of attitude summing
up these various factors has been offered by Allport.

An attitude is a mental and neural state of readiness,
organized through experience, exerting a directive or
dynamic influence upon the individuals' response to all
objects and situations with which it is related (4).

In the connotation of a "state of readiness" expressed by Allport, one
observes the implication that attitudes are separate from behavior and
are more general than the specific overt expressions which flow from
them. Hence, a distinction came to be made between attitudes and
opinions. The latter are taken to mean overt symbols from which attributes can be inferred. Zimmerman failed to recognize this distinction in his early research with Black, for he defined an attitude as, "an opinion or point of view on a subject" (100).

One concludes therefore, that the concept of attitude represented an important change in the theory of social psychology of a few decades ago. Murchison has described this change as moving from a preoccupation with instinct theory and the heredity-environment controversy to a recognition of the fact that human beings do not respond automatically and in stereotyped ways to external stimuli, but that their responses are always relative to their ideas, perceptions and dispositions, carried over from past experiences (3). In brief then, an individual's attitude toward something is his predisposition to perform, perceive, think and feel in relation to it (98).

Attitudes in turn are reflected in opinions, which are specific judgments on particular issues. Social psychologists have commented upon the sequence from value to attitude to opinion, or from a broad mental set to a narrower one and finally to a specific expression of it (53).

For purposes of the present dissertation, attitudes are defined as predispositions to act, or phrased more precisely, a predisposition on the part of the urban residents of Superior, Wisconsin, to act toward consumer cooperatives. Following the earlier research of Zimmerman and Black, and John (100) (50), the present study was designed to examine the generality and specificity of attitudes toward a particular marketing
institution, and to construct a model which would enable one to predict, in a probability sense, the degree to which any given individual is favorably disposed toward joining (96). In addition to determining the preceptual and attitudinal variables which are related to attitudes, the present study is also concerned with the larger aspects of organizational structure as they relate to the specific attitude under study.\

**A pragmatic contribution**

The importance of attitude research to business and industrial organizations has been well documented by Remmers (74). Business organizations have been applying the techniques of attitude research to many of their problems for several decades (24) (52). The field of advertising probably best exemplifies the most extensive application of social psychological techniques to business. In recent years however, the application of social psychological techniques in business has gone far beyond the limited sphere of copy research. Market research analysts have offered their services to business to help sell more goods to more customers. In addition, sociologists employed by academic institutions have made their research knowledge available to industry through consulting arrangements, and the acceptance of research grants (10).

Research has been undertaken within the sub-divisions of product development, advertising copy, public relations, buying behavior,\

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*For a discussion of the need for social organization variables in attitude research see Theory and Hypotheses section.*
consumer panels, dealer surveys, readership of magazines, and radio and television research.*

Within the competitive system, it is imperative that the firm knows how the public perceives its products and the company itself. The growth and development of cooperative associations in the United States warrants their study as an integral part of the national economy (30).**

It has been stated by Drury who is not unsympathetic toward consumers' cooperatives that:

A recognized need must exist before the cooperative form of organization can be successfully applied to a solution of a consumer problem. . . . Even though the need is real, it is also essential that it be recognized by the rank and file of the membership. . . (so that) they will fully accept the responsibility of ownership which is fundamental to cooperative success. Without an aroused self interest few people will bother to study cooperative principles and through education prepare themselves to do their part in guiding their organization along sound lines (30).

Unfortunately as it may be, it still is true that the masses in the United States show a lack of interest in themselves as consumers. For having such an important part to play in our economic system, it must be admitted frankly that the consumer lacks a great deal of information

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*See Remmers (74) for an extensive bibliography of market research studies.

**For the year 1953-54 there were 10,058 cooperatives of various kinds in the United States. The gross dollar volume of these cooperatives listed with the Farmer Cooperative Service in 1953-54 was 3,257, representing 32.7% of the total number. The state of Wisconsin is the second largest in terms of number of cooperative associations. In 1954 there were 843 associations in Wisconsin, which constituted 8.4 per cent of the total number of the nation. These associations had a total of 412,094 which represents 5.4 per cent of the total membership for the nation. Wisconsin cooperative members purchased 596 million dollars worth of goods and services from their cooperatives in 1954.
as to the quality, price, and sometimes even the quantity of goods in
the market. As one student of the subject writes, "He (the consumer) is
today a more prolific but less intelligent buyer than at any other time
in the history of exchange economy" (97).

Perhaps this lethargy may be explained by the higher level of
income in this country as compared with foreign nations. One writer has
well referred to cooperation as an "attitude of mind", leading to "a
willingness to work for the common good without hope of individual
profit." Such an attitude of mind would seem quite foreign to American
tradition.

Even among those who join cooperatives, there exists the problem of
favorableness of attitudes and differential participation. Those
staunch supporters of consumers' cooperation Sidney and Beatrice Webb,
have written that, "the cooperative movement finds difficulty in making
the average citizens take a real interest and exercise an active part,"
and that even in England where the movement is strong, "95 per cent of
the members do not even take the trouble to vote in the election of its
committee of management" (95).

In addition to the continuous problems of attitudes and participa-
tion, present day cooperatives are confronted with competition that
is more powerful and somewhat different in character, from that of past
years. Consumer cooperatives are facing directly into a powerful
phalanx of massive buying elements: chain stores, super markets, retail-
ers' buying groups. These units have followed the movement of population
into the larger cities, and consumer cooperatives are following suit (72).
The question immediately arises: Will the urban environment prove conducive to cooperative growth and development? There is some suggestion that the cosmopolitan nature of urban populations has retarded the growth of consumer cooperatives (72).

It is therefore, extremely relevant to their continued growth and development, that consumer cooperatives secure information as to the attitudes of the general public toward their unique type of organizational structure. This uniqueness, has led in the past to many misconceptions and ambiguous interpretations of the organization's role in a competitive society. A recognition of this problem by cooperative organizations is evidenced by the support they have afforded the present study.

The major purposes of the present dissertation are as follows:

To determine the personal, social, and economic characteristics of urban residents which are related to their attitudes toward consumer cooperatives.

To predict attitude toward consumer cooperatives utilizing the characteristics cited above.

To determine the degree to which membership in various social groups is related to predisposition to join and participate in consumer cooperatives.
The review of literature pertinent to a particular study serves a variety of purposes. It helps delineate the problem, provides a theoretical framework from which to derive hypotheses and interpret findings, and suggests measures and methods of testing the derived hypotheses.

Since the review of literature is related to the entire study being described, it has been integrated into the entire dissertation rather than isolated into a single chapter. The reader will find related literature reviewed as the theoretical framework of the dissertation is established, as the hypotheses are derived, as the methods and procedures are developed, and as the findings are interpreted. It is felt by the writer that the review of literature will in this way serve its purposes most effectively.
Description of the study

The data used in the present dissertation are part of the data collected as Iowa Agricultural Experiment Station Project 1175, Professor J. M. Bohlen leader in charge. The major purpose of the project is stated by Bohlen as: "To determine the attitudes of the residents of Superior, Wisconsin, toward consumer cooperatives, to discover social and personal factors related to these attitudes, and to point out their significance in programs of organization and education in consumer marketing."

The project was made possible by a grant from Consumers Cooperatives Incorporated, Superior, Wisconsin. The aforementioned group was interested in determining the degree of favorableness of attitudes toward consumer cooperatives in Superior, Wisconsin, as required data pending the establishment of a cooperative supermarket in Superior, Wisconsin.

Description of the population

The city of Superior, Wisconsin, is situated on the extreme western shore of Lake Superior. It is a central shipping point for the region, and as a consequence many of its residents are employed in the ore docks, railways and other transportation industries.

The following table indicates the number and proportion of the total
labor force in the major divisions of employment as defined by the United States Census.

Table 1. Employment by industry group for Superior, Wisconsin, 1950

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Number employed</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>52</td>
<td>.39</td>
</tr>
<tr>
<td>Forestry, fisheries, mining</td>
<td>20</td>
<td>.15</td>
</tr>
<tr>
<td>Construction</td>
<td>690</td>
<td>.52</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1593</td>
<td>12.03</td>
</tr>
<tr>
<td>Transportation</td>
<td>3879</td>
<td>29.28</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>108</td>
<td>.86</td>
</tr>
<tr>
<td>Utilities and sanitary service</td>
<td>177</td>
<td>1.34</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>748</td>
<td>5.65</td>
</tr>
<tr>
<td>Retail trade</td>
<td>2476</td>
<td>18.69</td>
</tr>
<tr>
<td>Finance, insurance, real estate</td>
<td>295</td>
<td>2.22</td>
</tr>
<tr>
<td>Personal services</td>
<td>1016</td>
<td>7.67</td>
</tr>
<tr>
<td>Entertainment, recreational services</td>
<td>161</td>
<td>1.22</td>
</tr>
<tr>
<td>Medical and health service</td>
<td>514</td>
<td>3.88</td>
</tr>
<tr>
<td>Educational</td>
<td>611</td>
<td>4.61</td>
</tr>
<tr>
<td>Other professional</td>
<td>256</td>
<td>1.93</td>
</tr>
<tr>
<td>Public administration</td>
<td>556</td>
<td>4.20</td>
</tr>
<tr>
<td>Not reported</td>
<td>96</td>
<td>.72</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13,247</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 shows that the transportation industries employ 29 per cent of the total labor force of Superior. The classification defined as retail trade employs 18 per cent of the population, while manufacturing is the next largest with 12 per cent of the total labor force employed.

The median family income for the population as reported in the 1950 census was $2946 (94). The income distribution for the population is
shown in Table 2 below.

Table 2. Distribution of family incomes, Superior, Wisconsin, 1950

<table>
<thead>
<tr>
<th>Income group</th>
<th>Number</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 999</td>
<td>2340</td>
<td>18.5</td>
</tr>
<tr>
<td>1000 - 1999</td>
<td>1525</td>
<td>12.1</td>
</tr>
<tr>
<td>2000 - 2999</td>
<td>2310</td>
<td>18.3</td>
</tr>
<tr>
<td>3000 - 3999</td>
<td>2910</td>
<td>23.1</td>
</tr>
<tr>
<td>4000 - 4999</td>
<td>1445</td>
<td>11.5</td>
</tr>
<tr>
<td>5000 - 5999</td>
<td>720</td>
<td>5.7</td>
</tr>
<tr>
<td>+ $6000 and over</td>
<td>1370</td>
<td>10.8</td>
</tr>
</tbody>
</table>

Census data on years of formal education completed by the population indicate that 2 per cent had received no formal education, 40.5 per cent had completed from one to eight years of schooling, 41.3 per cent had completed nine to twelve years, and 14.4 per cent had received some college training. The preceding percentages were for that portion of the population over 25 years of age (94).

Development of the Schedule

Following a review of the literature dealing with past researches on attitudes toward cooperatives, a schedule was prepared by the research team. The major dependent variables were defined as attitude toward joining and participating in a consumer cooperative.

A Likert type scale, measuring attitudes toward consumer cooperatives had been developed by the author in cooperation with
The aforementioned scale was previously used, after considerable revision, performed with the assistance of Professors Wert, Bohlen and Hamblin, in a contrived experiment completed at Iowa State College during the Spring of 1956. The experiment was designed to measure changes in students' attitudes toward cooperatives following subjection to an anti-cooperative propaganda film.

In addition to the Likert type scale used in the present study, a Coombs scale measuring attitudes toward consumer cooperatives was also developed by the author and included in the schedule. The rationale for having two scales designed to measure the same dimension is found in the tests of reliability performed on the scales. **

The satisfaction and understanding scales used in the present study were the result of revisions of scales previously used in three cooperative research studies at Iowa State College (8) (15) (42). With the exception of the scale designed to measure the dependent variable, attitude toward consumer cooperatives, none had been subjected to standard tests of reliability and validity. **

**Sampling Method**

The sample was drawn by the Iowa State College Statistical Laboratory, Survey Service Section. A systematic random sample of

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**For tests of reliability and validity see Construction of Indices Section.
the residents of Superior, Wisconsin was drawn from the city directory. The total sample size consisted of 430 residents.

A refusal rate of less than 5 per cent was reported by the interviewers. A substitution scheme which consisted of overdrawing the sample and substituting in the order drawn was effected upon encountering refusals.

Two interviewers, both rural sociology students in the Department of Economics and Sociology at Iowa State College, completed the task of interviewing the 430 respondents in the sample.

Analysis of data

The data were coded and punched on IBM cards to facilitate the analysis. As the analysis proceeded, additional decks were punched by the author. For example, the item analysis of scales used in the study, required an additional deck.

The analysis was performed using the equipment of the Iowa State College Statistical Laboratory. The major type of analysis employed in the study is known as discriminant analysis. Wert, Neidt and Ahmann have stated that, "... it is frequently desirable to predict a dichotomy from several numerical variables" (96). Whereas a coefficient of multiple correlation can be obtained from a multiple regression equation, a multiple biserial R can be obtained from a discriminant equation in a similar fashion.

The discriminant function was originally developed by Fisher,
and "... has received considerable use in ascertaining appropriate weights for a series of variables yielding maximum separation in two groups, each of which is assumed to be normally distributed" (96).

Rulon has stated that in order to answer the question, "How can I analyze these data so I may determine the group an individual is most like?", discriminate analysis may be utilized as one appropriate technique (77). He continued by describing the method as follows:

The set of \( n \) measurements for each individual may be represented by a plane in \( n \) dimensional space defined by the \( n \) variables. If we used a different color in plotting the points of the individuals in each of the different groups, our problem would become one of seeing whether in the \( n \) dimensional space the red points tend to be segregated from the blue ones, whether they tended to be segregated from the yellow ones, whether the blue ones tended to be segregated from the yellow ones and so on (77).

The discriminant function then becomes, the linear function of the \( x \) variables which maximizes the ratio of the between means of groups sum of square to within means of groups sum of squares.

The purposes of discriminant analysis stated in simple terms are to find out whether discrimination among groups is possible or not and then to reduce the size of the space in which it is necessary to think about regions of classification. Since, in the present analysis we are dealing with only two groups, there is no more than one discriminant function (96) (77).

In conclusion, it should be pointed out that discriminant analysis is not being offered as a substitute for regression analysis. As Rulon has indicated, "both types of analyses have their bit to offer for two different types of problems" (77).
The method of theorizing to be utilized in the present dissertation is referred to as conceptual variable analysis. Several other sociological theses have adopted the same method (42) (68) (75).

The principle units of conceptual variable analysis are as follows:

1. A concept is defined as an entity or dimension for which meaning is postulated in primitive terms (41). For example, relative deprivation and norm disparity are two concepts used in the present dissertation.

The choice of concepts guiding the collection and analysis of data is, of course, crucial to empirical inquiry. For to state an important truism, if concepts are selected such that no relationships between them obtain, the research will be sterile, no matter how meticulous the subsequent observations and inferences. The importance of this truism lies in its implication that truly trial-and-error procedures in empirical inquiry are likely to be comparatively unfruitful, since the number of variables which are not significantly connected may be infinite. Merton comments on the clarification of concepts as follows:

It is at times held that theory is comprised of concepts, an assertion which being incomplete, is neither true nor false, but vague. . . . It may be conjectured that in so far as any antithetical bias occurs among sociologists, it is in protest against those who identify theory with clarification of definitions, who mistakenly take the part for the whole of theoretic analysis. It is only when such concepts are interrelated in the form of a scheme, that a theory begins to emerge. Concepts, then, constitute the definitions (or prescriptions) of what is to be observed; they are the variables between which empirical relationships are to be sought. When propositions stating such relationships are logically interrelated, a theory has been instituted (64).
Schumpeter has also commented on definition of concepts: "If we are to speak about price levels and to devise methods of measuring them, we must know what a price level is. If we are to observe demand, we must have a precise concept of its elasticity" (81).

2. A general hypothesis is defined as a proposition stating the relationship between two conceptual variables. The following is an example of a general hypothesis:

   The degree of structural cohesion varies the degree of relative deprivation.

3. An operation, is the empirical referrent of a concept — it is either an empirical measurement or index or an empirical example of a concept. An example of an operation used in the present study is the satisfaction scale, as a negative index of relative deprivation.

4. Operations are involved in empirical hypotheses and in the statement of epistemic correlations. Empirical hypotheses state the relationship between two operations. An example from the present study would be:

   The attitude toward cooperatives scale varies with the satisfaction scale.

5. Epistemic correlations are propositions which link concepts to operations. Northrop has referred to this type of proposition as an epistemic correlation because it correlates a theoretical concept with an operation (70). An example of an epistemic correlation taken from the present study is: The satisfaction scale is a negative measure of relative deprivation.

   The foregoing are the units involved in conceptual variable
analysis discredits the notion that, "social theory is not an active and vital deviation within the general field of sociology, but rather a king of Hall of Fame, a sociological olympus, in which we enshrine the illustrious members of our profession" (1). Social theory is rather, a special kind of inquiry which yields cumulative achievements and proceeds from a basis of common interest. It is an integral part of the fund of knowledge which we are accumulating and, therefore, a continuously vital and growing occupation to which the creative minds of each generation may be expected to contribute (1).

The very functional characteristic of conceptual variable analysis creates an appeal for the research analyst. When concepts are defined explicitly, and indices developed which have some claims of reliability and validity, the process of theory building is an integrated one, which permits the testing of general level theoretical relationships stated in the general hypotheses.

Theoretical formulations of this type may be evaluated by the use of criteria of completeness, parsimony, integration and prediction (41). An important attribute of conceptual variable analysis as advanced by Hamblin, is the general level at which the conceptual variables are defined, thus permitting the application of a given theory to a number of diverse social systems. For example, the relationship between the concepts of cohesion and deprivation as stated in the form of a general hypothesis, has been tested, using markedly different indices, to explain the participation of members in consumer cooperatives and the phenomenon of rural migration from rural counties (42) (68). It would appear that these conceptual variables are at a sufficiently general
level of theory to permit the use number of operations, and to reconcile
in a theoretical sense, social phenomena which on the empirical level
appear markedly different. Merton has described the attribute discussed
above as follows:

... intermediate to the minor working hypotheses evolved in
abundance during the day-by-day routines of research, and the
all-inclusive speculations comprising a master conceptual
scheme from which it is hoped to derive a very large number
of empirically observed uniformities of social behavior (64).

The essential attribute discussed above notwithstanding, the em­
barking on this method of theorizing is soon confronted with some per­
plexing problems. Not the least of which involves the selection of
conceptual variables. Blumer has made reference to this aspect of
conceptual variable analysis as a "current shortcoming", and comments
further on the "... chaotic condition that prevails in the selection
of variables" (13). The functional nature of variable analysis previously
discussed, is viewed by Blumer as a contributing factor to the laxity
displayed by sociologists in the choice of variables. Blumer states that,
"The scheme of variable analysis has become for too many just a handy
tool to be put to immediate use" (12).

Unfortunately Blumer does not leave the reader with any explicit
criteria to be utilized in the selection of variables. He suggests only
that greater attention be paid to a prior theoretical formulation and an
understanding of the empirical problem.

Rogers has established five criteria for defining conceptual
variables, which are derived he concluded from Merton's five essential
characteristics of sociological theory (64) (75). An examination of
Rogers criteria will serve to indicate the nature of the problems which are indigenous to the use of conceptual variable analysis.

The first criterion stated by Rogers has reference to the dynamic nature of variables. The term dynamic as used by Rogers, is not synonymous with Blumer's "quantitative" nature of variables, but is defined as that characteristic of variables which enables them to be altered or changed by the change agent. Static concepts such as age, are eliminated by the Rogers' criterion. One must readily concede that the concept of age in itself may not be too meaningful, but the relationships established between the dependent variable and age groups may, and indeed have been, explained in terms of significant *ex post facto* theories (43).

The inclusion of only those variables which may be "manipulated" by change agents is a reflection as Lionburger has described it of "...an increased need for improved methods of manipulating people, systems, and things to promote special ends" (61). One would suggest that a recognition of this need should not dictate the nature of conceptual variables used in sociological theory formation. In addition the so called "static" variables may in themselves contribute significant empirical findings which may assume increased importance even for "change agents" when subjected to theoretical interpretation.

The second criterion cited by Rogers demands a "high" relationship with the dependent variable. The importance of this statement if found in the logic of the general hypothesis or more specifically in the hypothesized relationship between the conceptual variables. A failure to find a statistically significant relationship is not sufficient grounds
for eliminating a conceptual variable from the theory. The next stage would seem to be a careful scrutiny of indices, sampling techniques and the overall experimental design of the research. The statistical significance of the relationships may be likened to the "necessary" conditions involved in economic theory of the firm, but they are not "sufficient" conditions. Merton concluded that "By providing a rationally, the theory introduces a ground for prediction which is more secure than mere empirical extrapolation from previously observed trends" (64).

The criterion that all concepts should be sociological in nature is a commendable one. Although the role of psychological variables in sociological research is an ambiguous one, they are still much in evidence. It would seem that we are not yet ready for the Parsonian theory of action (71).

Criterion number five is stated as a limitation by Rogers, in that only conceptual variables were selected, for which indices were available. The idea inferred by Rogers is the construction of the theoretical model prior to the development of indices. The question becomes one of inductive versus deductive reasoning.

The limitation described by Rogers has been ably discussed by Pierce and Merton. The following quotes will suffice to indicate their views on post factum construction (73) (64).

It is then a logical inadequacy of the post factum construction which lead Pierce to observe:
It is of the essence of induction that the consequence of the theory should be drawn first in regard to the unknown, or virtually unknown result of the experiment; and that this should virtually be only ascertained afterward. For if we look over the phenomena to find agreements with the theory, it is a merely question of industry and ingenuity how many we shall find (73).

Merton concluded that:

The notion of directed research implies that, in part, empirical inquiry is so organized that if and when empirical uniformities all discovered, they have direct consequences for a theoretic system. In so far as the research is directed, the rationale of findings is set forth before the findings are obtained (64).

Merton goes on to state that one should not, however, discount the "serendipity" component of research, or "the discovery by chance or sagacity, of valid results which were not sought for" (64).

In addition to the criteria outlined by Rogers is suggested as follows: Concepts should be explicitly defined. Blumer states that, it should be evident that concepts in social theory are distressingly vague. Careful scrutinizing of our concepts forces one to recognize that they rest on vague sense and not on precise specification of attributes. This ambiguous nature of concepts is the basic deficiency in social theory (13).

Although the problems involved in the establishment of criteria for the selection of concepts are not minimal, there are criteria for distinguishing between an adequate and an inadequate social theory. One of them is the fruitfulness of the directiveness it provides; another is the degree to which a wide sample of diverse facts corroborates a synthetic formulation.

The preceding criteria will be referred to in the theory and hypotheses section to follow.
THEORY AND HYPOTHESES

Research studies concerned with the investigation of attitudes may be broadly classified as follows:

1. Investigations concerned with perceptual and attitudinal variables.

2. Studies concerned with the larger aspects of organizational structure as they affect the individual.

Katz and Kahn have recently advocated the inclusion of social organization variables, or at the very least of perceptual and attitudinal factors which reflect the complexities of organizational structure (53). In the present study an attempt has been made to utilize both types of variables, in predicting attitudes toward consumer cooperatives.

A sociologist studying determinants of attitudes would quite logically be concerned with social system or social organization variables. An examination of the behavioristic model employed by some psychologists indicates definite limitations.

Katz and Kahn discuss the specific limitations of applying the behavioral model of individual motivations to a social organization as follows:

The usual behavioristic model of the behavioristic process assumes internal drives or tension states which culminate in action under appropriate conditions of stimulation. The strengthening, direction, and organization of activities take place through the effects of reward and punishment upon these basic drives. This type of formula is very meaningful and useful in accounting for the behavior of the animal in the laboratory maze, motivated by hunger and rewarded by food. But in social settings some of the most important aspects of
motivation relate to the socially imposed barriers and the socially provided channels for the expression of behavior. These socially created barriers and channels often lack the objective consistency and stability of the alleys in the maze, and thus can be perceived in a more different fashion. Moreover the barriers and channels become internalized in the attitudinal structure of people and thus the individual becomes the giver as well as the receiver of punishments and rewards. Then too, in groups and organizations the connection between the formal reward system of the organization and the behavior of the individuals is often indirect and is mediated by processes which in themselves may be more significant than the formal reward system.

It is therefore a mistake of major proportions to take the individualistic model of reward and punishment (however appropriate for the study of individual problems in the laboratory, where reward can be manipulated directly in relation to behavioral outcome), and assume that this model explains the functioning of a complex social organization (53).

The use of social organizational variables in attitude research, has been advocated by a number of social psychologists. Lazarsfeld has stated that people are interested in the things which the groups to which they belong believe to be worthwhile (58).

"A considerable number of every person's attitudes are related to or anchored in one or more social groups" (55). The above statement was made by Harold H. Kelley, whose contributions to reference group theory, along with those of Merton, Newcomb, Sherif and Hyman are legion in the current literature. Although research studies have indicated that a person's attitudes are related to the attitudes commonly held by his membership groups, studies of prestige influence, opinion leadership, rejection of membership groups by underprivileged persons, and the influence of out groups upon levels of aspiration have indicated that attitudes are often related to non-membership groups (55) (67).
The beginnings of what we today label reference group theory may be traced to Sumner and his attempt to show that individuals are variously orientated to groups besides their own (88). In the process he invented a terminology to distinguish between ourselves, or the in-group, and everybody else, or the out-group. He held that conditions of amity and order obtain in the in-group whereas the relation to out-groups is that of hostility, plunder, and exploitation. Although he tended to blur the vitally important and conspicuous fact that, under certain conditions, the out-group becomes a basis of positive, not merely hostile reference, the initial distinction put Sumner well on the way toward opening up a series of problems regarding reference group behavior. This avenue to the development of a theory of reference group behavior, however, was not immediately followed by systematic research.

The next step in the direction of such theory came with the contributions of Cooley and Mead regarding the social self (25) (63). But here again, nothing was attempted in the way of systematic treatment and their ideas remained almost wholly undeveloped for a generation or more.

 Particularly among sociologists their conceptions were treated, not as a beginning but as a virtual conclusion, repeatedly quoted and illustrated with new examples of multiple selves, the looking-glass self, responses to the significant gestures of 'others,' and so on. And because the words of the forefathers became final words, little was built upon their insightful suggestions. They were honored, not in the manner in which men of science do honor to their predecessors, by extending and elaborating their formulations on the basis of cumulatively developed problems and systematic researches bearing on these problems, but in the manner in which litterateurs honor their predecessors, by repeatedly quoting 'definitive' passages from the masters' works (1).
It was not until the early 1940's that certain sociologists, among them Hyman, Sherif, and Newcomb are representative, advanced this theory by designing empirical researches which would feed back into theoretical formulations of reference group behavior (47) (82) (69).

The focus of attention thus far was centered primarily on the identification of the individual with groups, the implications of such identification, and the aspects of social organization which affect the selection of reference groups. In their analysis of material in *The American Soldier*, Merton and Kitt attempt to extend reference group theory to include additional aspects of human behavior, or perhaps it would be better to say that they attempt to analyze additional aspects of human behavior in a reference group frame of reference (65). This will be considered further after a discussion of reference group theory and group identification.

It has long been recognized that men act in a social frame of reference yielded by the groups of which they are a part. This is a legitimate area of study for those interested in the development of reference group theory. However, if this alone were the concern of such theory, it would merely be a new term for an old focus in sociology, which has always been centered on the group determination of behavior. But observation of human behavior reveals the further fact that men frequently orient themselves to groups other than their own in shaping their behavior and evaluations. Thus, while ultimately the theory must be generalized to the point where it can account for both membership and non-membership group orientations, it is the problems centered about
orientation to non-membership groups that constitute the distinctive concern of reference group theory, and of the present dissertation.

Rogers and Beal have recognized the importance of individual-group relationships as "one aspect of motivation in the adoption of farm practices" (76).

Cartwright also emphasized the importance of this relationship in understanding attitudes, beliefs and values when he stated, "To begin with the most general proposition, we may state the behavior, attitudes, beliefs and values of the individual are all firmly grounded in the group to which he belongs" (19).

A distinction has been made by some writers between membership, and non-membership groups. The concept of reference groups, utilized by Hyman, would seem to embody both types, since it is defined as any group to which an individual relates his behavior (47) (48).

The social organization variables used by the above researchers would seem to afford the social scientist a more basic understanding of attitude formation and change than previous research dealing only with psychological variables. In particular, they are important to social scientists who desire to interpret the development of attitudes, to predict their expression under different social conditions, to understand the social basis of their stability or resistance to change, or to devise means of increasing or overcoming this resistance.

The two social organization concepts utilized in the present dissertation and which reflect reference group behavior, deal with the normative
and comparison functions of reference groups. The normative function is described by Hyman as the setting and enforcing of standards for a person, which are labeled as group norms. The comparison function is that of serving as or being a standard or comparison point against which the person can evaluate himself and others (47). It should be noted that in the case of membership groups both functions may be performed as evidenced by Merton's studies on the American soldier (66). Kelley has stated that,

... a more complete theory of reference groups must consist of at least two parts, one having to do with groups as sources and enforcers of standards (motivational) and the other having to do with groups as standards themselves, (perceptual i. e. frames of reference (55).

It must be recognized that reference group theory utilized by many sociologists has mainly been limited to the comparative function. The normative function of reference groups would seem to be applicable to membership groups, and more especially those displaying a high degree of cohesiveness.

Turner has defined the concept of reference group as: "Any group, the characteristics of whose members serve as a standard by which the individual evaluates himself" (93).

In the present dissertation, social classes will be utilized as comparative reference groups. In this respect, one observes that Bott has studied the nature of social classes as reference groups and has written:

The (social class reference groups) are used by individuals to structure their social world and to make comparisons and evaluations of their own behavior and that of other people.
Although these concepts may not be objectively real, they are psychologically real, in the sense that they affect the behavior of the individual (16).

The conceptual variables used in the present study and which deal with the aspects of reference group theory cited above, will be discussed in the section to follow.

In summary, then the residents of the city of Superior, Wisconsin are part not of one, but of several interlocking social systems. Each system may have its own pattern of rewards and punishments, and as the individual's involvement in these various structures and systems varies, so too will his values, attitudes, perceptions, and motives. If one is to understand the behavior of individuals in groups in such complex structures, it follows that one must conceptualize and measure:

(1) Organizational variables, in order to describe the different systems which make up the organization, and the way in which the characteristics of the organization impinge upon the individual

(2) the needs, perceptions, and goals of the members and the patterns of motivation which result; and

(3) criteria adequate to describe the total effectiveness of organizations in terms of their product, in terms of their ability to adapt to new conditions, and in terms of the extent to which they meet the needs and contribute to the development of their members (46). It is in this context that the study of attitudes toward consumer cooperatives is approached.
Definitions of conceptual variables

1. Structural Cohesion — the degree to which the units in the system are predisposed to accept the formal role of a given sub-system.

2. Attractiveness — the degree to which the units in a system display an affinity for the structure of a given sub-system.

3. Relative Deprivation — the degree to which the units in the system perceive the role expectations of group membership as constituting a reduction of rewards.

4. Ambiguity — the extent to which the units in a system possess an ambiguous understanding of the membership roles and organizational structure of a given group.

5. Norm disparity — the degree to which a group membership perceives the norms of a given group as differing from their own.

Discussion of Conceptual Variables and Statement of General Hypotheses

The concept of structural cohesion was coined by Francis, who states that both the group and the structure have their claims upon the individual. Francis further stated that several researches have failed to observe that there are basically two kinds of cohesiveness (37). A quote from Francis will suffice to indicate the nature of this distinction, as it applies to voluntary groups:

A person can leave a group, but he cannot join it. He may aspire to membership in a group, but he can only become a member of the group. This implies a passage of time, becoming a member of a group is a social process. The usual terminology has been that of 'assimilation', with the
alternatives of 'accomodation' and 'adjustment'. On the other hand a person can both join and leave a structure. This is essentially an event which is both located in time and space (37).

Structural cohesiveness may serve, therefore Francis continued, to make a particular group desirable.

The concept of attractiveness of the group or structure is also used by Francis, who explained that it may have utility in explaining why a person migrated into one structure rather than another, "the former was the more attractive" (37).

One must conclude however, that the concept of attractiveness would seem to include other dimensions, a relationship which will be defined and discussed in the hypotheses to follow.

The general hypothesis formulated utilizing the above conceptual variables is:

1. The degree of structural cohesion varies directly with the degree of attractiveness. It would seem logical to suggest that individuals will tend to join and participate in those groups to which they are attracted. The question immediately arises as to the determinants of attractiveness.

Francis also cites another dimension which he refers to as the "importance of being a member of a group." The latter would seem to coincide with Merton's relative deprivation or relative rewards concept (65).

Merton and Lazarsfeld used the concept of relative deprivation to account for variations in attitudes toward the army by individuals who
were members of specific groups, during World War II (66). Its central significance is in some measure evidenced by it being one of the two concepts expressly called to the attention of the reader in the chapter introducing the two volumes (66). Merton continued that the idea would seem to have a kinship to, and in part include, such well-known sociological concepts as "social frame of reference," "patterns of expectation," and "definitions of the situation" (66).

The reader will recall Merton’s use of relative deprivation as an interpretative intervening variable, to explain differences in attitude toward induction on the part of married and single men. Merton and Kitt concluded that:

We may thus describe the major function of the concept of relative deprivation as that of a provisional after-the-fact interpretive concept which is intended to help explain, the variation in attitudes expressed by soldiers of differing social status (65).

The use of this concept by Merton in The American Soldier differs somewhat from the manner in which it is used in the present dissertation. The focus in The American Soldier was, as Merton described it, on relative "deprivation" rather than on "relative" deprivation. The reason for this Merton concluded, "is both apparent and understandable, in view of the conspicuously deprivational character of the army situations" (65). In the present study however, the interpretation is largely one of "relative" deprivation, as the reader will observe from the discussion of the operations which form the empirical hypotheses used to test the general relationship.

The general hypothesis formulated for the present study is therefore:
2. The degree of attractiveness varies indirectly with the amount relative deprivation.

Dorokin has commented on the relationship as follows:

The (valence) or attractiveness of any object or activity is a function of the needs of the individual and the properties of the object. The groups' attractiveness for any given person then depends upon the nature and strength of his needs, and upon the perceived suitability of the group for satisfying these needs (85).

Festinger, Schacter and Black have stated that individuals may want to belong to a group, because they like the other members, because being a member of a group may be attractive in itself, or because the group may mediate goals which are important for the members (33).

Axelrod, in his study of urban structure and social participation indicated the importance of group influences:

We expect the high status person to join with others who are in a similar position, in such organizations as will safeguard his position. . . . The social assets of belonging to the right Country Club, the right church, the right service clubs, and participating in charities are ignored only at the cost of economic loss (7).

Past research on farmer cooperatives illustrates that individuals gain cooperatives for varied and diverse reasons (18) (51). The majority of these reasons, however, are concerned with expectations of rewards. It would seem logical to suggest that the degree of attractiveness any group holds for an individual will be indirectly related to the amount of relative deprivation perceived as a concomitant of membership.

The formulation of hypotheses one and two, now permits the derivation of a third hypothesis. If, The degree of structural cohesion varies with the degree of attractiveness, and if, 2. The degree of attractiveness
varies indirectly with the degree of relative deprivation. Then, 3.
The degree of structural cohesion varies inversely with the degree of
relative deprivation.

The preceding hypothesis merely states that individuals will be un-
willing to accept a formal role in a given structure to the degree that
they perceive the role so relatively depriving.

The conceptual variable stated as amount of ambiguity, was defined
as the degree to which units in a system possess an ambiguous under-
standing of the membership roles and organizational structure of a
given group (53). The above conceptual variable is used in the present
study as an independent variable. The understanding score, which forms
the operation for the concept has been used in a number of past research
studies (8) (14) (43).

The conceptual variable, amount of ambiguity is used in the formu-
lation of a third general hypothesis, namely:

4. The degree of attractiveness varies indirectly with the amount
ambiguity. Hypotheses one and four stated above may now be used in the
derivation of a third general hypothesis.

If, 1. The degree of structural cohesion varies with the degree of
attractiveness, and if, 4. The degree of attractiveness varies in-
versely with the amount of ambiguity. Then, 5. The degree of structur-
al cohesion varies inversely with the amount of ambiguity.

The preceding hypothesis states that persons will be less willing
to accept a formal role in a given structure if they possess an ambigu-
ous understanding of that role.
The understanding operation, cited above has also been used as an independent variable related to the degree of participation of members in cooperative groups. Membership participation was used as an index of structural cohesion (42). In addition, understanding or information variables have been used in a number of attitude studies (48) (67) (58) (5) (9) (10). There is some suggestion, more notably by Hyman and Sheatsley, who have commented that: "... for the very nature and degree of public exposure to the material is determined to a large extent by certain psychological characteristics of the people themselves" (10). Hyman and Sheatsley emphasize the point that people tend to become exposed to information which is congenial to their prior attitudes. In a series of experimental studies beginning with the work of Bartlett, and carried on by other investigators such as Margolies, Clark, Nadel, and Murphy, it has been consistently demonstrated that a person's perception and memory of materials shown to him, are often disturbed by his wishes, motives and attitudes (12) (13) (14) (15). It would appear that the selectivity of the information variables constitutes a limitation on the meaningfulness of any relationships in which they are included. Zimmerman also recognized the selectivity of his degree of cooperative experience variable which correlated highly with favorableness of attitude, although he discounted the importance of this characteristic, as follows:

Given experience enough everybody comes to favor cooperation. These conclusions are highly valid, even conceding the obvious fact that the reason why many of these farmers had so much cooperative experience was that they were favorable toward it before they got their experience. Cooperative experience is selective, as well as education (100).
In the light of the above discussion, it would seem advisable to explore the determinants of the concept of ambiguity. Accepting the limitations which are imposed by the nature of ex post facto theorizing, the author attempted to reconcile certain empirical findings with a general level theoretical framework found in the formulation of another general hypothesis, previously discussed by Kelley and Volkart (56).

6. The degree of ambiguity is related to the amount of norm disparity. It would seem logical to suggest that an ambiguous understanding of the membership roles and structure of a given group, would be associated with the amount of perceived norm disparity.

Empirical support for the above postulated relationship is offered by Bohlen, who found that those persons who possessed a farm background had a greater understanding of the role of the cooperative than those who did not have a farm background (14). This higher level of understanding is partially accounted for, one would assume, by contact and familiarity with the structure and hence, less disparity of norms. The concept of norm disparity will be further clarified for the reader in the discussion to follow.

The preceding hypothesis, plus hypothesis number five, permits the derivation of an additional hypothesis.

If, 6. The degree of ambiguity is related to the amount of norm disparity. And if, 5. The degree of structural cohesion is indirectly related to the amount of ambiguity. Then, 7. The degree of structural cohesion is indirectly related to the amount of norm disparity.
The preceding concept of norm disparity is discussed by Charters and Newcomb, who stated that attitudinal response is a function of the relative strengths of momentary forces toward or away from membership in groups with conflicting norms (23). Charters and Newcomb hypothesized that by increasing the potency of one of an individual's membership's groups one would expect to find that his attitudes would resemble more closely the attitudes prescribed by the norms of that group (23). H. H. Kelley has referred to this method as "salience", which means heightening the individual's awareness of his membership in the specified group by vivid reminders of this membership (56).

The concept of norm disparity is then another social organization variable, the inclusion of which suggests that attitudes are not acquired in a social vacuum. Their acquisition is rather a function of relating oneself to some group or groups, positively or negatively, and perceiving a disparity of norms in so doing. In the present study, respondents were asked if they had ever been members of cooperatives, and if they responded in the affirmative, were further reminded of this association by questioning them regarding their satisfaction with cooperative membership. The index used to measure norm disparity will be discussed, along with indices for the other conceptual variables in the section to follow.

Epistemic Correlations

Epistemic correlations were defined as statements which relate operations to concepts.* The problem of the validity and reliability of

*See discussion of conceptual variable analysis in the Method and Procedure Section.
these indices or operations cannot be overlooked. With respect to the scales utilized in the present study the standard tests of validity and reliability have been performed, in addition to the use of the scalar analysis technique on the measures of the dependent variable.*

Concerning the validity of the other indices, stated below in the form of epistemic correlations, one has recourse to the logical and empirical tests of validity. The logical and/or face value type of validity requires an explicit definition of the concept and a careful examination of the index as a logical measurement of the conceptual variable. The empirical validity of the indices is found in the tests of the general hypotheses by means of the empirical hypotheses which state the relationship between the operations.

While the previously discussed ex post facto method of theorizing may serve to limit the indices which are available, and therefore the conceptual variables which may be used, the problem of validity and reliability of the operations is equally relevant when utilizing an a priori method of theorizing.

The following are the epistemic correlations for the present study.

Epistemic correlations

E. C. 1. The stated intent of the respondent to join and participate in consumer cooperatives is an index of structural cohesion.
E. C. 2. Favorableness of attitude toward the cooperative is an index of the attractiveness of the group.

*See Construction of Indices Section.
E. C. 3. The understanding scale is a negative measure of the degree of ambiguity.

E. C. 4. The satisfaction scale is a negative measure of the degree of relative deprivation.

E. C. 5. Respondents who perceive the cooperative membership as comprised of "foreigners" have a greater relative norm disparity than those who deny any ethnic characteristic of the cooperative group.

E. C. 6. Past membership experience in a cooperative and satisfaction with same is a negative index of norm disparity.

E. C. 7. The degree to which respondents perceive the cooperative group as comprising a social class group lower than their real class position is an index of relative deprivation.

**Empirical hypotheses used to test the general theory**

Empirical hypotheses serve an important function in conceptual variable analysis in providing the basis for testing the general theory.* The following are the empirical hypotheses which will be used to test the general theory. Past research findings are given when relevant to the specific hypothesis being tested.

1. The stated willingness of respondents to join and participate in consumer cooperatives is directly related to their favorableness of attitude toward the cooperative.

Several past research studies have established the relationship

*See discussion of conceptual variable analysis in the Method and Procedure Section.
between actual participation of members in cooperatives and favorableness of attitudes. For example Zimmerman and Black, K. John, Fetrow, Bohlen have tested the above hypothesis in their respective researches, and each reported a positive relationship (100) (51) (35) (14).

In the present study, however, the dependent variable is defined as a predisposition to accept the cooperative structure and formal role by joining the cooperative. The foregoing distinction is necessary since the sample consists of non-members.

2. Favorableness of attitudes toward consumer cooperatives is directly related to the degree of anticipated satisfaction to be derived from membership.

Zimmerman and Black have stated that, "If an attitude is pronounced it is significant even though it be somewhat indefinite and uncertain." Furthermore, it has been shown that people do not have to be residents of Russia, or even have lived in Russia, to possess an attitude toward Russians (100).

One may state therefore, that although an individual may never have been a member of a cooperative he still has certain expectations regarding the organization. It is the ratio of these expectations to the actuality (his present situation), which constitutes his anticipated satisfaction.

The research findings of John offer support for the relationship between attitude toward the cooperatives and satisfaction with the cooperative. One must note, however, that John's sample was comprised of cooperative members (51).
John has stated that the intensity of attitude is related to:

a. What the member considers to have value.

b. His conception of the function of the cooperative in providing these values.

c. The extent that he feels that a particular function which he feels the cooperative should perform is fulfilled.

3. Individuals will display a willingness to join and participate in a given group in relation to the amount of anticipated satisfaction to be derived from membership. The preceding empirical hypothesis, may be derived from hypotheses one and two.

4. Favorableness of attitude toward consumer cooperatives is related to the amount of cooperative understanding.

Since the early Zimmerman and Black study of 1926, several rural sociologists have reported findings in support of the hypothesis stated above. John, Stern and Doran, Bohlen, Sandage, and Anderson reported a positive relationship between favorableness of attitude and cooperative understanding (100) (57) (86) (14) (78) (5).

Fetrow, Sandage, and John commented in their respective researches on the confusion or ambiguity which existed in the minds of farm people concerning the role of the cooperative in a competitive society (35) (78) (51). Sandage reported that, "much confusion exists concerning who owns and controls retail farm cooperatives" (78). He continued that only members believe generally that cooperatives are non-profit organizations. Fetrow has reported from his Oklahoma study of 1928 that "over half of the members and non-members alike were misinformed in that they felt the
cooperative could fix prices" (35). Fetrow concluded that members also possessed a misconception of the role of the cooperative field service man. Nor is this ambiguity confined to the farm population as Bohlen has illustrated in his study of the attitudes of town residents toward cooperatives (14). All these researchers reported a positive relationship between favorableness of attitudes toward cooperatives and the amount of cooperative understanding.

5. Individuals who possess an understanding of the cooperative structure and function, will be more willing to join and participate in cooperatives than those who possess a lesser amount of understanding.

The previous statement of empirical hypotheses numbers one and four permits the derivation of hypothesis number five, as stated above. The relationship follows in a logical fashion from the preceding discussion.

6. An understanding of the cooperative structure and function is related to the amount of contact with cooperatives.

The relationship stated above has been supported by the research findings of Zimmerman, John and Bohlen (100) (51) (14). Zimmerman and Black found that knowledge of cooperatives was related to length of membership, and to geographic distance from the cooperative (100). The research results of Bohlen indicated that, "Those people in the population who had farm backgrounds, had more knowledge about the cooperative associations" (14).

Another aspect of cooperative contact was discussed by Zimmerman and Black who reported that:

An important factor in attitude and behavior variation is the structure of previous experience and thinking. National groups
such as Danes, Germans, Finns, Swedes, Norwegians, and Yankees, so called, have different traditions, customs, and beliefs, which are powerful factors in guiding new behavior patterns. It also seems to operate in individual variations within the communities, causing greater differences than would ordinarily be expected (100).

Reel, Fessler and Wakeley reported that more cooperative members than non-members had a continental European nationality background.

The preceding comments will become more relevant upon examining the final empirical hypothesis to be used in testing the general theory.

7. Individuals, who because of membership in a specific group have gained some knowledge about/or experience with the cooperative structure will tend to join more readily than those who are not members of these groups.

One would logically anticipate, in the light of the above discussion by Zimmerman and others, that certain Scandinavian nationality groups would be more favorably disposed toward joining and participating in cooperatives than would other nationality groups.

Zimmerman and Black have stated that occupational or other social grouping may also be an important factor. They said:

Farmers as a group are socially separate from townspeople as a group, and especially from the middlemen group who handle their products. The mistrust and misunderstanding will be especially great if the two groups have vital relations with each other, as have farmers and middlemen (100).

Zimmerman and Black continued that:

Farmers have certain traditional types of beliefs which profoundly influence and determine their attitudes. Geographic distance, social groupings, occupational environment, and the conventional logic or types of reasoning prevalent among farmers, lie back of these traditional beliefs (100).

The foregoing characteristics have been referred to as community of interest.
The development and growth of consumer cooperatives in urban centers may be inhibited by a lack of this community of interest. Phillips and Duncan stated:

Similarly, the cosmopolitan nature of urban populations has retarded the growth of consumers' cooperation. Lack of community of interest among large segments of people has prevented associative effort. As a matter of fact, consumers' cooperation in this country has been most successful in those areas where one nationality predominates (72).

The preceding quote, made by Phillips and Duncan, is historically applicable to consumer cooperative development in Superior, Wisconsin.
CONSTRUCTION OF INDICES

Development of Scales

Attitude toward consumer cooperatives scale

In many studies it is not sufficient to regard certain attributes as present or absent. The most important thing about many human attributes is the extent to which they vary from one case to another or from one group to another. The research analyst needs to know, if an attribute is present, how strongly or to what degree it is present. With respect to the certain variable used in the present study, namely attitude toward consumer cooperatives, it was necessary to know the respondents degree of favorableness to the particular organization chosen for study.

A Likert type scale was constructed to measure attitudes toward consumer cooperatives. The decision to use a Likert type scale was endorsed for the following reasons:

1. A Likert type scale consisting of 40 items had been constructed and pre-tested by the author in a previous study (43). Tests of reliability and term analyses had been performed on the scale using a sample of 65 college students enrolled in an introductory rural sociology course at Iowa State College. Professors Wert, Bohlen and Hamblin assisted with the selection of 20 items, upon examination of item frequency distributions to ascertain the discriminative characteristics of each item. The
scale was later reduced to 11 items, following the consideration of evidence obtained from reliability and item analysis statistics* (96).

2. The relative ease of construction and administration has proved an influential factor in the decision of many research workers to utilize a Likert type scale. The procedure involved in the construction of a Likert scale is considerably less involved than that required for Thurstone's equal appearing intervals, although some sacrifice in the power of the instrument is acknowledged (32). The later limitation may however, be partially overcome through the adoption of the scalogram analysis technique developed by Guttman (39).

**Reliability of the criterion variable**

Since a measurement technique cannot be more valid than it is reliable, it would seem only prudent for the investigator to ascertain the reliability of the instrument he is using (40). Festinger and Katz stated that when investigators inquire into the reliability of their observations, they are asking themselves how well they can control the determinants of the key response on repeated attempts to re-establish the same observational situation (32). This is to say that when some response or inferred construct is consistently predictable from a

*The 11 items used in the present study to measure attitudes toward consumer cooperatives are reproduced in the Appendix.*
specified set of conditions, reliability is high; when predictions are unstable reliability is low.

The factors which influence reliability or cause error have been described by Loevinger and others as follows (62):

1. Differential abilities demanded by specific test items relative to those required by the test as a whole.

2. Uncontrolled procession in the individual that influence reliability e.g. motivations, fatigue, boredom.

3. Varying social and physical stimuli may affect the reaction.

4. Variations in the recording and interpretation of the behavioral events.

It is therefore, misleading to speak of the reliability of an instrument with the implication that the reliability or unreliability is the property only of the instrument itself, for the error observed is the result of variation in the whole complex of determinants of the measured event. At the risk of seeming redundant it should also be emphasized that established reliability does not necessarily indicate that a significant variable is being measured. This is a problem of validity.

The eleven items of the criterion variable, attitude toward consumer cooperatives were split into odd-and even-numbered items, and a coefficient of reliability of a test one-half the length of the original test using the Spearman-Brown modified formula was calculated. The coefficient of reliability was .70. In order to achieve a reliability coefficient of .90 the attitude scale must be lengthened four times. The latter calculation was derived through the use of the Spearman-Brown
prophecy formula, for which the major assumption is that the items concerned in the shortening or lengthening of the test are homogenous with respect to those of the original test (27).

**Item-total score interrelationships**

A Pearsonian product moment coefficient of correlation was computed for each item with the total score. The results of the item analyses are reported in Table 3.

A scalogram analysis utilizing the method developed by Louis Guttman was completed for the eleven items of the Likert type attitude scale, using a sample of 100 drawn at random from the original $N$ of 413. After combinations had been made, it was found that six of the eleven items scaled. The coefficient of reproducibility for these six items was .92.* The preceding statistic is offered as evidence of the unidimensionality of the attitude toward consumer cooperatives scale.

The major limitations of the Guttman method have been stated by Festinger and Katz (32). They are as follows:

1. The arbitrary nature of the decision as to whether errors are random or systematic.

2. The coefficient of reproducibility is related to the difficulty of the items. (as shown by the marginal values).

3. The arbitrary shifting of columns and rows until the order is attained which allows the maximum coefficient of reproducibility.

In addition to the above limitations cited by Festinger and Katz,

*The scaled items are presented in the Appendix p.
### Table 3. Coefficients of correlation between items of the attitude scale and total scores

<table>
<thead>
<tr>
<th>Item</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cooperatives should have a right to exist in our country</td>
<td>.65</td>
</tr>
<tr>
<td>2. Cooperatives are a form of socialism</td>
<td>.32</td>
</tr>
<tr>
<td>3. The existence of cooperatives doesn't endanger the American way of life</td>
<td>.46</td>
</tr>
<tr>
<td>4. Cooperatives are a step toward communism</td>
<td>.12</td>
</tr>
<tr>
<td>5. Most cooperatives are monopolies</td>
<td>.24</td>
</tr>
<tr>
<td>6. Cooperatives are a threat to free enterprise</td>
<td>.73</td>
</tr>
<tr>
<td>7. Competition between cooperative grocery stores and other local stores is good for the community</td>
<td>.47</td>
</tr>
<tr>
<td>8. The responsibilities of belonging to a cooperative are greater than the benefits one gets in return</td>
<td>.18</td>
</tr>
<tr>
<td>9. Cooperatives can fulfill as great a need for city residents as they do farm people and residents of small towns</td>
<td>.28</td>
</tr>
<tr>
<td>10. Cooperatives were all right in their day but with all the competition there is now not much need for them</td>
<td>.46</td>
</tr>
<tr>
<td>11. Smart shoppers buy at cooperatives</td>
<td>.52</td>
</tr>
</tbody>
</table>
Coombs has pointed out that if a test is made up of items which scale in Guttman fashion, the opportunity to discover deviant responses will have been eliminated (27). In other words, areas yielding unique patterns tend to be eliminated in the scaling procedure.

This point of view is summed up by Coombs as follows:

... in a highly organized social order with standardized education, there will tend to be certain traits generated which will be common to the population subjected to the same pattern of forces. There is, however, at the same time, contradiction, and interaction of these forces on organisms that are not equally endowed in the first place - with the result that the structuring of a psychological trait is less complete in some individuals than in others. ... A psychological trait in other words may or may not be general, i.e., common to a large number of individuals (26).

The above critique, notwithstanding, the application of scalogram analysis does enable the investigator to develop a more powerful instrument, an ordinal scale, which lends itself to analysis by higher order parametric statistics (84).

Validity of the criterion variable

Festinger and Katz have stated that to discover the complete network of relationships of any variable to other variables external to it is to give it meaning, or to explore its validity (32). Stated in simpler terms, it is the degree to which the instrument measures what it is purported to measure. Jahoda, Deutsch and Cook have stated that implicit in this definition is the assumption that the measuring instrument embodies an appropriate operational definition or empirical meaning of a theoretical construct (49).
Two major approaches to establishing the validity of measurements have been cited by sociologists (49) (32). They are logical validity and empirical validity. The procedure involved in logical validity and the so-called face validity was followed in the selection of items to be included in the attitude toward consumer cooperatives scale. The underlying assumption involved in this method is that the referent of the attitude which is the common object of all the items is taken as the defining concept.

The tests of empirical validity performed on the attitude scale in the present study may be classified as follows:

I. The measurement of known groups or of types of people who on a priori grounds should differ in an expected way in their attitudes and opinions.

II. Comparison with other measurements of their attitudes and opinions.

III. The accuracy of prediction behavior.

The first such criterion selected was item 40 a, of the schedule which reads as follows: "If all of the following supermarkets provided about the same services from which would you buy your groceries?"

____a cooperative
____an independent that gave trading stamps
____an independent that did not give trading stamps
____shop around in all three
____prefer to buy at a non-supermarket
In analyzing the data the dichotomy of cooperative versus all others was utilized and the results are reported in Table 4.

An F value of 29.63 with one and 406 degrees of freedom is significant at the one per cent level.

A biserial coefficient of correlation of .51 was obtained.

Table 4. Mean attitude scores for groups preferring and not preferring cooperatives

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative preferred</td>
<td>44.264</td>
<td>34</td>
</tr>
<tr>
<td>Non cooperative preferred</td>
<td>39.364</td>
<td>373</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>407</td>
</tr>
</tbody>
</table>

The second criterion also consisted of a group of individuals who on a priori grounds should differ in an expected way in their attitudes and opinions, namely those individuals with prior cooperative membership experience. The results of this analyses are as follows:

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership experience</td>
<td>42.347</td>
<td>46</td>
</tr>
<tr>
<td>No membership experience</td>
<td>39.403</td>
<td>367</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>413</td>
</tr>
</tbody>
</table>
An F value of 18.42 with one and 412 degrees of freedom is significant at the one per cent level.

A biserial coefficient of correlation of .319 was obtained.

The disadvantages of utilizing a membership criterion for purposes of establishing validity may be summarized as follows:

1. Joiners may differ in psychological respects from non-joiners.
2. The extreme attitudes may differ significantly but not those of the more moderate opinion.

The criterion as used above would be a more meaningful one if the classification represented current members as opposed to non-members.

There was no data available to indicate the nature of the relationship between the respondent and the cooperative group, or his reason for discontinuing this association.

The second method performing an empirical test of validity, as stated earlier, involves a comparison with other measurements of the attitude. Kretch and Crutchfield reported that this procedure provides some presumptive evidence of the validity of both measures (57). Other observers, however, suggested that this method should be regarded as a test of reliability, and not validity (32).

In accordance with criterion number two outlined above, a coefficient of correlation was computed between the eleven item Likert scale and a seven stage Coombs scale, also designed to measure attitudes toward consumer cooperatives. The coefficient of correlation was .83.

The final procedure advocated and performed as an empirical test of validity is referred to as the accuracy of prediction behavior. In the
present study the attitude scale was used to predict the respondents pre-
disposition to joining cooperative. There has been some suggestion by
research analysts, that overt behavior is a preferred index. In the case
of the present study, one would require the actual joining of a cooper­
ative as a criterion. Murphy, Murphy, and Newcomb indicated that covert
behavior may on occasion be preferable to overt.

Actions are no more inherently valid in the first place than
words. Actions are frequently designed to distort or conceal
true attitude quite as fully as verbal behavior. If conditions
of secrecy, and preferably anonymity are observed there is
more reason to expect free and complete expression of attitudes
through words, thus freed from social pressures, than from
behaviors which are open to all beholders (67).

A biserial coefficient of correlation was computed for the attitude
scale and the dichotomy of stated intent to join the cooperative. The
biserial coefficient of correlation was .54.

Satisfaction with consumer cooperatives scale

The satisfaction scale used in the present study is a revision of
similar scales previously used in research studies by Beal, Bohlen and
Harp respectively (8) (14) (42). In the present dissertation, however,
the items were modified to form a Likert type scale, with a total of
eight items. The author chose this procedure in order to convert the
instrument from a nominal to a partially ordered scale, and in order to
facilitate the use of scalogram analysis, thereby testing for the
presence of an ordinal scale (34).
Reliability of the scale

The split-half method of estimating reliability was also used on the satisfaction scale. The use of the Spearman-Brown modified formula yielded a coefficient of correlation of .73.

In addition, a coefficient of correlation was computed for each item in the scale with the total score. The results of the item analysis are reported in Table 5.

Table 5. Coefficients of correlation between items of the satisfaction scale and the total scores

<table>
<thead>
<tr>
<th>Item</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trading at a cooperative grocery store would be of no advantage to me.</td>
<td>.46</td>
</tr>
<tr>
<td>2. Cooperative stores are not well managed.</td>
<td>.38</td>
</tr>
<tr>
<td>3. It is cheaper to buy in a chain store supermarket such as__________than it is in a cooperative.</td>
<td>.16</td>
</tr>
<tr>
<td>4. I would not like to be seen going in and out of a cooperative grocery store.</td>
<td>.58</td>
</tr>
<tr>
<td>5. I would not want my friends to know that I trade at a cooperative grocery.</td>
<td>.62</td>
</tr>
<tr>
<td>6. The quality of goods sold through cooperatives is poorer than through other grocery stores.</td>
<td>.34</td>
</tr>
<tr>
<td>7. One gets better services at a chain store than in a cooperative.</td>
<td>.46</td>
</tr>
<tr>
<td>8. I can gain no advantages from buying at a cooperative that I do not already have where I am now shopping.</td>
<td>.58</td>
</tr>
</tbody>
</table>
A scalogram analysis again utilizing the method developed by Louis Guttman was completed for the eight Likert type items of the satisfaction scales on a sample of 100 drawn at random from the original sample of 413. The coefficient of reproducibility failed to equal the .90 level required as evidence of the existence of a quasi scale type. Since the original number of items included in the scale was small, attempts to scale a portion of the total items were abandoned.

Validity of the satisfaction scale

The empirical tests of validity performed on the satisfaction scale in the present study may be classified as follows:

I. The measurement of known groups or of types of people who on a priori grounds should differ in an expected way in their attitudes and opinions.

II. Comparisons with other measurements of their attitudes and opinions.

III. The accuracy of prediction behavior.

Under classification number one, the criterion chosen involved the selection of those individuals who had been members of consumer cooperatives and reported satisfaction with membership. The following items in the schedule yielded the necessary data:

Item #613a. Have you or your husband ever been a member of a cooperative?

(b) Were you satisfied with the prices, services and quality of goods there?
Table 6. Mean satisfaction scores for previous cooperative membership and non-cooperative membership groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean satisfaction scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative membership experience</td>
<td>29.304</td>
<td>46</td>
</tr>
<tr>
<td>Non-cooperative membership experience</td>
<td>23.841</td>
<td>367</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>413</td>
</tr>
</tbody>
</table>

A biserial coefficient of correlation of .52 was obtained.

The final test advocated as an empirical test of validity is referred to as the accuracy of prediction behavior. In this respect, a coefficient of correlation of .23 is reported between attitude toward consumer cooperatives and satisfaction with consumer cooperatives. The coefficient of correlation for former members was .36.

Understanding of consumer cooperatives scale

The understanding scale used in the present study is a modification of the scale used in previous studies by Beal, Bohlen, and Harp (8) (14) (42). The present understanding scale is comprised of items designed to measure the respondents' level of understanding of the cooperative organizational structure and the formal membership roles therein. The responses to individual items were weighted, upon consideration of their ambiguity of content.

The nature of the scale precluded the use of any of the more common tests of reliability. The discriminative characteristic of the scale as
noted by the researchers cited above, is offered as evidence of its reliability.

Using the previous cooperative membership group as the criterion, the scores of the former membership group were compared with those who had no cooperative membership experience. The results are shown in the table below.

Table 7. Mean understanding scores for previous cooperative membership and non-membership groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean understanding scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative membership experience</td>
<td>28.956</td>
<td>46</td>
</tr>
<tr>
<td>No cooperative membership experience</td>
<td>26.310</td>
<td>367</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>413</td>
</tr>
</tbody>
</table>

A calculated F value of 22.36 with one and 412 degrees of freedom is significant at the one per cent level. There is therefore a significant difference between mean understanding scores when compared on the basis of previous cooperative experience.

As to the validity of the instrument in question, one can also submit as evidence its predictive effectiveness, as reported in past research studies (3) (14) (42). In the present study the understanding variable was related to attitude toward consumer cooperatives with a calculated coefficient of correlation of .60. For that portion of the
sample who had previous membership in cooperatives, the coefficient of
correlation was .56.

**Occupational rating index**

North-Hatt type of occupational indices were computed for each
individual, based on the occupation of husband as obtained from item 62
in the schedule.* The procedure followed for unmarried respondents was
to assign an index based on their own given occupation, or if widowed
and not working, the occupation of their deceased husband.

The index used in the present study consists of a larger and more
extensive list of occupations than that which is found in the original
North-Hatt. The larger list of occupations, prepared and rated by a
group of sociologists at Ohio State University who acted as judges,
greatly facilitated the assigning of indices.

It has been reported that more than thirty studies made in the
United States since 1925 have asked judges to rank occupations. Deeg
and Paterson have stated that these investigations show a remarkable
consistency in the way occupations were ranked over a thirty year
period (16).

Although the relationship of occupation indices to income and edu­
cation has been established by many past researches, it is not a perfect
ordering. Broom and Selznick explain that:

> Occupation serves as a symbol which stands for a combination
> of characteristics, most importantly: income, service to

*See Appendix for copy of schedule.*
humanity, education and training, social prestige, morality and responsibility, intelligence and ability (17).

In addition to using the occupational indices as a continuous independent variable in predicting attitudes toward consumer cooperatives, the indices were combined to form social strata. The categories used in the stratification of the sample by occupation groups were as follows: 1. Professionals and officials, 2. Managers and proprietors, 3. clerical and skilled, and 4. semi-skilled and unskilled. The classification is somewhat similar to that used by Richard Centers in his study of occupational mobility of urban occupation strata (21) (22).

5. Centers continues that:

If we know a person's occupation we can predict something about his attitude from that knowledge alone, and if we know only his class identification, we can also predict something about his attitude, but if both occupation and class identification are known, our prediction of his attitude can be even more definite (21).

The purpose for combining occupation indices will be apparent to the reader upon consideration of the indices of relative deprivation used in the present study. The combining of occupational indices into social strata was used to indicate the individual's real social class position. The ratio of the dominant social class groups which the respondent perceives the cooperative membership, to his real class position serves as an index of relative deprivation. If for example the ratio is less than one, the individual perceives cooperative membership as a depriving situation.*

*See Theory and Hypotheses Section.
ANALYSIS OF DATA

Testing of General Theory

The statistical method known as discriminant analysis is used to test the first five hypotheses of the general theory.* The empirical hypotheses used to test the general hypotheses will now be presented with the results of the analysis.

1. The stated willingness of respondents to join and participate in consumer cooperatives is positively related to the favorableness of their attitude toward the cooperative.

The hypothesis stated in the null form is: There is no positive relationship between willingness of individuals to join and participate in consumer cooperatives, and their attitudes toward cooperatives.

The means of the two groups are shown in Table 8.

Table 8. Mean attitude satisfaction and understanding scores for join and not join groups

<table>
<thead>
<tr>
<th>Numerical values</th>
<th>Means</th>
<th>Difference in means</th>
<th>Nzd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=75 n=238</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Join</td>
<td>Not join</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I 1. Attitude</td>
<td>43.573 38.878</td>
<td>4.695</td>
<td>510.567</td>
</tr>
<tr>
<td>I 2. Satisfaction</td>
<td>27.866 23.665</td>
<td>4.201</td>
<td>456.846</td>
</tr>
</tbody>
</table>

*See Theory and Hypotheses section for research support for general and empirical hypotheses. For discussion of the method of discriminant analysis see Method and Procedure.
The calculated F value of 38.56 with three and 409 degrees of freedom is significant at the one per cent level. In addition a biserial coefficient of correlation of .521, which is significant at the one per cent level, supports the relationship.

Since the null hypothesis is refuted the original proposition that willingness to join and participate in cooperatives is related to favorableness of attitude, is supported.

2. Favorableness of attitude toward consumer cooperatives is positively related to the degree of anticipated satisfaction to be derived from membership.

Stated in the null form the hypothesis becomes: There is no positive relationship between attitudes toward cooperatives and anticipated satisfaction with cooperatives.

A calculated coefficient of correlation of .23 which is significant at the one per cent level, was obtained between attitudes toward cooperatives and anticipated satisfaction with cooperatives.

The null hypothesis is refuted, and the original proposition that favorableness of attitude toward consumer cooperatives is positively related to the degree of anticipated satisfaction to be derived from membership is supported.

3. Individuals will display a willingness to join and participate in a given group (cooperative) in relation to the amount of anticipated satisfaction to be derived from membership.

The mean satisfaction scores for the two groups are shown in Table 8.

Stated in the null form, the hypothesis becomes: There is no difference in willingness to join and participate in cooperatives when compared on
the basis of anticipated satisfaction derived from membership in co-operatives.

A calculated biserial coefficient of correlation of .41 which is significant at the one per cent level, was obtained between stated intent to join and participate and the satisfaction scores. The mean satisfaction scores for the two groups are shown in Table 8.

The null hypothesis is therefore refuted and the original proposition that individuals will display a willingness to join and participate in cooperatives in relation to the amount of anticipated satisfaction to be derived from membership, is supported.

4. Favorableness of attitude toward consumer cooperatives is positively related to the amount of cooperative understanding.

The above hypothesis in the null form is: There is no positive relationship between favorableness of attitude toward consumer cooperatives and amount of cooperative understanding.

A calculated coefficient of correlation of .60, which is significant at the one per cent level, was obtained between favorableness of attitude and cooperative understanding.

The null hypotheses is refuted therefore, and the original proposition that favorableness of attitude toward consumer cooperatives is positively related to the amount of cooperative understanding, is supported.

5. Individuals who possess an understanding of the cooperative structure and function, will be more willing to join and participate in cooperatives than those who possess a lesser amount of understanding.
The null hypothesis is: There is no positive relationship between stated intent to join cooperatives and understanding of cooperatives.

The biserial coefficient of correlation between intent to join and the cooperative understanding scores was .64. The mean understanding scores for the two groups are shown in Table 8.

The null hypothesis is refuted therefore, and the original hypothesis, that individuals who possess an understanding of the cooperative structure and function, will be more willing to join and participate in cooperatives than those who possess a lesser amount of understanding, is supported.

Using as the criterion variable, the stated willingness of respondents to join and participate in consumer cooperatives, and as the prediction variables attitude toward cooperatives, anticipated satisfaction with cooperatives, and understanding of cooperatives, a discriminant function was computed.

The discriminant equation

\[ \lambda = 0.0264392530x_1 + 0.02086492x_2 + 0.04634948x_3 \]

A multiple biserial R of .685 was calculated using the three predictor variables cited above.

The test of significance for the multiple biserial R reported above yielded an F of 38.56, with 3 and 409 degrees of freedom. The calculated F reported above is significant at the one per cent level.

In order to indicate the relative effectiveness of the three variables used in prediction, the procedure outlined by Wert was followed.
The contribution of the variables to the numerical values of \( \Delta \), which corresponds to the sum of squares for regression in an analysis dealing with a numerical criterion. Thus, in the solution for \( \Delta \), the contributions are shown in Table 9.

Table 9. Relative effectiveness of predictors

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Contribution to ( \Delta )</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>13,499</td>
<td>31.858</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>9.531</td>
<td>22.493</td>
</tr>
<tr>
<td>Understanding</td>
<td>19.342</td>
<td>45.648</td>
</tr>
<tr>
<td>( \Delta )</td>
<td>42.372</td>
<td></td>
</tr>
</tbody>
</table>

The understanding variable, as shown in the table, contributes the largest value to the regression sum of squares.

The above procedure is identical with that used for computing the relative effectiveness of the variables in a multiple regression equation.

Upon examination of the relative effectiveness of the predictors as shown in Table 9, the effect of deleting a variable is considered. Wert, Neidt and Ahmann have stated that, "Should a variable be removed from the battery, the relative importance of the remaining variables may change radically" (96). Wert, Neidt and Ahmann have suggested that the most straightforward method to attack this problem is to compute a two-variable discriminant equation, ignoring one of the variables (96).
Following the procedure outlined by Wert, a two variable discriminant equation was calculated deleting the understanding variable. The computations yielded a multiple biserial coefficient of correlation (R) of .62 as compared with an R of .68 when the understanding variable was included.

The test of significance from a zero relationship, upon deletion of the understanding variable yields an F value of 20.14, which with one and 409 degrees of freedom is significant at the one per cent level. Thus a significant loss in predictive ability ensues, when the understanding variable is deleted.

An additional two variable discriminant equation was calculated after deleting the satisfaction variable. The computations yielded a multiple biserial coefficient of correlation (R) of .64, compared with an R of .68 when the satisfaction variable was included.

The test of significance from a zero relationship, upon deletion of the satisfaction variable, yields an F value of 17.49 which with one and 409 degrees of freedom is significant at the one per cent level. Thus a significant loss in predictive ability ensues when the satisfaction variable is deleted.

6. An understanding of the cooperative structure and function is positively related to the amount of contact with the cooperative.

The above hypothesis stated in the null form is: There is no positive relationship between understanding scores and amount of contact with cooperatives.
The biserial coefficient of correlation between membership, non-membership and the understanding scores was .51.

The null hypothesis is refuted and the original hypothesis that, an understanding of the cooperative structure and function is positively related to the amount of contact with the cooperative, is supported.

Table 10. Mean understanding of cooperative scores compared on the basis of previous membership

<table>
<thead>
<tr>
<th>Previous membership</th>
<th>Mean understanding score</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>.956</td>
<td>46</td>
</tr>
<tr>
<td>No</td>
<td>26.310</td>
<td>367</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>413</td>
</tr>
</tbody>
</table>

The amount of contact with cooperatives was also measured by place of birth, given as rural farm, town, and urban. The following table illustrates the difference in mean understanding scores for the three categories cited above.

Table 11. Mean understanding scores compared on the basis of place of birth

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>Mean understanding score</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural farm</td>
<td>27.653</td>
<td>72</td>
</tr>
<tr>
<td>Town</td>
<td>26.937</td>
<td>95</td>
</tr>
<tr>
<td>Urban</td>
<td>26.152</td>
<td>244</td>
</tr>
</tbody>
</table>
The calculated F value of 5.27 with 2 and 408 degrees of freedom is highly significant at the one per cent level.

The preceding statistics serve to refute the null hypothesis, and the original proposition that there is a positive relationship between amount of cooperative understanding and the amount of contact with cooperatives, is supported.

A form of contact with the cooperative is found in reading the cooperative paper, an experience shared by 41 per cent of the sample.

7. The hypothesis is suggested that people who read the cooperative paper will have a greater understanding of cooperatives, be more satisfied with cooperatives; and possess a more favorable attitude toward cooperatives.

The following table illustrates the differences in mean attitude, satisfaction, and understanding scores when compared on the basis of having read or not read the cooperative paper.

Table 12. Mean attitude, satisfaction, and understanding scores compared on the basis of having read or not having read the cooperative paper

<table>
<thead>
<tr>
<th>Read coop. paper</th>
<th>Attitude</th>
<th>Satisfaction</th>
<th>Understanding</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>42.32</td>
<td>26.86</td>
<td>28.55</td>
<td>169</td>
</tr>
<tr>
<td>No</td>
<td>38.88</td>
<td>22.46</td>
<td>27.22</td>
<td>244</td>
</tr>
</tbody>
</table>
The above hypothesis in the null form is: There is no difference in attitude toward, satisfaction with and understanding of the cooperative scores, when compared on the basis of respondents having read or not having read the cooperative paper.

The calculated F values of 19.96, 21.46, 3.96 respectively with one and 409 degrees of freedom are significant beyond the one per cent level.

The null hypothesis is refuted and the original hypothesis stated above is supported.

In addition, biserial coefficients of correlation between the dichotomous variable of having read and not having read the cooperative paper and the attitude, satisfaction and understanding scores were computed. The results were biserial r's of .28, .26, and .51 respectively, for the three variables.

The relationship between the attitude criterion and the predictor variables of satisfaction and understanding, were discussed previously. Using the present statistic, however, a multiple R of .612 was calculated for the two independent variables.

The regression equations are as follows:

Total \[ y = .0669170078 x_1 + .77142713692 x_2 \]

Within \[ y = .0587032988 x_1 + .762902218 x_2 \]

Since the satisfaction and understanding variables have previously been shown to be related to the criterion, attitude toward consumer cooperatives, these individual differences were controlled by using the satisfaction and understanding scores as control variables in the
analysis of covariance. The statistic is described by Wert, Neidt and Ahmann as enabling the investigator to compute, "tests of significance for the comparison groups whose members may have been stratified and whose members have been measured with regard to one or more variable characteristics other than the control variable" (96). The means of the criterion and control variables are shown in Table 12.

The hypothesis is: Individuals who read the cooperative paper will have more favorable attitudes toward consumer cooperatives than those who do not, when satisfaction and understanding scores are controlled.

The hypothesis in the null form is: There is no difference in attitude toward consumer cooperatives between those who read the cooperative paper and those who do not, when satisfaction, and understanding scores are controlled.

The results of the analysis are reported in Table 13 below.

Table 13. Test of significance of reading cooperative paper on attitudes toward consumer cooperatives

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Mean square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>410</td>
<td>5976.936</td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>409</td>
<td>5950.644</td>
<td>14.549</td>
</tr>
<tr>
<td>Difference</td>
<td>1</td>
<td>26.292</td>
<td></td>
</tr>
</tbody>
</table>
The F value of 1.807 with one and 409 degrees of freedom, is not significant. There is insufficient evidence to refute the null hypothesis, and the original hypothesis is not supported.

Other empirical hypotheses

3. Individuals, who because of membership in a specific group, have gained some contact and experience with the cooperative structure, will tend to join cooperatives more readily than those who are not members of these groups.

The following hypothesis is suggested:

Individuals who have farm backgrounds will tend to join cooperatives in a greater proportion than those who were born and reared in a town or city.

The hypothesis in the null form is: There is no difference in the proportion stating a willingness to join cooperatives, when compared on the basis of place of birth.

Table 14 illustrates the proportion stating a willingness to join cooperatives, when compared on the basis of place of birth.

Table 14. Frequencies of stated willingness to join cooperatives compared on the basis of place of birth

<table>
<thead>
<tr>
<th>Stated intention</th>
<th>Rural farm</th>
<th>Town</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Join</td>
<td>14</td>
<td>13</td>
<td>19</td>
<td>46</td>
</tr>
<tr>
<td>Not join</td>
<td>58</td>
<td>82</td>
<td>225</td>
<td>365</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>95</td>
<td>244</td>
<td>411</td>
</tr>
</tbody>
</table>
A calculated chi square value of 12.77 with one degree of freedom is significant at the one per cent level.

The null hypothesis is refuted and the original hypothesis is supported. Those individuals with a farm background tend to join in greater proportions than those born and raised in a town or city.

Since the cooperative development in Superior was initiated by people of Finnish extraction, one would hypothesize that members of this particular national group would be more willing to join and participate in consumer cooperatives, than non-Finnish groups.

For the sample as a whole, the following hypothesis is suggested:

9. Those individuals who perceive the cooperative membership as "foreigners" will tend to join in a lesser proportion than those who perceive the cooperative membership as comprised of "all people."

The hypothesis in the null form is: There is no difference in the proportion stating a willingness to join cooperatives, for those perceiving cooperative members as foreigners, compared with those who perceive them as comprised of "all people."

Table 15 illustrates the proportion joining and not joining, when compared on the above characteristic.

<table>
<thead>
<tr>
<th>Stated intention</th>
<th>Foreigners</th>
<th>All people</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Join</td>
<td>11</td>
<td>55</td>
<td>66</td>
</tr>
<tr>
<td>Not join</td>
<td>105</td>
<td>172</td>
<td>227</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>227</td>
<td>343</td>
</tr>
</tbody>
</table>
A calculated chi square value of 10.72 was found, which with one degree of freedom is significant at the one per cent level.

The null hypothesis is refuted and the original hypothesis, that individuals who perceive the cooperative membership as "foreigners", will tend to join in a lesser proportion than those who perceive the cooperative membership as comprised of "all people", is supported.

10. The hypothesis is suggested that: Individuals who are married will have more favorable attitudes toward consumer cooperatives than those who are not married.

The above hypothesis in the null form is: There is no difference between attitudes toward consumer cooperatives, when compared on the basis of marital status.

The following table illustrates the difference in mean attitude scores for the married and unmarried groups.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>40.158</td>
<td>321</td>
</tr>
<tr>
<td>Unmarried</td>
<td>38.131</td>
<td>91</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>412</td>
</tr>
</tbody>
</table>

The calculated F value of 12.86 with one and 411 degrees of freedom is significant at the one per cent level.

The null hypothesis is refuted and the original hypothesis that married persons have more favorable attitudes toward cooperatives than
unmarried is supported.

11. Individuals who perceive the cooperative membership as comprised of all people, will have a more favorable attitude toward consumer cooperatives than those who perceive the cooperative memberships as comprised of a given class group.

The hypothesis in the null form is: There is no relationship between the individual’s perception of the class structure of the cooperative membership and attitudes toward cooperatives.

The following table illustrates the mean attitude scores for those perceiving the cooperative membership as comprised of all classes, and those who specify a given class group.

Table 17. Mean attitude toward consumer cooperative scores compared on the basis of perceived class structure

<table>
<thead>
<tr>
<th>Perceived class structure</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>All classes</td>
<td>40.250</td>
<td>296</td>
</tr>
<tr>
<td>Class named</td>
<td>38.254</td>
<td>110</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>406</td>
</tr>
</tbody>
</table>

The calculated biserial coefficient of correlation is .25, which is significant at the one per cent level. The null hypothesis is refuted, and the original hypothesis that individuals who perceive the cooperative membership as comprised of all people, will have a more favorable attitude toward consumer cooperatives than those who perceive the cooperative membership as comprised of a given class group, is supported.

12. Individuals who perceive the cooperative membership as comprised of foreigners will have a less favorable attitude toward cooper-
atives than those who perceive them as composed of all groups, ("national-
ality makes no difference.")

The hypothesis in the null form is: There is no difference between
attitude toward cooperative scores when compared on the basis of per-
ception of cooperatives membership as comprised of foreigners or all
groups.

The following table illustrates the mean attitude scores for both
groups.

Table 18. Mean attitude toward consumer cooperatives scores compared
on the basis of perception of cooperative membership as "foreigners" or "all groups"

<table>
<thead>
<tr>
<th>Membership perception</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreigners</td>
<td>40.600</td>
<td>136</td>
</tr>
<tr>
<td>All groups</td>
<td>37.911</td>
<td>277</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>413</td>
</tr>
</tbody>
</table>

The calculated F value of 5.87 with one and 412 degrees of freedom
is significant at the one per cent level.

The null hypothesis is refuted and the original hypothesis that,
individuals who perceive the cooperative membership as comprised of
"foreigners" will have less favorable attitudes toward cooperatives than
those who perceive them as composed of "all groups", is supported.

13. Individuals who perceive the cooperative membership as com-
prised of a specific ethnic group, and are not themselves members of that
group, will have a less favorable attitude toward cooperatives, than individuals who perceive the cooperative membership as a non-ethnic group.

The hypothesis in the null form is: There is no relationship between attitudes toward consumer cooperatives, and perception of cooperative memberships as a specific ethnic group, or as a non-ethnic group.

The following table illustrates the differences in mean attitude score, when compared on the basis of perception of the cooperative membership as elicited from the responses to an open-end question.

Table 19. Mean attitude toward consumer cooperatives scores compared on the basis of perception of cooperative membership

<table>
<thead>
<tr>
<th>Cooperative membership perceived as:</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finnish</td>
<td>37.781</td>
<td>96</td>
</tr>
<tr>
<td>No specific ethnic group</td>
<td>40.578</td>
<td>316</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>412</td>
</tr>
</tbody>
</table>

A calculated biserial coefficient of correlation of .34 is significant at the one per cent level. The null hypothesis is refuted and the original hypothesis, that individuals who perceive the cooperative membership as composed of a specific ethnic group and are not themselves members of that group, will have a less favorable attitude toward cooperatives, than individuals who perceive the cooperative as non-ethnic,
is supported.

14. Individuals who perceive the cooperative membership as comprised of a social class group above their own social class level will tend to join in greater proportions, than those who perceive the cooperative membership as a social class below their own social class level.

The hypothesis in the null form is: There is no difference in willingness to join and participate in consumer cooperatives when compared on the basis of the ratio of the perceived social class level of cooperative membership to the individual's own social class position.

The following table shows the number willing and not willing to join cooperatives, when compared on the basis of their perceived social class level of cooperative membership to their own social class position.

Table 20. Frequencies of willingness to join cooperatives when compared on the basis of perceived social class of cooperative membership relative to own social class positions

<table>
<thead>
<tr>
<th>Willingness to join</th>
<th>Perceived social class of cooperative membership relative to own social class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Join</td>
<td>Higher</td>
</tr>
<tr>
<td>Join</td>
<td>63</td>
</tr>
<tr>
<td>Not join</td>
<td>245</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
</tr>
</tbody>
</table>

A chi square value of 3.8 was found, which with one degree of freedom is significant at the five per cent level.

The null hypothesis is refuted and the original hypothesis that, individuals who perceive the cooperative membership as comprised of a
social class group above their own class level will tend to join in
greater proportions than those who perceive the cooperative membership
as a social class below their own social class level is supported.

15. Favorableness of attitude toward consumer cooperatives is
directly related to the amount of formal education.

The hypothesis stated in the null form is: There is no difference
in attitudes toward consumer cooperatives, when compared on the basis of
formal education.

The mean attitude scores for various classifications of years of
schooling completed are given in Table 21.

Table 21. Mean attitude toward cooperative scores compared on the
basis of number of years of formal education completed

<table>
<thead>
<tr>
<th>Education years completed</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-7</td>
<td>41.483</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>38.814</td>
<td>54</td>
</tr>
<tr>
<td>9-11</td>
<td>39.736</td>
<td>91</td>
</tr>
<tr>
<td>12</td>
<td>39.603</td>
<td>131</td>
</tr>
<tr>
<td>13-15</td>
<td>39.859</td>
<td>71</td>
</tr>
<tr>
<td>16</td>
<td>38.882</td>
<td>17</td>
</tr>
<tr>
<td>&gt; 16</td>
<td>40.812</td>
<td>16</td>
</tr>
</tbody>
</table>
An F value of 1.25 with six and 412 degrees of freedom is not significant. The null hypothesis is not refuted.

A coefficient of correlation was also computed to test the relationship between attitudes toward consumer cooperatives and years of formal education.

A coefficient of correlation of .07 with 410 degrees of freedom is not significant at the five per cent level.

The null hypothesis is not refuted and the original hypothesis is not supported.

16. The amount of understanding of the cooperative structure and purpose is related to the amount of formal education.

The hypothesis stated in the null form is: There is no difference in understanding scores when compared on the basis of number of years of formal education.

The mean understanding scores for the various classifications of years of schooling completed are given in Table 22.

An F value of 2.96, with six and 412 degrees of freedom, is significant at the one per cent level.

A coefficient of correlation was also computed to test the relationship between understanding of cooperatives and years of formal education.

The null hypothesis is: There is no positive relationship between understanding of cooperatives and years of formal education.

A coefficient of correlation of .01 with 410 degrees of freedom is not significant at the five per cent level.

The null hypothesis is not refuted, and the original hypothesis is not supported.
Table 22. Mean understanding of cooperative scores compared on the basis of years of formal education completed

<table>
<thead>
<tr>
<th>Education years completed</th>
<th>Mean understanding scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-7</td>
<td>28.935</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>26.518</td>
<td>54</td>
</tr>
<tr>
<td>9-11</td>
<td>26.538</td>
<td>91</td>
</tr>
<tr>
<td>12</td>
<td>26.717</td>
<td>131</td>
</tr>
<tr>
<td>13-15</td>
<td>25.774</td>
<td>71</td>
</tr>
<tr>
<td>16</td>
<td>25.882</td>
<td>17</td>
</tr>
<tr>
<td>more than 16</td>
<td>26.062</td>
<td>16</td>
</tr>
</tbody>
</table>

17. The amount of satisfaction with cooperatives is related to the amount of formal education.

The hypotheses in the null form is: There is no difference in cooperative satisfaction scores when compared on the basis of years of formal education.

An F value of 5.36, with six and 412 degrees of freedom, is significant at the one per cent level. The null hypothesis is refuted and the original hypothesis is supported.

A coefficient of correlation was also computed to test the relationship between satisfaction with consumer cooperatives and years of formal education.
The null hypothesis is: There is no positive relationship between satisfaction with consumer cooperatives and years of formal education.

A coefficient of correlation of \(-.27\) with 410 degrees of freedom is significant at the one per cent level.

The null hypothesis is not refuted and the original hypothesis is not supported. There is, however, a negative relationship between satisfaction with consumer cooperatives and years of formal education.

Table 23. Mean satisfaction with cooperative scores compared on the basis of number of years of formal education completed

<table>
<thead>
<tr>
<th>Education years completed</th>
<th>Mean understanding scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-7</td>
<td>23.935</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>23.574</td>
<td>54</td>
</tr>
<tr>
<td>9-11</td>
<td>22.802</td>
<td>91</td>
</tr>
<tr>
<td>12</td>
<td>24.473</td>
<td>131</td>
</tr>
<tr>
<td>13-15</td>
<td>25.478</td>
<td>71</td>
</tr>
<tr>
<td>16</td>
<td>28.470</td>
<td>17</td>
</tr>
<tr>
<td>&gt;16</td>
<td>29.250</td>
<td>16</td>
</tr>
</tbody>
</table>

Favorableness of attitude toward consumer cooperatives is directly related to level of income.

The hypothesis in the null form is: There is no difference in attitudes toward cooperatives when compared on the basis of income level.
The mean attitude scores for the various income classifications are shown in Table 24 below.

An F value of .76 with five and 403 degrees of freedom is not significant. The null hypothesis is not refuted.

A coefficient of correlation was also computed to test the relationship between attitude toward consumer cooperatives and occupational rating.

Table 24. Mean attitude toward cooperative scores compared on the basis of gross family income level

<table>
<thead>
<tr>
<th>Gross family income in dollars</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 2200</td>
<td>39.298</td>
<td>77</td>
</tr>
<tr>
<td>2201 - 3200</td>
<td>39.788</td>
<td>52</td>
</tr>
<tr>
<td>3201 - 4200</td>
<td>40.345</td>
<td>84</td>
</tr>
<tr>
<td>4201 - 5200</td>
<td>39.885</td>
<td>105</td>
</tr>
<tr>
<td>5201 - 6200</td>
<td>38.625</td>
<td>40</td>
</tr>
<tr>
<td>more than 6200</td>
<td>39.901</td>
<td>51</td>
</tr>
</tbody>
</table>

The hypothesis is: There is a positive relationship between attitudes toward consumer cooperatives and occupation ratings.

The null hypothesis is: There is no positive relationship between attitudes toward consumer cooperatives and occupational ratings.

A coefficient of correlation of .04 with 411 degrees of freedom is not significant at the five per cent level.
The null hypothesis is not refuted and the original hypothesis is not supported.

19. The amount of understanding of the cooperative structure and purposes is related to the level of income.

The hypothesis in the null form is: There is no difference in understanding scores, when compared on the basis of level of income.

The mean understanding scores for the various income levels are shown in Table 25 below.

Table 25. Mean understanding of cooperatives scores compared on the basis of gross family income level

<table>
<thead>
<tr>
<th>Gross family income in dollars</th>
<th>Mean attitude scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 2200</td>
<td>26.727</td>
<td>77</td>
</tr>
<tr>
<td>2201 - 3200</td>
<td>26.923</td>
<td>52</td>
</tr>
<tr>
<td>3201 - 4200</td>
<td>27.178</td>
<td>84</td>
</tr>
<tr>
<td>4201 - 5200</td>
<td>26.428</td>
<td>105</td>
</tr>
<tr>
<td>5201 - 6200</td>
<td>26.050</td>
<td>40</td>
</tr>
<tr>
<td>more than 6200</td>
<td>26.058</td>
<td>51</td>
</tr>
</tbody>
</table>

An F value of .95 with 5 and 408 degrees of freedom is not significant. The null hypothesis is not refuted.

A coefficient of correlation was also computed to test the relationship between understanding of cooperatives and occupational rating, as measured by the North-Hatt indices.
The hypothesis is: There is a positive relationship between understanding of cooperatives and occupational rating.

The null hypothesis is: There is no positive relationship between understanding of cooperatives and occupational rating.

A coefficient of correlation of -.03 with 411 degrees of freedom is not significant at the five per cent level.

The null hypothesis is not refuted and the original hypothesis is not supported.

20. The amount of satisfaction with cooperatives is related to the level of income.

The hypothesis in the null form is: There is no difference in satisfaction scores when compared on the basis of level of income.

The satisfaction scores for the various income levels are shown in Table 26.

Table 26. Mean satisfaction with cooperatives scores compared on the basis of gross family income level

<table>
<thead>
<tr>
<th>Gross family income in dollars</th>
<th>Mean satisfaction scores</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 2200</td>
<td>23.376</td>
<td>77</td>
</tr>
<tr>
<td>2201 - 3200</td>
<td>24.057</td>
<td>52</td>
</tr>
<tr>
<td>3201 - 4200</td>
<td>24.476</td>
<td>84</td>
</tr>
<tr>
<td>4201 - 5200</td>
<td>24.476</td>
<td>105</td>
</tr>
<tr>
<td>5201 - 6200</td>
<td>24.875</td>
<td>40</td>
</tr>
<tr>
<td>more than 6200</td>
<td>26.176</td>
<td>51</td>
</tr>
</tbody>
</table>
An F value of 1.50 with five and 408 degrees of freedom is not significant. The null hypothesis is not refuted.

A coefficient of correlation was also computed to test the relationship between satisfaction with cooperatives and occupational rating as measured by the North-Hatt indices.

The hypothesis is: Satisfaction with consumer cooperatives is positively related to occupational rating, as measured by the North-Hatt index.

The null hypothesis is: There is no positive relationship between satisfaction with consumer cooperatives and occupational rating.

A coefficient of correlation of .128 with 411 degrees of freedom is significant at the one per cent level.

The null hypothesis is refuted and the original hypothesis that satisfaction with consumer cooperatives is positively related to occupational rating, is supported.
Implications for Future Research

Limitations of post factum theorizing

An earlier chapter was used to present the limitations of post factum theorizing. The researcher utilizing this method is soon confronted with the reality that the selection of conceptual variables is limited by the availability of existing indices. The melioristic tradition of sociology, more especially rural sociology, often serves to heighten the problem. It has been stated that much of current research is unearthing facts, which cannot be utilized by any current generalized analytical scheme (71). Parsons argues cogently, that quantitative data are not scientifically important unless they can be fitted into analytical categories (71).

Perhaps an equally important consideration is the degree of abstraction the researcher employs in categorizing his data. Merton offers a method which would seem to reconcile, at least in some measure the positions of the empiricist and the theorist. The preceding reference is to Merton's theory in the "middle ground" or "intermediate level" (64).

Merton has recognized the need for "viable" theory which he designated as theory which, "is now employed in guiding and interpreting research," and "thereby create small families of empirically verified theorems" (64). The procedure outlined by Merton would seem to be consistent with that of conceptual variable analysis, with of course greater
emphasis being given to a priori theoretical formulation. An attempt has been made within the framework of the present study to build a small family of hypotheses, which were then subjected to empirical verification.

Abel has stated that, "There has been since Comte, a progressive elucidation of the assumption upon which sociology is founded, namely that relational and group attributes are dynamic qualities" (1). The method of theorizing employed in the present study known as conceptual variable analysis, certainly recognizes the dynamic aspects of sociological concepts. In the present dissertation, however, conceptual variables which treat of relational and group attributes are limited in the theoretical orientation for the reason previously mentioned.*

Limitations of the present study and suggestions for future research

The theory of reference groups with its normative and comparative aspects, is the method used in the present dissertation for dealing with relational and group attributes. Kelley has commented that:

A considerable number of every person's attitudes are related to or anchored in one or more social groups. The nature of this social anchorage of attitudes is by no means clear or simple. On the one hand it is apparent that a person's attitudes commonly expressed within groups to which he belongs, (his membership groups.) On the other hand studies of prestige, influence, opinion leadership, rejection of membership groups by underprivileged persons, and the influence of outgroups upon levels of aspiration, have indicated that attitudes are often related to non-membership groups (55).

In addition, Hovland, Janis and Kelley have commented that:

*See Method and Procedure Section.
The influence excited by a communicator and by what he says is often dependent upon the individual's adherence to group norms or standards. Thus, one of the important sets of audience predispositions concerns the conformity motives which stem from membership in, or affiliation with, various social groups (4-6).

In the present dissertation there are many questions which have not been answered with respect to reference or membership and non-membership group influences. For example: What is the motivational relationship between the person and each of his various reference groups? How much does he value his membership, or in the case of a non-membership group, how much does he desire to become a member? What kind of motives are involved in his membership aspirations? What factors permit a group member to resist the group pressures toward conformity without being rejected? What are the peculiar patterns of standards and norms associated with special roles or offices within the group? What factors in the person's relation to the group promote internalization of the group norms (4-6)?

The preceding questions deal with the normative function of reference groups, whereas the present dissertation dealt mainly with the comparison function of reference groups. As a consequence of this orientation, the major emphasis has been from the standpoint of the perceptual and judgement processes involved in attitude formation. However, one must readily admit that even in this area, a lack of definitive answers is apparent. It would be desirable to know the exact nature of the stimulus which the comparison group presents to the individual (4-6). The use of membership and non-membership groups might suggest a highly structured and definite comparison point characteristic of the former,
contrasted with an ambiguous stimulus capable of a variety of interpretations for the latter.

In the present dissertation the degree of structural cohesion, defined as the willingness of individuals to accept the formal role within a given group, was shown to be related to the concepts of attractiveness, relative deprivation, ambiguity and norm disparity. Past research, which also utilized cooperative organizations as the unit of study, have established relationships between participation in the formal structure and reasons for joining (8) (14) (42). It is clear from these and other researches that different people may have quite different reasons for joining and remaining in a group. The attractiveness of a given group is a concept, as stated earlier, which subsumes other concepts. The conceptual variable, degree of attractiveness was shown to be related to the degree of relative deprivation, amount of ambiguity, and the degree of norm disparity. All of the aforementioned conceptual variables influence the attractiveness a given group holds for an individual.

The statement of the relationships between above mentioned conceptual variables in the form of general hypotheses, which were subjected to empirical verification, has been offered as a "family of empirically verified theorems" (64). Although the theory is parsimonious, no claims have been made as to its completeness.

Hovland, Kelley and Janis offered a framework which will be used to discuss the limitations involved in the theoretical orientation of the present dissertation. They stated that:

Common knowledge and some research data indicate that a person's membership in a group can involve any one or
combination of the following three factors:

1. Positive attractions within the group based on friendship for the other members and the desirability of status, and activities which membership makes possible. In determining the net positive attractions of a group, account must be taken of the undesirable aspects of the group which must be endured and desirable activities outside the group which must be foregone, if membership is to be maintained.

2. Outside threats or deprivations which are avoided by maintaining membership in the group.

3. Restraints which act to keep the person within the group without regard to his desires in the matter (46).

The aforementioned factors will now be discussed with a view to specifying the limitations of the present study, and their implications for future research.

With respect to the first factor, the suggestion is that attempts be made to study the relationship between the acceptance of the formal roles or the degree of structural cohesion and its degree of complementarity or competition with the roles accepted by the individual in other subsystems. A given group therefore, must be viewed in regard to its relationship to other groups in the social system, and this context is essential it would seem, if one is to comprehend the net positive attractiveness of any given group.

The second factor cited by Hovland, Janis, and Kelley would seem to be especially apropos for a cooperative group, which is essentially categoric in nature (46). With reference to the rural scene, the need for organizing protective associations is discussed by Zimmerman, who cites examples of the traditional types of rural beliefs as follows: "The farmer is the only producer. The middlemen set the price. All
other groups are organized except the farmer and he must organize to protect himself. All other economic groups are parasites" (100).

The question arises whether the need for categoric associations of this type exists for urban residents. In addition, research should be undertaken to determine the characteristics of the social environment which are most conducive to the development and growth of categoric formations.

The third factor cited by Hovland, Janis, and Kelley has reference to the restraints which act to keep the person within the group without regard to his desires in the matter. Zimmerman and Black have commented on the preceding factor, usually referred to as conformity, as it applies to cooperative associations:

Voluntary cooperation is more likely to succeed than legal coercion. The mainsprings of cooperation are the psychological attitudes of the members. Excessive legalism damages these attitudes and furnishes a poor and unwieldy substitute. Loyalty is a matter of thought and feeling and not of mechanical device (100).

The voluntary cooperation Zimmerman and Black describe involves adherence to group norms and acceptance of prescribed roles. The hypothesis is suggested that homogenous groups are capable of exercising coercion of a social rather than a legal nature. It is further suggested that the enforcement of group norms is more difficult for heterogenous groups.

The preceding discussion of conformity to group norms has definite implications for future research on consumer cooperatives, both from the standpoint of attitudinal and participation studies. Since the present study and others have shown that reference groups are related to attitude formation, the problem becomes one of ascertaining the degree of
conformity exhibited by any given member. The degree of conformity shown by a member will depend, of course, upon his expectations of being rewarded for conformity and being punished for non-conformity. Thus conformity motives depend, in part, upon the pattern of formal and informal sanctions applied within the group. The more severe the formal punishments and the stronger other members reactions to deviancy, the stronger will be the individual members tendencies to conform and resist counter-influence. These social reactions or pressures toward conformity depend in turn, upon various circumstances within and around the group. For example, they have been shown to depend on the cohesiveness of the group.(33) (34). It would seem logical to suggest as indeed it has, that the sanctions for conformity are applied differentially to the various members of a group, depending upon such considerations as their tenure, their position in the communication network of the group, and their social status (46).

Past research on cooperative associations has emphasized participation as the degree of acceptance of the formal role. This is the ideal formal role structure. In addition one would suggest research be undertaken to establish the relation of informal roles to formal role acceptance, and in the light of the discussion above, the nature of group norms, as they relate to formal role acceptance by members, with particular reference to member status within the group.

In addition to informal roles within the group, recognition should also be given to the influence of informal groups on attitudes. The importance of informal group influences on attitude formation is an area
of investigation which was not treated in the present study.

The preceding aspect of group influences on attitude formation is cited by Axelrod as part of the Detroit area study. Axelrod stated that informal groups in the city are important in determining attitudes. He continues that:

About one-half the population (Detroit) report that they see relatives at least once a week. This is in sharp contrast to the stereotype which pictures the city dweller as devoid of kinship associations. This very dense network of informal relationships must have an important effect in determining attitudes, in organizing actions, and supporting and sustaining norms (7).

Axelrod suggested that kinship associations are important for all socio-economic status groups in the city. The hypothesis suggested by other researches, that formal participation substitutes for informal is refuted by Axelrod, who offered support for a direct relationship between the two types of activity.

In the present dissertation no recognition was given to influence of these informal groups on attitude formation. The hypothesis is suggested that urban residents with farm backgrounds will participate in informal groups whose members have similar backgrounds, and thereby reinforce certain attitudes. The preceding suggestion is relevant to the results of the present study, which reported more favorable attitudes toward consumer cooperatives, historically a rural organization, on the part of individuals with farm backgrounds compared with those of non-farm background.

In addition Zimmer has shown, that in an urban environment, farm migrants assimilate at a much slower rate than urban migrants. Simi-
larity of environment is therefore a factor in assimilation (99). Co­
operatives would seem to offer one type of organization which was
familiar to the farm migrant in his new urban setting. In this respect,
cooperatives may serve to facilitate the assimilation of farm migrants
in an urban locale.
The major purposes of the present study were to determine the attitudinal and perceptual variables which are related to willingness to join and participate in consumer cooperatives, and to determine the larger aspects of organizational structure related to attitude formation.

The conceptual variable involved in predisposition to join and participate in consumer cooperatives was called structural cohesion, and was defined as the degree to which the units in a system are willing to accept the formal role of a given sub-system. The social system for the present study was the city of Superior, Wisconsin, which is comprised of a multitude of sub-systems.

It was hypothesized that the degree of structural cohesion would vary directly with the amount of attractiveness. The conceptual variable, attractiveness, was defined as the degree to which the units in the system displayed an affinity for the structure of a given sub-system.

In order to study the determinants of group attractiveness, the concept of relative deprivation was used. It was further hypothesized that the degree of attractiveness would vary indirectly with the amount of relative deprivation. It would seem logical to assume that individuals would be less attracted to groups, membership in which they perceive as depriving. Relative deprivation was defined as the degree to which the units in a system perceive group membership as relatively depriving. Using hypotheses one and two, a third hypothesis was derived: The degree of structural cohesion varies indirectly with the amount of
relative deprivation. The preceding hypothesis states that individuals will display a willingness to join and participate in consumer cooperatives to the extent they perceive cooperative membership as non-depriving, relative to their present status.

The fourth hypotheses stated that the degree of attractiveness varies indirectly with the amount of ambiguity. The concept of ambiguity was defined as the degree to which units in the system possess an ambiguous understanding of the structure and formal roles of a given sub-system. The hypothesis states that individuals who are ambiguous in their understanding of the structure and formal roles of a given sub-system will be less attracted to that sub-system than those who possess a less ambiguous amount of understanding.

Hypotheses numbers one and four were used in the derivation of hypothesis number five which stated that: The degree of structural cohesion varies indirectly with the amount of ambiguity. It was hypothesized, therefore, that an ambiguous understanding of the cooperative structure and formal roles will tend to be negatively related to willingness to join and participate in the cooperative.

After consideration of the selective nature of the ambiguity concept, a sixth hypothesis was formulated. The hypothesis stated that: The amount of ambiguity varies directly with the amount of norm disparity. The conceptual variable norm disparity was defined as the degree to which the units in a system perceive a given sub-system as possessing norms which differ from those held by their own reference groups. It was further stated, that individuals who perceive the greatest amount of norm
disparity between their group and the cooperative, would be characterized by the greatest amount of ambiguity.

Hypotheses numbered five and six were used in the derivation of a final hypothesis. It was hypothesized that structural cohesion would vary indirectly with the amount of norm disparity; that is individuals who perceive a large disparity of norms between the cooperative and their reference group, will be less willing to join and participate in a cooperative than those who perceive a lesser amount of norm disparity.

Data for the study were collected from a random sample of 413 residents of Superior, Wisconsin, by means of a prepared schedule. The data were coded and punched on IBM cards for analysis.

The limitations of post factum theorizing were discussed with reference to the selection of indices for the conceptual variables used in the present dissertation. Structural cohesion was measured by the respondent's stated willingness to join and participate in consumer cooperatives. The concept of attractiveness was measured by the attitude toward consumer cooperatives scale. The results of tests of reliability and validity on the attitude scale were reported. The satisfaction scale was used as a negative index of norm disparity. The results of similar tests of reliability and validity were also reported for the satisfaction scale. The understanding scale was used as a negative measure of ambiguity. All three scales had been used by the author in previous research studies. Data concerning the respondent's nationality and his perception of the predominant national group of the cooperative, were used to measure norm disparity.
The instruments just described were used to obtain scores from each respondent for each of the five conceptual variables. Appropriate statistical techniques were used to test the hypothesized relationships.

A discriminant analysis was employed to predict willingness to join and participate in consumer cooperatives by a random sample of the residents of Superior, Wisconsin. The predictor variables used in the discriminant analysis were, attitude toward consumer cooperatives, as an index of the attractiveness of a given group; satisfaction with cooperatives as a negative index of relative deprivation; and understanding of cooperatives as a negative index of ambiguity.

Relationships significantly different from zero were found between structural cohesion and the concepts of attractiveness, relative deprivation and ambiguity. Statistical tests were also performed to indicate the relative predictive effectiveness of each of the independent variables.

A test of significant loss was used, to determine the effect of deleting the understanding variable. The results indicated that a significant loss in predictive ability ensues, when the understanding variable is eliminated. An additional test for significant loss was performed after deleting the satisfaction variable. The results indicated that a significant loss in predictive ability ensues upon deleting the satisfaction variable.

In keeping with another purpose of the present study, the relationship between the concept of structural cohesion as measured by stated willingness to join and participate in consumer cooperatives, and the
concept of norm disparity was supported.

The hypothesized relationships between attitudes toward consumer cooperatives and income, education, and occupational rating were not supported. A significant relationship was reported between satisfaction with consumer cooperatives and occupational rating.

The intended contributions of the present study are as follows:

1. Methodological: The statistic known as discriminant analysis has application to sociological research, as well as its more common use in personnel selection.

2. Theoretical: Conceptual variable analysis can be used to establish "families" of hypotheses within a given sub-division of sociological research.

3. Pragmatic: Social organization variables are related to attitudes toward joining and participating in consumer cooperatives. An understanding of these relationships is essential to the growth and development of consumer cooperatives in urban centers.
LITERATURE CITED


47. Hyman, H. H. The psychology of status. Arch. of Psychology. No. 269. 1942.


ACKNOWLEDGEMENTS

The author wishes to express his sincere appreciation and indebtedness to Dr. J. H. Bohlen for his valuable suggestions and constructive criticisms in the planning and execution of the project, and in the analysis and interpretation of the results.

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APPENDICES

Attitude Toward Consumer Cooperatives Scale

1. Cooperatives should have a right to exist in our country.

2. Cooperatives are a form of socialism.

3. The existence of cooperatives doesn't endanger the American way of life.

4. Cooperatives are a step toward communism.

5. Most cooperatives are monopolies.

6. Cooperatives are a threat to free enterprise.

7. Competition between cooperative grocery stores and other local stores is good for the community.

8. The responsibilities of belonging to a cooperative are greater than the benefits one gets in return.

9. Cooperatives can fulfill as great a need for city residents as they do farm people and residents of small towns.

10. Cooperatives were all right in their day but with all the competition there is now not much need for them.

11. Smart shoppers buy at cooperatives whenever they can.
Satisfaction With Consumer Cooperative Scale

1. Trading at a cooperative grocery store would be of no advantage to me.

2. Cooperative stores are not well managed.

3. It is cheaper to buy in a chain store supermarket such as ______________ than it is in a cooperative.

4. I would not like to be seen going in and out of a cooperative grocery store.

5. I would not want my friends to know that I trade at a cooperative grocery.

6. The quality of goods sold through cooperatives is poorer than through other grocery stores.

7. One gets better services at a chain store than in a cooperative.

8. I can gain no advantages from buying at a cooperative that I do not already have where I am now shopping.
Understanding of Consumer Cooperative Scale

1. Check any one of the following you consider appropriately describing a true cooperative:
   (a) ____ A cooperative is a group of people seeking extra income by going into business as merchants.
   (b) ____ A cooperative is a group of people conducting certain aspects of their home business operations jointly for themselves at cost.
   (c) ____ A cooperative is just another way of doing business.
   (d) ____ Don't know.

2. How are cooperatives controlled?
   (a) ____ By customers on the basis of one vote per member.
   (b) ____ By customers on the basis of one vote for each share of stock held.
   (c) ____ By manager appointed by wholesale cooperative such as _________.
   (d) ____ Don't know.

3. What is done with the savings or profits the local cooperative makes?
   (a) ____ Manager decides at end of each year.
   (b) ____ Returned to member patrons on basis of volume of business.
   (c) ____ Returned to members on basis of number of shares of stock held.
   (d) ____ Wholesale cooperative uses money for enlarging operations.
(e) ___ Earnings used to advance political activities of "left wing" groups.

(f) ___ Don't know.

4. If a person belongs to a cooperative does he have a responsibility to buy there?
   ___ yes ___ no ___ Don't know

5. Is any business that makes refunds to customers a cooperative?
   ___ yes ___ no ___ Don't know

6. Can any business that does not pay refunds to customers be a real cooperative?
   ___ yes ___ no ___ Don't know

7. Cooperatives dodge income tax responsibilities.
   Strongly agree, agree, undecided, disagree, strongly disagree.

8. Cooperatives can exist only because of special tax privileges.
   Strongly agree, agree, undecided, disagree, strongly disagree.

9. In a cooperative just like any other business the price you pay over the counter is what the goods cost you.
   Strongly agree, agree, undecided, disagree, strongly disagree.
Table 27. Analysis of variance attitude toward cooperative scores by family income

<table>
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Table 28. Analysis of variance satisfaction with cooperative scores by family income

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Table 29. Analysis of variance understanding of cooperative scores by family income

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Table 30. Analysis of variance attitude toward cooperative scores by years of formal education

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Table 31. Analysis of variance satisfaction with cooperative scores by years of formal education

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Table 32. Analysis of variance understanding of cooperative scores by years of formal education

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Table 33. Analysis of variance attitude toward cooperative scores compared on the basis of place of birth

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Table 34. Analysis of variance satisfaction with cooperatives scores compared on the basis of place of birth

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Table 35. Analysis of variance mean understanding of cooperative scores compared on the basis of place of birth

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Table 36. Analysis of variance attitude toward cooperatives scores by willingness to join and participate

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Table 37. Analysis of variance satisfaction with cooperative scores by willingness to join and participate

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Table 38. Analysis of variance understanding of cooperative scores by willingness to join and participate

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Table 39. Analysis of variance attitude toward cooperative scores by previous membership experience

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Table 40. Analysis of variance satisfaction with cooperative scores by previous membership experience

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Table 41. Analysis of variance understanding of cooperative scores by previous membership experience

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Research Survey

We are making a survey in order to find out some facts about opinions on cooperatives in this community. We would appreciate it if you would give us your opinions and answers to some questions in this area. This is not a test — we want your opinions — all answers will be kept in confidence and your responses will be never identified with you.

Introduction: What are your opinions of the following statements? Your answer is correct if it expresses your true opinion. DO NOT OMIT ANY ITEMS. Encircle the appropriate letter or letters.

SA - Strongly Agree; A - Agree; U - Undecided; D - Disagree; SD - Strongly Disagree

1. Cooperatives should have a right to exist in our country. SA A U D SD
2. Cooperatives dodge income tax responsibilities. SA A U D SD
3. Cooperatives are a form of socialism. SA A U D SD
4. The existence of cooperatives doesn't endanger the American way of life. SA A U D SD
5. Cooperatives are a step toward communism. SA A U D SD
6. Most cooperatives are monopolies. SA A U D SD
7. Cooperatives can exist only because of special tax privileges. SA A U D SD
8. Cooperatives are a threat to free enterprise. SA A U D SD
9. Competition between cooperative grocery stores and other local stores is good for the community. SA A U D SD
10. Cooperatives bear their fair share of the tax burden. SA A U D SD
11. Trading at a cooperative grocery store would be of no advantage to me. SA A U D SD
12. Cooperative stores are not well managed. SA A U D SD
13. It is cheaper to buy in a chain store super market such as ____________ than it is in a cooperative. SA A U D SD
14. I would not like to be seen going in and out of a cooperative grocery store. SA A U D SD
15. I would not want my friends to know that I trade at a cooperative grocery.  
16. The quality of goods sold through cooperatives is poorer than through other grocery stores.  
17. In a cooperative, like any other business, the customer has little to say about quality of goods, prices and services offered.  
18. In a cooperative, just as in any other store, the price you pay over the counter is what the goods cost you.  
19. One gets better services at a chain store than in a cooperative.  
20. Smart shoppers buy at cooperatives whenever they can.  
21. I can gain no advantages from buying at a cooperative that I do not already have where I am now shopping.  
22. The responsibilities of belonging to a cooperative are greater than the benefits one gets in return.  
23. Cooperatives can fulfill as great a need for city residents as they do farm people and residents of small towns.  
24. Cooperatives were all right in their day but with all the competition there is now not much need for them.  
25. It isn't wise to shop at one store exclusively. It's better to look around.  
26. This community needs a strong progressive cooperative grocery store and meat market.  
27. Check any one of the following you consider appropriately describing a true coop:
   ____a. A cooperative is a group of people seeking extra income by going into business as merchants.
   ____b. A cooperative is a group of people conducting certain aspects of their home business operations jointly for themselves at cost.
   ____c. A cooperative is just another way of doing business.
28. How are cooperatives controlled?
   a. By customers on basis of one vote per member.
   b. By customers on basis of one vote for each share of stock held.
   c. By manager appointed by wholesale cooperative such as ________.
   d. Don't know.

29. What is done with the savings or profits the local cooperative makes?
   a. Manager decides at end of each year.
   b. Returned to member patrons on basis of volume of business.
   c. Returned to members on basis of number of shares of stock held.
   d. Wholesale cooperative uses money for enlarging operations.
   e. Earnings used to advance political activities of "left wing" groups.
   f. Don't know.

30. If a person belongs to a cooperative, does he have a responsibility to buy there?
    _______ YES _______ NO _______ Don't know

31. Is any business that makes refunds to customers a cooperative?

32. Can any business that does not pay refunds to customers be a real coop?
    _______ YES _______ NO _______ Don't know

33. Which social group in the community do you usually find buying at coops?
    _______ Upper class _______ Lower class
    _______ Upper middle class _______ All classes (No
    _______ Lower middle class _______ relationship to class)
34. Which of these groups of people in the community do you usually find buying at coops?

____ Foreigners (what nationality)
____ First generation Americans (what nationality)
____ Old line Americans (what nationality)
____ All people (background makes no difference)

35. What is the major nationality of the various classes in this community?

____ Upper class
____ Upper middle class
____ Lower middle class
____ Lower class

36. Which age group mainly buys from the cooperatives?

____ Older people
____ Middle-aged people
____ All ages (age not a factor)

37. In your own words what are the kinds of people who would or do buy from a cooperative grocery store. (Interviewer may wish to fill this on a basis of probing without use of above.)

________________________
________________________
________________________

38. What is your attitude toward joining a cooperative?

( ) I would be eager to join and participate in a grocery cooperative.
( ) In all probability I would join and participate in a grocery cooperative.
( ) I might consider joining and participating in a grocery cooperative.
( ) It doesn't matter to me whether a grocery store is a cooperative or not.
( ) It is not likely I would join and participate in a grocery cooperative.
( ) It is extremely unlikely I would join and participate in a grocery cooperative.
( ) I would never join and participate in a grocery cooperative.
39. How would you classify your overall attitude toward cooperatives.

( ) I am extremely favorable toward cooperatives.
( ) I am quite favorable toward cooperatives.
( ) I am somewhat favorable toward cooperatives.
( ) I am rather neutral toward cooperatives.
( ) I am somewhat unfavorable toward cooperatives.
( ) I am quite unfavorable toward cooperatives.
( ) I am extremely unfavorable toward cooperatives.
( ) I do not know enough about cooperatives to have an opinion about them.

40. If respondent is married. Is your husband's attitude towards cooperatives:

_______ less favorable
_______ more favorable
_______ about the same as yours.

40a. If all of the following supermarkets provided about the same services from which would you buy your groceries?

_______ a cooperative
_______ an independent that gave trading stamps
_______ an independent that did not give trading stamps
_______ shop around in all three
_______ prefer to buy at non-supermarket

40b. Why (probe) __________________________________________

41. Where do you now buy your groceries?

1. __________________________

2. __________________________

3. __________________________

(Number 41—Where do you now buy your groceries?—continued)

(If respondent buys at more than one store, indicate above which category of groceries she buys at each and why.)

42. Have you ever seen the cooperative paper, "The Cooperative Builder"?

_____ Yes  _____ No

43. If yes to 42, do you read it?  _____ Yes  _____ No
In order to classify the information we need to know some things about your background.

a. Place of birth ____________________________ Farm Town City
   ____________________________(Address) i.e. town and state
b. Nationality of mother ____________________________
c. Nationality of father ____________________________
d. Age ___ e. Number of years of formal education _______
f. Marital status: _____Married _____Single _____Widowed
   _____Divorced
g. Number of children ________
h. Father's occupation ____________________________
i. Husband's occupation ____________________________
j. Have you or your husband ever been a member of a cooperative?
   _____Yes _____No
k. If yes to j. above:
   k1. What cooperative ______
   k2. Where __________________
   k3. How long ________________
   k4. Are you still a member __________
   k5. Were you satisfied with quality of goods there: _____Yes _____No _____na
   k6. Were you satisfied with prices: _____Yes _____No _____na
   k7. Were you satisfied with services: _____Yes _____No _____na
   k8. Why did you join ____________________________

k9. If you had it to do over, would you join again? _____Yes _____No _____na

l. Stated in broad categories, what is your income per year as a family?
   ______ less than 2200
   ______ 2201 - 3200
   ______ 3201 - 4200
   ______ 4201 - 5200
   ______ 5201 - 6200
   ______ More than 6200