Study of attitudes toward supermarkets in Great Falls, Montana

Lewis Michael Roome

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A STUDY OF ATTITUDES TOWARD SUPERMARKETS IN GREAT FALLS, MONTANA

By
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B.B.A., Texas A&M University, 1962

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Chairman, Board of Examiners
Dean, Graduate School

[Date] June 3, 1974
I am indebted to many people for their help in preparing this paper. I am especially grateful for the help and assistance given me by my advisor, Dr. Thomas J. Steele. He not only planted the seed of my interest in attitudes and their impact on consumer behavior, but he continually provided guidance and encouragement in the preparation of this work.

I would also like to give special thanks to Mrs. Virginia Gilmore, Librarian for the AFIT Minuteman Education Program, and Mrs. Bobbie Smith, my typist. Mrs. Gilmore not only aided me in locating needed reference materials, but went "beyond the call" in proofing the paper and providing invaluable advice on format and style. Mrs. Smith worked many additional hours to ensure that the final product met the highest professional standards and was completed in time to satisfy University requirements.

Finally, I must single out for special recognition, my wife, Sandra. She always found the time, in an already busy schedule, to help accomplish those numerous tasks that are necessary to the successful completion of any research project. She performed as my part-time typist, conducted personal interviews with shoppers, distributed and collected
questionnaires, tabulated data, and did countless other jobs. Without her help, it is probable that this paper would have never been completed in time to meet the deadlines established by the University and possibly, would never have been completed at all.
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CHAPTER I

INTRODUCTION

Statement of the Problem

Aided by rising disposable income and increasing prices, supermarkets have registered healthy increases in sales in recent years. In 1972, these sales were up 7.7 per cent, and for the first time, topped the $100 billion mark.\(^1\) In spite of these gains, however, profits were down for all store classes. Net profits as a per cent of sales reached all time lows with supermarket chains registering an after-tax net of 0.6 per cent and independents, 1.1 per cent.\(^2\) Contributing to these record low profit figures were intense competition, depressed margins, increased wage rates, increased cost of goods, price regulation, and increased operating costs.

In spite of these trends, and to some extent to offset them, supermarkets have been expanding at tremendous rates. Since World War II, the number of supermarkets has


\(^2\)Ibid.
risen over 300 per cent. The annual rate of growth in terms of new stores is now about 2.5 per cent of total stores. Supermarkets have also been growing in size. Today's store is about twice the size of its predecessor of the 1960s. The 1972 average chain store contained 19,240 square feet of selling area, an increase of 1500 square feet over the 1971 average store. The average store now handles around 9,000 items and is continuing to add more lines and services. These indications of change, and the advent of "super" supermarkets and combination stores which sell as many non-food items as food items, all demonstrate the dynamic operating environment that faces the supermarket executive.

The problem for the manager is how to maintain or improve profits in this environment. How can he best offset the costs that come with expansion and change? He could increase prices, but given the degree of competition existing, raising prices is not a feasible solution. An obvious answer is to increase the sales of the products he offers. This could possibly be done by getting his customers to eat more, thereby increasing their requirement for food purchases. This is obviously not a feasible solution however. Even if he could persuade an individual to eat more, it is doubtful

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food consumption per individual could be increased by more than a very small per cent. Additionally, the climate of the times certainly does not favor increased food consumption. One merely has to look at the myriad of advertisements promoting the "slim" and the "trim" or examine the countless numbers of diet fads and health food regimens to find evidence of this attitude. As a recent article in *Time* put it, "The simple fact is that Americans eat too much."5 The better approach, and the one supermarkets are continually engaged in, is to increase the volume of traffic in the store. "Supermarkets must look to increased volume to maintain or improve profits," says Robert Picordat, Director of Store Planning for Giant Food, a leading grocery chain.6

Attracting new patrons and stimulating current customers to shop more often (i.e., increasing traffic volume) requires the manager to recognize the preferences and feelings of the consumer. He must seek to understand what motivates shoppers to patronize one supermarket over another. What causes them to select or reject his store? What attitudes do they hold that influence their behavior? The answers to these types of questions have important implications for supermarket executives. If behavior can be related

to attitudes, then an understanding of these attitudes becomes the key to increasing traffic volume and improving store loyalty. Decisions must be conditioned by these attitudes because "the more nearly a store's product and service offerings meet customer expectations, the more likely the store will induce customers to become patrons."?

Knowledge of shoppers' attitudes toward the store and, more importantly, those attributes that shape these attitudes thus becomes invaluable information. These attributes, their importance to shoppers, and shoppers' beliefs in their relationship to particular supermarkets, become building blocks of the shoppers' image of the store. They will seek out that store that fits their specific desired attributes. For the manager then, these attributes become the basis of changing or improving advertising and promotion strategies, store layout and design, personnel policies, and so on. The necessity for recognizing them is evident.

In summary, the supermarket executive, in order to maintain or improve profits in a challenging environment, must attract more patrons and prevent the loss of those who are presently customers. The key to this endeavor is an understanding of the customers' attitudes and, more

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specifically, those dimensions that are influential in developing the attitudes. When both these attitudes and behavior point in the same direction, the manager can feel confident in drawing conclusions about the dimensions. These attributes are the important variables grocery shoppers evaluate and the ones upon which they base their selection of competing stores.

Purpose of the Study

This study examined attitudes toward Great Falls, Montana area supermarkets. An attempt was made to identify relationships between these attitudes and behavior and then draw conclusions about those attributes that are important in determining attitudes. The primary objectives of the study were to identify, measure, and analyze attitudes in order to identify those attitude-determinant factors that are important to the supermarket manager in increasing and improving his store's patronage.

Limits of the Research

Research was limited to an investigation of the attitudes of selected subjects toward twelve major supermarkets in the Great Falls area. These subjects were residents

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who are primary grocery shoppers for their families. The supermarkets of interest are well dispersed throughout the area. These stores and their locations are identified below:

<table>
<thead>
<tr>
<th>Store</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albertson's</td>
<td>Holiday Village Shopping Center</td>
</tr>
<tr>
<td>Buttreys Food Store</td>
<td>Central Business District</td>
</tr>
<tr>
<td>Buttreys Food Store</td>
<td>Tenth Avenue S.</td>
</tr>
<tr>
<td>Buttreys Food Store</td>
<td>Westgate Shopping Center</td>
</tr>
<tr>
<td>Buttreys Food Store</td>
<td>Holiday Village Shopping Center</td>
</tr>
<tr>
<td>Noble's Foodland</td>
<td>First Avenue N.W.</td>
</tr>
<tr>
<td>Rosauer's Super Market</td>
<td>Valu Mart Shopping Complex</td>
</tr>
<tr>
<td>Safeway Stores, Inc.</td>
<td>Central Business District</td>
</tr>
<tr>
<td>Safeway Stores, Inc.</td>
<td>Sixth Street N.W.</td>
</tr>
<tr>
<td>Super Save IGA</td>
<td>Sixth Avenue N.</td>
</tr>
<tr>
<td>Super Save IGA</td>
<td>Tenth Avenue S.</td>
</tr>
<tr>
<td>Super Save IGA</td>
<td>Riverview Area</td>
</tr>
</tbody>
</table>

---

10 A primary grocery shopper is defined as that member of a family group (or single member if not part of a family group) who is most responsible for the purchase (selection) of food items for the group and selection of the location where the items will be purchased.
CHAPTER II

REVIEW OF THE LITERATURE ON ATTITUDES
AND ATTITUDE MEASUREMENT

Research on attitudes and associated measurement techniques spans a period of over seventy-five years. Development of the concept of attitude began in the domain of experimental psychology and soon became a distinctive area for study in social psychology. Only within the last two decades, however, have researchers begun to recognize the potential an understanding of attitudes and attitude measurement can have on marketing strategies and programs. Today, "researchers are rushing into this area with new surveys, new models, and new methods of analysis."1 There is also evidence that store executives too are recognizing the importance of attitudes. Increased emphasis on attractive designs, customer-oriented layout, and personalized customer service are but a few manifestations of this recognition.2 Certainly more owners and managers are becoming aware that "success hangs on more than product;" it depends on the consumers' attitudes.3

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1Search for Good Attitude Measures Goes On...and On...and On," Media/scope, February 1968, p. 61.
3Ibid.
Description of the Concept

An appropriate and necessary beginning to any review of attitude research is an understanding of the concept itself—its definition and structure. Even the briefest review of attitude literature reveals that there are almost as many definitions of the concept as there are researchers.

To illustrate, attitude has been defined as:

A more or less permanently enduring state of readiness of mental organization which predisposes an individual to react in a characteristic way to any object or situation with which it is related.  

An attitude is a tendency to act toward or against something in the environment which becomes thereby a positive or negative value.

An attitude is a mental disposition of the human individual to act for or against a definite object.

An attitude, roughly, is a residuum of experience, by which further activity is conditioned and controlled. . . . We may think of attitudes as acquired tendencies to act in specific ways toward objects.

An enduring system of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to a social object.

The evaluative dimension of a concept.

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5 Ibid. 6 Ibid. 7 Ibid.


9 Lynn R. Anderson and Martin Fishbein, "Prediction of Attitude from the Number, Strength, and Evaluative Aspect of Beliefs about the Attitude Object: A Comparison of
Although these definitions vary, there seems to be a common thread that runs through them. Gordon Allport, after considering over one hundred different definitions, concluded that there seemed to be basic agreement that an attitude is a learned predisposition to respond to an object or class of objects in a consistently favorable or unfavorable way. He went on to say that the most distinctive feature of the concept seemed to be this bipolarity in the direction of an attitude. An individual, then, is inclined to respond favorably or unfavorably toward the attributes of an object. This inclination is an attitude.

The structure of an attitude is a composite of two similar, but different constructs. These elements are beliefs and values. Beliefs are associated with the probability dimension of a concept. A person may "believe in" an object, or hold "beliefs about" the object. Under the first condition (i.e., "believe in") the individual accepts at some level of probability that the object does in fact


11Ibid.

exist. Under the second (i.e., "belief about") he accepts as probable or improbable that a relationship exists between the object of belief and another object or concept. Values are degrees of worth assigned to the object. For example, an individual may value safety in an automobile very highly, but place little value on style. Automobile safety has a higher degree of worth than automobile style.

Two additional terms, valence and salience, are important to an understanding of the concept. Valence generally refers to the direction (e.g., favorable-unfavorable) and strength or degree (e.g., very favorable, extremely unfavorable) of the attitude. Salience concerns the relevance or importance of particular attributes to the individual.

Development of the Concept

The concept of attitude had its beginnings in the field of psychology. Early work by experimental psychologists led to the development of the term "task-attitude" and recognition of the importance of "preparedness" or preconditioning in response to stimuli. Much controversy developed as more experimentalists examined the nature of attitudes. A variety of attitude types and forms were identified and much debate developed as to whether attitudes were a part of a subject's conscious or unconscious mental state. The

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discovery that they were largely unconscious states discouraged experimentalists from further research. Not until Freud began to relate attitudes to other concepts, such as love, hate, prejudice, and so on, did the study of the concept again flourish.

Social psychologists became interested in attitudes as a possible explanation of how culture and social force were carried forward from one generation to the next. A classic work was Thomas and Znaniecki's study of Polish peasants. From this study, the researchers concluded that attitudes were individual mental processes which determined both the actual and potential responses of each person in the social world. Attitudes were directed toward some object and reflected the mental state of an individual toward some value. Values were social concepts that reflected the way in which socialized men viewed objects in common.

Much additional study of the concept centered on its relationship to behavior. Attitudes were generally viewed as unidimensional concepts. They were predispositions to respond along a single dimension (e.g., favorable-unfavorable). Allport disagreed with the common view, feeling that it was entirely realistic to view an object favorably, but hold unfavorable feelings about other characteristics of the object. Because of this qualitative nature of attitudes, he felt that they could not predict behavior. Along this same

\[14\text{Allport, "Attitudes," p. 6.} \quad 15\text{Ibid.}\]
line, but for different reasons, Leonard Doob argued that there did not necessarily have to be a direct relationship between attitude and behavior. One not only had to learn an attitude, he had to also learn what behavioral response to make to it. For this reason, it was perfectly logical for two people to hold identical feelings toward an object and still react differently to it. Doob's argument hinted at the multicomponent nature of attitudes. Many researchers believed that attitudes contained an affective (feeling), a cognitive (belief), and a conative (action tendency) component. Fishbein disagreed with these views and preferred to define beliefs and behavioral intentions as independent phenomena that are only related to attitudes. Beliefs and behavioral intentions are determinants or consequents of an individual's attitude.

**Development of Attitude Measurement Techniques**

Many instruments have been developed in the search for good tools to measure attitudes. Only a few have found widespread use, however. Many others are offshoots from or combinations of the more popular techniques, or were developed to accomplish a specific task.

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One of the earliest measurements devised was the Thurstone Equal-Appearing Interval Scale.\textsuperscript{18} This scale is constructed basically as follows: (1) a large number of statements concerning the attitude object are developed; (2) these statements are sorted by several judges (300 in the original technique) into eleven piles which appear to the judges to be equally spaced as to the degree to which agreement with the statement reflects the underlying attitude; (3) the piles are numbered and a scale value is determined for each statement; (4) statements for which there is widespread disagreement are discarded; (5) a small number of statements are selected which represent an even distribution along the attitude continuum. A respondent using the Thurstone scale marks those statements with which he agrees. The median of the scale values of all the statements marked becomes the attitude score. Reliability of the scales has generally been well established, but validity depends to a great extent upon the particular attitude being measured and the precise formulation of the statements. Though widely used in psychological research, the cost of development has generally limited its use in marketing research.

Another approach to measurement was developed by Likert.\textsuperscript{19} His summated scale requires the development of a

\textsuperscript{18}Shaw and Wright, \textit{Measurement of Attitudes}, p. 21.
\textsuperscript{19}Ibid., p. 24.
large number of statements relevant to the attitude object. Instead of rating each statement along an attitude dimension as in Thurstone's technique, the respondent merely indicates on a five-position scale some degree of agreement or disagreement with the statement. Statements are varied in their degree of favorability or unfavorability toward the attitude object, and the attitude score is the sum of the various values assigned to the scale positions (i.e., the sum of the scores for all statements). The scales are generally reliable, but as in the equal-appearing interval scale, validity depends upon the particular scale being developed. Likert scales are popular in marketing research, but usually the scales are not summed.

Guttman developed a scale similar to a summated scale. Respondents are provided a list of statements with which they are to agree or disagree. Unlike statements in a summated scale, however, statements in the Guttman scale are rank-ordered. Respondents who have agreed with a particular statement, also agree with all statements ranked below it. Guttman's scale is a cumulative scale. Like Thurstone's technique, the Guttman scale is seldom used in marketing research. Considerable time and effort is needed to develop the scales and construction of a large number would be expensive.

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The most widely used scale in marketing research is the semantic differential developed by Osgood, Suci, and Tannenbaum. The scale consists of pairs of antonyms separated by a number of cues. Respondents indicate their attitude toward an object by marking a position on the scale which indicates the direction and intensity of their feeling toward the object. Values assigned to the various scale positions can be summed for several antonym pairs to produce an attitude score. Several studies report high estimates of reliability and validity for the scales. The semantic differential will be discussed in more detail in Chapter III.

Development of Models

An attitude has been defined as an inclination to respond toward the attributes of an object. An overall attitude toward an object can be determined by combining the many favorable or unfavorable attitudes toward these attributes. In an attempt to better understand attitudes and their relationship to other concepts and behavior, several theoretical models have been developed which depend upon evaluation of these various attributes.

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An early investigation into the relationship between attitudes and beliefs was undertaken by Milton Rosenberg.\textsuperscript{23} Rosenberg theorized that both the sign (i.e., positive or negative, favorable or unfavorable) and extremity (i.e., degree of favorableness) of a person's feeling toward an object were functions of whether the object was perceived as blocking or facilitating the attainment of values and whether or not the values were important. Thus, a strong and positive feeling toward an object should be associated with beliefs that the attitude object tends to facilitate the attainment of important values. Likewise, strong negative feelings should indicate beliefs that the object tends to block attainment of important values. Rosenberg tested his theory on a group of undergraduates through an attitude questionnaire on the issue of "allowing members of the Communist Party to address the public." His findings tended to confirm his hypotheses. The model based upon this study is called the Rosenberg Importance-Potency Model. It states that the sign and degree of an overall attitude toward an object is a function of the sum of the products of the importance of each value associated with the object and the potency of the object for realizing the value.\textsuperscript{24} Mathematically,

\begin{equation}
\text{Mathematically},
\end{equation}

\textsuperscript{23}Milton Rosenberg, "Cognitive Structure and Attitudinal Affect," in Readings in Attitude Theory.

\textsuperscript{24}Hughes, Attitude Measurement for Marketing Strategies, p. 58.
the model may be expressed as:

\[ A = \sum_{i=1}^{n} I_i P_i \]

In more familiar terms, the model may be stated:25

\[ A = \sum_{i=1}^{n} S_i V_i \]

where

- \( S = \) salience of the ith attribute
- \( V = \) valence of the ith attribute
- \( n = \) the number of attributes

A decade later, Martin Fishbein developed a different model of the relationship between beliefs and attitudes.26 The theory behind his model predicted that an individual's attitude toward any object was a function of his beliefs about the object and the evaluative aspects of those beliefs. Mathematically, Fishbein's model can be expressed as:

\[ A_o = \sum_{i=1}^{n} B_i a_i \]

where

- \( A_o = \) the overall attitude toward object "o"
- \( B_i = \) the strength of belief "i" about "o" (i.e., the belief that \( x \) is related to "o")
- \( a_i = \) the evaluative aspect of \( B_i \) (i.e., the evaluation of the attribute, \( x_i \))
- \( N = \) the number of beliefs

\[ ^{25}\text{Ibid., p. 59.} \]

\[ ^{26}\text{Martin Fishbein, "A Behavior Theory Approach to the Relations between Beliefs about an Object and the Attitude Toward the Object," in \textit{Readings in Attitude Theory}, p. 394.} \]
Operationally, an individual's attitude toward an object can be determined by having him (1) rate various attributes of the object along a series of bipolar evaluative scales, (2) indicate his beliefs about the relationship of the attributes and the object on a similar bipolar scale, and then, (3) sum the products of these two ratings for each attribute. Fishbein's model is important to market researchers because of its emphasis on the elements of attitude change. An attitude can change because of a change in beliefs, the evaluative aspect of beliefs, or both. The Fishbein theory and model was used in the study and will be discussed in more detail in Chapter III.

Recognizing that an individual could hold highly favorable feelings toward an object and still respond unfavorably toward the object, Fishbein modified his model to reflect measures of attitude toward specific acts. The new model, Fishbein's Behavioral Intention Model, was stated as:

\[ BI = b_1A_{act} + b_2(NB \cdot Mc) \]

The behavior intention (BI) of an individual is a function of his attitude toward an act (e.g., buying or using a specific brand) and the product of what others think he should do (NB, the norm governing the behavior) and his motivation to comply

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with their desires \((Mc)\). The coefficients \(b_1\) and \(b_2\) are coefficients estimated via multiple linear regression. Fishbein's model was not only a useful way of explaining behavior, but was a major contribution due to its recognition and incorporation of social influence on behavior.

In order to overcome Fishbein's and Rosenberg's failure to relate their respective attitude models to behavior, Hughes and Naert (and later Hughes and Guerrero) used the following model:\(^{29}\)

\[
Pr = \sum_{i=1}^{n} S_i V_i
\]

This model, known as the Probability-Attitude Model, reflects the probability of some specific behavior. This probability is determined by summing the products of salience and valence for all the attributes associated with the object of behavior. The significance of this formula is in its substitution of the action tendency component for the evaluative component and its implication that these action tendencies are in fact determined by changes in attitude salience and valence.\(^{30}\)

**Attitude Measurement: Previous Studies**

The literature on attitudes and attitude measurement is seemingly endless. The few that will be reported here

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\(^{29}\)Hughes, *Attitude Measurement for Marketing Strategies*, p. 59.

\(^{30}\)Ibid.
are only cited as examples of the variety of projects that have been pursued in the quest for a better understanding of attitudes.

Much attitude research has taken place in the domain of social psychology. Carey, in a study of sex differences in problem solving performance, discovered that men make significantly higher scores than women on a scale of attitudes toward problem solving.\(^31\) Attitude scores produced by her study had a positive relationship to performance scores. Drinkwater used a Likert scale to determine the attitudes of high school girls toward physical education as a career for women.\(^32\) Richardson employed a modified Thurstone scale to measure attitudes of college students toward physical fitness and exercise.\(^33\) In a study of attitudes toward cooperation in a health examination survey, Borsky examined factors associated with an individual's stated intentions of cooperation in a medical examination program.\(^34\) The study indicated


\(^32\)Barbara Drinkwater, "Development of an Attitude Inventory to Measure the Attitude of High School Girls Toward Physical Education as a Career for Women," Psychological Abstracts 36 (February 1962): 102.


that several factors were related to examination behavior. Among these were attitudes and beliefs on health, on potential benefits of the examinations, on the importance of medical research, and about the reasonableness of procedures. Kogan developed a Likert scale for assessing attitudes toward old people. He found that unfavorable attitudes were associated with negative dispositions toward ethnic minorities and a variety of physically disabled groups. Finally, Lester administered two "fear of death" scales and a semantic differential scale for suicide in a study of attitudes toward death and suicide. He found no association between the two phenomena.

Although coming later to the fields of marketing and consumer behavior, the concept of attitude and the techniques of measurement have still generated a wealth of research literature. Woodside and Bovino conducted a study of retail store personalities. The purpose of their study was "to determine the salient attributes of the retail store personality, to describe major personality attributes among similar store types, and to offer management a tool by which they


37 Woodside and Bovino, "Consumer Images of Retail Store Personalities," pp. 173-78.
might assess their own store image." The researchers' methodology included employing Thurstone and Likert attitude scales to measure attitude toward a certain class of bookstores and particular attitudes toward specific bookstores in the class. In addition to identifying specific attributes, such as friendliness, reliability, fair pricing, and so on, their study revealed that consumers generalize across all offerings of a store (i.e., if a store has less service, it may seem to have higher prices). Additionally, there seemed to be an interdependency among the dimensions (i.e., attitude toward an attribute of a product tends to influence attitudes toward other attributes of the product).

Another study employing the Thurstone technique was conducted by Jon Udell. Udell "sought to determine what relationship existed between consumers' attitudes and their behavior concerning trading stamps." His technique employed 108 judges examining 100 statements. Nine statements were finally selected to be used in the study. From the study, Udell concluded that "the Thurstone attitude indexes were predictive of the stamp-saving behavior of the respondents."

The relationship of demographic variables and consumer attitudes was the subject of a study by Charles Collazzo.39

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He examined the beliefs, attitudes, and frustrations of various groups of consumers on the basis of demographic attributes, such as age, income, occupation, and education. His primary technique included sentence completion questions, free word association, rating scales, ranking, and forced choice questions. Among Collazzo's findings were: (1) a significant relationship exists between education and occupation in the determination of attitude toward shopping; (2) education is more important than income in determining attitudes; and (3) availability of size and brand names were important to low income groups.

Stephenson conducted research which identified patronage motives that were apparently important in selecting among competing outlets. An additional benefit of the study was demonstrating how retailers could employ the semantic differential to obtain necessary market information. The researcher used personal interviews to administer a semantic differential scale on which respondents rated three types of stores (e.g., new store, regular store, ideal store). A primary contribution of Stephenson's work was pointing out the usefulness of the semantic differential technique. It appeared to be adequate in (1) measuring differences in the way customers view a given store, (2) identifying salient attributes that are

important to a given group of customers, and (3) comparing customers' views of competing stores.

Stephenson, in partnership with Robert Kelly, did further developmental work on the semantic differential as a tool for designing retail patronage appeals. The researchers recognized that retailers needed some tool to help them determine consumer attitudes and expectations. Only when these customers' expectations were met would the store be likely to induce customers to become patrons. Kelly and Stephenson developed a differential scale and proposed its application in three specific areas: just prior to opening a new store, shortly after a new store has opened, and once a store has reached maturity. The application of the differential in these areas could reveal the following types of information: (1) information of existing market opportunities; (2) information on the success of the store in communicating to prospective customers; (3) information on attitudes consumers are forming about a new store; and (4) information about changes in the environment (e.g., change in consumers, change in competitors).

CHAPTER III

METHODOLOGY

Hypothesis and Statistical Technique

Statement of Hypothesis

The basis of this study was the proposition that an individual's attitude is an important determinant of the particular supermarket at which he or she shops. Each individual associates certain characteristics or attributes with a supermarket (e.g., cleanliness, courteousness of store personnel). An individual's feeling about these attributes per se (i.e., their general importance or unimportance) and the extent to which he or she believes a particular supermarket displays them determine the individual's attitude toward the particular store. A significant correlation between attitudes and shopping behavior (i.e., the percentage of shopping done at a particular supermarket) would have important meaning for a supermarket owner or manager. Important store characteristics which helped shape attitudes could be identified. Additionally, the degree to which shoppers believed a particular store exhibited (or failed to exhibit) the characteristics could be determined. Such information would be valuable in planning advertising and promotion, developing or improving store layout, planning store construction, establishing
personnel policies, and other such activities which should be pursued with a consumer orientation.

To test the proposition, the following hypothesis was examined:

\[ H_0: \text{Across individuals, there is no statistically significant correlation between attitudes toward specific supermarkets and the percentage of shopping done at those supermarkets.} \]

\[ H_A: \text{Across individuals, there is a statistically significant correlation between attitudes toward specific supermarkets and the percentage of shopping done at those supermarkets.} \]

or, more appropriately:

\[ H_0: \text{The sample correlation coefficient is zero.} \]

\[ H_A: \text{The sample correlation coefficient is not zero.} \]

Stated in mathematical form the null hypothesis and the alternative are:

\[ H_0: r = 0 \quad H_A: r \neq 0 \]

**Statistical Technique**

The hypothesis was primarily tested by determining the correlation between attitudes (as indicated by attitude scores generated through use of the Fishbein Attitude Model) and supermarket shopping behavior (as indicated by the percentage of shopping reported to be done at specific supermarkets). Coefficients of correlation were determined by using Pearson Product Moment Correlation methods.

The significance of correlation was tested using a t-distribution. Rejection of the null hypothesis was considered a significant finding. The hypothesis was primarily
tested at the .05 level of significance. The .10 and .20 levels of significance were also examined in some cases.

An additional test of the hypothesis was made using the Kolmogorov-Smirnov one-sample test. This method was appropriate for very small samples. Maximum differences between observed sample distributions and theoretical distributions (as assumed in the null hypothesis) were determined. These values were compared to a table of critical values at various levels of significance to determine significance.

General Approach to the Study

Attitudes of a sample of Great Falls area residents toward specific area supermarkets were measured through the use of an attitude measurement scale. This scale was developed to provide inputs to the Fishbein Attitude Model. Using this model, an attitude score was determined for each individual. Data needed to develop the measurement scale were obtained during personal interviews with a small sample of residents. The scale itself was given to selected residents in the form of a self-administered questionnaire. Once collected, the data were analyzed to determine correlation between the attitude scores and the specific supermarkets at which the respondents actually shop.

Description of the Fishbein Attitude Model

Fishbein's Theory of Attitudes

Traditional attitude theory held that the construct "attitude" was a composite of three key elements—a "feeling"
element, a "belief" element, and an "action tendency" element. Psychologists referred to these elements as the affective, cognitive, and conative elements respectively. A person's attitude was determined by the particular mix of these elements. However, Martin Fishbein, a social psychologist at the University of Illinois, felt that only one of these elements, the affective, was of real consequence. He consequently developed a different theory of attitudes which provided a new view of the construct.

Fishbein's approach separated the affective element from the cognitive and conative elements. The affective element, he observed, was the only one that was actually being measured when scales were constructed to measure attitudes.\(^1\) He equated the affective element with evaluation (i.e., favorable-unfavorable) and considered it to be the sole component of "attitude." In simplest terms, Fishbein defined attitude as a feeling, evaluated as favorable-unfavorable, good-bad, and so on, toward some object.

Fishbein's theory recognized "belief" as a construct separate from "attitude." An individual may evaluate an object as good or bad and, at the same time, express either belief or disbelief in the existence of the object.\(^2\) Furthermore, belief may be expressed as "belief in" an object (i.e.,

\(^1\)Fishbein, "A Consideration of Beliefs, and Their Role in Attitude Measurement," in Readings in Attitude Theory, p. 257.

\(^2\)Ibid., p. 258.
belief in the existence of the object per se) or "belief about" the object (i.e., belief about the relationship between the object and some other object or concept).\(^3\) Formally, Fishbein defined attitude as "a learned, implicit response that mediates evaluative behavior."\(^4\) Attitude refers only to the "evaluation of a concept . . ."\(^5\) A belief is defined as "the probability or improbability that a particular relationship exists between the object of belief and some other object, concept, or goal."\(^6\) Belief is a "concept's position on the probability dimension."\(^7\)

The Fishbein Model

Using a behavior theory approach, Fishbein developed a model of the relationship between belief and attitude.\(^8\) The model states that an individual's attitude toward any object is a function of his beliefs about the object and the

\(^3\) Martin Fishbein and Bertram H. Raven, "The AB Scales: An Operational Definition of Belief and Attitude," in Readings in Attitude Theory, p. 187.

\(^4\) Fishbein, "Beliefs and Their Role in Attitude Measurement," p. 260.

\(^5\) Fishbein, "A Behavior Theory Approach to the Relations between Beliefs about an Object and the Attitude Toward the Object," p. 389.

\(^6\) Fishbein, "Beliefs and Their Role in Attitude Measurement," p. 260.

\(^7\) Ibid.

\(^8\) Fishbein, "Relations Between Beliefs and Attitudes," p. 394.
evaluative aspect of those beliefs. Mathematically, this can be expressed as:

\[ A_o = \sum_{i=1}^{n} B_i a_i \]

where

- \( A_o \) = the overall attitude toward object "o"
- \( B_i \) = the strength of belief "i" about "o" (i.e., the probability or improbability that "o" is related to some other concept, \( x_i \))
- \( a_i \) = the evaluative aspect of \( B_i \) (i.e., the evaluation of \( x_i \))
- \( N \) = the number of beliefs about "o"

Operationally, an attitude can be determined by having a subject rate the strength of his beliefs about an object (\( B_i \)) and the evaluation of those beliefs (\( a_i \)) on a series of bipolar semantic scales. The subject's attitude toward the object (\( A_o \)) is then obtained by summing the products of the various belief strengths and evaluations. For example, assume one is interested in determining a subject's attitude toward a particular make of automobile, such as Ford. Assume further that a preliminary investigation revealed that economy, style, and performance were important dimensions or attributes of the product class, automobile. The subject would evaluate these dimensions on a seven point scale, such as:

To me economy is

\[ \text{Important} \quad (7) \quad (6) \quad (5) \quad (4) \quad (3) \quad (2) \quad (1) \quad \text{Unimportant} \]

\[ ^9 \text{Numbers in parentheses represent scale values.} \]
Assume the subject checks the scale position corresponding to a scale value of 6. A similar procedure would be followed for the dimensions of style and performance. Assume the subject rates these as 3 and 5 respectively. These scores represent the "a_i" values to be used in the model (i.e., a_1 = 6, a_2 = 3, a_3 = 5). The subject next rates the strength of his beliefs about Ford, using again, a semantic scale. This scale would be similar to the following:

Ford is economical:

\[
\text{Agree}: \quad X \quad \text{Disagree}
\]

(7) (6) (5) (4) (3) (2) (1)

Assume our subject indicates a scale value of 5. Assume he also indicates scores of 3 and 7 when he rates the strength of his beliefs about the relationship between Ford and style and Ford and performance respectively. These scores represent the "B_i" values to be used in the model (i.e., B_1 = 5, B_2 = 3, B_3 = 7). The products of these a_i-score and B_i-score values would then be summed to yield the subject's overall attitude score. In this example, B_1 a_1 = 30, B_2 a_2 = 9, and B_3 a_3 = 35. The sum of the products is 74. \(^{10}\)

\(^{10}\) The attitude score has little meaning in itself; however, the higher the score, the more favorable the individual's feeling about an object. A comparison between scores on two or more brands or scores on the same brand by two or more individuals would have meaning; although the difference in score values would not necessarily indicate how much more favorable the higher score was.
Other Models

Fishbein's model differs from the traditional attitude models. As Sampson and Harris observed, "Historically, attitude models were based on the idea of consistency, which holds that through some self-regulating homeostatic process, individuals strive toward consistency in thought, feeling, and behavior."\(^{11}\) The more notable models developed from consistency theories include those of "balance" (Heider, 1958), "congruity" (Osgood and Tannenbaum, 1955) and "cognitive dissonance" (Festinger, 1957). These models led to the prediction of attitude as a function of the average amount of feeling contributed by beliefs. They were thus, averaging models. Fishbein's model, on the other hand, is a summation model. His attitude prediction, as previously noted, is a function of the sum of beliefs about an object and the evaluation of those beliefs.

Studies in Support of Fishbein's Theory and Model

Several studies seem to support Fishbein's theory and model. In an initial test, the model was used to predict attitudes toward Negroes from a consideration of beliefs about Negroes and the evaluative aspect of these beliefs.\(^{12}\)


\(^{12}\)Fishbein, "Relations Between Beliefs and Attitude," pp. 396-97.
High correlation was found between the estimated and obtained scores. Another test indicated that a leader's attitudes toward the members of his group could be predicted from a knowledge of his beliefs about the members' behavior and the evaluation of those behaviors. Similarly, a voter's attitude toward a political candidate was determined to be a function of his beliefs about the characteristics of the candidate, the candidate's stand on issues, and his evaluation of these characteristics and issues.

Determination of Salient Attributes

A first step in preparing to measure attitudes is the identification of salient attributes. Salient attributes may include any dimension of a concept. Whitening ability, taste, and decay prevention may be salient dimensions for toothpaste. For supermarkets, such attributes could be friendliness of store personnel, cleanliness, or availability of desired brands. Such attributes as these are important because they are what is evaluated by the purchaser, not the product or service itself. As G. D. Hughes has observed, "People do not buy a product, they buy its taste, texture, nutritional value, ability to clean, brighten, and

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13 Ibid., p. 397.
14 Ibid.
15 Hughes, Attitude Measurement for Marketing Strategies, p. 73.
Salient attributes take on meaning and play a valuable part in the construction of attitudes when an individual believes in the existence of a relationship between the attributes and a product or service.

Definition of Salience

Salience is closely related to the terms "relevance" and "importance." An attribute that is salient to an individual should be relevant to him and will probably be important also. Salience may be defined as "the quantity of an attribute that is desired in a product." Attribute salience varies among consumers and according to the end purpose of the product or service. It is generally measured by asking a subject to rank attributes according to their importance to her.

Methods of Identifying Attributes

There are many approaches available for use in identifying attributes. These include direct questioning, indirect

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16 Ibid., p. 397.

17 An attribute that is considered important will not necessarily be salient. Safety is an important attribute in an automobile, but it may not be salient to an individual when selecting among makes because he considers all makes equally safe (or unsafe). See Myers and Alpert, "Determinant Buying Attitudes," p. 14.

18 Hughes, Attitude Measurement for Marketing Strategies, p. 10.

19 Ibid., p. 11.
questioning, and statistical approaches using multivariate techniques. Direct and indirect questioning approaches are often classified as unstructured methods and require either the researcher or the respondent to identify the attributes. Statistical approaches are structured. An additional approach, the Repertory Grid, uses a partially structured technique. This technique will be discussed at length as it was the basic approach used in this study.

Direct questioning approaches may take several forms. Respondents may simply be asked to identify those factors they consider important when purchasing a product or service. A similar form asks subjects to describe characteristics of an "ideal" brand or service. A third form uses dual questions to determine what attributes are important and then, how these attributes differ among products or services. This method seeks to differentiate those dimensions respondents see as being important, but also possessed equally by competing alternatives. In its most complex form, direct questioning involves depth interviews conducted by highly trained interviewers. Through in-depth probing, such interviewers seek to determine attributes which are relevant to a particular attitude object.

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20 Myers and Alpert, "Determinant Buying Attitudes," p. 15.
21 Ibid., p. 16.
22 Hughes, Attitude Measurement for Marketing Strategies, p. 74.
Indirect questioning approaches differ from direct approaches in that attributes are determined by inference. Researchers do not ask direct questions, but rather, draw conclusions from responses to indirect questions or projective stimuli.

Statistical approaches include factor analysis, cluster analysis, and nonmetric multidimensional scaling. Both factor and cluster analysis are aids in identifying salient attributes rather than techniques for identification. Factor analysis takes many dimensions and reduces them to a few correlated factors. Cluster analysis groups objects along several dimensions. Both techniques are essentially tools for reducing a large number of dimensions to manageable size. Nonmetric multidimensional scaling identifies attributes and additionally, places objects in n-dimensional space.

The Repertory Grid Method

The Repertory Grid method requires a respondent to identify a dimension and then compare objects along the dimension. The technique was employed in this study during personal interviews with a sample of primary grocery shoppers.\textsuperscript{23} The interviewing procedure was conducted as follows:

1. The subject was given twelve cards. On each was listed the name of a specific supermarket to be used in the study (e.g., Buttrey's, IGA, Albertson's). The subject was then asked to

\textsuperscript{23}Techniques used in obtaining this sample will be discussed under Data Collection.
discard those cards listing supermarkets with which he or she was completely unfamiliar (i.e., at which he or she had never shopped or had shopped so infrequently that he or she had no opinion about the store).

2. Three cards were then selected randomly from those remaining. The subject was asked to identify a dimension which he or she considered common to any two of the supermarkets, but different from the third.

3. Once a dimension was identified, the subject was asked to rate the remaining supermarkets with which he or she was familiar along the dimension. This rating was a ranking along a scale similar to the following:

\[
\begin{array}{cccccccccc}
\text{Dimension} & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 \\
\end{array}
\]

The supermarket which most exhibited the particular dimension was rated in the number one scale position. The supermarket which next most exhibited the dimension was rated in the number two scale position. The remaining supermarkets were similarly rank-ordered. A code corresponding to each supermarket was used to facilitate administration and analysis of the scales.

4. Three more cards were then selected randomly and the procedure was repeated. This process was continued until each respondent exhausted his or her ability to identify new dimensions.

Each respondent's replies were summarized in matrix form with rows corresponding to dimensions and columns representing specific stores. Each entry represented a scale position. The matrix was then analyzed for similarities or duplication between dimensions by comparing the rows. There were six cases of duplication between dimensions. Five of these cases were subjectively dismissed as insignificant.

\[24\] The average was seven constructs per respondent.
An example of such insignificant duplication was the identical ratings given the dimensions, "Availability of a Bakery" and "High Quality Meat," by one respondent. Such duplication occurred more from coincidence than from a synonymity of dimensions within the respondent's mind. The only apparent similarity between dimensions was in the case of "Large Variety of Name Brands" and "Large Variety of Products."

The Repertory Grid approach was chosen for this study for several reasons. First, it eliminates bias and errors of interpretation by the interviewers. The respondent, not the researcher, determines the dimensions. Second, it ensures that the dimensions are relevant. Fishbein stresses the importance of "the individual's own beliefs" about an object. These salient beliefs are the only ones that are determinants of an individual's attitude. As Hackman and Anderson indicate, "... the best estimate of attitude should be obtained from a consideration of the subject's own elicited beliefs . . ." Third, it was hoped that attributes provided by respondents in their own words would have more meaning for other respondents in later surveys. Finally, it was hoped respondents would give more thought to dimensions to be determined by comparison of similarities and differences.


26 Ibid.
Results of the Repertory Grid Method

Thirty-one attributes were identified by respondents using the Repertory Grid. These attributes were subsequently reduced to twenty dimensions for use in the study. Of the twenty dimensions selected for use, eighteen had been mentioned by more than one respondent. Two dimensions, "Decor" and "Number of Personnel Available to Serve Customers," were retained even though they were only mentioned once by respondents. Information on the importance of "Decor" was considered of interest since two supermarkets, Albertson's and Buttreys Food Store (Tenth Avenue S.), had recently undergone remodeling programs. Information on the importance of "Number of Personnel Available to Serve Customers," was thought a necessary complement to "Courtesy of Personnel" in assessing the impact of store personnel policies. The attribute, "Physical Arrangement of Products," was re-phrased as two dimensions--"Ease in Finding Items Wanted" and "Ease in Getting to Items Wanted." These phrases were thought to be more descriptive and less ambiguous than the original single attribute. Several dimensions pertaining to the availability of specific types of food or non-food items were combined into the single dimension, "Availability of Specialty Departments." Finally, eight dimensions were

27 Availability of Sundries, Availability of Bakery, Availability of Convenience Foods, Availability of Specialty Foods, Availability of Snack Bar.
dropped either because of insufficient response (i.e., lack of salience) or because they were closely related to another dimension retained for the study. 28

**Development of the Attitude Measurement Instrument**

The instrument used in this study was developed to facilitate use of the Fishbein Attitude Model. This model first requires determination of appropriate attributes and then development of scales to determine the values of \( a_i \) and \( B_i \). These scales were of the semantic differential form.

**The Semantic Differential**

The Semantic Differential Scale has been widely used in marketing research. Mindak applied it to marketing and advertising in developing brand and consumer profiles for beer manufacturers. 29 Crespi used it to determine "styling images" for appliance designs. 30 Using the differential, Harris predicted consumer reaction to different product

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designs.  

Barclay used the differential as an index of brand attitude.  

Finally, Kelly and Stephenson proposed using it to identify factors underlying consumer patronage decisions.  

As originally developed, the scale was designed to discriminate between subtle differences in the meaning associated with an object. Sets of bipolar adjectives were developed and arranged on a seven-position scale as follows:  


Subjects would indicate both direction and intensity of feelings about the association between a concept and the scale by marking a position on the scale. Meaning was assessed on three dimensions: evaluative, potency, and activity.  

The differential is generally modified for use in marketing research. Sets of antonyms, either words or phrases, are chosen which are relevant to the concept under study. The scale design separates the antonyms by a number  

---  


of cues. Cues may be numerical, graphic, or verbal, and in practice, are generally some combination. Regardless of form, the cues represent degrees of differentiation along the scale. For example, for the antonym pair "dirty-clean," scale positions (cues) may be "extremely dirty," "quite dirty," "slightly dirty," "neither," "slightly clean," "quite clean," and "extremely clean." Operationally, subjects are asked to evaluate or measure a particular concept along the dimension represented by the antonym pair. Quantitative weights can be assigned to each scale position to make mathematical manipulation of the responses possible.

Development of Scales to Determine the "a_i" Elements

The scales used to determine the values of the "a_i" elements were semantic differentials using, in general form, the antonym pair "important-unimportant." Subjects were asked to evaluate each attribute identified during preliminary investigation along the scale. Essentially, this evaluation was a measurement of the salience of the dimension. The measurement was in terms of the degree of importance of the dimension in relation to the concept, supermarket. The physical design of the scales was similar to the following:

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34 Hughes, Attitude Measurement for Marketing Strategies, p. 91.
35 Kelly and Stephenson, "The Semantic Differential," p. 44.
36 See Appendix for the scales used in the study.
<table>
<thead>
<tr>
<th></th>
<th>Important</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanliness</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>Display of Products</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
<tr>
<td>Quality of Produce</td>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>

A combination of graphic and verbal cues was used. Each numbered box represented a specific degree of importance as follows:

1. Extremely Important
2. Very Important
3. Quite Important
4. Moderately Important
5. Slightly Important
6. Neither Important Nor Unimportant
7. Not Very Important

Subjects were asked to place an "X" in the box that represented their feeling. The scales were heavily unbalanced toward the "Important" side to eliminate end piling that was detected during pre-tests.\(^\text{37}\) Seven cues were used to permit the assumption of an interval scale and provide an adequate number of response possibilities without overburdening and

\(^{37}\) The results of pre-tests on the scales are discussed under Reliability and Validity.
and irritating the subject. The five scale positions representing varying degrees of importance were selected to provide an adequate range of possible responses. The scale position, "Not Very Important," permitted a negative evaluation by the subject. Subjects who considered a dimension irrelevant could indicate their indifference by marking the neutral position, "Neither Important or Unimportant." Each scale position was scored as indicated below:

<table>
<thead>
<tr>
<th>Extremely Important</th>
<th>Not Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>(7)</td>
<td>(6)</td>
</tr>
<tr>
<td>(5)</td>
<td>(4)</td>
</tr>
<tr>
<td>(3)</td>
<td>(2)</td>
</tr>
<tr>
<td>(1)</td>
<td></td>
</tr>
</tbody>
</table>

In terms of the Fishbein model, the score represented the evaluation of a specific dimension (i.e., the $a_i$ element).

Development of Scales to Determine the $B_i$ Elements

The scales used to determine the values of the $B_i$ elements were patterned after a semantic differential proposed for patronage research by Kelly and Stephenson. Salient dimensions identified during preliminary investigation were rephrased in the form of antonym sets, such as Clean-Dirty, Low Quality Produce-High Quality Produce, Small Stock Level-Large Stock Level, and so on. The physical design of the scales were similar to the following:

Clean _______ Very Dirty

__________________________

Kelly and Stephenson, "The Semantic Differential," p. 44.
Cues were similar to those used in the "a_i" scales in both form and number. The scale positions represented these degrees of differentiation: Very; Quite; Slightly; Neither; Slightly; Quite; Very. Subjects were asked to place an "X" on the line that represented their belief about the relationship between a specific supermarket and a specified dimension. In terms of the Fishbein model, this rating represented a "B_i" element. Each subject was asked to apply the scales to each of twelve supermarkets examined in the study. Since a subject was possibly not familiar with all the supermarkets, a provision was added to permit the indication of unawareness. A subject who was completely unfamiliar with a particular supermarket or had shopped there so infrequently that he or she could not accurately evaluate the store, was permitted to skip the associated scales after indicating his or her unawareness. Unfamiliarity with a specific dimension was indicated by marking the neutral position on the scale. The values of the scale positions ranged from 7 to 1, with the higher values representing the
positive positions on the scale, such as:

<table>
<thead>
<tr>
<th>Clean</th>
<th>Dirty</th>
</tr>
</thead>
<tbody>
<tr>
<td>(7)</td>
<td>(1)</td>
</tr>
<tr>
<td>(6)</td>
<td>(2)</td>
</tr>
<tr>
<td>(5)</td>
<td>(3)</td>
</tr>
<tr>
<td>(4)</td>
<td>(1)</td>
</tr>
</tbody>
</table>

High Prices
Compared to
Other Stores

<table>
<thead>
<tr>
<th>Low Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>(7)</td>
</tr>
<tr>
<td>(6)</td>
</tr>
<tr>
<td>(5)</td>
</tr>
<tr>
<td>(4)</td>
</tr>
<tr>
<td>(3)</td>
</tr>
<tr>
<td>(2)</td>
</tr>
<tr>
<td>(1)</td>
</tr>
</tbody>
</table>

Reliability and Validity

To improve the reliability and validity of the instrument, some specific steps were taken in its construction and application. First, antonym sets on the $B_i$-value scales were alternated in polarity direction periodically to prevent subjects from forming position preferences (e.g., clean-dirty, discourteous store personnel-courteous store personnel, large stock level-small stock level). Second, in applying the instrument, the $a_i$-value scales were administered first. This approach was intended to prevent any possible influence on the evaluation of the dimensions. Third, all the scales were pre-tested to identify any ambiguity in the antonym sets and errors in scale construction.

Fifteen Great Falls' residents were asked to participate in the pre-test of the attitude measurement instrument.

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39 Fishbein argues that the characteristics should be evaluated before rating the belief statements to prevent the evaluation of the characteristics from becoming a function of the evaluation of the object. Sampson and Harris tested the hypothesis that the $B_i a_i$ scores would be affected by the order of presenting the $A$ and $B$ scales and found that the order was inconsequential. In spite of this finding, the $a_i$-value scales were presented first to ensure no bias developed.
To reduce the time involved in pre-testing, participants were selected from a group of residents known to the researcher. Although not randomly selected, participants were screened to ensure they met the definition of "primary grocery shopper" and were not eligible to use the Air Force commissary at Malmstrom Air Force Base. Participants were predominantly females between the ages of 20 and 30 years. Most were members of a family group consisting of two members. The average yearly family income of participants was $10,000 to $15,000. Participants purchased groceries two to four times per month, spending an approximate total of $75 to $125.

The attitude measurement scales were included in a four-part, self-administered questionnaire. Participants in the pre-test were given the questionnaire and asked to complete it by following the instructions carefully. Completed questionnaires were collected by the researcher a few days later. Participants were offered a quart-size bottle of Coca Cola as an incentive to complete the pre-test.

The physical design of the test instrument was very similar to that of the final instrument discussed earlier. To determine the "a_1" elements, participants were asked to indicate their feelings about each of twenty attributes identified in preliminary research. These feelings were identified in preliminary research. These feelings were

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40 See Development of Scales to Determine the "a_i" Elements, p. 42 and Development of Scales to Determine the "B_i" Elements, p. 44.
expressed in terms of the importance or unimportance of the attribute in relation to supermarkets in general. Participants responded by marking a seven-position scale associated with each attribute. Each scale position represented a specific degree of importance or unimportance as follows: Very Important; Quite Important; Slightly Important; Neither Important nor Unimportant; Slightly Unimportant; Quite Unimportant; and Very Unimportant. The end toward which the scale was marked indicated both the direction and intensity for the feeling. To determine the \( B_i \) elements, participants were asked to indicate their beliefs about the relationship between specific supermarkets in the Great Falls area and a specific attribute. Again, responses were indicated by marking a seven-position scale. These scales differed in form from those used to determine the \( a_i \) elements, however. Each dimension appeared as a set of antonyms separated by the scale positions. The pole toward which the participant marked indicated both the direction and intensity of his or her beliefs (i.e., the degree of association of the attribute in question with the supermarket in question).

Analysis of the results of the pre-test showed that instructions throughout the questionnaire were apparently well understood by all participants. Heavy end piling was discovered in some of the scales used to determine the \( a_i \) elements. Dimensions associated with eleven of the twenty
scales were rated to some degree of importance by all participants. Dimensions associated with the remaining nine scales received "unimportant" ratings by only one or two participants in each case. To eliminate such end piling, it was recognized that in the final instrument, scales should be reconstructed to be heavily unbalanced toward the "important" side.

No problems were encountered with the $B_1$ element scales. Participants evaluated an average of five supermarkets each, and responses were generally well distributed throughout the scales. Some participants did indicate initial confusion caused by the alternating polarity of the scales. It was determined to continue the use of this technique in the final instrument, however, because of its potential to prevent the formation of position preferences. To reduce the confusion, instructions were added to inform participants that the positive positions on the scales would alternate.

Other parts of the questionnaire which were pre-tested included an instrument for rank-ordering (via per cent of shopping) those supermarkets where a participant actually shopped and a data sheet requesting general demographic information. Several participants failed to indicate the percentage of shopping done at all stores they had previously evaluated. This confused comparisons between rankings by attitude scores and rankings by percentage of shopping done.
To correct this discrepancy, it was determined to change the instructions. In the final questionnaire, participants were asked to indicate the percentage of shopping done at every store they had previously evaluated. No problems were encountered with the data sheets. Participants provided all requested information.

Internal consistency of the items in the scales was estimated by the Split-Half technique. This method treats each of two or more parts of the scales as separate scales and estimates reliability from the correlation between the to or more sets of scores. Scales in this study were split into two parts using an odd-even approach (i.e., all odd numbered items were considered one scale and all even numbered items were considered one scale and all even numbered items another). The scores were correlated using Pearson Product Moment Correlation.

To evaluate concurrent validity, a criterion measure was obtained at the same time the scales were administered. The criterion measure was shopping behavior. The behavior of interest was where subjects indicated they shopped (i.e., at which supermarkets they purchased groceries) and the percentages of the shopping done at these supermarkets. A significant, positive correlation between attitude score and shopping behavior would support validity. The evaluation of content validity was a subjective judgement. Through careful construction of the scales, a maximum effort was made to
ensure that the content of each item pertained to the attitude object. Additionally, the construction of the $B_i$-value scales using antonyms ensured that the entire attitude continuum (i.e., positive-negative attitude) was represented.

**Data Collection**

All data were collected from residents in the metropolitan area of Great Falls, Montana. Great Falls is an industrial (light) city with agricultural and livestock production. The 1970 Census population data showed that area within the corporate limits to have 60,091 residents. The Standard Metropolitan Statistical Area population within the same area was 81,804. A 1972 estimate of population within the city and retail trading zone was 199,678.\(^{41}\) The number of households within the city and the retail trading zone has been estimated at 61,163.\(^{42}\) The average income per household is $12,733.\(^{43}\) Total retail sales for the area was estimated in 1971 to be $176,946,000.\(^{44}\) Of this figure, $27,308,000 was attributable to supermarkets.


\(^{42}\) Ibid.

\(^{43}\) Ibid.

Nature of Data Collected

Both demographic and attitude data were collected. Demographic data were collected to provide a general picture of the respondents and provide a data resource for possible future analyses. The kinds of demographic data concerning the primary grocery shopper are indicated below:

- Sex
- Age
- Family Size
- Annual Family Income
- Distance from Nearest Supermarket
- Distance from Supermarket Where Primary Grocery Shopping is Done
- Frequency of Grocery Purchases
- Education Level of Shopper
- Average Monthly Food Purchase ($)
- Supermarkets Where Shopping is Done

Attitude data collected included indications of feelings about specific dimensions associated with supermarkets and beliefs about the relationship between those dimensions and specific stores.

Sampling Technique

The general population from which samples were drawn included adult residents of Great Falls, Montana. Specifically, the universe of interest was adult residents who are primary grocery shoppers in Great Falls area supermarkets. Residents who purchase their groceries through the commissary at Malmstrom Air Force Base were excluded to eliminate bias.
Sequential sampling techniques were employed to select a sample of fifteen subjects used to determine salient attributes. This technique examines data as it is collected and stops collection when enough data is gathered. This approach was considered appropriate since data collection could be stopped when the responses became repetitious. This sample was drawn from a group of residents using the facilities of the Great Falls Easter Seal Society building. This building houses several private and public social and educational services for Great Falls' residents. All subjects in this sample fulfilled the definition of "primary grocery shopper" and the requirements of the universe of interest. Subjects in this sample were predominantly females ranging in age from 20 to 50 years. All subjects except one were high school graduates and the majority had some college education. The yearly family income level of the subjects ranged generally from $5,000 to $20,000. Most subjects purchased groceries from two to four times per month.

A second, larger sample was used to obtain the attitude measurements and demographic data. This sample was drawn from the alphabetical listing of names of residents and business and professional concerns listed in *Polk's Great Falls City Directory*. A general table of random numbers was used to make selections from this listing. Business and

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professional concerns that were randomly selected were eliminated, and the selection process continued until an appropriate sample of residents only was obtained. A sample size of 150 was initially selected.

Data Collection Methods

Personal interviewing was used to determine the salient attributes. This method was the most flexible and seemed appropriate to the Repertory Grid method where cards are used, items must be selected randomly, and so on. The personal interview provided an environment that permitted both interviewer and subject to ask clarifying questions. Interviews lasted approximately twenty minutes.

The attitude measurement scales were included as a part of a self-administered questionnaire. These questionnaires were hand-carried to each subject's residence and picked up a few days later. Response incentive was provided by giving each respondent a quart-size bottle of Coca Cola.

Layout of the questionnaire was designed to ease the response task of the subject and the processing task of the researcher. Layout was uniform throughout with scaling

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46 The population under study was sufficiently large as to be considered as approaching infinite size. For populations this size, the use of samples larger than 500 is seldom warranted. A number between 30 and 500 should be sufficient. See John T. Roscoe, Fundamental Research Statistics for the Behavioral Sciences (New York: Holt, Rinehart and Winston, Inc., 1969), p. 157.

47 See Appendix for a reproduction of the questionnaire used in the study.
questions grouped separately from demographic questions. Parts I and II of the questionnaire contained the $a_1$-value and $B_1$-value scales respectively. Construction and design of these scales were as indicated earlier. Instructions preceded each set of scales and included: (1) an explanation of the general nature of the task; (2) a description of the significance of the scale positions and detailed examples of how to mark them; and (3) the attitude to be taken toward the task (i.e., importance of rating all dimensions, importance of examining each scale closely). Part III was formatted to provide an indication of where a respondent purchased groceries. The percentage of shopping done at each store could also be indicated. Part IV of the questionnaire requested general information about the respondent. Responses in this part were indicated by marking an appropriate box or filling in the requested information.
CHAPTER IV

RESULTS OF STUDY

Restatement of Objectives and Hypothesis

The basis of the study was the proposition that an individual's attitude is an important determinant of the particular supermarket at which he or she shops. The objective was to examine attitudes toward Great Falls area supermarkets in order to identify attitude-determinant factors that could help supermarket owners and managers improve their store's patronage. To facilitate the accomplishment of the objective, an instrument was developed to identify and measure attitudes.

To test the proposition, the following hypothesis was examined:

\( H_0: \) Across individuals, there is no statistically significant correlation between attitudes toward specific supermarkets and the percentage of shopping done at those supermarkets.

\( H_A: \) Across individuals, there is a statistically significant correlation between attitudes toward specific supermarkets and the percentage of shopping done at those supermarkets.

Rejection of the null hypothesis would confirm the validity of the measuring instrument and the general proposition.
Description and Analysis of Findings

Data collected from eighty respondents were determined to be usable for purposes of the study. Respondents indicated familiarity with an average of four supermarkets. No respondent evaluated more than eight stores, and four respondents evaluated only one store each. Data on the number of stores evaluated are listed in Table 1. The first column lists the number of stores evaluated by a single respondent. The second column lists the number of respondents evaluating the corresponding number of stores in the first column.

<table>
<thead>
<tr>
<th>Number of Stores Evaluated</th>
<th>Number of Respondents Evaluating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

Data on Attitude Scores

Inputs to the Fishbein Attitude Model, determined through use of the attitude-measurement instrument, enabled
generation of an attitude score for each supermarket evaluated by a respondent. Data in Table 2 show the number of attitude scores generated for each specific supermarket.

TABLE 2
NUMBER OF ATTITUDE SCORES GENERATED FOR SPECIFIC SUPERMARKETS

<table>
<thead>
<tr>
<th>Supermarket No.</th>
<th>Name and Location</th>
<th>No. of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Albertson's (Holiday Village)</td>
<td>52</td>
</tr>
<tr>
<td>2</td>
<td>Buttreys (Central Business District)</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Buttreys (Tenth Avenue S.)</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Buttreys (Westgate)</td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>Buttreys (Holiday Village)</td>
<td>39</td>
</tr>
<tr>
<td>6</td>
<td>Noble's (First Avenue N.W.)</td>
<td>25</td>
</tr>
<tr>
<td>7</td>
<td>Rosauers (Valu-Mart)</td>
<td>24</td>
</tr>
<tr>
<td>8</td>
<td>Safeway (Central Business District)</td>
<td>19</td>
</tr>
<tr>
<td>9</td>
<td>Safeway (Sixth Street N.W.)</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>Super Save IGA (Tenth Avenue N.)</td>
<td>27</td>
</tr>
<tr>
<td>11</td>
<td>Super Save IGA (Tenth Avenue S.)</td>
<td>21</td>
</tr>
<tr>
<td>12</td>
<td>Super Save IGA (Riverview)</td>
<td>15</td>
</tr>
</tbody>
</table>

The range of attitude scores was 281 to 948. Attitude scores for three Buttreys Food Stores (Tenth Avenue S., Westgate Shopping Center, and Holiday Village Shopping Center) consistently fell in the upper range of scores (i.e., attitude scores above 600). Attitude scores for Albertson's and Noble's Foodland were distributed approximately equally between the upper and lower ranges of scores. The remainder of the supermarkets received attitude scores consistently
in the lower range. Table 3 contains a distribution of attitude scores for each supermarket. Each cell entry represents the number of attitude scores falling in the corresponding attitude score range for a specific store.

**TABLE 3**

**DISTRIBUTION OF ATTITUDE SCORES BY SUPERMARKET**

<table>
<thead>
<tr>
<th>Range of Attitude Scores</th>
<th>Supermarkets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>281 - 300</td>
<td>1</td>
</tr>
<tr>
<td>301 - 350</td>
<td></td>
</tr>
<tr>
<td>351 - 400</td>
<td>2</td>
</tr>
<tr>
<td>401 - 450</td>
<td>4</td>
</tr>
<tr>
<td>451 - 500</td>
<td>9</td>
</tr>
<tr>
<td>501 - 550</td>
<td>6</td>
</tr>
<tr>
<td>551 - 600</td>
<td>6</td>
</tr>
<tr>
<td>601 - 650</td>
<td>7</td>
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<tr>
<td>651 - 700</td>
<td>9</td>
</tr>
<tr>
<td>701 - 750</td>
<td>3</td>
</tr>
<tr>
<td>751 - 800</td>
<td>5</td>
</tr>
<tr>
<td>801 - 850</td>
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</tr>
<tr>
<td>851 - 900</td>
<td>1</td>
</tr>
<tr>
<td>901 - 950</td>
<td></td>
</tr>
</tbody>
</table>

**Data on Shopping Behavior**

Data on shopping behavior provided a measure by which validity of the instrument could be checked. The behavior of interest was the per cent of shopping accomplished

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1Numbers at the heading of each column, unless otherwise specified, correspond to the supermarket numbers and names shown in Table 2, for Table 3 and all subsequent tables.
by a respondent at a specific store. Respondents who shopped at more than one store, generally exhibited the largest percentage of shopping at only one or two stores. The remaining percentage was distributed approximately evenly throughout the remaining stores. For all stores, the percentage of shopping accomplished by each respondent was generally less than 25 per cent per store. Three Buttreys Food Stores (Tenth Avenue S., Westgate Shopping Center, and Holiday Village Shopping Center) were shopped in excess of 25 per cent by several respondents. A distribution of the percentages of shopping reported by respondents is listed in Table 4. Cell entries reflect the number of respondents who reported a shopping percentage falling within the corresponding range of percentages for each store. Twenty-four respondents indicated they did not shop at one or more of the stores they had evaluated (i.e., a shopping percentage of "0" was assigned). In 42 per cent of these cases, the corresponding attitude score for the store was above 600. A distribution of attitude scores assigned by respondents to stores where they no longer shop is shown in Table 5.

Sixty per cent of all respondents who reported shopping at more than one store assigned their highest attitude score to the store where they performed the largest percentage of their shopping. Fifty-nine per cent of these respondents assigned their lowest attitude score to the supermarket where they performed the least percentage of shopping. Scores
falling between these highest and lowest values did not appear to follow any pattern. Generally, respondents performed their largest percentage of shopping at stores with attitude scores among the three highest scores assigned by the respondent to all stores he or she evaluated. Data in Table 6 show the number of times the reported highest percentage of shopping figure coincided with the highest attitude score, the second highest attitude score, and so on. Data in the right hand column represent the number of times the highest percentage of shopping figure coincided with the corresponding attitude score position in the left-hand column.

Tests of Reliability and Validity of the Instrument

Reliability of the instrument was tested using the Split-Half technique discussed in Chapter III. Attitude scores generated from odd-numbered and from even-numbered scales completed by all respondents evaluating Albertson's were correlated. The resulting correlation coefficient equaled .786356. The computed t-ratio equaled 9.0068 which was significant beyond the .001 level. This significant correlation substantiated the reliability of the instrument.

Having examined reliability, tests were undertaken to determine validity of the instrument. Rejection of the null hypothesis, indicating significant positive correlation between attitude scores and shopping behavior, would support validity.
TABLE 4

DISTRIBUTION OF THE PERCENTAGES OF SHOPPING REPORTED BY RESPONDENTS FOR SPECIFIC SUPERMARKETS

<table>
<thead>
<tr>
<th>Range of Shopping Percentages</th>
<th>Supermarkets</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>10</th>
<th>11</th>
<th>12</th>
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<td>3</td>
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<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 5

**DISTRIBUTION OF ATTITUDE SCORES ASSIGNED TO STORES WHERE RESPONDENTS REPORTED "0" PER CENT SHOPPING**

<table>
<thead>
<tr>
<th>Range of Attitude Scores</th>
<th>Supermarkets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>281 - 300</td>
<td>1</td>
</tr>
<tr>
<td>301 - 350</td>
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</tr>
<tr>
<td>351 - 400</td>
<td></td>
</tr>
<tr>
<td>401 - 450</td>
<td>1</td>
</tr>
<tr>
<td>451 - 500</td>
<td></td>
</tr>
<tr>
<td>501 - 550</td>
<td>2</td>
</tr>
<tr>
<td>551 - 600</td>
<td>3</td>
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<tr>
<td>601 - 650</td>
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<tr>
<td>651 - 700</td>
<td>3</td>
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<tr>
<td>701 - 750</td>
<td>1</td>
</tr>
<tr>
<td>751 - 800</td>
<td>1</td>
</tr>
<tr>
<td>801 - 850</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 6

**FREQUENCY WITH WHICH THE HIGHEST PERCENTAGE OF SHOPPING FIGURE COINCIDED WITH ATTITUDE SCORES**

<table>
<thead>
<tr>
<th>Position of Attitude Score</th>
<th>Number of Coincidences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Attitude Score</td>
<td>45</td>
</tr>
<tr>
<td>2nd Highest Attitude Score</td>
<td>11</td>
</tr>
<tr>
<td>3rd Highest Attitude Score</td>
<td>8</td>
</tr>
<tr>
<td>4th Highest Attitude Score</td>
<td>1</td>
</tr>
<tr>
<td>5th Highest Attitude Score</td>
<td>5</td>
</tr>
<tr>
<td>6th Highest Attitude Score</td>
<td>3</td>
</tr>
<tr>
<td>7th Highest Attitude Score</td>
<td>1</td>
</tr>
<tr>
<td>8th Highest Attitude Score</td>
<td>1</td>
</tr>
</tbody>
</table>
Product moment correlation was used in an initial attempt at correlating all the attitude scores generated in the study and all the corresponding reported shopping behaviors (as indicated by per cent of shopping figures). The attempt was unsuccessful, however, since the required data input (330 data points) exceeded the computer storage capacity assigned to the correlation program.²

An alternative to correlating all attitude scores and all shopping behavior was to examine the relationship between these measures for all respondents who evaluated two stores, all respondents who evaluated three stores, and so on. Product moment correlation was again used to generate coefficients. An alpha level of .05 was considered acceptable. Significant correlations were found only for respondents who evaluated three and four stores. Inputs for respondents evaluating three stores produced a correlation coefficient equal to .257117. The computed t-ratio equaled 2.07801 which was slightly greater than the table ratio of 2.00. The coefficient of correlation generated for respondents who evaluated four stores each was .383648. The corresponding t-ratio was again 2.00. When the level of significance was reduced to .10, the correlation between the measures for respondents evaluating only two stores showed significance. At the .20

²The computer used for statistical programs was a PDP11, a small, single-user unit with disc storage. The computer is leased by the University of Montana for use by students enrolled in the Air Force Institute of Technology (AFIT) Minuteman Education Program.
level of significance, correlation between the measures was significant for respondents who evaluated eight stores each. Regardless of the number of insignificant findings, the validity of the instrument appeared inconclusive. This was particularly true in those cases where the instrument was used to determine attitudes of individuals who shopped at less than three or more than four stores. In these cases where only one store was evaluated, the relationship between the attitude score and shopping behavior would obviously have little meaning. In those cases where only two stores were evaluated, the sample was too small for a statistically reliable test. For those individuals shopping at more than four stores, the relationship between their attitude scores and their reported shopping behavior was clouded. At the extremes, attitude scores and shopping behavior quite often matched; that is, highest scores coincided with highest percentage of shopping figures and lowest scores coincided with lowest percentage of shopping figures. This implied that respondents were somewhat definite about which store they liked best and which store they liked least, and they were more knowledgeable of their shopping behavior at these stores. Between the extremes, scores and behavior matched less frequently. As more stores came under consideration, individuals probably found it increasingly difficult to make accurate distinctions between their shopping behavior at various stores. The instrument did appear to be a valid tool for
measuring attitudes of respondents who shopped at either three or four stores.

Another test of the hypothesis was undertaken by examining the correlation between the attitude score generated for a specific supermarket and the per cent of shopping done at that store for all stores evaluated by a single respondent. The objective was to determine if the instrument would produce a valid measure of attitudes for an individual respondent. It was recognized that the determination of validity from this test would be difficult because of the small number of observations per respondent. However, this test was, again, a less desirable substitute for the test of correlating all attitude scores and all reported shopping behaviors, which could not be accomplished on the AFIT computer. Coefficients of correlation were determined for each respondent and tested using a t-distribution. The hypothesis was tested at the .05 level of significance. In only six of eighty cases was there a significant relationship between attitude scores and shopping behavior. When the level of significance was reduced to .10, only three additional coefficients were found to be significant. Although there was a low percentage of significant findings (7.5 per cent), the results of the test must be considered inconclusive when one considers the size of the samples used.

Because of the low rate of significant correlations on an individual respondent basis, a second test of the hypothesis was undertaken using a different set of measures.
Product moment correlation was again used, and the inputs were, again, attitude scores and shopping behavior. However, this time each specific supermarket was examined individually in an attempt to determine if the instrument would produce valid attitude measures for a specific store. All attitude scores for a particular supermarket and all corresponding percentage of shopping figures were correlated. Correlation coefficients were determined and computed t-ratios compared to table t-ratios at the .05 level of significance. Only one store, Noble’s Foodland, showed significant correlation. When the level of significance was reduced to .10, one additional store, Safeway (Sixth Street N.W.) showed a significant relationship. Again, there was a low rate of significant correlations.

To eliminate the possibility that attitude scores and corresponding shopping behavior falling between the extremes could have distorted estimates of validity, a final test of the hypothesis was conducted. Of interest in this test were the relationships between largest attitude scores and largest percentages of shopping and lowest attitude scores and lowest percentages of shopping. A different statistical technique was employed to reduce the possibility of distortion in estimates of validity caused by sample size.

The Kolmogorov-Smirnov one-sample test was used because it operates with samples that are very small. Attitude scores and corresponding shopping behavior for all respondents
evaluating a specific number of stores were examined. A sample distribution of the number of times the highest attitude score coincided with the highest percentage of shopping, the highest attitude score coincided with the second highest percentage of shopping, and so on, was developed. A similar distribution was developed for analysis of low attitude scores and shopping behavior. A significant relationship between the highest attitude scores and highest percentage of shopping figures was found to exist for respondents who evaluated three and four stores. A significant relationship between the lowest attitude scores and lowest percentage of shopping figures existed only for respondents who evaluated four stores. Data in Table 7 show the results of the test. Computed maximum "D" values and levels of significance for relationships between highest attitude scores and highest percentages of shopping and lowest attitude scores and lowest percentages of shopping are shown. Again, it appeared that the instrument produced valid measures of attitude for respondents that evaluated at least three, but no more than four stores. The number of insignificant relationships found to exist between attitude scores and behavior when other numbers of stores were evaluated casts doubt upon the accuracy of using "percentage of shopping" as the criterion measurement. This criterion called for a judgement on the part of the respondent which may have become more inaccurate as the number of stores evaluated increased.
### TABLE 7
RESULTS OF THE KOLMOGOROV-SMIRNOV
ONE-SAMPLE TEST

<table>
<thead>
<tr>
<th>Number of Stores Evaluated</th>
<th>Highest</th>
<th>Lowest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum D</td>
<td>Significance Level</td>
</tr>
<tr>
<td>3</td>
<td>.333</td>
<td>.05 *</td>
</tr>
<tr>
<td>4</td>
<td>.375</td>
<td>.05</td>
</tr>
<tr>
<td>5</td>
<td>.300</td>
<td>N.S.</td>
</tr>
<tr>
<td>6</td>
<td>*</td>
<td>N.S.</td>
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<td>7</td>
<td>*</td>
<td>N.S.</td>
</tr>
<tr>
<td>8</td>
<td>*</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

**NOTE:** The Maximum "D" is the difference between the cumulative values of the observed distribution expressed as a proportion of the total and the cumulative values of the expected distribution expressed as a proportion of the total.

A * indicates that the Maximum "D" did not occur at the distribution representing the highest attitude score and per cent of shopping or lowest attitude score and per cent of shopping.

### Analysis of Attribute Ratings

An analysis of the ratings respondents gave to various supermarket characteristics provided information on how important or unimportant the characteristics might be for consumers. Five attributes were rated by all respondents as being of some degree of importance. These were Cleanliness, Ease in Finding Items You Want, Convenience in Getting to Items You Want, Quality of Produce, and Courteousness and Helpfulness of Store Personnel. The attributes, Decor and Nearness of Store to Other Shopping Areas or Stores Where You Shop, were
rated as least important by the largest number of respondents. Cleanliness, Quality of Produce, and Quality of Meats were the most important attributes. Over 90 per cent of the respondents rated these characteristics as being Very Important or Extremely Important. Other attributes receiving a predominance of high ratings were Quality of Products, Price Levels Compared to Other Stores, and Courteousness and Helpfulness of Store Personnel.

Analysis of Specific Supermarkets

Information on the beliefs about specific stores held by respondents was obtained by analyzing those scales expressing a relationship between characteristics and specific supermarkets. Twenty-five per cent of the respondents who shopped at either Safeway Store believed the store was dirty. No other store was thought to be dirty by as large a percentage of respondents. Over one-third of the respondents who were familiar with Albertson's, Noble's Foodland, Super Save IGA (Sixth Avenue N.), and Super Save IGA (Riverview area) believed that products in these stores were difficult to locate. Forty-two per cent of the respondents believed this about Albertson's, a store that recently completed a large remodeling program. Although decor was not considered a highly important characteristic by most respondents, three stores were rated as having unattractive decor. These stores were Noble's Foodland and both Safeway Stores. A closely related attribute, Product Display, was also found unattractive
by significant percentages of the respondents at Noble's and Safeway. Parking was evidently not a problem at most stores. However, 21 per cent of the respondents who shopped at Buttreys Food Store (Holiday Village Shopping Center) did indicate that it was difficult to find parking there. Most respondents believed that the stores they were familiar with provided a selection of customer services. More than 85 per cent of the respondents evaluating the Buttreys Food Stores (except the store in the Central Business District) believed that the stores provided a wide selection of customer services. Noble's Foodland and the Safeway Stores were the only supermarkets that a majority of respondents thought maintained a limited selection of services. Most respondents believed that the stores they evaluated had high quality produce. However, 40 per cent of the respondents evaluating Noble's Foodland, 37 per cent evaluating Super Save IGA (Sixth Avenue N.), and 25 per cent evaluating Safeway Store (Sixth Street N.W.) believed these stores' produce to be of low quality. All Buttreys Food Stores, Noble's Foodland and Safeway Store (Central Business District) were rated high on meat quality. In contrast, 25 per cent of the respondents evaluating Safeway Store (Sixth Street N.W.), 41 per cent evaluating Super Save IGA (Sixth Avenue N.), and 27 per cent evaluating Super Save IGA (Riverview area) felt the meat quality at these stores was low.
CHAPTER V

SUMMARY AND IMPLICATIONS

Review of Study

The purpose of the study was to examine attitudes toward Great Falls, Montana area supermarkets in order to identify those attitude-determinant factors that are important to supermarket owners and managers in increasing their store's patronage. The primary objectives were to identify, measure, and analyze attitudes.

The basis of the study was the proposition that an individual's attitude is an important determinant of the particular supermarket at which he or she shops. A significant correlation between attitudes and shopping behavior (as indicated by the percentage of total shopping done at a particular supermarket) would have important meaning for store management. Important store attributes which helped shape attitudes could be identified, and the degree to which shoppers believed a particular store exhibited or failed to exhibit the attributes could be determined.

To determine the validity of the proposition, the following hypothesis was examined:

H₀: Across individuals, there is no statistically significant correlation between attitudes toward specific supermarkets and the percentage of shopping done at those supermarkets.

72
H_A: Across individuals, there is a statistically significant correlation between attitudes toward specific supermarkets and the percentage of shopping done at those supermarkets.

To facilitate accomplishment of the objectives, an instrument was developed to identify and measure attitudes. The instrument included scales which measured a subject's feelings about general characteristics associated with supermarkets (e.g., cleanliness, decor, quality of products), and his or her beliefs about the relationship between particular supermarkets and these characteristics. The scales were given to randomly selected residents in the form of a self-administered questionnaire. Values assigned to scale positions provided inputs to the Fishbein Attitude Model. Using this model, attitude scores for specific supermarkets were determined for each subject.

Attitude scores were compared to reported shopping behavior (as indicated by the percentage of total grocery shopping done at a particular supermarket) to obtain estimates of validity for the instrument. Investigation of the relationship between attitude scores and shopping behavior was accomplished using product moment correlation technique and the Kolmogorov-Smirnov one-sample test. Rejection of the null hypothesis would confirm the validity of the measurement instrument and the general proposition.

Data collected from eighty respondents were usable for purposes of the study. Respondents were familiar with an average of four supermarkets, but the range of familiarity
ran from one to eight. Attitude scores ranged from 281 to 948, and most supermarkets received scores consistently below 600. Buttreys Food Stores scored consistently above 600.

Respondents who patronized more than one store generally performed most of their shopping at only one or two stores. Several respondents expressed familiarity with stores at which they did not shop. In 42 per cent of these cases, the store's corresponding attitude score was above 600.

Sixty per cent of all respondents who shopped at more than one store assigned their highest attitude score to the store where they performed the largest percentage of their shopping. A similar percentage of respondents assigned their lowest attitude score to the store where they performed the least percentage of shopping.

Highly significant split half correlation (t = 9.0068; p < .001) substantiated the reliability of the instrument. Tests for validity were generally inconclusive. Significant correlation between attitude scores and shopping behavior occurred only in those cases where respondents shopped at three and four stores. Relationships between attitudes and behavior were unclear in those cases where patronage exceeded four stores. At the extremes (i.e., highest attitude score and lowest attitude score), attitude scores and shopping behavior often coincided. Between the extremes, scores and behavior matched less frequently.
Analysis of attribute ratings showed the following characteristics to be important: Cleanliness, Produce Quality, Meat Quality, Quality of Products, Price Levels Compared to Other Stores, and Courteousness and Helpfulness of Store Personnel. Items rated least important were Decor and Nearness of Store to Other Shopping Areas or Stores.

An examination of the beliefs respondents held about specific supermarkets showed that Safeway Stores received the most negative evaluations. Both Safeway Stores were considered dirty and both had unattractive decors and product displays. These stores also maintained a limited selection of services for customers. All Buttreys Food Stores were viewed very favorably by most of those respondents evaluating the stores.

Discussion

The attitude measurement instrument was determined to be a highly reliable tool for measuring attitudes. Tests of validity were inconclusive, however. The use of small samples would possibly account for the poor measures of validity indicated in those cases where attitude measures were determined for individuals who shopped at less than three supermarkets. In those cases where individuals shopped at more than four stores, the relationship between attitudes and behavior was unclear. Highest attitude scores often coincided with highest percentage of shopping figures and lowest attitude scores often matched lowest percentage of
shopping figures. This matching at the extremes indicated that respondents seemed to know which stores they liked best and which stores they liked least. Between these extremes, however, matching between scores and behavior occurred less frequently. Individuals probably found it more and more difficult to accurately determine what percentage of shopping was done at a particular store as the number of stores considered increased. Also, it was possible that the behavioral criterion itself (i.e., percentage of shopping done at a particular store) was not an accurate indicator of the behavior of interest (i.e., actual shopping patterns).

Limitations of the Study

A possible limitation of the study was the criterion measure selected to test the scale for validity. Shopping behavior, as indicated by the reported percentage of shopping done by an individual at a particular supermarket, may not have been a precise enough criterion to use. This was particularly true in those cases where indications of behavior for several stores were required. Additionally, the use of "per cent of shopping" to indicate the amount of store patronage could have been confusing. Respondents could have expressed the per cent of shopping either in terms of amount of money spent or the number of shopping trips to a particular store.

Another possible limitation of the study was its scope. Respondents could only consider and report on behavior
for the twelve supermarkets specified. Measures of attitude and indications of shopping behavior could possibly have been distorted for respondents who shopped at other stores, bought meat and other food products in bulk, and so on.

A final possible limitation of the study was the sample selected for use. Although the response rate was high (nearly 90 per cent of the questionnaires distributed were completed) and the number of non-usable responses small (four questionnaires were non-usable), the total number of respondents participating in the study was small. In several cases, the number of respondents or the number of stores under consideration were too small to produce statistically reliable tests. Also, although steps were taken to ensure the randomness of the sample, some bias was initially introduced by drawing the sample from the Great Falls City Directory. This directory contains the most complete listing of residents. However, many persons, including new residents, are missed when the directory is compiled. Additionally, because of the length of time required to prepare the directory for publication, many of the items of information are no longer current (i.e., persons listed are no longer residents, addresses have changed, and so on).

Implications for Practice

The supermarket manager should be interested in what store dimensions grocery shoppers consider important. More
importantly, he should be concerned with the extent to which these shoppers believe his store has these dimensions. The attitude measurement instrument could provide these types of information and be a useful tool in helping the manager determine how competitive his store is. Attitudes toward his store and other specific supermarkets, expressed as attitude scores, could be determined for a sample of shoppers through use of the instrument. The manager could then rank-order the means of these scores to determine how favorably his store was viewed by shoppers vis-a-vis his competitors. The factors that determined the attitude score could then be examined to identify those characteristics shoppers desired in a supermarket (i.e., those characteristics they considered important) and the extent to which, shoppers felt the particular store met their desires. The manager could then initiate action to ensure that his store either corrected deficiencies or continued to meet the shoppers' expectations, as applicable.

**Implications for Further Study**

Information about attitudes is most meaningful when there is a relationship between attitudes and behavior (i.e., when the behavior follows the pattern predicted by the attitude). The large number of cases in which attitudes (i.e., scores) did not match reported shopping behavior indicate the need for further study. Follow-up interviews with respondents could possibly provide some insight as to why their attitudes
and shopping behavior did not match more closely. One could
determine why respondents patronized stores where their atti-
tude scores indicated unfavorable attitudes toward the stores
or why they did not shop at stores for which they held favor-
able attitudes.

Questions about the selected behavioral criterion's
ability to provide accurate and precise data on shopping
behavior indicate the need for further study using another
criterion. The best criterion would be observed behavior.
This criterion would not be feasible, however, because of
costs and management difficulties. A possibly more useful
criterion would be reported behavior which indicated the
number of times an individual shopped at a specific super-
market and also, the amount of the grocery expenditure in
each case. The most meaningful criterion should perhaps be
one that identifies the percentage of the shopper's total
grocery expenditure spent at each store. This criterion
would have more meaning for the store manager who must equate
increased patronage with increased sales. A large number of
patrons who spend very little at a store would possibly have
less impact on sales volume than a smaller number of patrons
who spend large percentages of their total grocery dollars
at the store.
The questionnaire shown in this appendix is identical to the one used in the study except for Part II. To reduce the size of the appendix, this part shows only the scales associated with one of the supermarkets examined in the study. The instrument used in the study repeated these scales for each of the eleven other stores examined.
Dear Grocery Shopper,

I am conducting research as a part of a professional paper I am preparing for my Masters Degree in Business Administration from the University of Montana. My purpose in this research is to identify attitudes of Great Falls' grocery shoppers toward specific Great Falls' area supermarkets. The ultimate goal is to determine why you purchase groceries where you do and use this information to improve Great Falls' grocery services in general and give you the kinds of services you want.

Your participation in this research will consist of completing the attached four-part questionnaire. Although the questionnaire appears to be long and perhaps difficult, I assure you it is not. It has been carefully designed to make it both quick and easy for you to complete. You need only follow the directions carefully. This is not a test of any sort. Your responses are completely confidential.

Again, I stress the importance of following the instructions carefully. The value of the information in my paper will depend upon the completeness and care with which you accomplish the questionnaire.

Responses are desired from the individual who is most responsible for the selection of food items and the location where the items will be purchased. If this is someone in your family other than you, please pass this questionnaire on to them.

Thank you for your time and cooperation.

Sincerely,

Lewis M. Roome
4950A Avenue C
Great Falls, Mt.
PART I

In this part of the questionnaire I would like you to rate some characteristics of supermarkets in general. Your rating will be in terms of how important you feel the characteristic is.

INSTRUCTIONS: Here is how to use the following scales:

To the right of each characteristic are seven (7) boxes. Rate each characteristic and mark your response as follows:

If you feel the characteristic is EXTREMELY IMPORTANT, place an "X" in the box numbered 1.

If you feel the characteristic is VERY IMPORTANT (but not Extremely important), place an "X" in the box numbered 2.

If you feel the characteristic is QUITE IMPORTANT, place an "X" in the box numbered 3.

If you feel the characteristic is MODERATELY IMPORTANT, place an "X" in the box numbered 4.

If you feel the characteristic is SLIGHTLY IMPORTANT, place an "X" in the box numbered 5.

If you feel the characteristic is NEITHER IMPORTANT NOR UNIMPORTANT, place an "X" in the box numbered 6.

If you feel the characteristic is NOT VERY IMPORTANT, place an "X" in the box numbered 7.

The direction toward which you mark of course, depends upon which of the two ends of the scale seem to be most appropriate for the characteristic you are rating.

IMPORTANT: (1) PLEASE RATE ALL CHARACTERISTICS AND (2) CHECK ONLY ONE BOX FOR EACH CHARACTERISTIC.

PLEASE GO TO THE NEXT PAGE
When considering supermarkets in general, how important are the following characteristics to you?

Remember that each numbered box represents a specific degree of importance as follows:

<table>
<thead>
<tr>
<th>Extremely Important</th>
<th>Very Important</th>
<th>Quite Important</th>
<th>Moderately Important</th>
<th>Slightly Important</th>
<th>Neither Important</th>
<th>Not Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. Cleanliness
2. Ease in Finding Items You Want
3. Decor
4. Convenience in Getting to Items You Want
5. Display of Products
6. Distance from Your Home to Store
7. Availability of Parking
8. Nearness of Store to Other Shopping Areas or Stores You Shop
9. Availability of Customer Services (check cashing, stamps, etc.)
10. Availability of Specialty Departments (bakery, sundries, specialty foods)
11. Quality of Produce
12. Availability of a Wide Selection of Name Brands

PLEASE GO TO THE NEXT PAGE
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Availability of a Wide Selection of Products</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14. Quality of Meats</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15. Size of Stock Levels</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. Quality of Products (other than meat or produce)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17. Price Levels Compared to Other Stores</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18. Availability of Specially Priced Items</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. Courteousness and Helpfulness of Store Personnel</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20. Number of Personnel to Serve You</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

**THIS Completes PART I. PLEASE Go TO PART II.**
PART II

In this part of the questionnaire, I would like you to indicate your beliefs about specific supermarkets in the Great Falls area.

INSTRUCTIONS: In the next several pages you will evaluate a number of specific supermarkets on the basis of several characteristics. Each characteristic will appear as a set of opposite words or phrases. For example, the characteristic "CLEANLINESS" will appear as the opposite words, "CLEAN--DIRTY"; the characteristic "QUALITY OF PRODUCE" will appear as the opposite phrases, "HIGH QUALITY PRODUCE--LOW QUALITY PRODUCE"; and so on. Each set of opposite words or phrases will be separated by seven distinct lines. Here is how to mark these scales using as an example, the opposite set, "CLEAN--DIRTY":

If you believe the particular supermarket is VERY Clean or VERY Dirty, place an "X" as follows:

Clean  X:__:__:__:__:__:__:  Dirty
       Very     Very

or

Clean  ____:__:__:__:__:__:X:  Dirty
       Very     Very

If you believe the particular supermarket is QUITE Clean (but not Very) or QUITE Dirty (but not Very), place an "X" as follows:

Clean  ____:X:__:__:__:__:   Dirty
       Very     Very

or

Clean  ____:__:__:__:__:X:__:  Dirty
       Very     Very

If you believe the particular supermarket is SLIGHTLY Clean or SLIGHTLY Dirty, place an "X" as follows:

Clean  ____:__:__:X:__:__:__:  Dirty
       Very     Very

or

Clean  ____:__:__:__:X:__:__:   Dirty
       Very     Very

If you are completely unsure of how to evaluate the particular supermarket on the basis of a specific characteristic, place
an "X" as follows:

Clean ___:___:___:___:___:___ X:___:___:___ Dirty
Very ___:___:___:___:___:___ Very

As in previous scales, the direction toward which you mark depends upon which end of the scale best indicates your beliefs about the relationship between the specific characteristic and the supermarket being evaluated.

Please examine each scale closely before marking your response. The arrangement of the opposite set of words or phrases has been intentionally alternated for every other characteristic you will be considering. For example, one scale will have the positive word or phrase of the opposite set on the left side of the scale, such as "CLEAN(positive)--DIRTY(negative)". The next scale will reverse this arrangement and have the positive word or phrase of the opposite set on the right side of the scale, such as "DIFFICULT TO FIND ITEMS WANTED(negative)--EASY TO FIND ITEMS WANTED(positive)". If you mark your response on a wrong line, simply line through it and remark the scale to reflect the correct response.

It is very important that you treat each characteristic as a separate and independent judgement. It is the degree to which you believe a particular supermarket exhibits or fails to exhibit a particular characteristic that is of interest to me. Please place only one "X" for each characteristic and please mark an "X" for every characteristic.

Please be sure to evaluate every supermarket with which you are familiar.

On the following scales you will be indicating your beliefs only about this supermarket:

ALBERTSON'S
(Holiday Village Shopping Center)
(1)

If you are completely unfamiliar with this supermarket, or have shopped there so infrequently that you feel you cannot accurately evaluate the store, place an "X" in this box and then next set of scales on page 8.
This supermarket exhibits each of the following characteristics to the degree indicated:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Very</th>
<th>Very</th>
<th>Very</th>
<th>Very</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dirty</td>
<td></td>
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<tr>
<td>Hard to Find Items Wanted</td>
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<td></td>
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<tr>
<td>Easy to Find Items Wanted</td>
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<td></td>
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<tr>
<td>Attractive Decor</td>
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<tr>
<td>Unattractive Decor</td>
<td></td>
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<td></td>
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<tr>
<td>Hard to Get to Items Wanted</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Easy to Get to Items Wanted</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractive Display of Products</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Unattractive Display of Products</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Far from Home to Store</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Close from Home to Store</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy to Find Parking Space</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hard to Find Parking Space</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Far to Other Shopping Areas or Stores I Shop</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Close to Other Shopping Areas or Stores I Shop</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wide Selection of Customer Services</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Limited Selection of Customer Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate Kinds of Specialty Departments</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate Kinds of Specialty Departments</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>High Quality Produce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Quality Produce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Limited Selection of Name Brands

Wide Selection of Name Brands

Wide Selection of Products

Limited Selection of Products

Low Quality Meat

High Quality Meat

Large Stock Level

Small Stock Level

Low Quality Products

High Quality Products

Low Prices Compared to Other Stores

High Prices Compared to Other Stores

Limited Selection of Specially Priced Items

Wide Selection of Specially Priced Items

Courteous and Helpful Store Personnel

Discourteous and Unhelpful Store Personnel

Inadequate Number of Personnel to Serve Customers

Adequate Number of Personnel to Serve Customers

THIS COMPLETES THE SCALES ASSOCIATED WITH

ALBERTSON'S
(Holiday Village Shopping Center)

/////////////////////////////////////////////////////////////////////////
PART III

INSTRUCTIONS: In this part of the questionnaire, I would like you to indicate at which supermarkets you purchase your groceries. Place an "X" in every box that corresponds to a supermarket you evaluated in Part II. On the line provided next to each box you marked, enter the approximate percentage of your total grocery shopping done at that particular supermarket. If you evaluated a specific store in Part II, but do not presently purchase groceries there, enter a "0" on the appropriate line.

ALBERTSON'S (Holiday Village Shopping Center) ........... □ __%
BUTTREYS FOOD STORE (Downtown in Central Business District) ........................................................... □ __%
BUTTREYS FOOD STORE (10th Ave. South) ................. □ __%
BUTTREYS FOOD STORE (Westgate Shopping Center) ........ □ __%
BUTTREYS FOOD STORE (Holiday Village Shopping Center) □ __%
NOBLE'S FOODLAND (1st Ave. Northwest) ................. □ __%
ROSAAUER'S SUPERMARKET (Valu-Mart Shopping Complex) □ __%
SAFEWAY STORES (Downtown in Central Business District) □ __%
SAFEWAY STORES (6th St. Northwest) ...................... □ __%
SUPER SAVE IGA (6th Ave. North) ......................... □ __%
SUPER SAVE IGA (10th Ave. South) ............... □ __%
SUPER SAVE IGA (Riverview Area) ......................... □ __%

THIS COMPLETES PART III. PLEASE GO TO PART IV.
PART IV

The final action I will ask you to take is to complete the following supplemental data sheet. This sheet asks for general information which I need in order to obtain a complete picture of the respondent. Your name is not required and all your answers will be held in strict confidence. Your cooperation in providing the following information will be greatly appreciated. Please fill in the requested information or mark the appropriate box as necessary.

1. FAMILY SIZE: _____

2. DISTANCE FROM YOUR HOME TO NEAREST SUPERMARKET: _____Miles

3. DISTANCE FROM YOUR HOME TO SUPERMARKET WHERE YOU PRIMARILY SHOP: _____Miles

4. FREQUENCY OF GROCERY PURCHASES PER MONTH: _____

5. AVERAGE AMOUNT SPENT ON GROCERY PURCHASES PER MONTH: $_____

6. SEX OF RESPONDENT: □ M □ F

7. AGE OF RESPONDENT:

Less Than 20 yrs □ 36-40 □ 56-60 □
20-25 □ 41-45 □ over 60 □
26-30 □ 46-50 □
31-35 □ 51-55 □

8. EDUCATION LEVEL OF RESPONDENT:

Less Than High School Graduate □
High School Graduate □
Some College but Less Than College Graduate □
College Graduate □
Post-Graduate □
9. FAMILY INCOME LEVEL (Yearly):

- Less Than $5,000 □
- $5,000-$9,999 □
- $10,000-$14,999 □
- $15,000-$19,999 □
- $20,000-$24,999 □
- $25,000-$29,999 □
- $30,000-$34,999 □
- $35,000-$39,999 □
- $40,000-$44,999 □
- $45,000-$49,999 □
- $50,000 & Above □

THIS COMPLETES THE QUESTIONNAIRE.

Again, I greatly appreciate your time and effort in this project.
SELECTED BIBLIOGRAPHY

Books


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