CONSUMER INNOVATION: AN INVESTIGATION OF SELECTED CHARACTERISTICS OF INNOVATORS

Thesis for the Degree of D. B. A.
MICHIGAN STATE UNIVERSITY

William Earl Bell

1962

This is to certify that the

thesis entitled

CONSUMER INNOVATION: AN INVESTIGATION
OF SELECTED CHARACTERISTICS
OF INNOVATORS

presented by

William Earl Bell

has been accepted towards fulfillment
of the requirements for

DBA degree in Marketing

William Lazer
Major professor

Date November 21, 1962

O-169

Z
355
279
296
SG 157
244
087

ABSTRACT

CONSUMER INNOVATION: AN INVESTIGATION OF SELECTED CHARACTERISTICS OF INNOVATORS

by William Earl Bell

A perplexing problem facing marketing managers today is the rate of failure of product innovations in the market place. While innovating firms have been producing new products, consumers have been rejecting them at a devastating rate.

Consumers who accept newness and business firms introducing innovations are both innovators. The consumers who innovate are the most willing to accept something new and break their established patterns of purchasing and consumption. This research examines consumer innovators to determine if they constitute a unique marketing target for managerial considerations.

Three constrast groups are delineated to determine if there is a unique market for newness. First, consumer innovators are defined as the first 10% of a market to accept innovations. Second, people who accept an innovation after it has achieved 10% saturation but before 50% are termed early adopters. The third group constitutes the mass market, or the characteristics of the total population.

Innovations of two types are studied: (1) a strategic innovation, which is a product alteration; (2) functional innovation, which is a product to perform a previously

fulfilled function in a new way. Color television and stereophonic equipment are studied as representative of the former type of innovation, and dishwashers and air conditioners are the products of the latter type.

Two kinds of information are sought concerning the consumer: (1) socio-economic data, and (2) the buying process and influences exerted on and by innovators.

5,456 interviews from the Detroit Metropolitan market provide the data for the study of characteristics. A sample of 109 was reinterviewed for information concerning marketing behavior and influences. The chi-square statistic is used for testing the hypotheses.

Results show that innovators are different from the mass market, and they do constitute a unique marketing segment. Further, consumer innovators are different from early adopters in most of the variables studied. A summary of the way these people differ is shown in Table I.

The people who accept simple changes, the strategics, differ in their characteristics from those who accept functional innovations. While innovators constitute a unique market, the nature of the innovation may delineate the market still further. Table II shows in summary form how these groups differ.

The innovators are found to be disseminators of information concerning the innovistic products by giving opinions and demonstrating the products. Informal communication is recognized as more effective than mass media by innovators.

Innovators do not shop for innovistic products. The purchase decision is made without comparisons. The major consulting source of innovators is buying guides.

TABLE I

COMPARISON OF PROFILES: INNOVATORS AND EARLY ADOPTERS

Variable	Innovators	Early Adopters
Age		
Head	Young	Youngest
Spouse	Young	Youngest
Occupation		
Head	Highly concentrated in Professional and Managerial group	Not as highly concentrated in a specific group
Spouse	Little concentration	Little concentration
Education		
Head	Very highly educated	Highly educated
Spouse	Highly educated	Average
Family Income	Highest	High
Ethnic Group	Jewish, French, Other Europeans	British, German, Italian
Home Characteristics		
Ownership	High ownership	Highest ownership
Structure	Single and multi-units	Highest single unit
Home Value	Very high value	High value
Rent	High rent	High rent
Number in Family	Dispersed	Dispersed

TABLE II

COMPARISON OF PROFILES: STRATEGIC AND FUNCTIONAL INNOVATORS

Variable	Strategic Innovators	Functional Innovators
Age		
Head	Very young	Young
Spouse	Very young	Young
Occupation		
Head	Dispersed between Professional-Managerial and Craftsmen-Foremen	Highly concentrated in Professional-Managerial
Spouse	No difference	No difference
Education		
Head	Above average education	Very highly educated
Spouse	Above average education	Very highly educated
Family Income	High income	Very high income
Ethnic Group	Negro, French, Italian	Jewish, German, British
Home Characteristics		
Ownership	Slightly higher than average	Very high
Structure	Highly concentrated in single units	More highly concentrated in single units
Home Value	High value	Extremely high value
Rent	High rent	Very high rent
Number in Family	Dispersed	Dispersed

CONSUMER INNOVATION: AN INVESTIGATION OF SELECTED CHARACTERISTICS OF INNOVATORS

By

William Earl Bell

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF BUSINESS ADMINISTRATION

Department of Marketing and Transportation Administration

1962

PREFACE

This study is concerned with the acceptors of product innovations. The consumers who purchase innovistic products are termed innovators. They break their traditional patterns of purchase and consumption behavior when they accept innovistic products.

The focal point of the study is an attempt to determine if the consumer innovators constitute a specific marketing target. Such a target could be delineated for special marketing endeavor. Interpretation of the data in terms of positive action for marketing management is the second major aspect of the study.

The study is divided into two parts. Part I is concerned with the background. Chapter I briefly reviews the importance of innovation to the economy. Comments are made on the highlights of previous research on the acceptance of newness. Chapter II presents the problem which is delineated for study. The research design utilized to elicit the data is given in Chapter III.

Part II is concerned with the presentation of the research findings for the problem outlined in the second chapter. The socio-economic characteristics are portrayed in Chapter IV. A detailed examination is made in an attempt to discern any existing differences between the people who

buy goods first and those who buy later. Chapter V investigates the values and attitudes held by initial consumers. The sixth chapter describes the buying process of innovators and the role of the innovators as influentials in their social groups. The final chapter summarizes the findings and points out various adjustments of the marketing mix which could be made when firms introduce innovations.

The author is indebted to many people who cooperated in making this study possible. It would be impossible to mention them all. I would, however, like to mention several.

First, my dissertation committee composed of: Dr. William Lazer, Chairman, Dr. Frank H. Mossman and Dr. Paul E. Smith. These men provided guidance, patience, and encouragement throughout the study. I would like to particularly acknowledge Dr. Lazer's devotion of many hours to the project.

Second, I sincerely thank the Detroit _News_ and particularly Dr. Albert Moellman, Director of Research, for allowing me to use raw data they had obtained in connection with their publication, _The Sixth Quinquennial Survey of the Detroit Market_.

Finally, I express gratitude to my wife, Dorothy, who offered encouragement, sympathy and understanding.

TABLE OF CONTENTS

TABLE OF CONTENTS - Continued

TABLE OF CONTENTS - Continued

LIST OF TABLES

LIST OF TABLES - Continued

LIST OF ILLUSTRATIONS

LIST OF APPENDICES

PART I. THE BACKGROUND

CHAPTER I

INTRODUCTION

The Role Of Innovation In The Economy

Innovation as a Way of Life

Many scholars have sought to explain the more notable advances of the human race in terms of the degree and speed of innovation within a culture. In the United States,

> . . . innovation, change, mobility, movement are permanent traits . . . . In stressing the need for innovation, Americans are fighting for the maintenance of this aspect of their way of life, for the permanency of one thing to which they are attached.[1]

Thus, innovation is a primary and pervasive force in the economy.[2]

Dominance of Innovation

Innovation is a major competitive tool of business firms today. The fierce competition for differential advantage makes innovating a primary weapon in the business environment. New product offerings have been growing at an increasing rate. For example, products which were not in

---

[1]Roger Girod, "Comment on 'Consumer Reaction to Product Innovation'," Consumer Behavior, ed. Lincoln Clark, III (New York: Harper & Brothers, 1958), p. 10.

[2]E. J. Kelley and William Lazer, "Managing Innovation in Marketing," Advanced Management--Office Executive, Vol. I No. 7 (July, 1962), p. 10.

existence at the end of World War II constituted 70% of Procter & Gambles's household sales volume in 1959.[3] Of General Foods' 1959 sales, 24.5% were from products only 10 years old.[4] (Retail) food buyers are offered 24 new products on an average day, 120 a week and 6,000 a year.[5] It is obvious that new products are the energizing force in the economy. The constant change of the product mix is evidence of the dynamics of present-day business.

Innovation and Economic Activity

The amount of investment in our economy is partially determined by innovations. It has long been accepted that investment is a crucial element in determining the level of economic activity. The amount of money expended depends in part on the new opportunities for investment. New products and new processes are two types of innovation which enhance investment and the level of economic activity. At least one renowned economist argues that innovations are the primary cause of the business cycle.[6] Innovations stimulate the level of economic activity; and if new innovations are not forthcoming, economic activity slows down.

---

[3] Grey Matter, Grey Advertising Agency, Inc., National Advertisers' Edition, Vol. XXXI (January, 1960), p. 1.

[4] Ibid.

[5] Ibid.

[6] Joseph A. Schumpeter, Business Cycles (New York: McGraw-Hill, Inc., 1939), pp. 87-102.

Benefits of Innovation

Innovations aid various segments of the economy in numerous ways. For example:

1) Consumers are offered products that fill a need or want better than previous products, or fulfill a want which was previously unfulfilled.

2) Labor benefits through the creation of new jobs to design or adjust equipment in order to produce an innovation, the actual production of the innovation, and the numerous marketing functions which need to be performed.

3) The national level of economic activity is enhanced by innovations. Research and developmental expenditures in 1960 were over 11 billion dollars, of which business expenditures were 4.49 billion.[7]

4) The owners of the innovation gain from the monetary rewards achieved through the success of a new product. A competitive advantage can be gained through innovations.

Arguments Against Innovation

The results of innovation are not without criticism. Economists frequently argue against the wastes of high tail fins, planned obsolescence, throw-away bottles and the like.

Their concern, as social critics, is that innovations are wasteful, that consumers do not need the products which

---

[7]National Science Foundation, Statistical Abstract of the United States 1962 (Washington, D. C.: U. S. Dept. of Commerce, Bureau of Census), p. 542.

are a result of an economy of abundance. They argue that the consumers are being manipulated by business for its own gains. Business is blamed for what they term a warped sense of values currently held by consumers. Business is also criticized for unnecessary depletion of natural resources.

These critics have as their focal point the "misdirected" allocation of resources. They argue, for example, that society is "production oriented" and that the measure of economic activity and a standard of living is the quantity of goods and services available.[8] The implication is that resources are not properly allocated and that a distinction needs to be made between kinds of goods and services provided. For the benefit of society, goals should be other than production oriented.[9]

Recognition should be given to the fact that this is a value judgment, and someone other than the market should make the decision as to what goods are best for society. This becomes a social and moral argument against materialism and not an argument against innovation per se.

A second major criticism against innovation is the endeavor of marketing men to induce or create demand through advertising. Critics argue that the wants of the consumer are created by production. This follows the economic law of

---

[8]See John K. Galbraith, The Affluent Society (Boston: Houghton Mifflin Company, 1958), particularly Chapters 9-11.

[9]Ibid.

J. B. Say which asserts that supply creates its own demand. ?
Thus, they argue that wants are not originated by the consumer but by business. "(Advertising and salesmanship) . . can not be reconciled with the notion of independently determined desires, for their central function is to create desires--to bring into being wants that previously did not exist."[10]

Many scholars would argue that a need or want cannot be created. The role of advertising is to disseminate information and inflame demand rather than to create a demand.

In the last analysis, it is the consumer who has the power to accept or reject the innovation. By his actions, he decides whether emulation, prestige, and yearly models are values for which he is willing to pay. In our society, this is a consumer decision.

There is ample evidence that the consumer has made the decision to accept or reject innovations offered in the market place. The rate of product failure is devastating. Estimates run from 50% to 98%,[11] indicating that rather than being controlled, the consumer has control over the success of product offerings and exercises it to a high degree.

---

[10] Ibid., p. 155.

[11] Samuel C. Johnson and Conrad Jones, "How to Organize for New Products," Harvard Business Review, Vol. XXXV, No. 3 (May-June, 1957), p. 50.

Innovation Defined

An innovation is the act of implementing a novel idea into a process or product. For an innovation to be successful, the process must be feasible or a product needs to have commercial acceptability.

There are three major elements which must be present for a successful innovation. The first is an idea. This element is defined as an invention and is the creative work normally done by researchers. The second is the implementation of the idea or product from the conceptual stage to the final stage. This is the element, the actual production of the innovation, which receives the major attention of the business firm. The third element crucial to a successful innovation is the acceptance on the part of the market for which it is intended. While two parts of the process may be partially controlled by the firm, the acceptance decision is exogenous to the firm and is solely dependent upon the consumer. Influence may be exerted, but the decision is in the hands of the potential consumers.

Types of Innovations

"Innovations are of all degrees of importance and of narrow or wide application."[12] There is a continuum of innovation ranging from an infinitesimal change, such as a slight product alteration, at one end of the continuum to a

---

[12] J. M. Clark, Competition as a Dynamic Process (Washington, D. C.: The Brookings Institution, 1961), p. 185.

completely novel product or change on the other end. From the consumer's viewpoint, three types of product innovations can be delineated in this continuum.

The least complex type of innovation is termed a strategic innovation. This type is an alteration of an existing product. It performs no new function for the user of the innovation. The unique feature of a strategic innovation is that it requires no change in the behavior pattern of the users of the innovation. No new skills are needed on the part of consumers. The strategic type of innovation is the most common because it requires the least amount of ingenuity on the part of the firm and the least severance with the past on the part of the consumer. A new ingredient in toothpaste, a change in packaging, new colors, larger motors, additional trim are examples of a strategic innovation.

A second type of innovation is a functional innovation. While the function the product is to perform remains the same, the method of performing this function is new. A functional innovation is more complex than a strategic innovation on the part of both the producer and the consumer. For the firm, it is a new product, requiring new raw materials and/or new processes. For the consumer, it fulfills a previously fulfilled want in a new way. It breaks with the traditional method of performing an old function.

For example, an electric or gas clothes dryer requires a different behavior pattern on the part of the consumer

than the previous clothes drying method. The consumer no longer picks up each laundered article, shakes it, pins it on the line, checks at intervals for dryness, unpins each article, placing clothes pins in one container and laundry in another. Instead, the consumer removes the clothing from the washing machine and places it in the dryer in somewhat of a heap, returning later to remove the dried laundry at the proper time.

Other examples of a functional innovation are home freezers and air conditioners. They necessitate a change of habits and behavior on the part of the consumer as well as the manufacturer.

A third type of innovation is a fundamental innovation. This is the rarest type and the most complex of the three. It requires an original idea or concept which is implemented by the firm. In addition to the idea, a market needs to be developed.

A fundamental innovation is a break with the past. It performs a new function for the consumer. It fulfills a need which may not have been previously recognized, or if recognized, was not previously fulfilled. A fundamental innovation requires new types of behavior patterns and activities for the consumer. This type differs from the previous ones in that there is no substitution involved. It requires newness.

An example of a fundamental innovation is a dehumidifier. The want, e.g., comfort even in muggy or chilling

damp weather and freedom from the expense and nuisance of mildew or mold, had never been previously fulfilled. The product is a novelty and requires new type activities, rather than ones of substitution.

Innovation And Management

Reasons for Innovating

In a dynamic competitive society such as ours, it is crucial that management must be aware of the everchanging desires of the consumer. "The basic managerial response to accelerating change must be innovation."[13]

Typically, management views innovation as an internal situation rather than external. Business literature has had as a focal point such internal criteria for new products as the following:

1. To use up excess plant capacity.
2. To take up slack in manpower and facilities.
3. To make maximum use of sales organization.
4. To prevent wasting by-products.
5. To employ surplus capital.
6. To provide hedge against slack seasons.
7. To offset declining market for a company's basic products.[14]

While this approach to new product innovation is a valid one in so far as it goes, it also reflects the product or process orientation of the firm, rather than the marketing or customer orientation to which word homage is paid. Without consumer acceptance, without accurate market

---

[13]Kelley and Lazer, *op. cit.*, p. 10.

[14]*Grey Matter*, *op. cit.*, p. 2.

information, the innovation will have no opportunity to succeed.

Differential advantage which can be gained by introducing a new product is a major impetus for any firm. The new product may have a uniqueness or be patentable and offer a monopoly until a close imitation is marketed by a competitor.

The rewards to the innovating firm can be large. A completely new product may create a new industry from which a monopoly over the product may create a monopoly over the industry.[15] For minor product variants, a monopoly of an innovation may be a competitive advantage. In either case, if the rewards to management are greater than the costs, there is a gain which accrues to the firm.

Company growth is enhanced through innovations. The companies which are within "growth industries" typically are oriented toward new product innovation. Examples of these industries are chemicals, drugs and electronics. They normally have high research and development expenditures. "It is about 'par' to have around 50% of sales in products that are new since the war."[16]

---

[15] Clark, op. cit., p. 181.

[16] Ralph W. Jones, "Management of New Products," The Journal of Industrial Engineering, Vol. IX, No. 5 (Sept.-Oct., 1948). Reprinted in William Lazer and E. J. Kelley, eds., Managerial Marketing: Perspective and Viewpoints, Revised Edition (Homewood, Ill.: Richard D. Irwin, 1962), p. 444.

The above reasons for innovating place emphasis on the rewards for innovating. However, another reason for innovating is the possible loss of markets or market position due to not innovating. Given a competitive position, how long can a firm hold its position without introducing new product innovations? While it is not known, it is doubtful if a competitive position could be held for long in the dynamic business environment of today.

Problems of Innovation to Management

"Any business enterprise has two and only these two basic functions: marketing and innovations."[17] Thus, the task facing business is not one of determining if business should innovate but rather how it should be carried out most advantageously.

Management is faced with the problem of introducing innovations to potential customers. In general, marketing management is concerned with how to do a better job in introducing newness. They need to know what products might be accepted by consumers. In addition, how fast they might be accepted would aid companies using a payback on investment criteria.

They would also like to know if specific marketing strategies and tactics might be utilized when offering product innovations. For example, strategic and tactical

---

[17]Peter Drucker, The Practices of Management (New York: Harper & Brothers, 1954), p. 37.

considerations might well be found in areas of product planning, promotion, price and channel selection.

An approach to these problems can be found in the market orientation philosophy. Given the market as the focal point for management success, marketing research endeavor should start with market considerations. Specific types of information which can be obtained only in the market place are set forth below.

Useful Information to Management

Delineating a potential target is a crucial step for management. In attempting this delineation, management would find the answers to the following questions to be very helpful:

Is there a specific type of individual who accepts newness?

Is there a core of the market to which advertising might be directed?

Are there people who are the taste setters?

Can a group of people forecast the success or failure of innovations?

Is there sufficient inelastic demand to effectively utilize a skimming pricing policy?

To effectively answer these questions, attention must be turned to the people who are the first to purchase innovations in the market place.

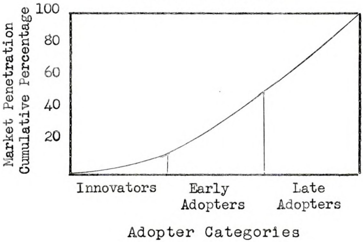
Innovation And The Consumer

The Consumer Innovator

There are difficulties in identifying innovators operationally. From a theoretical point of view, they are the very first to buy. Operationally, this assertion needs to be quantified. This is achieved by segmenting a market or potential market into adopter categories. A scheme which can be utilized follows.

FIGURE I

ADOPTER CATEGORIES



In any market or potential market, the first 10% who adopt a product are consumer innovators. The next 40% who adopt a new product are termed early adopters. The remaining 50% are the last to adopt and are known as the late adopters.

The above scheme for segmenting the market can be useful to management. Previously, it was shown that possible strategical and tactical considerations could be

gleaned from the market. It may be that one type of advertising should be used in the first steps of market penetration and a different type in the middle stages and still a different type for the last to adopt. Other examples of benefits which could be derived from such a segmentation are channels utilized and pricing considerations.

Functions Performed

The consumers who are the first to buy product innovations perform numerous functions. First, the consumer holds the veto power for the success or failure of the innovation. "The thousands of products now on the market are only a part of those which have been introduced to the public on the assumption they would sell."[18] Product innovations constantly are being placed before the public for acceptance or, possibly, rejection. There is ample evidence that the consumer has done a thorough job of screening out the new products. Estimates of new product failures range from 50% to 98%.[19]

A second major function performed is the determination of the rate of acceptance of a given market. The higher the rate of acceptance, the quicker the payback of the investment. In addition, the people who buy the innovation in the

---

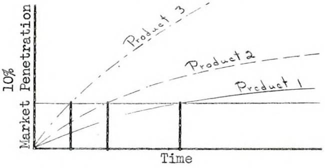
[18] Wroe Alderson, Marketing Behavior and Executive Action (Homewood, Ill.: Richard D. Irwin, Inc., 1957), p. 260.

[19] Johnson and Jones, op. cit., p. 50.

initial stage of the product's life cycle[20] also forecast the success of the new product.

FIGURE II

RATES OF ACCEPTANCE



In Figure II, product 1 has a low rate of acceptance. The length of time for the product to achieve 10% market saturation is approximately twice as long as the time for product 2. Therefore, the payback period is longer. Product 2 requires approximately twice as long to obtain 10% saturation as product 3. Similarly, it has a longer payback period.

It is important for management to achieve as fast an acceptance as possible to obtain a return on their investment. The innovators will help determine how long or short this payback period will be.

A third major function which is performed by the consumer is the influence which he may exert over his neighbors

---

[20]The term refers to the stages through which a product goes, from introduction to its decline. For a discussion of this concept, see E. Jerome McCarthy, Basic Marketing: A Managerial Approach (Homewood, Ill.: Richard D. Irwin, Inc., 1960), pp. 485-88.

and friends. He may be an opinion leader in a given community and may serve as a demonstrator of the new products. Thus, this person may be the key to whether or not the product will ever achieve mass acceptance and become a profitable addition to a product line.

Research Studies On The Consumer Innovator

Introduction

This section is divided into six parts. The first part notes the lack of research in relation to consumer products. The second part deals with a major research problem--defining and identifying the consumer innovator in operational terms. Different approaches which have been utilized are presented. Part three reviews briefly studies which are concerned with the personal characteristics of innovators in terms of sociological, psychological, and demographic variables. Part four sets forth the findings of research related to the adoption process and rates of adoption as it pertains to the individuals and the community. The fifth part reports on the influences which have affected the behavior of the various adopter categories. Such influences as communications, formal and informal, are given consideration. Part six summarizes the major findings of previous research as they apply to innovators.

Lack of Research

Despite the importance of innovation and consumer

behavior, surprisingly little research has been done in this area. This is particularly true of product innovations. The majority of research on innovation has been done by rural sociologists in their concern with the acceptance of new ideas and products in farming.

Problems of Defining and Identifying

A major problem in studying the consumer innovator concerns definitions and identification. One approach has been to delineate the people in terms of innovative-mindedness.[21] This term is defined as those who accept the innovation after the pioneers but before it attains widespread acceptance.[22] This definition excludes those who are the handful of people who are the pioneers.

A scale to measure the concept of innovative-mindedness is constructed which classifies the total sample into three groups: the innovative-minded (22% of the sample), the intermediate (over 50% of the sample), and those "not innovative-minded" (approximately 22% of the sample).

To ascertain in which of the groups an individual belonged, the respondents were asked three questions. Question one pertained to ownership or intended ownership of selected household appliances. Question two related to the attitude shown toward new appliances. Question three

---

[21]Eva Mueller, "The Desire for Innovators in Household Goods," Consumer Behavior, ed. Lincoln Clark, III (New York: Harper and Brothers, 1958), pp. 13-37.

[22]Ibid., p. 26.

elicited attitudes toward new features or improvements on appliances.

Responses were classified positive, pro-con, and negative. The respondents whose answers were two positive and a pro-con, or all positive were classified as innovative-minded. Two negative and a pro-con or three negatives were considered non-innovative-minded. The other possible combinations were considered intermediate. Thus, one did not have to own any new appliances to be classified as innovative-minded. The criterion was an intended purchase, rather than absolute ownership.

A second approach in identification has been utilized by rural sociologists in their attempt to distinguish the innovators from other groups. Their studies are concerned with how farmers adopt new ideas and technology. They have been quite prolific in their studies regarding acceptance of newness. H. F. Lionberger, author of Adoption of New Ideas and Practices, lists an annotated bibliography of 100 research sources on this topic.[23]

One scheme which has received widespread acceptance for identification of adopter categories by rural sociologists

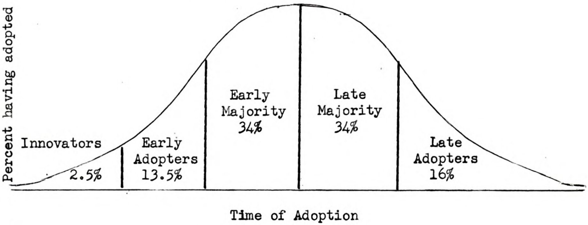
---

[23]H. F. Lionberger, Adoption of New Ideas and Practices (Ames: The Iowa State University Press, 1960), pp. 119-44.

is constructed on the basis of The Adoption-of-Farm-Practices scale.[24] This scale consists of 25 new farm practices. The year of adoption for each of the practices is ascertained from the sample. A standard scoring technique is then utilized which assigns equal weights to each practice. This device yields a single measurement score for each respondent. It has been ascertained that these scores are normally distributed or closely approach normality.[25] It is from this concept of normality that the adopter categories are identified. They are as follows.

FIGURE III

FARM RESEARCH ADOPTER CATEGORIES



---

[24] Everett M. Rogers, <u>Characteristics of Agricultural Innovators and Other Adopter Categories</u> (Wooster: Ohio Agricultural Experiment Station Research Bulletin 882, May, 1961), pp. 57-63; E. M. Rogers and G. M. Beal, <u>Reference Group Influences in the Adoption of Agricultural Technology</u> (Ames: Iowa State University, 1958).

[25] Rogers, <u>ibid</u>., p. 60.

Thus, the rural sociologist classifies a sample in five different ways. The first $2\frac{1}{2}\%$ to accept new ideas and practices are termed innovators. The next $13\frac{1}{2}\%$ of the sample who accept are known as early adopters. The third category is the early majority which is comprised of the next 34%. Group four consists of the next 34%, who are labeled the late majority. Finally, the last 16% to adopt from a given population are termed the late adopters.

The major difference in these two approaches is that the former method excludes the very first who purchase and the latter defines the very first ($2\frac{1}{2}\%$ of those adopting) as the innovators.

A second difference in the approaches is that the former does not need to own a product to be classified as innovative-minded; in the latter method they must have adopted the idea or product and the time lag between introduction and acceptance is the crucial measurement.

A third method of defining and identifying innovators which has been utilized is that of ascertaining whether a person owns a product or engages in a practice which has been classified as an innovation. A study, utilizing this method, which relates social class and acceptance or rejection to innovations was conducted by Graham.[26] Choosing five innovations of which only one was a new product, the

---

[26]Saxon Graham, "Selection and Social Stratification: Factors in the Acceptance and Rejection of Five Innovations by Social Strata In New Haven, Connecticut" (unpublished Ph.D. dissertation, Yale University, 1951).

author attempted to correlate different social class cultures with different innovations.

The operational definition of this study utilizes all three approaches. An innovator must own at least one of the innovations studied, be among the first 10% of a market to accept the innovation without regard to the time lag from introduction of the innovation to its acceptance.

Personal Characteristics

A major way of determining what type of people accept innovations is by ascertaining what the personal characteristics of these people are. This is an excellent method of finding whether the innovators constitute a specific marketing target. It is a method of determining what personal variables, if any, help explain a propensity to innovate. The following sections set forth findings of various researchers who have delved into the personal variables.

Culture

One consideration in explaining the propensity to innovate is culture. The following quotes by anthropologists indicate the importance placed on this concept:

> Several factors operate in the process of acceptance or rejection of new items by society. One of the most important of these, again, is the culture base.[27]

---

[27]Saxon Graham, American Culture: An Analysis of Its Development and Present Characteristics (New York: Harper and Brothers, 1957), p. 543.

> For an innovation to be accepted then, it usually must be compatible with the culture base already existing.[28]

One example of how cultural factors influence acceptance of newness is reflected in a study by Pedersen in relation to ethnic groups.[29] He found that the Danish farmers had adopted more selected farm practices than did the Polish groups. The study indicated that the Polish group tended to perpetuate the status quo whereas the cultural adjustment of the Danes facilitates the interaction of newness. Thus, some ethnic groups are more prone to innovate than others.

Social isolation has been found to be linked with unfavorable attitudes and nonadoption of innovations in farming.[30] In addition, heterogeneous neighborhoods were found to be more receptive toward improved school practices and greater participation in agricultural and school organizations than homogeneous neighborhoods.[31]

One research firm reports that people who are highly

---

[28]Ralph Linton, The Study of Man, Student's Edition (New York: Appleton-Century-Crofts, Inc., 1936), p. 341.

[29]Harold A. Pedersen, "Cultural Differences in the Acceptance of Recommended Practices," Rural Sociology, Vol. XVI (March, 1951), pp. 37-49; Charles R. Hoffer, Acceptance of Approved Farming Practices Among Farmers of Dutch Descent (East Lansing: Michigan Agricultural Experiment Station Special Bulletin 316, June, 1942).

[30]E. A. Wilkening, "Social Isolation and Response of Farmers to Agricultural Programs," American Sociological Review, Vol. XVI (December, 1951), pp. 836-37.

[31]J. A. Duncan and B. W. Kreitlow, "Selected Cultural Characteristics and the Acceptance of Educational Programs and Practices," Rural Sociology, Vol. XIX (December, 1954), pp. 349-57.

mobile are the ones which start the trend toward product acceptance.[32] Opinion Research Corporation accepts a leadership concept which influences styles, tastes, and product preferences. The leaders to which this firm refers are mobile in more than a single dimension. It lists seven types of mobility which need to be considered. They are as follows:[33]

1. Intellectual mobility
2. Occupational mobility
3. Kinship mobility
4. Economic mobility
5. Social mobility
6. Educational mobility
7. Geographic mobility

A single dimension of mobility is not sufficient to identify the people who start the trend toward product acceptance, but rather all types of mobility must be considered. It warns that too much of one type of mobility may mean that another type may be low.

Researchers found that the high mobiles were the first to use automatic clothes dryers and sound reproduction stereo equipment. There is some evidence, however, which indicates that not all new products are accepted at a faster rate by the high mobiles. For some products, the rates of acceptance were similar among different classifications of

---

[32] Victor Hillary, "People Who Are 'Highly Mobile' Start Trend to Product Acceptance, Survey Says," _Wall Street Journal_ (Eastern Edition), June 5, 1959, p. 11. Also reported in "Predicting Consumers' Needs: Can Tastemakers Point the Way?" _Printers' Ink_, August 28, 1959, pp. 23-26.

[33] "Predicting Consumers' Needs . . . ," _ibid._, p. 25.

mobiles (classified sample as 27% high mobiles, 50% medium mobiles and 23% low mobiles). For some products, the low mobiles had a greater rate of acceptance than the high mobiles. Thus, while the mobility concept works for some products, it does not work for all.

Another aspect of culture which has been given consideration by researchers is religion. Several studies[34] have indicated that religion has not been statistically significant when related to acceptance of newness. One study has indicated that church membership is so related but church attendance is not.[35]

It has been traditionally assumed that innovations and social change are most readily accepted in metropolitan areas as opposed to farms and villages. However, there is some evidence that the validity of this generalization needs to be questioned.[36] The role of agricultural colleges and the extension information disseminated has made the rural areas much more sophisticated than would have been true in the past. With the educational work, the research being done in this area, the excellent communications which have

---

[34]Joseph H. Greenberg, "Social Variables in Acceptance and Rejection of Artificial Insemination," American Sociological Review, Vol. XVI (1951), pp. 86-91; James Copp, Personal and Social Factors Associated with the Adoption of Recommended Farm Practices Among Cattlemen (Manhattan: Kansas Agricultural Experimental Station Technical Bulletin 83, September, 1956).

[35]Copp, op. cit., pp. 15-16.

[36]Greenberg, op. cit., pp. 86-91.

been established between the sources of newness and the consumer, this generalization needs further research. The "rugged individualism", the lack of conformity to a social ethic may be traits which are the breeding ground for newness.

Social Class

Closely related to culture is the concept of social class. Social class refers to the segmenting of the population into different strata. This is frequently done on the basis of four variables: source of income, house type, occupation and dwelling area. The proponents of social class assert that the population can be stratified into unique groups for which different marketing appeals should be utilized.

Graham[37] asserts that each social class has a unique culture. Thus, he hypothesized that since each social class differs culturally, innovations would be accepted differentially. "Selection (of innovations) was hypothesized to be dependent in part upon the compatibility of the attributes of the innovation with the previous configuration of the culture into which it was introduced."[38] To test the above hypothesis, he chose five innovations: television, canasta, supermarkets, and two types of health insurance. He found

---

[37]Graham, "Selection and Social Stratification . . . ," Abstract.

[38]Ibid.

that when the social classes differed in the degree of acceptance, it could be explained primarily by variations in the possession of those cultural characteristics compatible with the innovation's attributes.

> Thus, no single class (social) or classes will be conservative or liberal in reacting to all innovations. Depending upon innovational characteristics in various instances, the upper class would accept at one time and reject at another. The same could be said for the middle and lower classes . . . if the classes were to accept in equal degree, they would do so because of their common sharing of some aspects of the culture of their society.[39]

Thus, one would not expect to find innovators in a unique social class for different types of innovations.

Measurements of social class have been made by rural sociologists in relation to acceptance of new farm practices. Copp asserts that

> all the evidence supports the argument that there is a high positive correlation between social-class position and the general predisposition to adopt recommended farm practices. Perhaps the act of adopting recommended farm practices might be interpreted as an indication of upward social mobility aspirations.[40]

In addition, Rogers found a relation of social class ratings and Adoption-of-Farm-Practices Scores which was significant at the one percent level.[41]

The research cited asserts that each innovation appeals

---

[39] Saxon Graham, "Class and Conservatism in the Adoption of Innovations," Human Relations, Vol. IX, No. 1 (1956), p. 92.

[40] Copp, op. cit., p. 24.

[41] Rogers, op. cit., pp. 13-14.

to a different social class. For example, television would be accepted more readily by one social class than by another social class. However, when considering innovations of different types, social class cannot be distinguished. If an innovation is a complement to the existing product line, the market may remain the same in terms of social class. However, if a firm is diversifying its product line through innovations, the marketing target may shift.

Education

Innovators are more highly educated than the other adopter categories. This is the general finding of numerous researchers and has been proven to be highly significant statistically.[42] While these studies relate to farm practices only, it is interesting to note that the correlation was higher when related to formal education than to technical agricultural training. For example, a study conducted in the Netherlands found that the educational variable is important in that country as well.[43]

In conjunction with a higher formal education level, it has been found that innovators read more farm magazines and Extension bulletins. Also, they were found to have a better

---

[42] Ibid., pp. 12-13; Copp, op. cit., p. 14; C. R. Hoffer and Dale Stangland, Farmers' Reaction to New Practices (East Lansing: Agricultural Experiment Station Technical Bulletin 264, February, 1958), p. 15.

[43] A. W. Van Den Ban, "Some Characteristics of Progressive Farmers in the Netherlands," Rural Sociology, Vol. XXII (September, 1957), pp. 205-12.

reading ability than some of the other adopter categories.[44]

Age

The old adage "you can't teach an old dog new tricks" has become a part of society. The generalization is often made that the young are much more subject to change than the elderly. However, the research evidence has by no means substantiated this belief. Some researchers have found age to be significant while others have not.[45] It would be logical, considering the higher education, that the age of the innovators would be lower. However, an explanation for the older people being the innovators is that the young are financially weaker and cannot afford to adopt new products.[46] Thus, while the younger consumers may desire to innovate, they cannot afford to do so.

Several researchers have found that innovators fall into a 35-54 age bracket.[47] However, this bracket is so

---

[44]Rogers, _op_. _cit_., pp. 14-16.

[45]For studies which have found age to be significant, see: Rogers, _op_. _cit_., p. 14; C. P. Marsh and A. L. Coleman, "The Relationship of Farm Characteristics to the Adoption of Recommended Farm Practices," _Rural Sociology_, Vol. XX (September-December, 1955), pp. 289-96. For studies which have found no significance, see: Copp, _op_. _cit_., p. 13; M. C. Wilson and G. Gallup, _Extension Teaching Methods and Other Factors That Influence Adoption of Agricultural and Home Economics Practices_ (Washington: U.S. Department of Agriculture Federal Extension Service Circular 495, August, 1955); Hoffer and Stangland, _op_. _cit_., p. 13.

[46]Copp, _op_. _cit_., p. 13.

[47]"How Consumers Take to Newness," _Business Week_, September 24, 1955, p. 41; Copp, _op_. _cit_., p. 13.

large, it obscures any actual information concerning the marketing target for innovations.

In general, however, when the studies do not show age to be statistically significant, the data tends to show either a curvilinear relationship or a difference in percentage which tends to show that the younger are the acceptors.[48] At this stage of knowledge, no marketing target can be delineated regarding newness. Additional research needs to be done in this area.

Income

A significant variable when considering the purchase of product innovations is income. Because products cost money, income must be above a subsistence level before consumers can purchase innovations. One would not expect to find innovators at the extreme low end of the income scale.

As the income becomes higher, the consumer has the opportunity to purchase innovations. Thus, the higher the income, the more opportunity for innovating. However, this relationship need not continue. It may be that the higher the income, the greater the propensity to innovate, but this is not yet proven.

Numerous researchers have shown that while the innovators are found in several income brackets, most studies indicate they are found in the higher brackets. For example, Mueller's study of the innovation-mindedness showed

---

[48] <u>Ibid</u>.

that more individuals fall within the \$5,000-\$7,449 than any other bracket.[49] This income group was 9% larger than the next highest which was the top income bracket (\$7,500 plus).

Copp, using a different type measurement, found that the higher the gross farm income, the higher the adoption score. A problem of using this measurement is that one can not ascertain which is the cause and which the effect. Adoption of numerous new practices may lead to a higher income or a high income may lead to a high rate of adoption. One can only conclude that a high income is a characteristic of a high adoption score. His results do not indicate a "topping off" as did the Mueller study.[50]

Rogers' study resulted in the same conclusion found by Copp. The innovators and early adopters had a median income of \$15,940 while the next closest group (early majority) had a median income of \$8,700. This proved to be statistically significant.[51] The research evidence shows then that innovators do have a higher income than the rest of the population.

Values and Attitudes

Numerous researchers have attempted to measure psychological variables as they relate to innovators. The major hypothesis is that the people who accept newness may have a

---

[49] "How Consumers Take to Newness," p. 41.

[50] Copp, _op. cit._, pp. 18-19.

[51] Rogers, _op. cit._, p. 18.

unique composition of traits. These people break from the traditional patterns of behavior. Thus, one explanation of why they do so may be found in the values and attitudes they have.

Hoffer and Stangland, through the use of models, found that the farmers who were efficient tended to adopt recommended practices. In a similar fashion, farmers who identified themselves with self-reliance and progress adopted more practices than those who did not.[52] Farmers who associated themselves with conservatism and security tended to delay or not adopt the approved practices.[53]

Mueller found that the innovation-minded were prone to be optimistic, specifically in terms of financial outlook. Twenty-seven percent of the innovation-minded had incomes which had been going up and expected further improvement. Twenty-three percent of the group reported that their income had been steady and expected it to rise in the future.

Copp, using a Rigidity-Flexibility scale, found the more flexible farmers tend to show a progressive mentality in their farming while the rigid appeared more traditional. By scaling attitudes toward credit, future in farming and orientation in farming, he found the scale was correlated significantly with the adoption scale.[54]

---

[52]Hoffer and Stangland, _op_. _cit_., p. 3.

[53]_Ibid_. Also, Hoffer, _op_. _cit_.; Rogers, _op_. _cit_., p. 43.

[54]Copp, _op_. _cit_., pp. 26-27.

Venturesomeness

Innovators, by their very definition, need to be venturesome. These people are the first to try new methods and products. Several researchers have attempted to construct a measurement of venturesomeness.[55] This variable is difficult to measure as it is an "acceptable" trait to have, and thus, people do not like to admit they are not venturesome.

At least two approaches have been tried to obtain a measurement of this variable. One method is that of asking farmers' opinions of new practices and constructing an index from the elicited data.[56] The second method consists of presenting hypothetical practices and recording their responses as to whether they would "adopt immediately," "wait and see," or "not be interested." This latter method has the advantage of not using the actual experience of a new practice as a bias in the respondent's attitude.[57] In both methods, the measurement was found to be statistically significant. This conclusion would need to be found, since by definition, the innovators would be people who would try

---

[55]This term is defined as the degree to which individuals possess a favorable attitude toward trying new ideas and practices.

[56]Frederick C. Fliegal, "A Multiple Correlation Analysis of Factors Associated with Adoption of Farm Practices," Rural Sociology, Vol. XXI (September-December, 1956), pp. 284-92; Eugene A. Wilkening, Acceptance of Improved Farm Practices in Three Coastal Plain Counties (Raleigh: North Carolina Agricultural Experiment Station Technical Bulletin 98, 1952).

[57]Rogers, op. cit., pp. 34-35.

newness before other groups.

Other Characteristics

Research indicates, among the other factors examined, that innovators are quite active in formal social organizations, Parent Teacher Associations, and the like. The relationship of membership to adoption is highly correlated.[58] Not only are they members in formal social groups, but they also tend to hold offices in these groups. Thus, the innovators are active members of such groups.

"Merton[59] has categorized individuals as 'cosmopolites' and 'localites.' The localites were persons who read local newspapers, had local friends, and participated in formal organizations in the local community. In comparison, cosmopolites had their friends, interests and organizational memberships outside of the local community in which they lived."[60]

Numerous researchers have attempted to measure this dimension by constructing a scale.[61] Such items as the

---

[58] *Ibid.*, p. 13; Copp, *op. cit.*, p. 14; H. F. Lionberger and C. M. Coughenour, *Social Structure and Diffusion of Farm Information* (Columbia: Missouri Agricultural Experiment Bulletin 631, April, 1957); E. A. Wilkening, *Acceptance of Improved Farm Practices* . . . .

[59] Robert K. Merton, *Social Theory and Social Structure* (Glencoe, Ill.: Free Press, 1957).

[60] Rogers, *op. cit.*, p. 36.

[61] Gregory P. Stone and William H. Form, *The Local Community Clothing Market* (East Lansing: Michigan Agricultural Experiment Station Technical Bulletin 262, 1957); William M. Dobriner, *The Suburban Community* (New York: G. P. Putnam's, 1958), pp. 132-43.

amount of visiting with neighbors, the importance of neighbors' opinions on the respondent's farm decisions are typical. Thus, a high score indicates a locally oriented individual who identifies with the neighborhood. It has been found that the innovators tend to be less localite than other adopter categories. This may be partially explained by the fact that innovators are not completely integrated into the community. That is, they are different than the rest of the population. This finding has implications in terms of the influentials which will be discussed in a later section.

Adoption Process and Rates of Adoption

Adoption Process

Adoption, as used by sociologists, refers to the acceptance of new ideas and products.[62] For the marketing strategist, it refers to the acceptance of new products by consumers.

The adoption process concerns various stages which are

---

[62] G. M. Beal, "Information Sources in the Decision-Making Process," The Research Clinic on Decision Making (Pullman: State College of Washington, August, 1958), pp. 36-51; G. M. Beal, E. M. Rogers, and J. M. Bohlen, "Validity of the Concept of Stages in the Adoption Process," Rural Sociology, Vol. XXII (June, 1957), pp. 166-68; Subcommittee for the Study of Diffusion of Farm Practices, North Central Rural Sociological Committee, Adopters of New Farm Ideas, North Central Regional Extension Publication No. 13 (East Lansing: Cooperative Extension Service, October, 1961). For a dissent of the stages, see E. Hassinger, "Stages in the Adoption Process," Rural Sociology, Vol. XXIV (March, 1959), pp. 52-53.

used by the adopters from the time of awareness that a new idea or product is available until they accept the innovation. The adoption process looks at how individuals approach the acceptance of innovation; it is concerned with the problem solving steps taken by innovators.

Researchers, in general, have been able to delineate five stages through which the innovator progresses when becoming an innovator. They are:

1. Awareness
2. Interest
3. Evaluation
4. Trial
5. Adoption

> Awareness. At the awareness stage, a person first learns about a new idea, product, or practice. He has only general information about it. He knows little or nothing about any special qualities, its potential usefulness, or how it would likely work for him.
>
> Interest. At this stage the farmer develops an interest in the new thing that he has learned about. He is not satisfied with mere knowledge of its existence. He wants more detailed information about what it is, how it will work, and what it will do. He is willing to listen, read, and learn more about it, and is inclined to actively seek the information desired. It makes little difference whether we call this the information or the interest stage. The personal need of the individual making the decision remains much the same.
>
> Evaluation. At the evaluation stage a person weighs the information and evidence accumulated in the previous stages in order to decide whether the new idea, product, or practice is basically good, and whether it is good for him. In a sense, he reasons through the pros and cons mentally, and applies them to his own situation. Perhaps this stage could very well be referred to as the 'mental trial stage.' To be sure, evaluation is involved at all stages of the adoption process, but it is at this stage that it is most in evidence and perhaps most needed.
>
> Trial. At this stage the individual is confronted with a distinctly different set of problems. He must actually put the change into practice. This

> means that he must learn how, when, where, how much, etc. Competent personal assistance may be required in putting the innovation to use. The usual pattern of acceptance is to try a little at first, and then to make large-scale use of it if the small-scale experiment proves successful.
>
> Adoption. At this stage a person decides that the new idea, product, or practice is good enough for full scale and continued use. A complete change is made with that end in view.[63]

The above framework used in analyzing acceptance of farm products does not have a parallel developed in acceptance of product innovations. Researchers have not been able to determine if a problem solving approach is applicable to purchase decisions. Some reports indicate there is a decision orientation, while others find the opposite conclusion.

Some salient facts concerning purchase decisions which have been determined are:[64]

> More than one third of durable good buyers actually spend less than a few weeks planning their purchase.
>
> Little or no family discussion precedes a durable goods purchase in 71% of families surveyed.
>
> Only one store was visited by 47% of the people who bought a new TV set, refrigerator, washer or stove.
>
> Only 21% of the buyers remembered receiving information from advertisements and circulars.
>
> But 62% said that they did not receive information from any reading material, ads, billboards or point of purchase.

---

[63]H. F. Lionberger, Adoption of New Ideas and Practices, pp. 22-23.

[64]James K. Blake, "How Much Thinking Before Buying," Dun's Review and Modern Industry, Vol. LXVI (August, 1955), pp. 38-41. A complete report of this research can be found in Lincoln Clark (ed.), Consumer Behavior, The Dynamics of Consumer Reaction, I (New York: New York University Press, 1954), pp. 30-87, by George Katona and Eva Mueller.

> More than half of all buyers did not choose between models in different price classes, considered only one price.
>
> The older and presumably more seasoned consumer, the less deliberate his purchases become.
>
> Rural consumers are as circumspect almost as active information seekers as those in large metropolitan markets.

These same researchers found, by use of a scaling technique, that of a total sample, only 20% of these people can be classified as careful purchasers. Thus, from this study, the problem solving approach to purchase decision would seem to have little validity in the evaluation stage.

However, it is possible that word of mouth information still gives the customer sufficient information to make an intelligent, problem solving approach to purchase decisions. The potential customer may be well informed by opinion leaders and presold by informal sources of information.

Adoption Rates

Rates of adoption refer to the differences in the time sequence of acceptors of newness within a given population. Part of this phenomenon has previously been explored when adopter categories were defined. Also, the previous section set forth numerous variables as a partial explanation for this diverse behavior.

Several reasons have been set forth for an explanation of why some products, practices, and ideas are adopted quicker than others.

> The time span is likely to vary with individuals, the nature of the change involved, and the situation in which the individual finds himself when he learns

> about the change alternatives. Cost is important in this respect. The greater the cost involved, the more likely a person is to think a proposed change through carefully before adopting it. Also, the more complex the practice, the slower it is likely to be adopted.[65]

That is, strategic innovations would be accepted at a faster rate than a functional or fundamental innovation. The more complex, the greater the break with tradition, the slower the acceptance will be.

A study of acceptance and adaptation in school systems has been made. Mort and Cornell[66] found that the diffusion rates of new adaptations were slow, particularly in the early stages. On the average, it took seven times as long for the first 10% to accept as the next 40%.[67]

Several economists have been concerned with rates of adoption of innovations. Their approach is generally with industrial innovations and acceptance by a firm or industry. Mansfield[68] suggests the following factors as the principal ones which influence rates of diffusion:[69]

> 1. As the number of firms in an industry adopting an innovation increases, the probability of its

---

[65]H. F. Lionberger, Adoption of New Ideas and Practices, pp. 24-25.

[66]P. R. Mort and F. G. Cornell, American Schools in Transition (New York: Columbia University Teachers College, 1941).

[67]Ibid.

[68]Edwin Mansfield, "Diffusion of Technological Change," Reviews of Data on Research and Development, No. 31 (Washington: National Science Foundation, October, 1961).

[69]Ibid., p. 21.

adoption by a nonuser increases (he warns this is not necessarily true for innovations such as an entirely new product line, whose profitability may decrease with imitation).

2. The expected profitability of an innovation influences the probability of its adoption.

3. For equally profitable innovations, the probability of adoption tends to be smaller for innovations requiring relatively large investments.

4. The probability of adoption of an innovation is dependent on the industry in which the innovation is introduced.

Another economist, Griliches, attempted to explain the diffusion rates in terms of logistic variables. He asserts that

> it is in my belief that in the long-run, and cross sectionally, these variables (psychological) tend to cancel themselves out, leaving the economic variables as the major determinants of the pattern of technological change.[70]

Marketing Influences

Introduction

Probably no other area of acceptance of newness has received as much attention as has the role of influence. This area has been the focal point for rural sociologists, as their main concern has been with the diffusion and dissemination of new farm practices and ideas.

This section analyzes influence from two different approaches. First, the major sources of information are

---

[70]Z. Griliches, "Hybrid Corn, An Exploration in the Economics of Technical Change," Econometrica, Vol. XXV (October, 1957), p. 522.

related to the individual adoption process that was presented above. The second approach is utilizing the adopter categories previously defined to ascertain if a difference can be found in the use of types of media by these groups.

Information Sources by Stage in the Adoption Process

The sources of information available to the public are numerous. Research studies have shown that these sources change through the adoption process. The following table is a summary of research by rural sociologists regarding the sources, which are ranked by frequency, as they relate to each stage of the adoption process.

In the table, mass media is mentioned most often by farmers at the awareness and interest stages. Farm magazines and farm papers are used in greater frequency than other mass media such as newspapers, radio, and television.[71] Neighbors and friends are the sources most often consulted when a final decision is to be made. Thus, the informal groups are the most influential after the formal media create an awareness and an interest.

---

[71]G. M. Beal and J. M. Bohlen, The Diffusion Process (Ames: Iowa Agricultural Extension Service Special Report 18, March, 1957); J. H. Copp, M. L. Still, and E. J. Brown, "The Function of Information Sources in the Farm Practice Adoption Process," Rural Sociology, Vol. XXIII (June, 1958), pp. 146-57; E. A. Wilkening, "Role of Communicating Agents in Technological Change in Agriculture," Social Forces, Vol. XXXIV (May, 1956), pp. 361-67.

FIGURE IV

RANK ORDER OF INFORMATION SOURCES BY STAGE IN THE ADOPTION PROCESS*

AWARENESS:	INTEREST:	EVALUATION:	TRIAL:	ADOPTION:
learns about a new idea or practice	gets more information about it	tries it out mentally	uses or tries a little	accepts it for full-scale and continued use
1. Mass media--radio, T.V., newspapers, magazines	1. Mass media	1. Friends and neighbors	1. Friends and neighbors	1. Friends and neighbors
2. Friends and neighbors-mostly other farmers	2. Friends and neighbors	2. Agricultural agencies	2. Agricultural agencies	2. Agricultural agencies
3. Agricultural agencies, Extension, Vo-Ag., etc.	3. Agricultural agencies	3. Dealers and salesmen	3. Dealers and salesmen	3. Mass media
4. Dealers and salesmen	4. Dealers and salesmen	4. Mass media	4. Mass media	4. Dealers and salesmen

Personal experience is the most important factor in continued use of an idea.

*Subcommittee for the Study of Diffusion of Farm Practices, op. cit., p. 7.

Adopter Categories[72]

Research reports indicate that the innovators tend to be better informed than other adopter categories. They subscribe to more farm magazines than any other category. Not only do they receive more types of information, but they obtain the information sooner, and it is of a more technical nature. Innovators often have direct contact with agricultural scientists. They approve of the use of science in agriculture. They also tend to read more research bulletins.

In contrast with this direct line information received by the innovators, the early adopters have more contact with extension agents, vocational agricultural teachers, and agricultural agency workers. An explanation for this finding is that the innovator may be aware of the new practice before the local change agent, since the innovator is in contact with other innovators, scientists, and travels widely. The early adopters have more visits and contacts with exchange people than any other adopter group.

Late majority and laggards are more prone to depend on friends and neighbors for their information on new farm practices and ideas. As previously pointed out, innovators are not locally bound as are the other groups. By the definition of being first to accept, the innovators cannot

---

[72]The information for this section was obtained from Subcommittee for the Study of Diffusion of Farm Practices, <u>op. cit</u>.

follow friends within a given neighborhood. The only friends they could depend upon would be innovators in other areas.

Influence of Innovators

One of the most perplexing, yet important, problems is ascertaining the influence of the innovator. Since, by definition, he is the first to adopt, it would be logical to assume he would serve as an important agent in the dissemination of practices and ideas. That is, he would serve as a local demonstrator, an influencer of local change and a direct line of communication for the remainder of the community. If this is true, extensive effort should be utilized in selling the innovator as thoroughly as possible on a new idea, product, or practice.

However, some researchers report that because innovators are "different", they are not the influentials, but rather the next adopter group performs this function because they are more like the rest of the population.[73]

Many of the ways which innovators are "different" have previously been set forth in terms of innovator characteristics. Some studies have shown that these people do not have the highest status in the community, particularly if the changes are substantial and if the norms do not favor

---

[73] Ibid.

such change.[74] "Perhaps it is proper to say that they are watched but not followed."[75]

It appears that in this stage in the research, there is insufficient evidence for a conclusion as to the actual influence of innovators.[76]

Summary

The primary purpose of this section is to set forth the major findings of scholars concerned with the acceptance and diffusion of newness by people. This is an area of interest to many disciplines. Anthropologists, sociologists, psychologists, economists, as well as marketing scholars are concerned with the concept of change and newness.

A focal point for much of the research has been an attempt to determine if the acceptors of newness are dissimilar in any way to the rest of the population. The research indicates they are dissimilar; yet they are homogeneous as a group.[77]

---

[74]G. M. Beal and J. M. Bohlen, The Diffusion Process, op. cit.; E. A. Wilkening, "Informal Leaders and Innovators in Farm Practices," Rural Sociology, Vol. XVII (September, 1952), pp. 272-75.

[75]Lionberger, Adoption of New Ideas and Practices, p. 54.

[76]For a study which shows that innovators are persons sought as information sources, see H. F. Lionberger, "Some Characteristics of Farm Operators Sought as Sources of Farm Information in a Missouri Community," Rural Sociology, Vol. XVIII (December, 1953), pp. 327-38.

[77]Neal Gross, "The Differential Characteristics of Acceptors and Non-Acceptors of an Approved Technological Practice," Rural Sociology, Vol. XIV (June, 1949), pp. 148-56.

The following table summarizes the research findings of over 20 years of research and consists of over 100 studies by rural sociologists with regard to characteristics and communication behavior of the adopter categories.

The table sets forth numerous characteristics of the various adopter categories as found by sociologists. However, it remains for researchers to determine if the same conclusions hold true for the owners of consumer products, with the focal point being on the innovators. In the following chapter, a similar outline will be hypothesized for the owners of consumer products. The results of an empirical study which tests some of the hypotheses are presented.

FIGURE V

SUMMARY OF CHARACTERISTICS AND COMMUNICATION BEHAVIOR OF ADOPTER CATEGORIES*

Characteristic or Behavior	Innovators	Early adopters	Majority		Laggards or Late adopters
			Early	Late	
1. Time of adoption	First 2.5 per cent to adopt new ideas	Next 13.5 per cent to adopt	Next 34 per cent to adopt	Next 34 per cent to adopt	Last 16 per cent to adopt
2. Attitudes and values	Scientific and venturesome	Progressive	More conservative and traditional	Skeptical of new ideas	Agricultural magic and folk beliefs; fear of debt
3. Abilities	High level of education; ability to deal with abstractions	Above average education	Slightly above average education	Slightly below average education	Low level of education; have difficulty dealing with abstractions and relationships
4. Group memberships	Leaders in county wide or state organizations; travel widely	Leaders in organizations within the community	Many informal contacts within the community	Little travel out of community; little activity in formal organizations	Few memberships in formal organizations other than church; semi-isolates
5. Social status	Highest social status, but their farming practices may not be accepted	High social status; looked to by neighbors as "good farmer"	About average social status	About average social status	Lowest social status

FIGURE V CONTINUED

6. Farm businesses	Largest, most specialized, and most efficient	Large farms; slightly less specialized and efficient	Slightly larger than average sized farms	Slightly smaller than averaged sized farms	Small farms; low incomes; seldom farm owners
7. Sources of information	Scientists; other innovators; research bulletins	Highest contact with local change agents; farm magazines; Extension bulletins	Farm magazines; friends and neighbors	Friends and neighbors	Mainly friends and neighbors; radio farm shows

*Subcommittee for the Study of Diffusion of Farm Practices, op. cit., p. 7.

CHAPTER II

THE PROBLEM

Scope Of The Problem

This research is designed to explore one aspect of innovation, that of early acceptance by the consumer of innovistic products.

First, the research seeks to identify the people who are the first to purchase selected new product offerings. The identification is sought in terms of socio-economic characteristics. Research by sociologists, as previously shown, has indicated that innovators are different in numerous variables than those who follow later in the acceptance of newness.

A second aspect of the research is to determine if these people are opinion leaders and what role they might play in influencing their friends and neighbors in decisions to purchase new products.

The third dimension of the research seeks to determine if the characteristics of innovators of consumer products are similar to those of the innovators of farm products and ideas.

Types of Innovations Studied

Three types of innovations have been delineated:

strategic, functional and fundamental. The strategic innovation is defined as only a slight change in an existing product. A functional innovation means a new way of performing a previously fulfilled function. The fundamental innovation is the radically new product which performs a new function. This study is concerned with the first two. They constitute the majority of product innovations which are introduced to consumers and are the types of major concern to business today.

The third type is of major corporate and economic importance. It occurs relatively rarely, however, and does not lend itself to an empirical study.

Kind of Product Investigated

This research is limited in scope to the task of exploring the innovistic purchasers of one kind of product. Kind of product refers to the categorization used in classifying goods on the basis of similarity between products. An example of this distinction is the separation of items into clothing and household appliances. There are inherent differences within these goods and their uses. The people who buy innovations may be different as well, i.e., food innovators may not be fashion innovators, and the two groups may present very different profiles. The kind of goods selected for study is household appliances.

Adopter Categories and Contrast Groups Utilized

This study has as its focal point the innovator, which

is the primary adopter category. For comparisons and contrasts, an additional category, the early adopter, is defined and investigated. Thus, two categories are studied rather than the five categories used by sociologists.

A second contrast group is defined and used in the study. This group constitutes the total population of a geographic area. By studying this group, it is possible to determine the distribution of characteristics for the population. The findings can be thought of as the expected value if no segments of the population are deleted. That is, if a product had a 100% market saturation, the distribution of characteristics would be the same as the population. Schematically, the categories are as follows.

FIGURE VI

CATEGORIES SELECTED FOR USE

Innovators | Early Adopters | 100% Market Saturation

The first 10% are compared with the next 40% and then with the expected value if no segments were removed from the population.

Statement of the Problem

The objective of the study is to investigate

empirically the characteristics of consumer innovators for strategic and functional innovations. Specifically, it seeks to gain insight into the following questions:

1. What are the characteristics of consumer innovators in terms of socio-economic variables?

2. Is there conformity of the characteristics within each type of innovation? Are the strategic innovators homogeneous in their characteristics? Are the functional innovators homogeneous in their characteristics? Are the two types similar in their characteristics?

3. Do innovators constitute a group of consumers who can be differentiated from the early adopters and the total population?

4. What are the influences recognized by the innovators in the process of selecting innovations?

5. What marketing tools appear to be most effective in influencing new product acceptance?

6. What role do innovators perform as diffusion agents? Are they local demonstrators and opinion leaders?

Hypotheses

The fundamental premise of this research is that there is conformity of characteristics for consumers who are the first to adopt an innovation for a specific kind of product and that these characteristics can be differentiated from those of the general population.

Following are specific hypotheses to be tested:

1. There is a significant difference between the innovators and the contrast groups for each of the characteristics tested. The characteristics are as follows:

   a. Number of people in the family
   b. Age of head and spouse
   c. Age distribution of children
   d. Occupation of head and spouse
   e. Education of head and spouse
   f. Family income
   g. Home characteristics
      1) own vs. rent
      2) type of structure
      3) home value
      4) monthly rent
   h. Ethnic groups
   i. Vacation habits
   j. Automobile ownership
   k. Movie habits
   l. Dining out habits

2. There is a significant difference between the strategic innovator and the functional innovator for the characteristics tested.

3. The major influence regarding the purchase selection is magazines.

4. The majority[1] of innovators do not consult people outside the family before purchase.

5. The majority of innovators have been asked by acquaintances to see their products.

6. The majority of innovators have been asked their opinions of the innovation by other people.

7. The majority of innovators visited only one store before purchasing.

8. The majority of innovators used credit in purchasing

---

[1]Majority is defined as 51% or greater.

their innovations.

9. The majority of innovators have four or more magazines in their homes.

10. The majority of innovators belong to at least two types of organizations.

11. The majority of innovators have lived in the Detroit Area three years or less.

12. The majority of the heads of households of innovators have been employed by their employers three years or less.

13. The majority of innovators watch TV six hours or less per week.

Boundaries Of The Study

This study has several limitations. The significant ones are as follows:

1. The research concentrates on only one facet of innovation, that of consumer acceptance. Innovation, however, starts with the conception of an idea. The firm plays a dominant role in making the new product available commercially. Thus, only one of the three parts is explored.

2. This research is concerned with only one class of innovation: product innovation. Social, cultural and ideological innovations are not considered. The study is further limited to only one kind of product, household appliances. Different kinds of products might

yield different results.

3. Consumer innovators are defined as a percentage of a total market rather than of potential market. Not all households could be considered a potential customer for some products. The 10% cut-off point is an arbitrary decision. This may need readjusting in future studies for obtaining distinctions of characteristics.

4. The information gathered concerning the consumer was not obtained at or near the date the innovations were purchased. Thus, in the intervening time period, these people may have changed in their socio-economic characteristics.

CHAPTER III

RESEARCH DESIGN

Introduction

The purpose of this chapter is to set forth, in detail, the method utilized in obtaining the relevant data used in this study. The chapter is divided into four sections. Section one is devoted to a discussion of the criteria used in the selection of the class of goods and products. Section two sets forth the contrast groups which are used for comparing the characteristics studied. Section three is an explanation of the sampling procedures for the original sample and for the subsample. The fourth section presents the methodology used for the statistical analysis of the data.

Criteria And Selection Of The Products

This study is limited to one specific class of goods. The products are chosen from the household appliance industry. Specific products within the given industry are selected on the basis of the following criteria:

1. At least one product should be selected from strategic innovations and functional innovations.
2. The majority of people within the geographic area should be able to use the product.

3. Innovation should be of recent enough introduction so that people can recall the process of selection.

4. The products should not be ones which appeal to or are utilized by select social classes.

5. Information can be obtained concerning the identification of the people who purchased the products.

6. The people should have the choice of accepting or rejecting the product offering.

7. The value of the product should be sufficiently high that gifts would be excluded.

8. Saturation of the market must be known.

The products chosen for study which meet the above criteria follow.

TABLE 1

MARKET SATURATION OF INNOVISTIC PRODUCTS

Innovations	Percent of Market Saturation*
Strategic	
Color TV	.6
Stereophonic (including combinations)	9.3
Functional	
Automatic Dishwashers	5.2
Air Conditioners (room and central)	6.1

*Sixth Quinquennial Survey of the Detroit Market, The Detroit News, 1962.

The Contrast Groups

Early Adopters

The same criteria given above are utilized for selection of early adoption products and type delineation as were used for selection of the innovistic products. Those selected follow.

TABLE 2

MARKET SATURATION OF EARLY ADOPTION PRODUCTS

Early Adopter Products (Medium Penetration)	Percent of Market Saturation*
Strategic	
Hi Fi Phonograph	22.7
Functional	
Food Disposal	21.0
Clothes Dryers	43.0

*Sixth Quinquennial Survey of the Detroit Market, The Detroit News, 1962.

The owners of these products are called early adopters. The characteristics of this group are contrasted statistically with the characteristics of the innovators to determine if they are different.

Population

A second group, with which the characteristics of innovators are contrasted, is the population. The characteristics of the population are inferred from a sample.[1] This

[1] Sixth Quinquennial Survey of the Detroit Market, The Detroit News, 1962.

provides a method of measuring the difference between the distribution of the characteristics of equal to or less than 10% market penetration and what the distribution would be if a product had a 100% saturation. This relationship is tested for statistical significance.

Sampling Procedures

Geographic Area

The study is limited to the Detroit Metropolitan Area. This area is composed of Macomb, Oakland, and Wayne counties. This designation conforms with the Census Bureau definition of the Detroit Standard Metropolitan Statistical Area. From the 1960 census data, it is known that there are 1,080,220 households in this three county area.

This area was selected for three major reasons. First, excellent statistics are available concerning the characteristics this study seeks to investigate. Second, data from previous research that has been done can be utilized. Third, it is feasible operationally.

The Sample

Pertinent data relating to the characteristics for the selected products in the given geographic area has been previously collected.[2] The information was gathered, by use of questionnaires, in the Spring of 1961. The following information is the description of the sampling procedure

---

[2] *Ibid*.

used by the research firm.

> The survey involved 7,233 in-the-home interviews conducted by trained interviewers regularly employed by Market Opinion Research Company for such purposes. Respondents were selected from every census tract, incorporated place and unincorporated township in the six southeastern Michigan counties of Livingston, Macomb, Monroe, Oakland, Washtenaw and Wayne. This area is designated by the Audit Bureau of Circulations as the Detroit Retail Trading Area.
>
> The basic sample for the survey was one percent of occupied dwelling units with a minimum of four interviews in virtually every census tract; reduced to one-half percent for Detroit City and the greater part of the area where population density exceeds 5,000 persons per square mile.
>
> Field counts of the 1960 census by enumeration districts were used as a base. Interview points were established at every 400 housing units in the one percent area and at every 800 in the one-half percent area. The blocks were selected at random within each enumeration district which fell into the sample. Interviews were taken at every fourth home in clusters of four. This resulted in a total of 7,233 interviews, of which 6,388 were in the three-county Detroit Standard Metropolitan Statistical Area as designated by the U. S. Bureau of Census, referred to herein as Metropolitan Detroit.
>
> Two questionnaires were used alternately. Questions for which the need for detailed information by areas was anticipated appeared on both questionnaires. This applied particularly to such questions as population, housing, occupation, income and newspaper coverage.
>
> Required information was punched on standard 80-column International Business Machines (IBM) cards for tabulating. Cards were duplicated where necessary to bring the number up to one percent of the 1960 Census occupied dwelling units for each census tract in the entire survey area. This resulted in 11,660 cards for the six-county Retail Trading Area (1,165,835 households), and 10,800 cards for the three-county Metropolitan Detroit Market (1,080,220 households).[3]

Only one of the questionnaires described above pertains to the information utilized in this study. Thus, the number

---

[3]*Ibid.*, pp. 4-5.

of interviews used in the sample for this study was 3,194. The interviews were duplicated to 5,456 which constituted approximately a ½% sample of the Detroit Metropolitan Area.

The size of the sample for each product is given in Table 3.

TABLE 3

SAMPLE SIZE

Innovation	Sample Size
Strategic	
Color TV	47
Stereophonic	496
Functional	
Automatic Dishwashers	283
Air Conditioning	327
Early Adopter Products	
Strategic	
Hi Fi Phonograph	622
Functional	
Food Disposal	589
Clothes Dryer	1,406

For analysis, duplications are removed. For example, a strategic innovator is counted only once if a respondent owns a color TV and a stereo. Similarly, duplications are removed from the other classifications: functional innovators, strategic early adopters and functional early adopters. The same procedure is used when all innovators and early adopters are combined as a single unit. The

following table exhibits the different size groups.

TABLE 4

GROUP SAMPLE SIZE

Group	Sample Size
Strategic Innovators	530
Functional Innovators	563
Strategic Early Adopters	622
Functional Early Adopters	1,731
Innovators	1,021
Early Adopters	1,814
Total Sample	5,456

The questionnaire utilized for this sample is found in Appendix C.

The Subsample

Additional information was desired for a study of the innovator which was not obtained in the original questionnaire. Therefore, it was necessary to do additional interviewing. Since names and addresses of respondents in the original sample were available, a subsample was drawn.

Much of the information desired from the subsample concerns recall about the selection process of the product(s) purchased. This necessitated limiting the potential subsample to a realistic period of recall. The cut-off period arbitrarily selected was six years. That is, no purchasers of the products analyzed who purchased before 1956 were included. This limited the sample to 498 respondents.

A quota sample was the procedure used for gaining the additional information. This method was selected for the

following reasons:

1. Many of these people would have moved in the 16 months from the time of the original interview.
2. This method is operationally feasible within reasonable time and cost limitations.

The Detroit area was divided into five geographic areas. Names and addresses were matched with these areas. Approximately 90 names and addresses were selected in each area. Each interviewer was given a map with the list of names and addresses and the geographic area delineated. Seniors and graduate students of Michigan State University were used as interviewers. Each interviewer was told to get a minimum of 20 interviews from the area. Respondents not at home, refusals, and moves necessitated the interviewers' moving around the given area. The goal of obtaining wide dispersion of a geographic area was extremely well achieved.

The number of usable interviews obtained was 109. The actual interviewing was carried out in September, 1962, approximately 16 months after the original questionnaire was administered.

The Questionnaire

The basic purpose of the questionnaire was to obtain information concerning the innovators which was not recorded in the original interview. A copy of the interview and interviewing instructions is found in Appendix D. The instrument was tested in the Lansing area prior to the actual interviewing.

The Chi-Square Statistic

Some convention must be adopted before one can assert as a result of the statistical analysis whether or not the consumer innovator is significantly different from other groups. That is, some technique must be used to determine if the distribution being considered is different or if the variations which occur are caused by chance. The research tool utilized for that is the chi-square statistic.

The chi-square test compares the actual value in a cell with the expected value. The expected value is computed on the basis of proportions. The method used to compute chi-square values is found in Appendix E.

To interpret a given chi-square value, only a few facts need to be known. The higher the value, the more difference there is between the actual observation and what would be expected if no other factors were influencing the distribution. It cannot be expected that the chi-square value would be 0 since that would imply that the actual and the expected cell values were identical, thus, some leeway need be provided. This is done by determining the confidence limit to be used. The confidence limit designates the probability that the conclusion is correct.

The analysis conducted uses four confidence limits. The first is the 90% level which means that if found significant at that level, there are 10 chances in 100 that the distribution would occur by chance. Similarly at the 95% level, it means that the particular distribution would occur

by chance only 5 times in 100. At the 99% and the 99.9% levels, the occurrence of a chance factor is decreased to 1 in 100 and 1 in 1,000 respectively.

The tables show the chi-square values and the significance levels. If a table shows that the variable is "significant at all levels," this is interpreted to mean that there is less than one chance in 1,000 that the distribution occurred by chance. If it shows that the variable is "not significant at all levels," this means that there is no difference even at the 90% level. That is, even allowing 10 chances in 100 that the distribution could have occurred by chance, it could not be interpreted to mean there was a significant distribution.

The convention for this type of research is to use the 95% confidence level to designate whether the distribution is significantly different. This convention is adopted for this paper. The chi-square value is shown in the tables for each analysis, and the confidence limit where it becomes significant is also given. This is for determining the extent to which the distribution is different. For example, it might be determined that a variable is significant at the 95% but not at the 99% level. This would mean that while it is different, it does not differ by much and that the difference is not of a great magnitude.

The computations for the chi-square values presented were done by the MISTIC computer at Michigan State University. Any standard statistics book has chi-square tables

which show the values for different confidence limits. When comparing the table value with the computed value: if the computed value is less, then there is no significant difference; if greater than the value in the book, there is a significant difference.

PART II. THE EVALUATION

CHAPTER IV

THE MARKETING TARGET IN TERMS OF SOCIO-ECONOMIC CHARACTERISTICS

Introduction

The socio-economic variables studied in the research are presented in this chapter. The chapter is divided into two distinct sections. Section I gives the findings in summary form. It is concerned only with the significant relationships. Section II gives the analysis of the data in detail. The statistical analysis is presented with the tables which relate to each variable studied.

Section I gives an evaluation of those hypotheses concerning the socio-economic variables. First, the innovators are compared with the other adopter categories to determine if the innovators are unique in their characteristics and how they differ from the other groups. Second, the innovators are evaluated to determine if they are a homogeneous group. Third, the hypothesis concerning whether a difference is discernible between the strategic and functional innovators is examined.

Section II presents the evaluation of each variable in regard to the three hypotheses, giving the data in statistical and tabular form.

Section I. A Summary Of The Findings

Innovators Compared with Other Adopter Categories

It was hypothesized that the innovators would be different in the distribution of characteristics studied than the other adopter categories defined.

This hypothesis is true for all the variables when the innovators are contrasted with the distribution of characteristics for the mass market. This conclusion is valid for both the heads and spouses of innovistic households.

When comparing innovators with early adopters, they are also found to be different for most of the variables studied. Table 5 shows the variables and whether the adopter categories are different.

The remaining part of this section is devoted to a discussion of how these groups differ in the distribution of characteristics.

Age

Previous research pertaining to age has not been conclusive. Most of the reported research found that the majority of innovators were within the 35-54 age bracket.[1]

This research finds that both the heads and spouses of innovistic households are younger than the mass market. Over 60% of the heads of innovistic households are less than 45 years of age, compared to 52.8% for the population.

---

[1]See page 29.

Innovistic spouses are also younger than the population. Slightly over 35% of the innovators are under 35. This compares with slightly over 31% of the population falling in this bracket.

TABLE 5

INNOVATORS COMPARED WITH CONTRAST GROUPS: A SUMMARY
(95% confidence limit)

Variable	Early Adopters	Mass Market
	Is there a difference?	
Age		
Head	Yes	Yes
Spouse	No	Yes
Occupation		
Head	Yes	Yes
Spouse	No	Yes
Education		
Head	Yes	Yes
Spouse	Yes	Yes
Family Income	Yes	Yes
Ethnic Group	Yes	Yes
Home Characteristics		
Ownership	Yes	Yes
Structure	Yes	Yes
Home Value	Yes	Yes
Rent	No	Yes
Number in Family	Yes	Yes

The heads of innovistic households are not as young as the early adopters. The first acceptors of newness, while being younger than the population, are not as young as those who accept at a later time. The spouses of innovators and early adopters are younger than the population, but there is

no difference between the two.

This lends credibility to the argument that the young are not financially able to afford newness, using their income to buy the traditional products necessary for day to day living instead.

Occupation

Occupation is an important variable in assembling a profile for a market segment. It delineates the market if purchasers of certain type products are found in specific occupations. It gives an indication of other dimensions of the adopter category, such as: interests, income, friends and the like.

Both the innovators and their spouses are employed in occupations differing from those of the mass market. Occupations of the heads of innovistic households are also different from those of the early adopters.

The heads of innovating households are predominantly concentrated in professional and managerial occupations. Early adopters are concentrated in two occupational groups: professional--managerial and craftsmen--foremen. The population is widely dispersed throughout the occupational groupings.

Slightly more spouses of innovators are employed than the spouses for the other groups. A greater percentage of working spouses are in professional or managerial occupations than would be expected. No difference is discernible

between the innovistic spouses and the early adopter spouses.

Education

Both the heads and spouses of innovistic households are different in the amount of formal education they have acquired.

Over 38% of the heads of innovistic households have at least some college education, compared with slightly over 21% of the population. 29.3% of the innovistic spouses have at least some college education, compared to 15% of the population. Innovators (both heads and spouses) also have more formal education than the early adopters.

The acceptors of newness, both the heads and the spouses, have more formal education than do the other adopter categories. This finding coincides with the conclusions reached by sociologists when studying acceptance of newness by farm operators.

Family Income

The innovistic households enjoy a much higher income than either of the other two groups. Over 31% of the innovators have incomes of $10,000 or above, compared to slightly over 22% of the early adopters and slightly less than 14% of the population. Thus, the incomes of innovators are definitely different than those of the other groups. This finding is similar to the conclusions reached by rural sociologists. Mueller found that more individuals fell

within the \$5,000-\$7,449 bracket than any other bracket.[2] This study finds the modal bracket to be \$7,000-\$9,999.

Ethnic Groups

Farm research, previously reviewed, suggests that ethnic groups may be a factor in the acceptance of newness. Some cultures are more prone to innovate than others. This raised the question: Are certain ethnic groups acceptors of the innovations studied?

To determine the ethnic group identity, they were traced through the male line. The classification system utilized is found in Appendix C-2.

The ethnic backgrounds of innovators differ significantly from those of the other two groups. However, the greatest frequency for both the innovators and early adopters is found in the ethnic group most represented in the population: the British.

Innovators, when compared to the population, are over represented in the following ethnic groups: German, French, Jewish and Other Europeans.

When innovators are compared to the early adopters, they are over represented in the following groups: French, Jewish, Negro, Polish and Other European. Thus, the French, Jewish and Other Europeans have a greater over representation than any other ethnic groups for the innovators.

---

[2] See pages 30 and 31.

Home Characteristics

Another dimension of the characteristics of the acceptors of newness is the type of living units which they occupy. One of the previously reviewed research projects asserted that the innovators are highly mobile.[3] Thus, they may rent living quarters and move frequently, rather than constitute fixed home owners with community ties. The home characteristics add another possible clue for investigation in determining the market for innovations.

There is a significant difference between the three categories in regard to home ownership and rentals. Home owners are most frequently early adopters, followed by innovators and finally the population.

Only a slight difference is discernible between the innovators and the population in relation to the type of structure in which they reside. Early adopters more frequently live in a single unit dwellings than do the other adopter categories.

Innovators who own their homes have much higher-valued homes than do the other two categories. 21% of the innovators have homes valued at $25,000 or over. 13.1% of the home-owning early adopters have homes in this bracket, compared to 7.9% for the total population.

Innovators who rent their homes pay a higher rent than does the population. There is, however, no significant

---

[3]See pages 23 and 24.

difference between the rent paid by innovators and that paid by early adopters.

Number in Family

Marketing managers would find it advantageous to know if their market for newness, the innovator, is from a large family or a small one. The findings presented in this chapter are based only on the number of people within a household. Additional data relating to the number and ages of children can be found in Appendix F-4.

The number of people in a household differs between the adopter categories. However, the dispersion is slight. Large families appear proportionately more often in the homes of innovators than in homes of the general population. The early adopters have fewer families composed of one and two people, but more than would be expected in the four to seven member family when compared with the population. The differences between the innovators and early adopters are negligible.

Homogeneity of Innovators

A second hypothesis concerning the innovators is that the innovators are a homogeneous group in regard to the socio-economic variables. That is, the owners of the different innovistic products studied would have characteristics that are similar. In a previous portion of this chapter they were found to be a unique group, but it has not been determined if they are similar in the characteristics.

In all of the variables examined in this section, innovators did not constitute a homogeneous group. The detailed analysis of how the product owners differ with regard to the variables is given in a later section. The distribution of each variable for each innovistic product is set forth.

Because of this lack of homogeneity, it is desirable to determine if the owners of the different types of innovations previously outlined yield different profiles. Attention is turned to this consideration.

Types of Innovation

It was hypothesized that the strategic innovators would differ in their characteristics from the functional innovators.

Table 6 shows in summary form in what variables the strategic innovators differ from the functionals. The remainder of this section considers how the strategic and functional innovators differ.

Age

Strategic innovators, the acceptors of the simplest type of change, are much younger than are the functional innovators. This is true for both the head of the household and the spouse.

Over 35% of the heads of households owning strategic innovations are younger than 35 years. Only 21.5% of the functionals fall in that category. Over 40% of the spouses of strategic innovators are less than 35, compared to

slightly over 30% of the spouses of functional innovators.

While innovations are accepted generally by the young, the simple changes are accepted by the youngest of the innovators.

TABLE 6

DIFFERENCES BETWEEN STRATEGIC AND FUNCTIONAL INNOVATORS (95% confidence limit)

Variable	Is there a difference?
Age	
Head	Yes
Spouse	Yes
Occupation	
Head	Yes
Spouse	No
Education	
Head	Yes
Spouse	Yes
Family Income	Yes
Ethnic Group	Yes
Home Characteristics	
Ownership	Yes
Structure	Yes
Home Value	Yes
Rent	Yes
Number in Family	Yes

Occupation

Strategic innovators show concentration in two occupational groups: professional-managerial and craftsmen-foremen with 30.9% in the former classification and 25.7%

in the latter. The functionals are very highly concentrated (54.9%) within a single occupational group, professional-managerial. This is over twice as many as would be expected when compared to the number of people in this occupational group for the population.

There is no difference between the spouses in regard to the two types of innovations.

Education

Innovation owners and their spouses are both very highly educated. However, the heads and spouses who own functional types of innovations are much more highly educated than are the strategic innovators. 27.1% of the functional innovators have at least a completed college education, compared with 13.6% for the strategics.

The spouses follow a similar pattern. 16.7% of the spouses owning functional innovations have at least completed college, compared with 8.8% of the strategics.

The innovations which require the most change on the part of the consumer are accepted most readily by the highly educated.

Family Income

The acceptors of functional innovations have higher incomes than do the strategic innovators. 42.8% of the functional innovators have incomes of $10,000 or over compared with 23.4% of the strategics. While both groups have high incomes when compared to the population (only 13.7%

of the population have incomes of $10,000 or over), the functionals have almost twice as many in this bracket as do the strategics.

Ethnic Groups

The ethnic backgrounds of the strategic innovators are quite different than the backgrounds of the functionals. The strategics are relatively more often French, Italian, Negro, Polish, Scandinavian and Other European than are the functional innovators. However, the only group which has a major difference is the Negro ethnic group.

Functional innovators are relatively more often British, German, Jewish and Other Slavic. Only the Jewish and British show a sizable difference.

There is, then, a difference between the ethnic groups for the types of innovations. In relative terms, the Jewish and British are the most prone to accept complex change, and the Negroes are most prone to accept the simpler changes. However, the British are not over represented for either type of innovation when compared to the number of people having British ethnic backgrounds in the total market.

Home Characteristics

There is a difference between these two groups in regard to home ownership. 86% of the functional innovators own their own homes compared to 79.8% of the strategics. Slightly more strategic innovators reside in multi-unit dwellings than do the functionals.

Of the innovators who own homes, the functional innovators have homes of very high value; 49.3% have homes valued at $20,000 or more. This compares with 20.6% of the strategic innovators owning homes in this bracket.

Functional innovators who rent pay higher rents than do the strategic innovators.

Number in Family

There are only slight differences between the number of persons in the families of strategic innovators and in those of functional innovators. More homes with functional innovations have no children (living at home) than homes with strategic innovations. Conversely, in very large families (8 or more members) the functionals are represented more than the strategics. However, both groups are widely dispersed in the number of people in a family.

Section II. The Detailed Statistical Analysis Of The Findings

Introduction

The purpose of this section is to present the detailed findings of the study regarding the characteristics examined. Each variable is isolated and analyzed on three levels. First, the adopter categories are set forth. Second, the distribution of the characteristics for the owners of each innovistic product is examined. Third, the strategic and functional innovators are compared. The strategic and functional early adopters are analyzed as well.

Tables

Each major variable has three separate tables. The percentage distribution is shown in each cell for the owners of the particular group. These figures can be converted into absolute figures by referring to a previous section which gives the sample sizes for each group.

The first table presented for each variable shows the distribution of characteristics among the adopter categories: innovators and early adopters. Similarly, the sample total figure is shown. The sample total is the inferred distribution of the population of the Detroit Metropolitan Area on the basis of a ½% sample of households. The primary purpose of this chart is to be able to distinguish if there is any significant difference between the innovators, early adopters and the population.

The second table has as its purpose the presentation of the data to prove or disprove the assertion that the innovators show homogeneity in their characteristics. The distribution of the characteristics of the owners of each product is presented for the innovators in this table.

The third table shows the data in terms of strategic and functional innovations for both the innovators and early adopters. It was hypothesized that strategic innovators may not be similar to functional innovators in their characteristics. This table is designed to test that hypothesis.

The fourth table relating to each variable is found in Appendix F. This table shows the characteristics of the multiple product innovators. The number of owners is so small that no statistical analysis was made. For example, two people out of the total number of interviews owned all four products classified as innovations. Only five owned three and only 95 owned any two. While the information is not analyzed, it is important for seeking insights into trends.

There are several other sets of tables found in the appendix. One set relates to the homogeneity of early adopters. While this was not necessary for comparing the innovators, it was desirable to gather this information to see if the early adopters show uniformity. The results of this inquiry are found in Appendix F.

The second set of tables includes several variables which are incidental to the study. They were included in

the original questionnaire, however, and have been appended. They are also found in Appendix F.

Ages of Heads and Spouses

Adopter Categories

This research finds that the innovating families are different with respect to age than the early adopters and the general population. This can be seen in Tables 7 and 8. The first shows the distribution of age for the head of the household and the latter for the spouse.

Heads of Households.--The adopter categories are significantly different with regard to age. Both the innovators and the early adopters are younger than the population. However, all three groups are characterized by portraying their highest frequency in the 35-44 age bracket. The major way that innovators and early adopters differ is in the amount of people who are less than 45 years of age. Early adopters have 64.8%, innovators 61.1%, compared to 52.8% of the population. Thus, the acceptors of newness are younger.

However, the very first, the innovators, are slightly older than the early adopters. The difference between the innovators and early adopters is also significantly different. This analysis yielded a chi-square value of 11.9, which is significant at the 95% level, but not at the 99%, indicating the difference is small. Thus, with regard to the head of the house, early adopters are youngest, followed by the innovators and then the mass market.

TABLE 7

AGE DISTRIBUTION OF HEADS OF HOUSEHOLD BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Age Distribution of Head of Household						
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older
Innovator[a]	-	3.5	25.2	32.4	23.7	9.1	5.9
Early Adopter[b]	-	2.6	29.4	32.8	19.5	9.3	6.3
Sample Total[c]	.1	3.3	22.1	27.3	20.7	14.0	12.6

X^2 = 166.80 Significant at all levels

[a]Not Stated: .2%

[b]Not Stated: .1%

[c]Not Stated: .1%

TABLE 8

AGE DISTRIBUTION OF SPOUSES BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Age Distribution							
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older	No Spouse
Innovator[a]	.1	7.0	28.3	33.2	18.1	8.3	3.9	.9
Early Adopter[b]	.1	6.1	33.2	31.1	16.0	9.1	3.9	.5
Sample Total[c]	.3	6.3	24.7	26.6	17.9	12.9	8.9	2.3

X^2 = 189.24 Significant at all levels

[a]Not Stated: .1%

[b]Not Stated: .1%

[c]Not Stated: .1%

There is a lack of homogeneity within both innovators and early adopters. The wide dispersion indicates that there is not a unique age bracket for either of these groups.

Spouses.--Turning to the head's counterpart, the spouse, one finds her to be significantly different in a slightly different way. Both the innovators and early adopters are younger than the spouse population. However, the innovating spouses are not significantly different from the early adopter spouses with respect to age. Slightly over 35% of the innovators are younger than 35, and slightly over 39% of the early adopters are in this group. This compares with slightly over 31% of the population.

There is a higher concentration or homogeneity within the 25-44 age group for both the innovator and early adopter spouse groups than was found for the heads. The spouses tend to be younger than do the heads.

In conclusion, the innovators, both heads and spouses, are different in their ages when compared with the expected age distribution. Innovistic heads of households tend to be older than the early adopters; however, there is no age dissimilarity between the spouses of these two groups.

Innovators

A second major consideration is whether or not the innovators constitute a homogeneous group. That is, are the owners of innovistic products similar in age, or is there a

diversity within this group? Tables 9 and 10 depict the answer to this question. Neither the head nor the spouse of the innovating household is homogeneous in age for the four innovistic products.

Heads of Households.--Heads of households do not conform to a specific age pattern in relation to the products owned, even though all have the same modal bracket, 35-44.

Color TV owners tend to be evenly dispersed between the three age brackets, 25-34, 35-44, and 45-54. Thus, a unique age is not a factor with regard to purchase of color TV. The proportion of color TV owners who are 55 and over is very similar to dishwasher and air conditioning owners.

Stereo owners are more concentrated between 25 and 45 than any other product owners; thus, stereo owners tend to be younger.

Dishwasher owners have a relatively higher number in their mode bracket than do the other products, with the heavy concentration, 63.3%, in the 35-54 age group.

Air conditioner owners tend to be older than any other product owners. Almost 23% are 55 or older.

The hypothesis that innovators are homogeneous with respect to age is refuted by the dispersion shown for the innovistic households.

Spouses.--The spouses in households owning innovistic products are not a homogeneous group with regard to age. The ages of spouses conform similarly with the heads'

TABLE 9

AGE DISTRIBUTION OF HEADS OF HOUSEHOLD OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Age Distribution of Head of Household						
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older
Color TV[a]	-	-	25.5	27.7	25.5	8.5	10.6
Stereo[b]	-	5.6	30.8	33.3	21.8	6.2	2.0
Dishwasher	-	-	18.0	38.2	25.1	13.8	5.0
Air Conditioner	-	2.8	20.2	30.3	23.8	12.8	10.1

X^2 = 80.03 Significant at all levels

Sample Total	.1	3.3	22.1	27.3	20.7	14.0	12.6

[a]Not Stated: 2.1%

[b]Not Stated: .2%

TABLE 10

AGE DISTRIBUTION OF SPOUSES OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Age Distribution of Spouse							
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older	No Spouse
Color TV[a]	-	6.4	21.3	25.5	21.3	6.4	12.8	4.2
Stereo	.2	10.9	30.3	34.9	14.5	6.5	1.0	1.6
Dishwasher	-	1.4	24.7	35.3	25.1	9.9	3.2	.4
Air Conditioner	-	4.9	27.2	31.8	17.1	12.2	6.7	-
X^2 = 92.90 Significant at all levels								
Sample Total[b]	.3	6.3	24.7	26.6	17.9	12.9	8.9	2.3

[a]Not Stated: 2.1%

[b]Not Stated: .1%

distribution.

Color TV owner spouses tend to be older, as do air conditioner owner spouses, than the other two product owners. However, more spouses of air conditioner owners are under 35 than are the color TV owner spouses.

Spouses of stereo owners tend to be much younger than do the other product owners.

Dishwashers tend to be owned by relatively more spouses in the 35-44 bracket with comparatively even dispersion in the next bracket on both sides.

As with the heads of households, no conformity exists for all four products regarding age of the owning spouses other than the common modal bracket. Thus, it is essential to discern similarity or variation between the functional innovators and the strategic innovators.

Types

It has been determined that innovators are not a homogeneous group. The task now is to determine if a difference can be ascertained between owners of the types of innovations previously delineated. Strategic innovations are defined as the lowest level of change, both to the firm and to the consumer. Functional innovations are defined as being more complex, calling for a new way to perform a previously fulfilled function. This level of analysis is to test if differences do exist.

<u>Heads of Households</u>.--Table 11 shows that the strategic

TABLE 11

AGE DISTRIBUTION OF HEAD OF HOUSEHOLD BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Age Distribution of Head of Household						
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older
Strategic Innovators[a]	-	5.3	30.4	32.8	21.7	6.6	2.8
Functional Innovators	-	1.6	19.9	33.9	24.5	12.1	8.0
X^2 = 45.93 Significant at all levels							
Strategic Early Adopters	.3	3.2	20.9	32.8	26.8	11.9	4.0
Functional Early Adopters[b]	-	2.6	29.5	32.5	19.7	9.3	6.3
X^2 = 31.16 Significant at all levels							
Sample Total[c]	.1	3.3	22.1	27.3	20.7	14.0	12.6

[a]Not Stated: .4%

[b]Not Stated: .1%

[c]Not Stated: .1%

innovators are much younger than the functional innovators. Slightly over 68% of the strategic innovators are under 45 years, while only a little over 55% of the functional innovators are less than 45. Thus, while innovators tend to be younger than the population, the most simple kind of innovation is more often accepted by younger heads of households than is the more complex innovation.

Also shown in Table 11 is the fact that early adopters are not homogeneous and that there is a difference between a strategic early adopter and a functional early adopter. In this case, the functionalists tend to be younger than the strategic early adopters. Thus, the conclusion opposite to the above: after a product has gained acceptance by 10% of the market, the more complex innovation is accepted by the younger at a faster rate than the less complex type of change.

Spouses.--The age distribution for spouses in innovistic households differs between strategic and functional innovations. They follow the same pattern as did the heads. That is, the strategic innovations are accepted more readily by youthful spouses than the functionals; only 30.2% of the functional innovator spouses are under 35, compared to 40.5% of the strategic innovator spouses.

The early adopter spouses conform to the early adopter heads, also. The functionalists are younger than the strategics.

In both the early adopter and the innovator categories,

TABLE 12

AGE DISTRIBUTION OF SPOUSE BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Age Distribution							
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older	No Spouse
Strategic Innovators[a]	.2	10.8	29.5	34.2	14.9	6.6	2.1	1.5
Functional Innovators	-	3.6	26.6	33.4	20.8	10.3	5.1	.2
X^2 = 44.55 Significant at all levels								
Strategic Early Adopters	.2	6.1	24.3	35.1	20.6	9.2	2.9	1.6
Functional Early Adopters[b]	.1	6.3	33.2	30.8	15.9	9.2	3.9	.5
X^2 = 28.83 Significant at all levels								
Sample Total[c]	.3	6.3	24.7	26.6	17.9	12.9	8.9	2.3

[a]Not Stated: 1.2%

[b]Not Stated: .1%

[c]Not Stated: .1%

the age bracket which has the most respondents is the 35-44 one. In all cases, the 25-44 group has almost 60% of the owners.

Occupations of Heads and Spouses

Adopter Categories

There is a significant difference between the adopter categories for both the head of the household and the spouse. The occupational distribution is much greater for the head than is the distribution for the spouse.

Heads of Households.--Innovators have quite a different occupational distribution as is indicated by the high chi-square value. This difference is almost entirely due to the relatively high number of innovators in the professional and managerial occupations when compared with the early adopters and the general population. Almost twice as many innovators belong to this category as would be expected. The only other category which is over represented, compared to the mass market, is the craftsman and foreman group. Over 60% of the innovators are in these two groups; thus, there is a fairly high concentration of the innovators within occupational groups.

When contrasted with the early adopters, the innovators continue to show a difference, with a chi-square value of 40.02 which is still significantly different. The apportionment of occupations is much broader for the early adopters than for the innovators.

TABLE 13

OCCUPATION OF HEAD OF HOUSEHOLD BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Occupations								
	Professional and Managers	Clerical	Sales Persons	Craftsmen and Foremen	Operatives	Service Workers	Laborers	Retired	Not in Labor Force
Innovator	41.6	3.4	4.6	20.0	11.9	4.6	5.8	4.6	3.4
Early Adopter	32.2	5.3	4.5	21.3	16.5	7.1	5.8	4.7	2.5
Sample Total	21.8	4.1	4.3	17.1	19.0	7.9	9.5	10.0	6.3

$X^2 = 359.62$ Significant at all levels

Spouses.--There is approximately equal representation of employment outside the home for spouses in all three adopter categories. The innovator group has slightly more working spouses than do the other two groups. Thus, it would be expected that they would be slightly over represented in each occupational group. The greatest over representation occurs in the professional and managerial class, though the percentage is very low. Clerical worker is the only other category over represented to any degree.

When comparing only the innovators with the early adopters, there is no significant difference in the occupational distribution. The chi-square value is 14.96, which is not significant at the 95% level.

Innovators

Turning to the question of whether or not there is homogeneity within the innovators, it can be seen in Tables 15 and 16 that the heads of the households and their spouses have a diversified distribution.

Heads of Households.--Table 15 shows that the professional and managerial group owns a greater number of all four products than any other group. However, the total proportion of each product owned by the group is quite dissimilar. Over 70% of the dishwasher owners fall in this group. Air conditioner owners show a high representation in this group, when compared with the remaining two products.

Spouses.--The spouses of color TV owners have a

TABLE 14

OCCUPATION OF SPOUSE BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Occupations									
	Professional and Managers	Clerical	Sales Persons	Craftsman and Foreman	Operatives	Service Workers	Laborers	Retired	Not in Labor Force	No Spouse
Innovators	5.7	5.6	2.2	-	1.1	4.0	1.5	.7	78.3	.9
Early Adopters	4.1	4.9	1.6	.2	1.7	3.9	.8	.6	81.7	.5
Sample Total	3.5	4.5	2.1	.1	1.4	5.8	.8	1.6	77.8	2.3

X^2 = 82.84 Significant at all levels

TABLE 15

OCCUPATION OF HEADS OF HOUSEHOLDS OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Occupations								
	Professional and Managers	Clerical	Sales Persons	Craftsmen and Foremen	Operatives	Service Workers	Laborers	Retired	Not in Labor Force
Color TV	31.9	-	-	23.4	21.3	2.1	10.6	8.5	2.1
Stereo	31.7	4.4	3.4	25.8	16.5	4.2	8.1	1.6	4.2
Dishwasher	70.7	-	6.7	13.1	2.1	1.4	1.4	3.9	.7
Air Conditioner	45.9	4.6	4.3	15.0	8.9	7.0	3.1	7.9	3.4
Sample Total	21.8	4.1	4.3	17.1	19.0	7.9	9.5	10.0	6.3

$X^2 = 205.56$ Significant at all levels

TABLE 16

OCCUPATION OF SPOUSES OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Occupations									
	Professional and Managers	Clerical	Sales Persons	Craftsman and Foreman	Operatives	Service Workers	Laborers	Retired	Not in Labor Force	No Spouse
Color TV	17.0	2.1	-	-	-	2.1	-	6.4	68.1	4.3
Stereo	4.6	6.9	2.4	-	1.6	4.2	2.0	-	76.6	1.6
Dishwasher	4.6	2.1	1.4	-	.4	2.5	-	-	89.0	.4
Air Conditioner	7.3	5.8	2.4	-	.6	4.0	1.5	1.2	77.1	-
X^2 = 86.58 Significant at all levels										
Sample Total	3.5	4.5	2.1	.1	1.4	5.8	.8	1.6	77.8	2.3

slightly higher representation in the work force than the spouses of any other product owners. A sizable percentage of these spouses are in the professional and managerial occupational group, compared to employed spouses of the other product owners and the expected value from the population. There are very few working spouses in homes which have dishwashers.

Types

Since lack of homogeneity is observed in Tables 15 and 16, it is desirable to turn attention to discovering if there is a difference between the strategic and functional innovators. Tables 17 and 18 show that there is lack of uniformity for the heads of households but no difference is discernible for the spouses.

Heads of Households.--While both types of innovators have the highest concentration in the professional and managerial group, the functionals have a much higher representation in this group. The strategics have a high concentration in two other occupational groups, which is not true of the functionals. In relative terms, the strategics are in the categories of craftsman-foreman and operatives twice as often as the functionals.

Looking at the early adopters, it can be observed that the difference between the two types is significant; however, it is slightly so. Functional early adopters tend to cluster more into three groups: professional and

TABLE 17

OCCUPATION OF HEAD OF HOUSEHOLD BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Occupations								
	Professional and Managers	Clerical	Sales Persons	Craftsmen and Foremen	Operatives	Service Workers	Laborers	Retired	Not in Labor Force
Strategic Innovators	30.9	4.2	3.2	25.7	16.8	4.2	8.5	2.3	4.2
Functional Innovators	54.9	2.7	5.9	14.6	6.2	4.8	2.5	6.2	2.3
X^2 = 117.21 Significant at all levels									
Strategic Early Adopters	29.7	4.7	6.1	15.9	10.2	3.9	4.1	7.1	2.4
Functional Early Adopters	32.9	5.3	4.6	20.8	16.5	7.2	5.5	4.7	2.4
X^2 = 23.33 Significant at 99% level									
Sample Total	21.8	4.1	4.3	17.1	19.0	7.9	9.5	10.0	6.3

TABLE 18

OCCUPATION OF SPOUSE BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Occupations: Professional and Managers	Clerical	Sales Persons	Craftsman and Foreman	Operatives	Service Workers	Laborers	Retired	Not in Labor Force	No Spouse
Strategic Innovators	5.9	6.6	2.3	-	1.5	4.1	1.9	.6	75.6	1.5
Functional Innovators	5.7	4.4	2.1	-	.5	3.4	.9	.7	82.1	.2
X^2 = 14.84 Significant at 90% level										
Strategic Early Adopters	5.0	6.4	2.6	-	2.1	6.1	.2	.5	75.5	1.6
Functional Early Adopters	4.0	4.9	1.7	.2	1.5	3.8	.8	.5	82.0	.5
X^2 = 24.92 Significant at 99% level										
Sample Total	3.5	4.5	2.1	.1	1.4	5.8	.8	1.6	77.8	2.3

managerial, craftsman and foreman, and operatives; while the strategics tend to be more widely dispersed.

Education of Heads and Spouses

Previously it was shown that research has indicated that the acceptors of newness had more formal education than those in other categories. The amount of formal education has meaning to the marketing manager particularly in relation to the level of advertising copy.

This study, too, ascertains that the innovators have more education than the population. The following section examines the educational variable in detail.

Adopter Category

Both the heads and spouses of innovistic households are significantly different in the amount of formal education they have acquired.

Heads of Households.--Both the innovators and the early adopters have more formal education than the mass market. Over 38% of the heads of innovistic households have had at least some college education, compared to slightly over 21% of the population.

Innovators have more education than the early adopters. The distinction between these two groups, however, is slight. The chi-square value for their comparison is 14.16 which is significant at the 95% level, but not at the 99% confidence limit.

Spouses.--The spouses in innovistic households are more

TABLE 19

EDUCATION OF HEAD OF HOUSEHOLD BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Education of Head of Household						
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	Not Stated[b]
Innovator	12.6	18.0	30.1	19.6	12.4	6.4	.9
Early Adopter	14.9	21.7	30.3	17.5	9.7	5.3	.6
Sample Total[c]	25.7	25.0	26.2	12.1	6.4	3.3	.9

X^2 = 277.29 Significant at all levels

[a]Includes completed part or all.

[b]This column was not included in the X^2 analysis.

[c].4% of the sample had no education. Not included in the X^2 analysis.

TABLE 20

EDUCATION OF SPOUSE BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Education							
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	No Spouse	Not Stated
Innovator	8.4	19.2	40.5	17.0	9.9	2.4	.9	1.7
Early Adopter	12.4	21.7	44.4	11.6	6.8	1.3	.5	1.3
Sample Total[b]	21.1	24.4	35.0	8.9	5.0	1.1	2.3	1.9

X^2 = 295.44 Significant at all levels

[a]Includes completed part or all.

[b].3% of the sample had no education. Not included in the X^2 analysis.

highly educated than either the early adopter spouses or the spouses of the population. Thus, they follow in the same pattern set by the heads. 29.3% of the innovator spouses, 19.7% of the early adopter and 15% of the population had at least some college. While the innovating spouses have a higher level of formal education, it is not as extensive as the heads'. Thus, education is a variable when related to the acceptance of newness.

Innovators

It has been determined that innovators are different. They differ from the other groups in their amount of education. However, are they homogeneous? That is, is there a common level of formal education which they have acquired?

Tables 21 and 22 show that neither the heads nor the spouses of innovistic households constitute a homogeneous group.

Heads of Households.--Table 21 shows that the heads of households having innovistic products are quite different in relation to the amount of formal education they have. It is clearly discernible that the product owners which are the most unique are the dishwasher owners. Slightly over 66% of these owners have greater than a high school education. Only slightly over 11% had less than a completed high school education.

Interestingly enough, color TV owners have the least amount of education. Over 44% have not completed high

TABLE 21

EDUCATION OF HEADS OF HOUSEHOLDS OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Education of Head of Household						
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	Not Stated[b]
Color TV	21.3	23.4	25.5	10.6	12.8	-	6.4
Stereo	16.9	21.6	29.4	17.7	9.3	4.4	.6
Dishwasher	2.1	9.5	21.2	25.1	26.9	14.1	1.1
Air Conditioner	10.7	14.1	35.5	21.7	10.4	7.3	.3

$X^2 = 145.63$ Significant at all levels

Sample Total[c]	25.7	25.0	26.2	12.1	6.4	3.3	.9

[a]Includes completed part or all.

[b]This column was not included in the X^2 analysis.

TABLE 22

EDUCATION OF SPOUSES OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Education							
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	No Spouse	Not Stated
Color TV	4.3	31.9	25.5	14.9	17.0	-	4.3	2.1
Stereo	10.3	21.2	42.8	13.1	5.9	2.8	1.6	2.2
Dishwasher	1.8	8.5	35.7	25.8	22.6	2.1	.3	3.2
Air Conditioner	9.5	17.4	42.5	19.0	7.6	4.0	-	-

X^2 = 139.93 Significant at all levels

Sample Total[b]	21.1	24.4	35.0	8.9	5.0	1.1	2.3	1.9

[a]Includes completed parted or all.

[b].3% of the sample had no education. Not included in the X^2 analysis.

school. In previously reported research on social class, one of the products examined was black and white television. It was found that television was owned more frequently by persons of lower economic status. There is some indication that a similar conclusion could be reached with regard to education and color TV.

Stereo owners have less education than do the owners of the other two products. However, stereo owners include over 31% with at least some college. Thus, no particular significance can be attached to the educational level of stereo owners except they show a wide disparity.

Spouses.--Spouses in innovistic households show a pattern of educational levels similar to that of their counterparts.

Over 50% of the spouses owning dishwashers have greater than a high school education, thus are much more highly educated than the other product owners' spouses.

The mode of educational level of the spouses of color TV owners is "some high school." Spouses of all other product owners have "completed high school" as the modal bracket.

Types

Does an incongruity exist between strategic and functional innovators? In terms of education, Tables 23 and 24 show there is a difference for both the heads and spouses of innovistic households.

TABLE 23

EDUCATION OF HEAD OF HOUSEHOLD BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Types	Education of Head of Household						
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	Not Stated[b]
Strategic Innovators	17.0	21.7	29.8	16.8	9.4	4.2	1.1
Functional Innovators	7.3	12.6	29.7	22.6	17.9	9.2	.7
X^2 = 63.99 Significant at all levels							
Strategic Early Adopters	19.5	25.1	28.4	14.3	7.7	3.9	1.1
Functional Early Adopters	14.4	21.5	30.6	17.8	10.0	5.2	.6
X^2 = 18.33 Not Significant at 99.9% level							
Sample Total[c]	25.7	25.0	26.2	12.1	6.4	3.3	.9

[a]Includes completed part or all.
[b]This column was not included in the X^2 analysis.
c.4% of the sample had no education.

TABLE 24

EDUCATION OF SPOUSE BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Types	Education							
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	No Spouse	Not Stated
Strategic Innovators	10.0	22.7	42.0	12.7	6.2	2.6	1.5	2.3
Functional Innovators	6.4	13.8	39.6	21.7	14.0	2.7	.2	1.6
X^2 = 51.96 Significant at all levels								
Strategic Early Adopters	15.3	26.1	38.3	9.8	5.2	1.9	1.6	1.8
Functional Early Adopters	12.0	21.9	44.6	11.6	7.1	1.0	.5	1.3
X^2 = 25.87 Significant at all levels								
Sample Total[b]	21.1	24.4	35.0	8.9	5.0	1.1	2.3	1.9

[a]Includes completed part or all.

[b].3% of the sample had no education. Not included in the X^2 analysis.

Heads of Households.--Strategic innovators are not formally educated to as high a degree as are the functional innovators. Thus, the heads of households who are more highly educated accept more complex innovations, while the heads with a lesser amount of formal education accept the more simple innovations. Over 80% of the heads who own the functional innovistic products have at least some high school compared to 61.3% of the strategic innovators and 49.3% of the mass market.

When turning to the early adopters, education is still significantly different at the conventional level. This difference is, however, of small magnitude. Functional early adopters tend to follow the same pattern as was seen for the innovators. They have more formal education than do the strategic early adopters.

Spouses.--There is a significant difference in education, with the functional innovator spouses having more formal education than the strategic innovators. Similarly, early adopters who have more education accept complex changes more readily than the lesser educated.

Family Income

Adopter Categories

Both innovators and early adopters definitely have higher incomes than the population, although a wide dispersion is shown. In addition, innovators have higher incomes than do the early adopters. Over 31% of the innovators have

TABLE 25

FAMILY INCOME BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Family Income Distribution					
	Less than $3000	$3000-$4999	$5000-$6999	$7000-$9999	$10,000-$14,999	Greater than $15,000
Innovator	5.0	11.4	21.7	30.4	17.6	13.9
Early Adopters	4.3	11.3	29.1	33.1	14.7	7.5
Sample Total	14.7	18.1	27.5	26.0	9.1	4.6

$X^2 = 465.03$ Significant at all levels

incomes of $10,000 or over compared to slightly over 22% of the early adopters which fall into this level. The population composition shows less than 14% in this group.

The modal income bracket for both the innovators and early adopters was $7,000-$9,999. While this concentration is definitely significant, it is important to note that over 16% of the innovators had a family income of less than $5,000. This is important and surprising when considering that all four of the innovistic products are of relatively high purchase value.

Innovators

Innovators do not show homogeneity in income. As can be seen from Table 26, the major difference is in the income distribution of owners of dishwashers. When the dishwasher owners are removed from the table, there is still a significant difference at the traditional level, but not at the 99% level. Thus, additional products are causing a difference. The owners of stereo have relatively fewer people in the $10,000 and above income bracket than do the other product owners.

Types

Comparison of the two types of innovators presents a significant difference between them. Functional innovators have a higher income than strategic innovators. Over 42% of the functional innovators have family incomes which equal or exceed $10,000 compared to slightly over 23.4% of the

TABLE 26

FAMILY INCOME OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Family Income Distribution					
	Less than $3,000	$3000- $4999	$5000- $6999	$7000- $9999	$10,000- $14,999	Greater than $15,000
Color TV	2.1	8.5	23.4	36.2	17.0	12.8
Stereo	5.8	14.3	23.0	33.3	14.1	9.5
Dishwasher	2.5	2.8	9.2	25.8	25.8	33.9
Air Conditioner	4.3	11.6	26.0	24.5	16.8	16.8
Sample Total	14.7	18.1	27.5	26.0	9.1	4.6

X^2 = 135.99 Significant at all levels

TABLE 27

FAMILY INCOME BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Family Income Distribution					
	Less than $3000	$3000-$4999	$5000-$6999	$7000-$9999	$10,000-$14,999	Greater than $15,000
Strategic Innovators	5.8	14.1	23.0	33.8	14.0	9.4
Functional Innovators	3.7	7.8	19.7	25.9	21.3	21.5
$X^2 = 53.37$ Significant at all levels						
Strategic Early Adopters	7.1	15.4	28.9	29.6	10.3	8.7
Functional Early Adopters	3.9	11.3	29.4	32.9	14.8	7.7
$X^2 = 24.84$ Significant at all levels						
Sample Total	14.7	18.1	27.5	26.0	9.1	4.6

strategic innovators.

The same phenomenon is observable for the early adopters. Comparing the chi-square values, the differences between early adopters are not as great as the differences between the innovators. However, the tendency is the same. That is, the functional early adopters are from a higher income bracket than are the strategic early adopters.

<u>Ethnic Groups</u>

The ethnic group identity used in this study was traced through the male line. The classification system utilized is found in Appendix C.

Adopter Categories

It can be seen in Table 28 that the innovators and early adopters are well dispersed throughout the various ethnic groups. None of the groups appear to stand out in a clear majority. Those of British origin, however, by far outweigh the other groups. It must be noted that in this particular geographic area, the British are by far the dominant ethnic group. Thus, one cannot look at the table and assert that the British are the innovators, even though they have the greatest frequency. The meaningful analogies are from observing the over or under representation in relation to the makeup of the population.

Table 28 shows that there is a significant difference in the three categories. Innovators, when compared to the population, are over represented in the following ethnic

TABLE 28

ETHNIC BACKGROUND BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Ethnic Background											
	British	German	French	Italian	Jewish	Negro	Polish	Other Slavic	Scandinavian	Other European	Other American	Asiatic
Innovator[a]	29.4	18.2	7.0	3.4	6.0	11.6	8.9	2.3	1.6	9.1	.9	.7
Early Adopter[b]	36.3	19.8	6.1	4.4	3.4	5.5	8.2	3.1	3.9	6.3	1.5	.8
Sample Total[c]	30.9	16.8	5.9	3.8	2.6	15.7	9.3	3.1	3.1	5.7	1.2	1.2

X^2 = 204.41 Significant at all levels

[a]Unknown: .9%

[b]Unknown: .7%

[c]Unknown: .7%

groups: German, French, Jewish and Other Europeans.

The innovators are also significantly different when compared to the early adopters. The chi-square value for this comparison is 78.52, which is significant at all levels. The innovators have a greater over representation when compared to the early adopters in the following ethnic groups: French, Jewish, Negro, Polish and Other Europeans. Therefore, the French, Jewish and Other Europeans have a greater over representation than any other ethnic groups for the innovators. British, German, Italian, Scandinavian and Other American are most over represented by early adopters.

There is a lack of any pronounced heterogeneity as the differences pointed out are of small magnitude.

Innovators

Turning to the query of innovators being similar for the different products, Table 29 shows that they are not homogeneous. Owners for each of the products are widely distributed with regard to ethnic grouping of backgrounds. The one exception to this generalization is found to be the owners of television.

A greater over representation of the classification Other Europeans exists among color TV owners than for any other ethnic group. There is also a higher representation of owners among Polish and Other Slavic groups when compared to population ownership. The latter groups also have a higher ratio of ownership of color TV than for the other

TABLE 29

ETHNIC BACKGROUND OF INNOVATORS

Innovations	Ethnic Background											
	British	German	French	Italian	Jewish	Negro	Polish	Other Slavic	Scandinavian	Other European	Other American	Asiatic
Color TV[a]	17.0	19.1	8.5	-	-	10.6	14.9	6.4	-	17.0	2.1	2.1
Stereo[b]	26.0	17.3	7.7	4.6	1.8	19.8	8.7	.8	2.2	9.1	.6	.8
Dishwasher[c]	38.2	19.1	8.1	1.4	11.3	1.8	5.3	1.8	3.2	6.4	1.8	.7
Air Conditioner[d]	34.9	19.3	3.7	3.1	8.6	5.5	10.1	4.0	1.5	6.7	1.2	.9
X^2 = 161.47 Significant at all levels												
Sample Total[e]	30.9	16.8	5.9	3.8	2.6	15.7	9.3	3.1	3.1	5.7	1.2	1.2

[a]Unknown: 2.1%
[b]Unknown: .6%
[c]Unknown: 1.1%
[d]Unknown: .6%
[e]Unknown: .7%

innovistic products.

Negroes are highest in over representation of ownership of stereo, both in relation to ownership of other innovistic products and to the population. The next highest over representation of stereo ownership is by Other Europeans.

Dishwasher owners are over represented by the Jewish group compared both with ownership of other products and the expected frequency. The next highest over representation of ownership by ethnic group for dishwashers is the British.

Air conditioner owners do not have an over representation with regard to other product owners. They are slightly over represented, when compared to the population, by the following ethnic groups: British, German, Jewish, Polish, Other Slavic and Other Europeans.

Types

Turning to Table 30, it can be seen that the strategic innovators are significantly different from the functional innovators. Strategic innovators are relatively more often French, Italian, Negro, Polish, Scandinavian and Other European than are the functional innovators. However, the only one which is highly different is the Negro ethnic group. Functional innovators are relatively more often British, German, Jewish and Other Slavic. Only two groups show a relatively higher number--the British and the Jewish groups.

Looking at the early adopters, it can be seen that, while the strategics have over representation in several

TABLE 30

ETHNIC BACKGROUND BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Ethnic Background											
	British	German	French	Italian	Jewish	Negro	Polish	Other Slavic	Scandinavian	Other European	Other American	Asiatic
Strategic Innovators[a]	25.1	17.3	7.9	4.3	1.7	19.1	8.9	1.3	3.0	8.9	.8	.9
Functional Innovators[b]	34.8	19.0	6.2	2.5	9.9	4.1	8.5	2.8	2.5	6.6	1.2	.9

X^2 = 103.52 Significant at all levels

TABLE 30 CONTINUED

Products Classified by Type	Ethnic Background											
	British	German	French	Italian	Jewish	Negro	Polish	Other Slavic	Scandinavian	Other European	Other American	Asiatic
Strategic Early Adopters	32.5	15.9	7.6	4.0	2.6	14.4	7.9	3.1	4.5	4.0	1.6	1.9
Functional Early Adopters[c]	36.6	20.4	6.1	4.3	3.6	4.6	8.3	3.1	3.8	6.3	.7	1.6
X^2 = 83.83 Significant at all levels												
Sample Total[d]	30.9	16.8	5.9	3.8	2.6	15.7	9.3	3.1	3.1	5.7	1.2	1.2

[a]Unknown: .8%

[b]Unknown: .9%

[c]Unknown: .7%

[d]Unknown: .7%

groups, only the Negro group is of any size. The functionals, while also having relatively higher representation in numerous categories, do not have as great a difference as did the strategics. The British and German groups have more over representation for functional early adopters than do any of the other categories.

Home Characteristics

A series of three tables for each level of analysis is presented regarding home characteristics. The first indicates whether there is a difference between the adopters who own their homes and those who rent. The type of dwelling is also shown. This refers to the number of living units per dwelling unit. The second table in the series shows the home values of those who own, while the third shows the monthly rent paid by the renters.

Adopter Categories

There is a significant difference between the three categories in regard to owning and renting. More early adopters own their homes than do either of the other groups. A greater percentage of innovators own their homes compared to the population total.

Only a slight difference is discernible between the innovators and the population in relation to the type structure in which they reside. Early adopters more frequently live in a single unit dwelling than do the other categories.

Home ownership within the adopter categories is also

TABLE 31

HOME OWNERSHIP AND TYPE OF DWELLING BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Home Ownership		Number of Units per Dwelling				
	Owns	Rents	1	2	3-4	5-9	10 or more
Innovator	82.1	17.8	83.6	9.0	2.5	.6	4.2
Early Adopter	89.8	10.2	91.2	7.2	.8	.4	.4
Sample Total	76.9	23.0	76.8	13.9	3.3	1.4	4.6
X^2 = 144.40 Significant at all levels			X^2 = 209.59 Significant at all levels				

TABLE 32

HOME VALUE BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Home Value (as a percentage of those who are homeowners)					
	Less than $7500	$7500-$9999	$10,000-$14,999	$15,000-$19,999	$20,000-$24,999	$25,000 or more
Innovator	2.7	8.0	28.7	26.1	13.5	21.0
Early Adopter	2.0	9.5	37.8	27.2	10.4	13.1
Sample Total	6.1	14.4	40.6	21.8	9.2	7.9

$X^2 = 265.82$ Significant at all levels

TABLE 33

MONTHLY RENT BY ADOPTER CATEGORIES
(as a percentage of owners within a type)

Adopter Categories	Monthly Rent (as a percentage of those who rent)				
	Less than $40	$40-$59	$60-$74	$75-$99	$100 or more
Innovator	3.3	22.0	28.6	25.8	20.9
Early Adopter	3.3	19.0	29.9	25.5	22.8
Sample Total	4.6	28.0	35.9	21.0	10.4

X^2 = 43.20 Significant at all levels

significantly different. Both the innovators and early adopters have a higher proportion of high value homes than does the population. The innovators are also significantly different from the early adopters, having a chi-square value of 42.73. The innovators own homes having higher value than do the early adopters.

The adopter categories differ in regard to the amount paid in monthly rent. The innovators and early adopters pay more rent than would be expected from the population. While the early adopters pay more rent, there is no significant difference between that category and the population.

Innovators

The innovators are not homogeneous in relation to home ownership and renting. Color TV owners and dishwasher owners tend to own homes more frequently than the owners of the other two products.

The number of units per dwelling is also significantly different. More air conditioner owners live in multi-unit dwellings than do owners of any other product. Color TV owners are next highest as multiple unit dwellers with nearly equal representation with respect to the population, but higher than any other product owner group.

The home value for those who own is significantly different for the innovators; thus, they are not a homogeneous group. The distortion of the distribution can be found in the high value home brackets. Dishwasher owners are very

TABLE 34

HOME OWNERSHIP AND TYPE OF DWELLING OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Home Ownership		Number of Units per Dwelling				
	Owns	Rents	1	2	3-4	5-9	10 and more
Color TV	100%	-	80.9	12.8	4.2	2.1	-
Stereo	78.4	21.6	83.9	9.1	1.6	.6	4.8
Dishwasher	95.8	4.2	95.4	2.8	1.4	.4	-
Air Conditioner[a]	79.8	20.5	78.3	10.7	4.3	.9	5.8
X^2 = 53.98 Significant at all levels			X^2 = 47.43 Significant at all levels				
Sample Total	76.9	23.0	76.8	13.9	3.3	1.4	4.6

[a]Sum equals 100.3 due to double counting for those who have both room and central air conditioning.

TABLE 35

HOME VALUE OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Home Value (as a percentage of those who are homeowners)					
	Less than $7,500	$7500-$9,999	$10,000-$14,999	$15,000-$19,999	$20,000-$24,999	$25,000 or more
Color TV	-	6.4	38.3	21.3	6.4	27.6
Stereo	4.1	13.9	33.7	29.3	7.7	11.3
Dishwasher	1.1	.7	10.7	15.9	26.6	45.0
Air Conditioner	1.5	3.8	28.7	33.7	14.7	17.6

X^2 = 231.98 Significant at all levels

Sample Total	6.1	14.4	40.6	21.8	9.2	7.9

TABLE 36

MONTHLY RENT OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Monthly Rent (as a percentage of those who rent)				
	Less than $40	$40-$59	$60-$74	$75-$99	$100 or more
Color TV	-	-	-	-	-
Stereo	3.7	23.4	31.8	32.7	8.4
Dishwasher	-	-	8.3	16.7	75.0
Air Conditioner	3.0	23.9	25.4	14.9	32.8
X^2 = 39.72 Significant at all levels					
Sample Total	4.6	28.0	35.9	21.0	10.4

high in the ownership of homes valued at $25,000 or over. Stereo owners have homes of much lower value than do the other product owners.

There is also a significant difference among the innovators with respect to the monthly rent. Dishwasher owners pay a much higher rent than do the other two product owners. Air conditioner owners tend to pay higher rents than do the stereo owners. Color TV owners do not rent, but own their homes instead.

Types

More functional innovators own their own homes than do strategic innovators.

Slightly more strategic innovators live in multi-unit dwellings than do the functionals. This relationship is statistically significant.

Strategic early adopters rent more often than do the functional early adopters. The strategic early adopters differ little from the characteristics of the population.

The same is true for the type of dwelling unit occupied. The strategic early adopters closely parallel the population, while the functionals are more strongly concentrated in the single unit dwellings.

Number in Family

This section sets forth the findings only in regard to the number of people within a household. Additional data relating to number and ages of children can be found in

TABLE 37

HOME OWNERSHIP AND TYPE OF DWELLING BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Home Ownership		Number of Units per Dwelling				
	Owns	Rents	1	2	3-4	5-9	10 and more
Strategic Innovators	79.8	20.2	83.2	9.6	1.9	.8	4.5
Functional Innovators	86.0	13.9	85.3	7.6	3.2	.5	3.4
X^2 = 7.72 Significant at 99% level			X^2 = 70.83 Significant at all levels				
Strategic Early Adopters	78.3	21.5	78.8	12.7	2.6	1.9	4.0
Functional Early Adopters	91.2	8.7	92.4	6.6	.5	.2	.3
X^2 = 4.35 Significant at 95% level			X^2 = 119.42 Significant at all levels				
Sample Total	76.9	23.0	76.8	13.9	3.3	1.4	4.6

TABLE 38

HOME VALUE BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Home Value (as a percentage of those who are homeowners)					
	Less than $7,500	$7,500-$9,999	$10,000-$14,999	$15,000-$19,999	$20,000-$24,999	$25,000 or more
Strategic Innovators	3.8	13.0	34.5	28.1	7.8	12.8
Functional Innovators	1.4	2.5	21.5	25.4	19.4	29.9
$X^2 = 105.41$ Significant at all levels						
Strategic Early Adopters	2.9	12.9	36.7	25.9	9.4	12.3
Functional Early Adopters	2.0	9.2	37.6	27.5	10.4	13.2
$X^2 = 7.24$ Not Significant at all levels						
Sample Total	6.1	14.4	40.6	21.8	9.2	7.9

TABLE 39

MONTHLY RENT BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Monthly Rent (as a percentage of those who rent)				
	Less than $40	$40-$59	$60-$74	$75-$99	$100 or more
Strategic Innovators	3.7	23.4	31.8	32.7	8.4
Functional Innovators	2.6	20.5	23.1	15.4	39.4
X^2 = 27.32 Significant at all levels					
Strategic Early Adopters	5.2	17.2	41.8	25.4	11.2
Functional Early Adopters	2.6	23.2	20.5	27.8	26.5
X^2 = 21.76 Significant at all levels					
Sample Total	4.6	28.0	35.9	21.0	10.4

Appendix F-4.

Adopter Categories

The innovators have larger-sized families than the general population. The number of people within a family is quite significantly different at all confidence levels for the three groups: innovators, early adopters and the expected distribution of the population. Families composed of three or less people are under represented in the innovator group, but those having from four to nine are over represented. The early adopters have fewer families composed of one and two people, but more than would be expected in the four to seven member family as compared with the population.

The chi-square value of the innovators and the population (i.e., removing the early adopter from the analysis) is 67.96. This is also significant at all levels.

When comparing the innovator with the early adopter only, the chi-square value is 20.35, which is significant at the 95% confidence level but not the 99%. Adopting the conventional level of 95% for this type of research, it can be asserted that these two groups are different in the number of family members. However, these differences are slight. Innovators have more families with 8 or more members than do the early adopters.

While these differences are discernible, the mode for all three groups is four members per family. Innovators

TABLE 40

NUMBER IN FAMILY BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Number in Family										
	1	2	3	4	5	6	7	8	9	10	11 or more
Innovator	2.0	17.8	15.9	22.1	19.8	13.5	4.7	2.0	2.0	.1	.1
Early Adopter	1.6	14.4	18.6	24.3	19.8	12.0	6.0	1.4	1.1	.3	.3
Sample Total	4.9	23.8	18.2	19.6	16.2	9.0	4.5	1.8	1.2	.5	.3

X^2 = 177.57 Significant at all levels

tend to cluster slightly more around the three through five persons per family (57.8%) than does the population (54%). Early adopters have more amassment than the other two groups (62.7%).

Innovators

Innovators are not homogeneous, statistically, when considering the number of people per family. The distribution of owners of each innovation by family size is shown in Table 41. The sample total is also presented for comparative purposes. Sample total is the expected percentage of owners to be found in each classification of the variable, based on the distribution of the population.

Color television owners all have seven or less people in their families. For all other products, some owners have families made up of more than seven members. The mode for color television owners is two people per family but is closely followed by five per family.

Stereo owners typically have four in the family with a clustering around three through five members per family unit. At the same time, there is a wider dispersion of family size than for any other product.

The owners of dishwashers show heavy concentration in the two through six member families, with the mode being four. Over 88% fall into this interval.

Air conditioner owners are typically families of two. However, they are widely dispersed and follow rather closely

TABLE 41

NUMBER IN FAMILY OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Number in Family										
	1	2	3	4	5	6	7	8	9	10	11 or more
Color TV	4.3	27.6	12.8	14.9	25.5	12.8	2.1	-	-	-	-
Stereo	2.8	11.5	18.7	25.0	17.7	13.9	6.7	1.2	1.8	.2	.2
Dishwasher	-	15.2	10.2	23.0	20.8	19.1	4.9	2.8	3.9	-	-
Air Conditioner	2.1	27.8	16.5	19.0	18.3	9.8	3.4	2.4	.6	-	-

X^2 = 87.81 Significant at all levels

Sample Total	4.9	23.8	18.2	19.6	16.2	9.0	4.5	1.8	1.2	.5	.3

to the characteristics of the population.

The dispersion of the number of people per family of innovators is perhaps wider than one would expect. The mode values are not high and they are not uniform.

Due to the lack of homogeneity, several different rows were removed one at a time to see if any one group of appliance owners was causing the high chi-square value. This was not productive as no three are similar enough to yield a low chi-square value.

Types

The purpose of Table 42 is to indicate whether or not the owners of the innovation types, strategic and functional, are different. Comparison of the strategic and functional innovators produces a chi-square value of 26, which is not significant at the 99.9% level. Using the convention of 95%, it is asserted that there is a difference between the strategic and functional innovators, even though relatively slight.

Both types of innovators have fewer families of one and two members than would be expected. The strategic innovators have still fewer small families of one and two members than do the functional innovators. Both types have the same mode, which is of relatively low value and tends toward a wide dispersion.

The strategic and functional early adopters are compared and found to be significantly different at all

TABLE 42

NUMBER IN FAMILY BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Number in Family										
	1	2	3	4	5	6	7	8	9	10	11 or more
Strategic Innovators	2.6	13.2	18.7	24.3	18.1	13.6	6.2	1.1	1.7	.2	.2
Functional Innovators	1.2	20.8	13.7	21.5	20.1	14.0	3.9	2.5	2.1	-	-
X^2 = 26.0 Not Significant at 99.9% level											
Strategic Early Adopters	.6	14.9	21.4	21.9	24.1	7.4	4.5	2.3	2.4	-	.5
Functional Early Adopters	1.7	14.5	18.4	24.1	19.9	12.0	6.3	1.3	1.1	.3	.3
X^2 = 32.54 Significant at all levels											
Sample Total	4.9	23.8	18.2	19.6	16.2	9.0	4.5	1.8	1.2	.5	.3

confidence levels. Functional early adopters show a greater percentage of larger families than the strategic early adopters. In addition, the functional early adopters have larger-sized families than would be expected from the population.

A chi-square value was computed for all four groups to determine if they would tend to average out. This did not happen. Thus, all types are found to be significantly different.

CHAPTER V

VALUES AND ATTITUDES OF CONSUMER INNOVATORS

Introduction

This chapter is a continuation of the exploration of the consumer innovator. The concern of this chapter is to determine the makeup of the people in terms of the values and attitudes which they have. After having determined they comprise a unique market in terms of socio-economic variables, attention is now focused on the outlook of these people and how they differ from other segments of the market. Attention is given to ascertain if any of these findings may add additional insights which have meaning to marketing management.

Mobility

Recalling that previous research has indicated the acceptors of newness are highly mobile in numerous dimensions, it was hypothesized that the innovators of this study would also be mobile. Two types of mobility are examined, geographic and job mobility. The questions on mobility were asked in the reinterviewing process, for which there were 109 respondents.

Geographic Mobility

It was hypothesized previously that the majority of innovators have lived in the Detroit area three years or less. Table 43 shows the responses to the question: How long have you lived in the Detroit area?

TABLE 43

TIME LIVED IN THE DETROIT AREA

Length of Time in Detroit Area	% Responding
Less than 1 yr.	-
1 to 2 yrs.	1.83
2 to 3 yrs.	.92
3 to 4 yrs.	.92
4 to 5 yrs.	2.75
Longer than 5 yrs.	93.58

Obviously these people are not mobile in regard to residence in geographic area.

In addition, the respondents were asked how long they lived in the previous area, defined as other than the three-county area. The results are as follow in Table 44. Again, the innovators are clearly not mobile geographically, with 45.9% never having lived outside the three-county area.

These people are, then, deep-rooted in the community in which they live. Their ties with friends and neighbors are of long standing. If the innovators are influential and opinion leaders for a given location, it would be that much easier for marketing management to utilize them for product

testing and panels. The concept of influence by these consumer innovators is discussed in the next chapter, but it is well to note at this point that they are stable components of the community, which in itself would have some bearing on opinion domination.

TABLE 44

TIME LIVED IN PREVIOUS AREA

Length of Time in Another Area	% Responding
Less than 1 yr.	-
1 to 2 yrs.	1.8
2 to 3 yrs.	4.6
3 to 4 yrs.	3.7
4 to 5 yrs.	6.4
Longer than 5 yrs.	37.6
Never	45.9

Job Mobility

Again, influenced by other research findings, it was hypothesized that the innovators have been employed by their employers three years or less. However, job mobility questions produced a result similar to those inquiring into geographic mobility. In regard to the length of time on the current job, the information in Table 45 was elicited. Over 50% of the respondents have held their current jobs longer than five years.

When asked how long the respondent worked for his present employer, the information in Table 46 was obtained.

TABLE 45

TIME ON CURRENT JOB

Length of Time on Current Job in Company	% Responding
Less than 1 yr.	3.7
1 to 2 yrs.	6.4
2 to 3 yrs.	3.7
3 to 4 yrs.	3.7
4 to 5 yrs.	6.4
Longer than 5 yrs.	51.4
Retired	7.3
Unemployed	.9
Self-employed	16.5

TABLE 46

TIME EMPLOYED BY FIRM

Length of Time Employed by Firm	% Responding
Less than 1 yr.	.9
1 to 2 yrs.	4.6
2 to 3 yrs.	1.8
3 to 4 yrs.	.9
4 to 5 yrs.	3.7
Longer than 5 yrs.	63.3
Retired	7.3
Unemployed	.9
Self-employed	16.5

Again, the respondents show stability. Over 63% have worked for the same firm longer than five years.

Turning to the length of time worked for the previous employer, the following information was elicited.

TABLE 47

TIME EMPLOYED BY PREVIOUS EMPLOYER

Length of Time Employed by Previous Employer	% Responding
First job - no previous employer	17.4
Less than 1 yr.	6.4
1 to 2 yrs.	7.3
2 to 3 yrs.	11.9
3 to 4 yrs.	7.3
4 to 5 yrs.	13.8
Longer than 5 yrs.	21.1
Unemployed	.9
Self-employed	11.0
Don't know	2.8

It can only be concluded that the innovator is not mobile. He is frequently a permanent resident of the community with strong neighborhood ties. He is a stable employee, remaining with his employer, often in the same position, over long periods of time. When he has a history of changing jobs or moving to another area, it usually has been after a sizable period of employment or residency.

Venturesomeness

Gregariousness

One measure of gregariousness which is obtained is the membership in various types of organizations. Research in farm products previously discussed found that the acceptors of newness were joiners.

A similar conclusion is reached for the innovators of

consumer products. When asked the types of organizations to which they belonged, only 17.4% replied they did not belong to any organization. The data from the answers elicited follow.

TABLE 48

MEMBERSHIP IN ORGANIZATIONS

Type of Organization	% Belonging
Civic	56.9
Religious	52.8
Social	45.0
Professional	31.2
None	17.4

Over half of the respondents belong to two types of organizations. This does not consider the number of organizations in which they hold membership within each type. The innovators of products are "belongers." The majority of these people are socially oriented. Their opinions concerning new products can be most important. They have an opportunity to act as informants to different audiences.

Vacation Habits

Another indication of the values held by innovators concerns the scope of their outlook. Are they venturesome in aspects other than trying new products or do they adhere to convention? Are they "locally" centered or do they travel widely? This question is particularly pertinent since this study investigates appliances in the home, and

there is a possibility that these people are "home-oriented."

In an attempt to determine whether they are home-oriented, a series of four tables relating to vacations are presented. The first table is designed to show if the groups are different in relation to taking a vacation and in the duration of the vacation, stated as a percentage of those taking a vacation. The second table tells whether or not they were away from home overnight. These percentages are based on those taking a vacation. The third table shows the mode of travel utilized. These figures may add to over 100% as some vacationers used more than one method of transportation. The fourth table in the series shows the distance traveled as a percentage of those who travel.

Adopter Categories

There is a significant difference in the adopter categories in relation to taking a vacation. This can be seen in Table 49. A higher percentage of innovators take a vacation than do the early adopters and the population. In addition, the table shows that of those who take a vacation, the length of vacation time is significantly different. The innovators take longer vacations than do the contrast groups. However, the population takes slightly longer vacations than do the early adopters.

Table 49A shows that there is a difference in the number of days away overnight. The innovator tends to be away overnight more than the contrast groups. The early

TABLE 49

VACATION HABITS BY ADOPTER CATEGORIES
(as a percentage of owners within a type)

Adopter Categories	Had a Vacation	Length of Vacation				
		1 Week	2 Weeks	3 Weeks	4 Weeks	5 or more weeks
Innovator[a]	72.2	10.2	40.1	30.7	11.8	5.7
Early Adopter[b]	70.4	12.4	45.8	29.0	8.0	4.1
Sample Total[c]	59.2	13.2	42.9	29.2	8.7	4.8
X^2 = 118.22 Significant at all levels		X^2 = 19.88 Significant at 95% level				

[a]Length of Vacation Not Stated: 1.5%

[b]Length of Vacation Not Stated: .7%

[c]Length of Vacation Not Stated: 1.1%

TABLE 49A

VACATION HABITS (CONTINUED) BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Days Away Overnight (as a percentage of those taking a vacation)			
	None	1-7	8-14	15 or more
Innovators	24.3	23.8	30.2	21.6
Early Adopters	27.8	23.2	33.9	15.1
Sample Total	36.4	22.3	26.0	15.2

$X^2 = 83.53$ Significant at all levels

adopter category shows a peaking in the 8-14 days duration for time spent away from home overnight.

The mode of travel by the three groups is also significantly different. Innovators who do more traveling than either of the other groups use the automobile, train and plane more than would be expected. The early adopter travels more than does the population, using the airplane more than would be expected.

Table 49C shows the actual distance traveled by the three groups is not significantly different. While the innovator takes a vacation in higher frequency, is away from home more often, and uses different modes of transportation than do the contrast groups, the actual distance traveled is not significantly different.

Innovators

Innovators do not constitute a homogeneous group with regard to whether or not they take a vacation. More dishwasher owners take a vacation than the other product owners. Air conditioner owners are the next highest frequency, followed by stereo owners. However, of those reporting the length of vacation, there is no significant difference in the length of time spent on vacation.

The days spent away from home overnight does show a significant difference for the innovators as seen in Table 50A. The major contributing factor to this difference is the dishwasher owner group. When they are removed from

TABLE 49B

VACATION HABITS (CONTINUED) BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Mode of Travel (as a percentage of those taking a vacation)[a]						
	No Travel	Car	Train	Bus	Plane	Boat	Ship
Innovators	15.6	74.4	4.7	1.2	7.2	.4	.4
Early Adopters	19.7	70.9	2.7	.2	6.1	.3	.1
Sample Total	21.9	70.8	3.0	1.3	4.8	.6	.2

$X^2 = 40.17$ Significant at all levels

TABLE 49C

VACATION HABITS (CONTINUED) BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Total Miles Traveled (as a percentage of those who traveled)				
	Less than 100	100-599	600-999	1000-2999	3000 and further
Innovators	4.4	25.3	14.3	33.3	22.7
Early Adopters	3.1	26.9	17.2	34.6	18.2
Sample Total	3.6	26.5	17.9	34.3	17.7

χ^2 = 12.58 Not Significant at all levels

TABLE 50

VACATION HABITS OF INNOVATORS
(as a percentage of owners of a product)

Innovators	Had a Vacation	Length of Vacation				
		1 Week	2 Weeks	3 Weeks	4 Weeks	5 or more Weeks
Color TV	63.8	20.0	30.0	26.7	16.7	6.7
Stereo[a]	69.1	9.9	41.8	27.8	14.0	4.4
Dishwasher[b]	81.6	10.0	35.1	34.6	11.2	7.8
Air Conditioner[c]	74.6	10.2	41.4	29.1	11.5	6.1
X^2 = 17.01 Significant at all levels		X^2 = 11.92 Not Significant at all levels				
Sample Total[d]	59.2	13.2	42.9	29.2	8.7	4.8

TABLE 50A

VACATION HABITS (CONTINUED) OF INNOVATORS
(as a percentage of owners of a product)

Innovators	Days Away Overnight (as a percentage of those taking a vacation)			
	None	7 or less	8-14	15 and more
Color TV	21.2	36.4	21.2	21.2
Stereo	27.0	22.0	32.5	18.5
Dishwasher	13.0	19.9	33.8	33.3
Air Conditioner	25.2	27.4	29.6	17.8
$X^2 = 38.68$ Significant at all levels				
Sample Total	36.4	22.3	26.0	15.2

the table, the chi-square value drops to 5.92, which is not significant at the 90% level. Thus, the other three product owners are not significantly different from each other in regard to number of days away from home overnight.

The mode of travel is also significantly different. Color TV owners use the bus more than any other group. They also use the airplane in over representative amounts compared to the population which uses the airplane. Dishwasher owners use the airplane more than any other product owners.

The distance traveled by innovators is significantly different as shown in Table 50C. There is no one product causing this distribution to be significant. When dishwasher owners are removed from the analysis, the chi-square value drops to 28.13, which is still significant at all levels. When color TV owners are removed, the chi-square value is 46.99, which is also significant. More dishwasher owners travel less than 100 miles than any other product owners; conversely, more dishwasher owners travel 3,000 miles or farther than any other product owners.

There is no distinguishable pattern for any of the product owners.

Types

Strategic innovators are significantly different from the functional innovators in respect to taking vacations, as shown in Table 51. Functional innovators take more vacations than strategic innovators. The length of vacation

TABLE 50B

VACATION HABITS (CONTINUED) OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Mode of Travel (as a percentage of those taking a vacation)[a]						
	No Travel	Car	Train	Bus	Plane	Boat	Ship
Color TV	13.3	80.0	-	10.0	13.3	-	-
Stereo	16.1	75.4	6.9	-	4.6	-	-
Dishwasher	12.6	72.6	4.3	.9	14.3	.4	.4
Air Conditioner	15.3	72.7	.8	1.7	11.2	.8	-
$X^2 = 55.92$ Significant at all levels							
Sample Total	21.9	70.8	3.0	1.3	4.8	.6	.2

TABLE 50C

VACATION HABITS (CONTINUED) OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Total Miles Traveled (as a percentage of owners of a product)				
	Less than 100	100-599	600-999	1000-2999	3000 and further
Color TV	7.7	30.8	11.5	42.3	7.7
Stereo	1.5	23.5	22.4	32.5	20.1
Dishwasher	8.1	22.8	8.6	28.9	31.5
Air Conditioner	4.0	32.8	7.6	32.3	23.2

X^2 = 51.79 Significant at all levels

TABLE 51

VACATION HABITS BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Had a Vacation	Length of Vacation				
		1 Week	2 Weeks	3 Weeks	4 Weeks	5 or more Weeks
Strategic Innovators[a]	68.4	11.0	40.6	27.9	13.8	4.7
Functional Innovators[b]	77.6	10.1	39.8	31.8	11.0	6.2
X^2 = 11.73 Significant at all levels		X^2 = 3.29 Not Significant at all levels				

TABLE 51 CONTINUED

Products Classified by Type	Had a Vacation	Length of Vacation				
		1 Week	2 Weeks	3 Weeks	4 Weeks	5 or more Weeks
Strategic Early Adopters[c]	72.1	14.1	44.9	23.9	9.4	6.0
Functional Early Adopters[d]	70.7	11.9	46.6	29.1	8.0	3.6
X^2 = .47 Not Significant at all levels		X^2 = 9.89 Significant at 95% level				
X^2 = 13.44 Significant at 99% level		X^2 = 30.51 Significant at 99% level				
Sample Total[e]	59.2	13.2	42.9	29.2	8.7	4.8

time, however, does not differ.

The opposite is true of the early adopters. There is no difference, statistically, in the number taking vacations, but there is in regard to the length of the vacations. However, no pattern evolves. That is, while more strategic early adopters take longer vacations than functional early adopters, more strategics also take shorter vacations than do the functionals.

No significant differences can be discerned between types for either innovators or early adopters for days away overnight.

The mode of travel for strategic innovators is different than for functional innovators. More functionals travel and use the airplane as a mode of transportation than do the strategic innovators.

There is no discernible difference between the early adopter types regarding their methods of travel.

Functional innovators show a different traveling pattern than do strategic innovators. The functionals are widely divided, either traveling only short distances or traveling extensively, whereas the strategics tend to make medium to long trips, with fewer going a short distance.

A slight difference can be found between the types of early adopters. More strategic early adopters travel less than a hundred miles from home; more also travel 3,000 miles or over for vacations than do the functionals.

TABLE 51A

VACATION HABITS (CONTINUED) BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Days Away Overnight (as a percentage of those taking a vacation)			
	None	1-7	8-14	15 or more
Strategic Innovators	27.2	22.9	30.7	19.2
Functional Innovators	20.7	24.6	30.7	24.0

X^2 = 6.27 Not Significant at all levels

Strategic Early Adopters	32.7	20.4	30.9	16.0
Functional Early Adopters	27.8	23.2	33.9	15.0

X^2 = 5.37 Not Significant at all levels

X^2 = 33.69 Significant at all levels

TABLE 51B

VACATION HABITS (CONTINUED) BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Mode of Travel (as a percentage of those taking a vacation)[a]						
	No Travel	Car	Train	Bus	Plane	Boat	Ship
Strategic Innovators	16.3	75.1	6.3	.9	5.4	.3	.6
Functional Innovators	14.7	73.5	2.8	1.4	10.8	.5	.2
X^2 = 13.79 Significant at 95% level							
Strategic Early Adopters	20.5	70.5	2.8	.7	6.8	.2	-
Functional Early Adopters	20.1	70.6	2.5	.2	6.2	.3	.1
X^2 = 3.70 Not Significant at all levels							

X^2 = 44.37 Significant at all levels

TABLE 51C

VACATION HABITS (CONTINUED) BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Total Miles Traveled (as a percentage of those who traveled)				
	Less than 100	100-599	600-999	1000-2999	3000 and further
Strategic Innovators	1.4	22.9	22.2	33.1	20.4
Functional Innovators	6.6	28.3	8.6	31.8	24.7
X^2 = 33.31 Significant at all levels					
Strategic Early Adopters	6.3	21.8	16.0	35.0	20.8
Functional Early Adopters	3.2	27.4	17.0	34.5	17.8
X^2 = 10.21 Significant at 95% level					

X^2 = 47.85 Significant at all levels

Recreation

When reinterviewing the innovators, an open end question was asked regarding the types of recreational activities participated in as a family. For the classification system used, see Appendix D-3. The results of the interviews are as follows.

TABLE 52

RECREATIONAL ACTIVITIES

Type of Activity	% of Mentions
Participating Sports	52.0
Spectator Sports	5.1
Hobbies	2.1
Family Outings	14.2
Cultural Activities	14.2
Partying	3.6
Games	5.1
Others	3.6

The findings portray the innovators as active people. Rather than sit on the sidelines, these people are "doers." They engage primarily in activities where there are groups of people involved rather than in individual participation. Many of the popular activities would be conducive for meeting and talking with other people, both within the family and outside it. Their recreational preferences depict the innovators as outgoing people.

The Meaning For Marketing Management

The usefulness of the type of information elicited in

regard to positive marketing action is much more subtle than was the delineation of the market in terms of socio-economic variables. The previous chapter was concerned with variables which are of a much more general nature. Once it was established that the innovators were different in the broad variables, this chapter turned to narrower distinctions in regard to the orientation of these people.

If it can be established that these innovators are influential in terms of disseminating information, if they are the opinion leaders of social groups, then the information gleaned from this chapter gives a better indication of the type of person who performs this function. The innovators logically should be consulted on new product ideas, consumer panels and the like. Because of their lack of mobility and their cosmopolitan orientation, it would be feasible to enlist their assistance for these projects.

It remains to be seen, however, just what role these people play in regard to influence. If they are not leaders within their informal social groups, they perform no specific role which would be of value for marketing management. Part of the task of the next chapter is to determine the role of the innovators in this reference.

CHAPTER VI

MARKETING BEHAVIOR AND INFLUENCES OF CONSUMER INNOVATORS

Introduction

This chapter examines the behavior of consumer innovators in two respects. The first relates to the actual selection of the innovations and the influences which appear to have importance to the consumer. The second aspect considers the role of consumer innovators and their contribution in disseminating information to their friends and neighbors. The findings which are reported in this chapter, unless otherwise indicated, are the results of the reinterviewing of 109 respondents.

The Buying Of Innovations

Sources of Information

One of the primary stages of the acceptance of newness concerns the awareness of the innovations available. The determination of the media which is most effective to the consumer, as he remembers it, has meaning to marketing. With vast expenditures on advertising, and so little known about its effectiveness, the answer to this question should cause marketing managers to appraise their selection of

media with a new perspective.

The innovators were confronted with the question, "Where did you first hear about the product(s) you own?" Data from the responses is shown in Table 53.

TABLE 53

SOURCES OF ORIGINAL INFORMATION ABOUT INNOVATIONS

Sources	% Mentioned*
Friends	38.5
In Store	11.0
TV	4.6
Newspaper	4.6
Magazines	3.7
Radio	.9
Other	45.9
Don't Know	20.2

*Total does not add to 100% as some respondents mentioned more than one.

Several conclusions can be drawn from the information in the table above. First, over 20% of the sample did not remember, thus no particular source had any lasting influence. Second, the classification "Other" was extremely high. This occurred most frequently with dishwasher owners where the home builder explained the product and made the suggestion. The other major influences under the category of "Other" were dealers who were personal friends and had suggested the products. Some respondents heard about the products in the course of business and did not consider the

source to be a friend.

The most outstanding fact shown in the table is the importance of impersonal communications in relation to the formal media listed. This finding runs contrary to the results of farm research.[1] The sociologists found that mass media was most effective in the awareness stage.

It is interesting to note that store displays, point of sale merchandising, outranks the four major media, which are of relatively low size. Three of these, TV, newspapers and magazines, are very evenly distributed in their frequency.

Consulting

When the innovators are considering purchasing the innovations, to whom do they turn for information and advice? If they are among the first to buy, they can hardly use their friends and neighbors for advice. The answer to this question is that the majority do not consult outside the family. 75.2% of the respondents reported that they consulted no one outside the family when making the purchase of the innovistic products. Thus, while they frequently hear about innovations from informal sources, they evaluate the products themselves.

While it was asserted that 75.2% did not consult anyone outside the family, this does not imply that the decision to buy is not evaluated. A question which appeared in a later section asked if they consulted for major purchases; 53.2%

---

[1] See page 42.

indicated they did so.

Of those who did consult, the major information source is publications and organizations set up for providing consumer information. Over 74% of those consulting used such sources as Consumers Report, Consumers Guide, Changing Times and the Better Business Bureau.

The table below shows the sources utilized as a percentage of those consulting. Appendix D-3 gives the classification system used.

TABLE 54

CONSULTING SOURCES

Source	% of Those Consulting
Consumer Publications & Organizations	74.1
Friends & Relatives	56.8
Media	22.4
Salesmen & Dealers	6.8
Technical	6.8
Other	13.8

Media Exposure

It was indicated previously that the formal media did not seem to make an impression on the innovators as a source of awareness. From the above table it can be seen that the use of media for a consulting source is not as great as might be expected. The task is now to determine if these people get much exposure to mass media. Two media were examined in the reinterviewing performed.

Television

The hypothesis was made that the majority of innovators watch television six or less hours a week. The reason for this hypothesis was that it was felt that these people, the innovators, would be extremely busy people. Attending meetings of social and civic organizations and pursuing their other interests, they would have little time for a wide exposure to television.

This hypothesis is false. In the table below, the answers to the question, "On the average, how many hours a week do you watch television?" are recorded.

TABLE 55

HOURS A WEEK VIEWING TELEVISION

No. of Hours	% Responding
Less than 6	19.3
6 but less than 11	12.8
11 but less than 16	11.9
16 but less than 21	6.4
21 but less than 26	14.7
26 or more	34.9

Thus, on the average almost 50% of the innovators get at least three hours of exposure to television per day. The exposure is there. It remains for marketing management to do a more effective job.

Magazines

The second medium examined is magazines. The

hypothesis was made that 51% or over of the innovators would have four or more magazines in the home, thus providing good exposure. This hypothesis is valid. The 109 homes interviewed had 659 magazines; this is slightly over six per household.

An indication of the type of magazine literature and the relative frequency can be seen in Table 56. The classification scheme used is found in Appendix D-3.

TABLE 56

MAGAZINES IN THE INNOVISTIC HOUSEHOLD

Type of Magazine	% Obtaining n=659
Home & Gardening	33.3
General Magazines	31.6
News & Business	7.1
Sports & Men's	4.7
Hobby	3.8
Fashion	3.2
Fiction	2.4
Buying Guides	2.0
Literary	1.7
Other	10.2

Again, marketers have knowledge concerning the type of media which gets into the innovistic homes.

<u>Shopping for Innovations</u>

Household appliances are normally considered shopping goods. That is, the potential customer travels from store to store before purchasing to compare product features and

prices between the various makes. Do innovators shop or do they decide on the product prior to going to make the actual purchase from the particular store chosen? Previously, it was hypothesized that people went to only one store before purchasing.

Table 57 shows the number of stores visited before purchasing.[2]

TABLE 57

NUMBER OF STORES VISITED

No. of Stores	% Response*
0	20.2
1	56.0
2	10.1
3	10.4
4	15.6
5	3.7
More than 5	11.0

*Total adds to more than 100% due to some respondents owning more than one product, and they may have visited a different number of stores for each product.

Over 20% of the innovistic products were purchased from other than the normal source, the retail store; and these purchasers did not shop in any store. This raises some questions regarding the selection of channels for innovistic

[2]0 means the product was not purchased at a store. One is interpreted to mean that customer went to one store and purchased. Two refers to visiting two and buying in one of those two, similarly with the rest.

products. One authority has questioned whether or not the same type of retail outlet should be used for innovistic products and another after the products have been accepted.[3] He argues that the functions performed may differ radically; that the innovations need a retail outlet that will sell, while after being accepted, the role of the retailer is to provide selection.[4]

The above table clearly shows that the purchasers of these innovistic products are not shoppers. 56% of the products were purchased by looking in one store and buying the products. This would indicate one of three things: the consumer knows what he wants before looking, the retailer is doing an outstanding job of selling, or the retail outlets handling the innovations are very few in a given area. The only valid conclusion that can be drawn here is that the consumer innovators do not shop in different stores to select the innovations.

The Use of Credit

It has been hypothesized that the purchasers of innovations would use credit. The hypothesis is not valid, however. Over 81% of the purchases were made on a cash basis. This is indeed surprising when considering the

---

[3]Perry Bliss, "Preretailing and Consumer Buying Patterns Over Time," Explorations in Retailing, S. C. Hollander, Ed. (East Lansing, Michigan: Bureau of Business and Economic Research, 1959), pp. 271-73.

[4]Ibid.

substantial retail prices of the products being examined.

Innovators As Influentials

This section is concerned with the personal influences exerted by consumer innovators in their roles as opinion leaders and disseminators of information to their friends and neighbors. Previously it was shown that the research evidence to date on this subject was not conclusive. Some research findings have indicated they are watched but not followed.

In an attempt to discover the role which the innovator plays as an influential, a series of questions was asked. The first query was whether anyone who might be interested in buying any of the innovistic products had asked to see the ones owned. The answers to this question were that 49.5% did show the products to people but 49.5% did not, with 1% not remembering. There cannot be a definite conclusion with exactly the same proportions given for yes and no. The hypothesis that the majority exhibited the products is therefore false.

However, when the respondents were asked whether or not their opinions were solicited by potential buyers, 65.1% responded that they had been. 31.2% said they had not been asked, and 3.7% didn't know. Although slightly less than 50% exhibited the products, about 65% were asked for their opinions.

In attempting to determine the role of the innovator,

it is even more crucial to know whether any of the people who were seeking opinions or asked to see the products followed up by purchasing one of the innovations. Of those respondents who said they either were asked or demonstrated (75 respondents), 64% asserted that those people did purchase, 28% reported they did not purchase and 8% did not know whether the people purchased or not.

Clearly, from the information given above, innovators do play a role in disseminating information concerning new products, and the friends and nieghbors who inquire about them follow up with purchases. This conclusion has meaning for marketing managers with regard to product planning and consumer panels.

It is desirable to be assured that the respondents are a type of innovative leader among their friends and neighbors rather than belonging to a unique group. This is feasible by determining if their friends and neighbors own the same products and if they were purchased before or after the respondents' purchases. It is possible that the respondents belong to social groups of which the members of the groups all own innovistic products. If this is true, then the respondents might not be influential among the groups, but rather followers. Emulation could then be a major factor in purchasing innovistic goods. The results of the reinterviewing indicate that the respondents do not belong to such unique social groupings where they might be followers rather than leaders.

When asked what proportion of their friends they would estimate have the innovistic products, they replied as shown in Table 58.

TABLE 58

FRIENDS OWNING INNOVISTIC PRODUCTS

# of Friends Owning Innovistic Products	% Responding*
All	5.5
Most	22.0
Half	22.9
Few	61.5
None	9.2
Don't Know	6.4

*Total adds to greater than 100% due to owners of more than one product with different numbers of friends owning.

The innovators are unique, in the innovations owned, among their friends. Clearly they set the pace for their own social group. More proof of this is given in the next table which shows, on the average, whether friends purchased innovistic products before or after the respondents.

Twice as many owners of the innovistic products bought before their friends. Again, it is established that the respondents are the leaders in their informal social groups.

For marketing people the implications are clear. Innovators are the people who would be valuable for trying out new ideas and concepts in the product planning stage. Test

marketing should utilize these people for determining their acceptance and rejection.

TABLE 59

COMPARISON OF TIME OF PURCHASE:
FRIENDS AND INNOVATORS

Time of Purchase of Friend	% Responding*
Before the Innovator	22.9
At the Same Time as Innovator	14.7
After the Innovator	45.9
Some Before, Some After the Innovator	21.1
No Friends Own	9.2
Don't Know	12.8

*Multiple product owners having different responses cause total to exceed 100%.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The previous chapters gave a detailed and segregated analysis of the data relating to different kinds of variables. The summary presented here pulls together the findings and examines them as a whole for the meaning they have for positive marketing action.

The Consumer Innovator

Innovators constitute a unique marketing segment. It is desirable, therefore, to assemble a profile for these people. The comparisons of the innovators with the two contrast groups in terms of socio-economic variables were previously shown in Table 5. To show how they differ, a compendium is presented in Table 60. This table shows only the characteristics for the innovators and the early adopters. The population or mass market characteristics constitute the basis from which the value of the variables, high, low or dispersed, are determined.

The market for innovations has been delineated still further. It has been determined that the owners of innovistic products are not homogeneous in their characteristics. The strategic innovators, those who accept minor product alterations, were found to be different than the functional

innovators, those accepting more complex changes. Table 61 shows how these groups differ.

TABLE 60

COMPARISON OF PROFILES: INNOVATORS AND EARLY ADOPTERS

Variable	Innovators	Early Adopters
Age		
Head	Young	Youngest
Spouse	Young	Youngest
Occupation		
Head	Highly concentrated in Professional and Managerial group	Not as highly concentrated in a specific group
Spouse	Little concentration	Little concentration
Education		
Head	Very highly educated	Highly educated
Spouse	Highly educated	Average
Family Income	Highest	High
Ethnic Group	Jewish, French, Other Europeans	British, German, Italian
Home Characteristics		
Ownership	High ownership	Highest ownership
Structure	Single and multi-units	Highest single unit
Home Value	Very high value	High value
Rent	High rent	High rent
Number in Family	Dispersed	Dispersed

TABLE 61

COMPARISON OF PROFILES: STRATEGIC AND FUNCTIONAL INNOVATORS

Variable	Strategic Innovators	Functional Innovators
Age		
Head	Very young	Young
Spouse	Very young	Young
Occupation		
Head	Dispersed between Professional-Managerial and Craftsmen-Foremen	Highly concentrated in Professional-Managerial
Spouse	No difference	No difference
Education		
Head	Above average education	Very highly educated
Spouse	Above average education	Very highly educated
Family Income	High income	Very high income
Ethnic Group	Negro, French, Italian	Jewish, German, British
Home Characteristics		
Ownership	Slightly higher than average	Very high
Structure	Highly concentrated in single units	More highly concentrated in single units
Home Value	High value	Extremely high value
Rent	High rent	Very high rent
Number in Family	Dispersed	Dispersed

When pinpointing the market for an innovistic product, the elemental step is to determine if the new product incorporates a simple change or a complex change. One can then determine the type of people who are likely to constitute the early market.

Innovators are a gregarious people. It has been determined through the study that they are joiners, belonging to varied organizations and having a cosmopolitan outlook. Yet, they are stable components of their communities and employment fields, being firmly established in their locations both geographically and vocationally.

Although they are widely exposed to mass media, innovators do not recognize it as a source of information for new products. Informal sources of communication are the most effective sources for information, according to the innovators.

It was established through the study that the innovators actually serve as a source of information for the innovations. They disseminate their knowledge of the new product in two ways. Their opinions of the new product are frequently solicited by acquaintances, friends and neighbors. The innovators also oblige when asked to demonstrate the new product. Many of these inquiring friends, etc., follow up by purchasing the products for themselves.

Implications For Marketing Management

The consumer is the focal point for marketing endeavor.

It follows from this market axiom that the better you know the consumer in the market, the better job you can do in serving that market. Profitably serving the market is one of the primary tasks of marketing management. The task can be performed properly only by keeping the resources of the firm in a constant state of adjustment with the market. To get the proper state of adjustment, market managers must be aware of market opportunities.

Business firms are not unaware of a market for innovation. In America, acceptance of newness is a way of life and is firmly established in many segments of the economy. Much of business endeavor is focused on attempting to serve the market for newness. Innovations have become a major weapon in the competitive arena in which firms vie for the consumers' dollars.

There is some indication, however, that the firms have not accurately interpreted the market for newness. The prima facie evidence for this assertion is the number of times the consumers exercise their veto power in regard to the product innovations offered. It would appear that business has not accepted a "market orientation." That is, it has not attempted to use the market as a focal point in planning marketing strategies and tactics from information gleaned in the market place. This does not imply that there would be no marketing risk involved if the market opportunity were appraised correctly. Marketing risk is inherent in any marketing endeavor. It does mean that a correct

appraisal of marketing opportunity may reduce the risk.

This research has used the "marketing orientation" philosophy. It has gathered information concerning the acceptors of newness from the original source: the acceptors themselves. It remains to be determined what adjustments of the marketing mix might be made to best serve this marketing opportunity.

The Marketing Mix

The potential marketing target has been defined in terms of socio-economic variables. It has been ascertained that the innovators who accept strategic innovations differ from those who accept more complex change, the functionals. Thus, the alterations of the marketing mix are dependent upon the type of innovation the firm is introducing. The innovators do not constitute a homogeneous market.

Goods and Service Mix

"The goods and service mix is concerned with all the ingredients which comprise the bundle of utilities that customers purchase. This includes such items as the product per se, the branding, labeling, warranties, and services accompanying the product."[1]

This mix is one which can utilize the type information obtained in this study. One example of how this is valuable

---

[1]William Lazer and E. J. Kelley (Eds.), Managerial Marketing: Perspective and Viewpoints, Revised Edition (Homewood, Illinois: Richard D. Irwin, 1962), p. 413.

is in the area of product development. The consumers who are the first to accept newness could provide information in two ways. First, they could serve as a source for new ideas for products. What better source of new product ideas could be obtained than from the people most likely to purchase the new offering? Recalling that they are influentials in their social circles, they have the opportunity to sell the concept or idea before the potential product is introduced. Second, these people could be advantageously used in product testing. New ideas and concepts which have been found to be feasible from a production viewpoint should be tested for consumer reaction. Since it has been determined that there is a unique market which first accepts newness, the most logical testing would be this potential market. After a record of the reactions of the innovators has been accumulated, it is possible that forecasting the rate of acceptance of strategic and functional innovations could be achieved. For example, if over time a record was kept of the opinions of the innovators, it might be that differing positive and negative responses could be scaled to the success and failure of products. Then by the reaction to the test marketing of an innovation, the rate of acceptance of the product could be forecasted.

Distribution Mix

The second sub-mix is the distribution mix. There are two major components of this mix: channels of distribution

and physical distribution. The former includes all the middlemen and facilitating agencies involved in getting goods and the title to goods to consumers. Physical distribution encompasses transportation, warehousing, storing and handling goods.[2]

The results of this research indicate there may be some adjustments of this sub-mix when considering innovations. Over 20% of the innovations were purchased outside the retail establishment which is considered the normal retail outlet. It was also found that the majority did not shop the retail outlets, but rather went to a specific store and purchased the innovistic product.

The marketing managers might utilize this information by scrutinizing the type of distribution policy used by the firm. Selective distribution may well be more effective than mass distribution for innovations. It is also feasible that channels other than the normal ones could be more effectively utilized. The marketing of innovations may well require a different type of selling than established merchandise. Some types of retail outlets are more prone to offer different methods of selling than others. This area needs further research before any conclusions can be made. There is, however, sufficient doubt to warrant the marketing manager's concern about the current adjustment of the distribution mix regarding product innovations.

---

[2] Ibid.

Communications Mix

"The communications mix is concerned with all the persuasive and informational ingredients that are employed in communicating with the market place. Included are personal selling, advertising, sales promotion, merchandising, and special sales aids."[3]

This mix provides many alternative strategical and tactical maneuvers for the marketing manager. It is in this area that much of the information gleaned from the study can be used. Two ingredients of this mix are given consideration, advertising and personal selling.

Advertising.--This study has shown that mass media advertising is not recognized as a source of information concerning innovations. The informal sources of information are much more recognized by innovators. It has also been established that the exposure to formal media is quite broad.

Two conclusions can be found from this information. First, advertising is doing an effective job and the innovators do not recognize it; or, second, advertising is not doing its job in introducing product innovations. Marketing management should be aware of this dilemma and determine which conclusion is correct.

The information provided by the study of the socio-economic characteristics gives an indication of the types of

---

[3] Ibid.

media which would be utilized for selling newness. The types of magazines which are found in innovistic homes are designated.

The educational level of innovators was found to be quite high. The more complex the innovation, the higher the education of acceptors. There was also an indication that the innovators consult literature concerning the innovistic products and determine for themselves if they want the products. This would indicate that the level of advertising copy should be geared to meet this educational level rather than a mass market type copy. Effort should be expended to give them rational data which is of benefit in assessing the value of the product. The copy should be detailed, since many of the innovators appear to be pre-sold. The research evidence indicates the innovators do not shop and compare.

Personal Selling.--The innovator appears to be the effective sales representative. It has been determined that innovators act as influentials within their circle of friends. They act as demonstrators and opinion leaders. Therefore, the goodwill of the innovators is of importance.

The innovators could provide a source of potential customers. Innovators know other people who might be interested in the innovistic products. The sales to these people should be followed up. It is important that they have a favorable attitude toward the product. Perhaps the most effective salesman for innovations is a missionary salesman, who essentially attempts to obtain the goodwill of the

innovators.

Pricing

For some products, the pricing decisions depend upon the marketing mix selected. For other products, the price is set and the marketing mix is specified within the limitations of the price. Pricing and the marketing mix are mutually dependent, and no discussion about marketing alternatives is complete without consideration of the various alternatives available for pricing decisions.

Pricing has traditionally been considered a function of cost rather than demand. The market orientation, however, requires that demand is of prime importance when considering pricing decisions.

"New Product pricing is important in two ways: it affects the amount of the product that will be sold; and it determines the amount of revenue that will be received for a given quantity of sales."[4]

Two pricing strategies are possible when pricing a new product: "skimming" pricing and "penetration" pricing.[5] The skimming policy is one of using high prices when introducing the innovistic products. It has the advantage of offsetting high costs of introduction and yielding a rapid payback. After the product has been on the market for a

---

[4]Joel Dean, "Pricing a New Product," reprinted in Lazer and Kelley, Managerial Marketing . . . . , p. 464.

[5]Ibid., p. 465.

given length of time, the price is dropped before penetrating the market. This method of pricing assumes that there is a core of the market which is interested in the product and price is not a deterrent factor in purchasing the product.

The penetration policy is using a lower price in an attempt to get wide distribution more quickly. In this case there is the assumption that there is not a core of the market who will pay a higher price for the innovistic offering.

This research has delineated a market for newness. Both the strategic and the functional innovators were shown to have high family incomes. Given this information, it would appear that a skimming pricing policy has some validity for the household appliance industry.

Summary

This section has briefly reviewed some of the more salient applications of the research for positive marketing action. This has been done by showing some of the adjustments which can be made in the marketing mix when the marketing endeavor is aimed at acceptance of innovation.

The precise alteration of the marketing mix is left to the marketing managers. Their creative skills are required in the task of obtaining proper balance in the mix. It is left for the practitioners to incorporate information obtained from the study to gain a "differential advantage."

APPENDICES

APPENDIX A

DEFINITIONS AND TERMINOLOGY

Adopter Categories

This term refers to the segmentation of the market into distinct groups. The rural sociologists utilize five segments. This study defines three: the innovators (first 10% of market), the early adopters (10% to 50%) and late adopters (last 50% of the market). Only the first two classifications are analyzed.

A third classification referred to in the study is the population or the mass market. This is used when ascertaining what constitutes a total market if a mass appeal is used. The characteristics are inferred from a sample.

Adoption Process

The steps taken by innovators from their awareness of a new idea or product until they have accepted it are termed the adoption process by sociologists. The five steps they have delineated are: awareness, interest, evaluation, trial and adoption.

Adoption Rates

Adoption rates refer to the time span between awareness and acceptance for various individuals. Some people accept

quicker than others; thus, different rates exist for different people.

Contrast Groups

See adopter categories. This study utilizes two contrast groups, early adopters and the total mass market.

Early Adopters

See Adopter Categories.

Innovation

An innovation is the act of implementing a novel idea into a process or product. For an innovation to be successful, the process must be feasible or the product needs to have commercial acceptability.

Innovator--Consumer Innovator

The consumers who are the first to accept product innovations are termed innovators or consumer innovators. This study operationally defines innovators as the people who purchase the product before it has achieved 10% market saturation.

Kind of Product

Products are normally classified into numerous categories for analytical purposes. Often they are classified by industry lines: for example, food products, clothing, etc. The kinds of products this study is concerned with are household appliances.

Market Saturation--Penetration

These terms are used synonymously to refer to the relationship of the number of households which own a product to the number of households within a given market.

Mass Market

See Population.

Population

This term refers to the total market in a geographic area. The characteristics of the population are inferred from a ½% sample of the Detroit Metropolitan Area. Given that a product has 100% saturation of households, the characteristics of the owners would be the same as the population. The terms sample total and mass market are synonymous with population in this study.

Types of Innovation

Three types of innovation have been delineated. The basis for this delineation is the degree of complexity of change involved from the viewpoint of the firm and of the consumer.

Strategic Innovation

This type of innovation is the least complex. It is a product alteration and does not perform a new function for the consumer. Changes in the behavior patterns are not necessary for the consumer.

Functional Innovation

A functional innovation provides a new product to fulfill a previously fulfilled function. It is a new method of doing something previously done. For the firm, new materials and/or processes are required. For the consumer, it breaks with the traditional way and requires new behavioral patterns to be established.

Fundamental Innovation

This type is the most complex, as it requires an original concept or idea. A new function is performed by the fundamental innovation. It is not a substitute; it requires newness for both the firm and the consumer and new investment for the firm, fulfilling a previously unfulfilled or unknown want for the consumer.

APPENDIX B

SUGGESTIONS FOR FURTHER RESEARCH

There are several areas concerning the acceptance of newness which need further research. They fall into two categories: one relates to areas which are dealt with in this study, and the other concerns areas which fall outside the scope of this project.

This research is limited in scope in numerous dimensions. The geographic area and the kind of product studied are two such dimensions. Before generalizations can be made concerning consumer innovators, more products and markets need study. It would, of course, be desirable to duplicate this type of project in other geographic areas.

Two findings of this study yield inconclusive results. First, channels of distribution need further researching in regard to innovations. Second, the role of personal selling for innovistic products should be examined in detail. Personal salesmen are either doing a superb selling job, or the consumers are presold and the traditional emphasis on personal selling is not required.

Not included in this study, but closely related would be an evaluation of the socio-economic variables to determine if any one or several variables are the most important.

It might be, for example, that income is the crucial characteristic and all others are incidental for innovators. The determination of the importance of each variable could be done by multiple correlation analysis.

APPENDIX C

INTERVIEWING DATA

Appendix C contains the data pertaining to the original interviewing conducted in the Detroit Metropolitan Area. The appendix is divided into two subsections.

C-1: The Interview. The questionnaire which was administered to the 5,456 respondents is presented.

C-2: The classification schemes utilized for two of the variables studied, occupations and ethnic groups, are presented.

APPENDIX C-1

MARKET-OPINION RESEARCH COMPANY
327 John R
Detroit 26, Michigan

Job No. 3500 - B1

C.T.: Cols 5-6-7-8 Area: Cols 9-10

Case No.: 1-2-3-4 Call No.: Col 11

SHOPPING HABITS OF DETROITERS

1. About how many times have you shopped at each of the following places for other than drugs, food, hardware, etc. (convenience goods) during the past month?

HAVE SHOPPED		NUMBER OF TIMES
0( )	Birmingham, Woodward & Maple	______
1( )	Dearborn, Michigan & Schaefer	______
2( )	Detroit Downtown	______
3( )	Grand River & Greenfield	______
4( )	7 Mile & Gratiot	______
5( )	Eastland	______
6( )	Northland	______
7( )	Royal Oak, 4th & Main	______
8( )	Wonderland	______
9( )	Outside Retail Trading Area	______
R1( )	Ann Arbor C.B.D.	______
R2( )	Howell C.B.D.	______
R3( )	Monroe C.B.D.	______
R4( )	Mt. Clemens C.B.D.	______
R5( )	Pontiac	______
X( )	None of above	______

OFFICE USE ONLY

	Code	Col.
Daily Paid	______	12
Sunday Paid	______	13
No. In Fam.	______	14
Head Of House		
Age	______	15
Occupation	______	16
Education	______	17
Type Of Dwelling	______	18
Ownership	______	19
Rental	______	20
Income	______	21
Race	______	22 - 23

2. During the past three months have you referred to classified advertising in a Detroit weekday or Sunday newspaper with reference to . . .

R( ) NOT REFERRED TO

1( ) seek employment
2( ) buy or rent a home or other real estate
3( ) buy furniture or other household goods
4( ) buy a car or other vehicle
5( ) buy or rent any other commodity or service

(a) To which newspaper did you refer?

1( ) News

2( ) Free Press

3( ) Other: ____________________
(Specify)

(Continued)

3. Which of the following MAJOR APPLIANCES do you have in this home, what BRAND is each and what FUEL does it use? Tell me also what YEAR each was bought and whether bought NEW or USED, from what type of STORE and how far from home?

	DO NOT HAVE	BRAND	CODE	POWER OR FUEL	YEAR BOUGHT	BOUGHT TYPE OF STORE NEW (Code No.)	USED	DISTRICT (Code No.)	HOW FAR FROM HOME (Full Miles)
Refrigerator	( )			G E O			( )		
Range	( )			G E O			( )		
Dryer-Clothes	( )			G E O			( )		
Water Heater									
Automatic	( )			G E O			( )		
Non-Automatic	( )			G E O			( )		
Incinerator	( )			G E O			( )		
Washer									
Automatic	( )			E O			( )		
Non-Automatic	( )			E O			( )		
Ironer	( )			E O			( )		
Sewing Machine	( )			E O			( )		
Vacuum Cleaner	( )			E O			( )		
Air Conditioner									
Room Cooler	( )			E			( )		
Central System	( )			E			( )		
De-humidifier	( )			E			( )		
Dishwasher	( )			E			( )		
Garbage Disposal	( )			E			( )		
Radio									
AM	( )						( )		
FM	( )						( )		
AM-FM	( )						( )		
Television									
Black & White	( )						( )		
Color	( )						( )		
Record Player									
Hi-Fi	( )						( )		
Stereo	( )						( )		
Combination									
(Describe)	( )						( )		

(Continued)

4. Which of these DAILY newspapers were received or brought into your home yesterday and how? Which of these Daily papers were paid for and which, if any, received free?

DAILY NEWSPAPERS RECEIVED	BY CARRIER PAID	BY CARRIER FREE	BOUGHT & BROUGHT HOME	OTHERWISE FREE
( ) NEWS	1( )	2( )	3( )	X( )
( ) FREE PRESS	4( )	5( )	6( )	R( )
( ) WALL ST. JOURNAL	1( )	2( )	3( )	4( )
( ) NEW YORK TIMES	5( )	6( )	7( )	8( )

5. Which OTHER DAILY newspapers were received or brought into your home yesterday?

0( ) Ann Arbor News
1( ) Lansing State Journal
2( ) Mt. Clemens Monitor Leader
3( ) Polish Daily News
4( ) Pontiac Press
5( ) Royal Oak Tribune
6( ) Toledo Blade
7( ) Toledo Times
8( ) Ypsilanti Press
X( ) Others: ________________ ________________

R( ) NONE

6. Which of these DAILY newspapers were read in this home and which were read outside the home by you and any other members of your family yesterday?

	NEWS HOME	NEWS OUT	FREE PRESS HOME	FREE PRESS OUT	WALL ST. JOURNAL HOME	WALL ST. JOURNAL OUT	NEW YORK TIMES HOME	NEW YORK TIMES OUT
Husband	___	___	___	___	___	___	___	___
Homemaker	___	___	___	___	___	___	___	___
________	___	___	___	___	___	___	___	___
________	___	___	___	___	___	___	___	___
________	___	___	___	___	___	___	___	___

7. Which of these SUNDAY newspapers were received or brought into this home last Sunday and how? Which of these Sunday papers were paid for and which, if any, received free?

SUNDAY NEWSPAPERS RECEIVED	BY CARRIER PAID	BY CARRIER FREE	BOUGHT & BROUGHT HOME	OTHERWISE FREE
( ) NEWS	1( )	2( )	3( )	X( )
( ) FREE PRESS	4( )	5( )	6( )	R( )
( ) NEW YORK TIMES	1( )	2( )	3( )	4( )

8. Which LOCAL or COMMUNITY newspapers, came into your home during the past week?

(DON'T LIST Dailies, Fraternity, Church, Union, etc. papers)

1. ________________ 3. ________________

2. ________________ 4. ________________

( ) NONE

9. Have you received the Detroit Shopping News during the past week? 1( ) YES 2( ) NO

(Continued)

B-3

10. Now, tell me about the automobiles in this family? What make, year model, body type, etc.?

MAKE	YEAR MODEL	BODY TYPE	BOUGHT NEW	BOUGHT USED	RADIO
________	____	____	( )	( )	( )
________	____	____	( )	( )	( )
________	____	____	( )	( )	( )

11. How many weeks VACATION did the head of the house have last year? ________Weeks

(a) About how many days were you (as a family) away from home overnight during vacation? ________Days

(b) How did you travel on this continent and about how far?

1( ) Car ____Miles 4( ) Plane ____Miles
2( ) Train ____Miles 5( ) Boat ____Miles
3( ) Bus ____Miles 6( ) Ship ____Miles

12. Did any member of this family travel abroad last year? 1( ) YES 2( ) NO

13. Has anyone in this family been to the movies during the past month? (Do not include school, church, club, etc. showings) ( ) YES R( ) NO

(a) IF "YES", Where? 1( ) Movie House
2( ) Drive-In Theatre
3( ) Elsewhere

14. About how many times has your family eaten out for DINNER (or main meal) during the past month? ________Number

(a) The last time you were out as a family, about how far was it from home? ________Miles

15. Have you done any REMODELING in this home, such as finishing a basement or attic, a patio, new room, etc. during the past year? 1( )YES 2( )NO

(a) IF "YES", Approximately how much was spent for this remodeling, not including furniture and furnishings? $________

16. During the past month have you consulted newspaper advertising before shopping for any of the following items . . . .

(a) IF "YES", Which newspaper consulted?

YES	NO	ITEM	NEWS	FREE PRESS	SHOPPING NEWS	COMMUNITY PAPER	OTHER
( )	R( )	Paint & Wallpaper	1( )	2( )	3( )	4( )	____
( )	R( )	Furniture	1( )	2( )	3( )	4( )	____
( )	R( )	Rugs & Carpets	1( )	2( )	3( )	4( )	____
( )	R( )	Hardware & Tools	1( )	2( )	3( )	4( )	____
( )	R( )	Housewares	1( )	2( )	3( )	4( )	____
( )	R( )	Tires & Accessories	1( )	2( )	3( )	4( )	____

(Continued)

17. How many persons, including yourself, are living in this home? ______________

18. How many are male and how many are female, and how old is each one? (Circle Husband and Wife)

	MALE	FEMALE	CODE
Under 5 years	___	___	___
5 - 9 years	___	___	___
10 - 12 years	___	___	___
13 - 14 years	___	___	___
15 - 17 years	___	___	___
18 - 19 years	___	___	___
20 - 24 years	___	___	___
25 - 34 years	___	___	___
35 - 44 years	___	___	___
45 - 54 years	___	___	___
55 - 64 years	___	___	___
65 years & older	___	___	___

19. IF TEENAGERS IN FAMILY, About how much a week does each have to spend outside of parental supervision?

AGE			
BOYS	GIRLS	ALLOWANCE	EARNED
___	___	$_______	$_______
___	___	$_______	$_______
___	___	$_______	$_______

20. How many occupied dwelling units in this building? ___________ No.

21. Do you own or rent this home? 1( ) OWN 2( ) RENT

HERE IS A CARD TO HELP YOU

IF OWNED, How much do you think you could get for this house if it were put up for sale? ________ (Code No.)

IF RENTED, What is the monthly rent? ________ (Code No.)

22. Is this the first home of this family? 1( ) YES 2( ) NO

IF "YES", Give previous home address of head (husband)

IF "NO", Give address of last previous home

Number & Street: ______________________________

Place & State: ______________________________

When did you move to this address? ____MO. ____YR.

HAND CARD TO RESPONDENT

23. In which of these groups would you place your COMBINED FAMILY INCOME (before Federal Tax)?

__________ (Code No.)

(Continued)

Appendix C-2: Occupation Classification

Professional, Technical, Semi-Professional

Accountant, lawyer, doctor, artist, trained nurse, teacher, librarian, social and welfare workers, chemists, clergymen, dentists, veterinarians, aviators, draftsmen, laboratory technicians, engineers including chemical, civil, electrical, industrial, mechanical and mining, etc.

Proprietor

Owner of business

Manager

Hotel and restaurant managers, buyers and department heads in stores, floormen, credit men, purchasing agents, ship captains, railroad conductors, manager of retail business, construction inspector, etc.

Executive, Official

Officials of lodges, societies, unions, etc. - presidents, etc. - of large companies, and public officials, etc.

Clerical Worker

Telephone operator, secretary, bookkeeper, accounting clerk, postman, shipping clerk, meter reader, etc.

Salesworker (Retail)

Miscellaneous salespeople, comparison shopper, personal shopper, etc.

Salesworker (Other)

Real Estate and insurance salesman, huckster, peddler, demonstrators, etc.

Skilled--Craftsman--Foreman

All skilled labor such as tool and die, heat treat, welder, precision grinder, bricklayer, carpenter, bakers, pattern makers, piano and organ tuners, plumber, steam fitter, sheet metal tradesman, machinist, mechanic, shoemakers, watchmakers, engravers, motion picture projectionists, lithographers, job setter, lay-out man, electrician, railroad engineer, stationary engineer, etc.

Operatives (Mfg.), Semi-Skilled

Molder, polisher, grinder, any factory machine operator (which is not skilled) such as lathe, punch press, milling-machine cutter, grinder, railroad brakeman, etc.

Operatives (Other), Semi-Skilled

Meatcutter, telephone serviceman, chauffeur, motorman, bus driver, crane operator, truck driver, etc.

Domestic Service

Maid, nursemaid, caretaker, day workers, miscellaneous servants in private family, etc.

Protective Service

Policeman, fireman, coast guards, watchman, sheriffs, bailiffs, soldiers, sailors, marines, etc.

Other Service

Janitor, porter, elevator operator, barber, beautician, bartenders, maids, porters, cooks, etc., (except private family) practical nurses, waiters and waitresses, gas station attendant, etc.

Common Laborers

Floor sander, stock boy, packers, warehouse worker, assembler, street cleaner, construction worker, apprentice, high-low truck, etc.

Appendix C-2: Ethnic Group Classification

BRITISH

English
Irish
Scotch
Welsh
Canadian
British
Australian

GERMAN

Austrian
German
Mennonite
Swiss

FRENCH

French
French Canadian

ITALIAN

Italian

JEWISH

Jewish

NEGRO

Negro

POLISH

Polish

OTHER SLAVIC

Czecho-Slovakian
Russian
Ukranian
Yugo-Slavian
Croatian
Serbian
Bohemian

SCANDINAVIAN

Danish
Finnish
Norwegian
Swedish
Icelandic

OTHER EUROPEAN

Belgian
Dutch
Estonian
Latvian
Lithuanian
Albanian
Chaldean
Dalmatian
Bulgarian
Greek
Hungarian
Macedonian
Maltese
Rumanian

ASIATIC

Armenian
Arbian
Lebanese
Syrian
Turkish
Chinese
Filipino
Hawaiian
Indian
Japanese

OTHER AMERICAN

Indian (Native)
Latin American
Argentine
Mexican
Portuguese
Spanish
American (U.S.A.)

APPENDIX D

REINTERVIEWING DATA

Appendix D presents the data of the reinterviewing procedure. The data are given in three sections:

D-1: The interviewers' instructions

D-2: The Questionnaire with supporting data

D-3: The classification system used for the open end question.

Appendix D-1: Interviewers' Instructions

Michigan State University

Instructions

1) Names and addresses are provided for your use. Please do not substitute other than a spouse. No children under 19 are to be interviewed. If people who live at that address do not correspond with name you have, do not interview. Go on to the next one.

2) Product Description

Stereophonic may be a relatively inexpensive set or an extremely elaborate one. Record regardless of size. Some will be in combination form; i.e., they will consist of a unit which has TV-Radio, etc. They are to be included. Hi Fi is not to be recorded.

Air conditioners may be either room or central. Both are to be included.

Questions

1) If they do not own any of the products, thank them and go to next name and address. If own, continue rest of questionnaire. Check box for ones owned.

2) Record last two digits of year of purchase.

3) Put in numerical order as they mention. Refers not to brand, but to product.

4) Do not include salesmen.

5)
) Refers only to the products owned.
6)

7) Ask only if 5 and/or 6 was answered yes.

8)
) Self-explanatory
9)

10) Include any type credit.

11) Record all mentions. Probe with "anything else." After they are through, hand card B for any others.

12) State each class and give examples of each. Social includes such groups as: Fraternal, Veterans, Country Club. Civic includes such groups as: Lions, PTA, Political, Cultural organizations. Professional -- self-explanatory. Religious -- self-explanatory.

13)
) If always lived in Detroit area, record as never.
14)

15) Current job refers to position within the firm. Circle "her" if female is head of household.

16) Employed by the company refers to length of service with the firm.

17) Previous employer refers to the one before the current employer.

18) Probe for additional information. Rank responses in order given.

19) Refers to the respondent only. Attempt to get them to think of day and night viewing.

20) Attempts to find out if respondents use outside information. Probe for additional sources.

Appendix D-2: Letter of Introduction

MICHIGAN STATE UNIVERSITY East Lansing

College of Business
Department of Marketing and Transportation Administration

Dear Consumer:

Your family has been selected to help represent the Detroit Metropolitan Area in a scientific survey now being conducted by the department of Marketing and Transportation of Michigan State University.

This interviewer will not ask you to buy anything. He has nothing to sell. His questions pertain to facts regarding certain products which you may own.

If you should have any questions, call Michigan State University 355-4616.

Thank you for your help in this scientific experiment.

Sincerely,

William E. Bell
Project Director

Appendix D-2: Magazine List

Buying Guides

Consumers Report
Consumers Union

News & Business

Business Week
U.S. News and World Report
Newsweek
Time
Forbes
Fortune

Home & Fashion

House and Home
Better Homes and Gardens
Living for Young Homemakers
Ladies Home Journal
Good Housekeeping
The American Home
McCalls
House Beautiful
Vogue
Seventeen
Glamour
Charm
Mademoiselle
Woman's Day
Family Circle

Professional Journals

Fraternal Magazines

General Magazines

Harpers
National Geographic
Esquire
The New Yorker
Playboy
Life
Look
Saturday Evening Post
Readers Digest
Holiday
Coronet
Redbook
Parents'

Fiction

Modern Romances
Modern Screen
True Confessions
True Experiences
True Love Stories
True Romances
True Story

Sport Magazines

Entertainment

TV Guide
Movie Magazines
Theater Magazines

Appendix D-2: Questionnaire

Michigan State University

Questionnaire

Good morning. Is your name ____________________________?

My name is ___________________. I am doing some survey work for Michigan State University. Your name has been selected in a sample and I would like to ask you a few questions. We are attempting to gather facts regarding the people who own (hand respondent card) Color TV, Stereo, Dishwasher or Air Conditioning.

1. Do you own any of these products?

2. When did you purchase the product(s)?

	Product(s) Owned	Year of Purchase
Color TV		
Stereo		
Auto Dishwasher		
Air Conditioner		

3. How did you first hear about the product(s) owned?

	Friend	TV	News-paper	Radio	In Store	Maga-zines	Other	D.K.
Color TV								
Stereo								
Dishwash.								
Air Cond.								

4. Did you consult anyone outside your family before making the purchase?

____ Consulted ____ Not consulted ____ D.K.

5. Has anyone else who might be interested in buying any of the products asked to see yours?

____ Yes ____ No ____ D.K.

6. Has anyone else who might be interested in buying one of the products asked your opinion of the product(s) you own? ____ Yes ____ No ____ D.K.

7. (Ask only if 5 and/or 6 was answered yes.)
Have any of these people purchased any of these products?

____ Yes ____ No ____ D.K.

8. a) What proportion of your friends would you estimate have these products?

	All	Most	Half	Few	None	D.K.
Color TV						
Stereophonic						
Auto Dishwashers						
Air Conditioners						

b) On the average, were they purchased before, at the same time as, or after your purchase?

	Before	At the same time	After	Some Before Some After	D.K.
Color TV					
Stereo					
Auto Dish.					
Air Cond.					

9. How many stores did you visit before purchasing?

	0	1	2	3	4	5	More than 5
Color TV							
Stereophonic							
Auto Dishwashers							
Air Conditioners							

10. Did you use credit to purchase any of the products?

	Yes	No	D.K.
Color TV			
Stereophonic			
Auto Dishwashers			
Air Conditioners			

11. What magazines do you have in your home?

a)

b) Any others?

c) Show list for others.

12. We would like to list the type organizations you belong to. (Give class and examples of each.)

_____ Social _____ Professional

_____ Civic _____ Religious

13. How long have you lived in the Detroit area (Wayne) (Oakland) (Macomb)?

____ Less than 1 yr. ____ 1 to 2 yrs.

____ 2 to 3 yrs. ____ 3 to 4 yrs.

____ 4 to 5 yrs. ____ Longer than 5 yrs.

14. How long did you live in the previous area (other than 3 county area)?

____ Less than 1 yr. ____ 1 to 2 yrs.

____ 2 to 3 yrs. ____ 3 to 4 yrs. ____ 4 to 5 yrs.

____ Longer than 5 yrs. ____ Never

15. How long has the head of the household held his/her current job in the company?

____ Less than 1 yr. ____ 1 to 2 yrs.

____ 2 to 3 yrs. ____ 3 to 4 yrs.

____ 4 to 5 yrs. ____ Longer than 5 yrs.

____ Retired ____ Unemployed ____ Self-employed

16. How long has he/she been employed by the company?

____ Less than 1 yr. ____ 1 to 2 yrs.

____ 2 to 3 yrs. ____ 3 to 4 yrs.

____ 4 to 5 yrs. ____ Longer than 5 yrs.

____ Retired ____ Unemployed ____ Self-employed

17. How long did he/she work for his/her previous (last) employer?

____ First Job - no previous employer

____ Less than 1 yr. ____ 1 to 2 yrs.

____ 2 to 3 yrs. ____ 3 to 4 yrs.

____ 4 to 5 yrs. ____ Longer than 5 yrs.

____ Unemployed ____ Self-employed

18. In what type of recreational activities do you as a family participate?

19. On the average, how many hours a week do you watch TV?

____ Less than 6 ____ 6 but less than 11

____ 11 but less than 16 ____ 16 but less than 21

____ 21 but less than 26 ____ 26 or more

20. Do you consult for major purchases?

____ Yes   ____ No   ____ D.K.

A) If yes, what sources?

B) Any others?

Appendix D-3: Classification Of Recreational Activities

	Number of Mentions	
Participating Sports		
Swimming	53	
Bowling	30	
Fishing	16	
Camping	15	
Golf	11	
Boating	10	
Ice Skating	8	
Skiing	8	
Tennis	4	
Badminton	4	
Hunting	4	
Roller Skating	2	
Water Skiing	2	
Handball	1	
Tobogganing	1	
Canoeing	1	
Riding	1	
Hiking	1	
	172	52.0%
Family Outings		
Picnicking	43	
Fairs	1	
Hayrides	1	
Zoo	1	
Lake	1	
	47	14.2%
Cultural Activities		
Travel	22	
Movies	16	
Reading	5	
Music	2	
Concerts	1	
Museums	1	
	47	14.2%

	Number of Mentions	
Spectator Sports		
All Sports	7	
Football	4	
Baseball	4	
Basketball	2	
	17	5.1%
Games		
Cards	15	
Croquet	1	
Chess	1	
	17	5.1%
Partying		
Dancing	7	
Parties	3	
Dining	2	
	12	3.6%
Hobbies		
Photography	2	
Antiques	1	
Railroad Models	1	
Stamp Collecting	1	
Gardening	1	
Go-cart	1	
	8	2.1%
Other		
Church Activities	4	
Scouting	2	
Family Sports	2	
Y.M.C.A.	1	
Civic Activities	1	
Shopping	1	
Visiting	1	
	12	3.6%

Appendix D-3: Classification of Magazines

	Number of Mentions	
Home and Gardening		
Better Homes and Gardens	37	
McCall's	37	
Ladies Home Journal	34	
Good Housekeeping	30	
Woman's Day	25	
Family Circle	20	
The American Home	12	
House Beautiful	9	
House and Garden	6	
Home	2	
Flower Grower	2	
House and Home	1	
Living for Young Homemakers	1	
Womans Home Companion	1	
Popular Gardening	1	
Organic Gardening	1	
	219	33.3%
General Magazines		
Reader's Digest	52	
Life	51	
Look	29	
Saturday Evening Post	26	
National Geographic	19	
Redbook	14	
New Yorker	5	
Holiday	5	
Parents	3	
Coronet	2	
Cosmopolitan	1	
Christian Century	1	
	208	31.6%
News and Business		
Time	18	
Newsweek	14	
U.S. News & World Report	7	
Business Week	4	
Forbes	2	
Fortune	2	
	47	7.1%

	Number of Mentions	
Sports and Men's		
Sports Illustrated	7	
True	5	
Argosy	4	
Field and Stream	2	
Outdoor	2	
Esquire	2	
Playboy	2	
Others	7	
	31	4.7%
Hobby		
Popular Science	5	
Popular Mechanics	5	
Photoplay	2	
Others	13	
	25	3.8%
Fashion		
Seventeen	6	
Vogue	5	
Glamor	5	
Mademoiselle	3	
Charm	2	
	21	3.2%
Fiction		
True Story	5	
Modern Romances	3	
Modern Screen	2	
True Confessions	2	
True Love Stories	2	
True Romances	2	
	16	2.4%

	Number of Mentions	
Buying Guides		
Consumers Report	6	
Changing Times	5	
Kiplinger Reports	1	
Consumers Digest	1	
	13	2.0%
Literary		
Harpers	5	
Saturday Review	2	
American Heritage	2	
Literary Digest	1	
Scientific American	1	
	11	1.7%
Other		
Children and Young People's	20	3.0%
Religious	12	1.8
Professional and Trade	10	1.5
Unclassified	26	3.9
	68	10.2%

Appendix D-3: Classification of Sources Consulted

	Number of Mentions	
Consumer Sources		
Consumer Buying Guides	38	
Dun & Bradstreet	1	
Better Business Bureaus	4	
	43	74.1%
Friends and Relatives		
Friends	27	
Doctor	1	
Associates	1	
Family	6	
Other Owners	2	
	37	56.8%
Media		
Brand Names	3	
Newspapers	3	
Advertising	3	
Magazines	2	
Stores	1	
Television	1	
	13	22.4%
Salesmen and Dealers		
Salesmen	2	
Dealers	2	
	4	6.8%
Technical		
Experts	2	
Service Manual	2	
	4	6.8%
Other		
Literature	4	
General	4	
	8	13.8%

APPENDIX E

CHI-SQUARE PROCEDURES

The formula for obtaining the computed chi-square value is as follows:

$$X^2 = \Sigma_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

where O_i = the observed value of each cell

and E_i = the expected value of each cell

The E_i is found by the formula:

$$E_i = \frac{\Sigma R}{N} \circ \Sigma C$$

where R = sum of the row
C = sum of the column
and N = the total sum of the row or column sums

After obtaining the chi-square value, it is then necessary to compare it with the standard chi-square statistical tables found in any standard statistics book.

After choosing the confidence limit desired, the table is read by that confidence limit and the appropriate degrees of freedom, which are determined by the formula:

Degrees of Freedom = (R-1)(C-1)

where R = the number of rows
and C = the number of columns

If the computed value is greater than the book value, the distribution is significant. If the book value is greater, there is such a slight difference in the distribution that it could have occurred by chance and is not significant.

APPENDIX F

OTHER VARIABLES AND CLASSIFICATIONS

Appendix E presents data which was obtained and classified but was not included in the text.

The additional variables studied and analyzed are: dining out habits, movie attendance, automobile ownership, and the number of children per family and their age distributions.

Data for all variables studied was classified in two additional ways which were not included in the text. The characteristics of multiple product owners were recorded. The number of respondents was so small that they were not statistically analyzed.

The characteristics of early adopters were examined for homogeneity, i.e., showing characteristics by product owners, and these tables are shown in this appendix.

The order of presentation is shown below.

F-1: Dining Out Habits

F-2: Movie Attendance

F-3: Automobile Ownership

F-4: Average Number of Children and their Age Distributions

F-5: Characteristics of Multiple Product Owners

F-6: Characteristics of Early Adopters

APPENDIX F-1

DINING OUT HABITS BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Dines Out	Frequency of Dining Out per Month (as a percentage of those dining out)		
		1-4 times	5-9 times	10 or more times
Innovators	54.3	79.6	12.8	7.6
Early Adopters	48.7	83.6	11.5	4.9
Sample Total	40.2	84.5	10.2	5.3
X^2 = 92.04 Significant at all levels		X^2 = 9.46 Not Significant at all levels		

APPENDIX F-1

DINING OUT HABITS OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Dines Out	Frequency of Dining Out per Month (as a percentage of those dining out)		
		1-4 times	5-9 times	10 or more times
Color TV	68.1	78.1	21.9	-
Stereo	46.3	85.1	9.2	5.7
Dishwasher	73.1	73.9	17.4	8.7
Air Conditioner	58.4	73.8	15.7	10.5
X^2 = 56.05 Significant at all levels		X^2 = 15.36 Significant at 90% level		

APPENDIX F-1

DINING OUT HABITS BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Dines Out	Frequency of Dining Out per Month (as a percentage of those dining out)		
		1-4 times	5-9 times	10 or more times
Strategic Innovators	47.4	83.7	11.1	5.2
Functional Innovators	63.1	74.9	16.1	9.0
X^2 = 26.90 Significant at all levels		X^2 = 6.86 Significant at 90% level		
Strategic Early Adopters	48.0	84.9	10.7	4.4
Functional Early Adopters	49.3	83.5	11.7	4.8
X^2 = .30 Not significant at all levels		X^2 = .32 Not significant at all levels		
Sample Total	40.2	84.5	10.2	5.3

APPENDIX F-2

MOTION PICTURE HABITS BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Attended at least once per month	Type of Movie House (as a percentage of those who attended)			
		Theater	Drive-In	Elsewhere	Theater and Drive-In
Innovators[a]	58.0	78.3	10.2	.5	10.7
Early Adopters	52.8	74.5	10.9	.3	14.3
Sample Total[b]	47.7	76.1	13.0	.3	10.4
X^2 = 42.92 Significant at all levels		X^2 = 15.58 Significant at 95% level			

[a]Other Combinations: .3%

[b]Other Combinations: .1%

Innovators	Attended at least once per month	Type of Movie House (as a percentage of those who attended)			
		Theater	Drive-In	Elsewhere	Theater and Drive-In
Color TV	46.8	81.8	18.1	-	-
Stereo[a]	57.2	74.5	11.7	1.1	12.0
Dishwasher	68.2	76.7	11.4	-	11.9
Air Conditioner	55.7	89.0	6.0	-	4.9
$X^2 = 14.98$ Significant at 99% level		$X^2 = 21.50$ Significant at 95% level			
Sample Total[b]	47.7	76.1	13.0	.3	10.4

[a]Other Combinations: .7%

[b]Other Combinations: .1%

APPENDIX F-2

MOTION PICTURE HABITS BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Attended at least once per month	Type of House Hold (as a percentage of those who attended)			
		Theater	Drive-In	Elsewhere	Theater and Drive-In
Strategic Innovators[a]	55.8	75.3	11.5	1.0	11.5
Functional Innovators	60.6	81.2	9.7	9.1	-
$X^2 = 2.59$ Not Significant at all levels		$X^2 = 59.84$ Significant at all levels			
Strategic Early Adopters	62.0	72.2	11.9	-	15.8
Functional Early Adopters	52.8	75.0	10.7	.3	14.1
$X^2 = 15.76$ Significant at all levels		$X^2 = 2.51$ Not Significant at all levels			
Sample Total[b]	47.7	76.1	13.0	.3	10.4

APPENDIX F-3

AUTOMOBILE OWNERSHIP BY ADOPTER CATEGORIES
(as a percentage of owners within a category)

Adopter Categories	Owns at least one car	Number of Cars Owned			
		1	2	3 or more	5 or more
Innovator	93.2	63.8	34.2	2.0	-
Early Adopter	96.8	68.7	29.6	1.7	-
Sample Total	84.7	77.1	21.4	1.5	-
X^2 = 222.30 Significant at all levels		X^2 = 96.90 Significant at all levels			

APPENDIX F-3

AUTOMOBILE OWNERSHIP OF INNOVATORS
(as a percentage of owners of a product)

Innovations	Owns at least one car	Number of Cars Owned			
		1	2	3 or 4	5 or more
Color TV	100.0	48.9	51.1	-	-
Stereo	92.1	71.7	26.3	2.0	-
Dishwasher	93.6	39.4	56.9	3.6	-
Air Conditioner	93.3	67.2	30.8	2.0	-
$X^2 = 10.26$ Significant at 95% level		$X^2 = 85.83$ Significant at all levels			
Sample Total	84.7	77.1	21.4	1.5	-

APPENDIX F-3

AUTOMOBILE OWNERSHIP BY TYPES OF PRODUCTS
(as a percentage of owners within a type)

Products Classified by Type	Owns at least one car	Number of Cars Owned			
		1	2	3 or 4	5 or more
Strategic Innovators	92.6	70.8	27.3	1.8	-
Functional Innovators	94.7	55.5	41.8	2.6	-
$X^2 = 1.92$ Not Significant at all levels		$X^2 = 25.56$ Significant at all levels			
Strategic Early Adopters	93.1	68.2	28.2	3.6	-
Functional Early Adopters	96.8	68.5	29.8	1.8	-
$X^2 = 15.87$ Significant at all levels		$X^2 = 7.90$ Significant at 95% level			
$X^2 = 23.58$ Significant at all levels		$X^2 = 44.86$ Significant at all levels			

APPENDIX F-4

AVERAGE NUMBER OF CHILDREN AND THEIR AGE DISTRIBUTION
BY ADOPTER CATEGORIES

Adopter Categories	Average Number of Children per household	Age Distribution of children (as a percentage of total households)			
		5 and younger	5-9	10-14	15-19
Innovators	2.06	39.9	39.5	41.6	30.9
Early Adopters	2.07	46.8	40.0	39.7	24.1
Sample Total	1.70	35.6	31.7	34.1	22.5
		$X^2 = 20.46$ Significant at 99% level			

APPENDIX F-4

AVERAGE NUMBER OF CHILDREN AND THEIR AGE DISTRIBUTION OF INNOVATORS

Innovations	Average Number of children per household	Age Distribution of children (as a percentage of total households)			
		5 and younger	5-9	10-14	15-19
Color TV	1.43	34.0	44.7	23.4	8.5
Stereo	2.18	44.6	42.2	44.0	33.3
Dishwasher	2.41	36.7	45.9	52.7	34.3
Air Conditioner	1.70	35.8	30.6	31.2	25.7
		X^2 = 18.11 Significant at 95% level			
Sample Total	1.70	35.6	31.7	34.1	22.5

APPENDIX F-4

AVERAGE NUMBER OF CHILDREN AND THEIR AGE DISTRIBUTION
BY TYPES OF PRODUCTS

Products Classified by Type	Average Number of children per household	Age Distribution of children (as a percentage of total households)			
		5 and younger	5-9	10-14	15-19
Strategic Innovators	2.11	44.0	42.0	41.6	31.4
Functional Innovators	2.07	36.9	38.2	42.8	29.3
		$X^2 = 1.59$ Not Significant at all levels			
Strategic Early Adopters	1.95	35.3	36.2	45.7	32.4
Functional Early Adopters	2.09	47.0	40.4	40.3	23.6
		$X^2 = 33.36$ Significant at all levels			
		$X^2 = 43.48$ Significant at all levels			
Sample Total	1.70	35.6	31.7	34.1	22.5

APPENDIX F-5

AGE DISTRIBUTION OF HEADS OF HOUSEHOLD OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Age Distribution of Head of Household						
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older
Any Two	-	1.0	21.0	42.0	14.0	20.0	2.0
Any Three	-	-	16.7	25.0	41.6	16.7	-
All Four	-	-	-	-	100.0	-	-
Sample Total	.1	3.3	22.1	27.3	20.7	14.0	12.6

APPENDIX F-5

AGE DISTRIBUTION OF SPOUSES OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Age Distribution								
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older	No Spouse	Not Stated
Any Two	-	6.0	26.0	38.0	11.0	15.0	2.0	2.0	-
Any Three	-	-	16.7	41.6	25.0	16.7	-	-	-
All Four	-	-	-	-	100.0	-	-	-	-
Sample Total	.3	6.3	24.7	26.6	17.9	12.9	8.9	2.3	.1

APPENDIX F-5

OCCUPATION OF HEADS OF HOUSEHOLD OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Occupations								
	Professional and Managers	Clerical	Sales Persons	Craftsmen and Foremen	Operatives	Service Workers	Laborers	Retired	Not in Labor Force
Any Two	64.0	2.0	3.0	17.0	6.0	2.0	-	2.0	1.0
Any Three	83.3	-	-	16.7	-	-	-	-	-
All Four	100.0	-	-	-	-	-	-	-	-
Sample Total	21.8	4.1	4.3	17.1	19.0	7.9	9.5	10.0	6.3

APPENDIX F-5

OCCUPATION OF SPOUSES OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Occupations									
	Professional and Managers	Clerical	Sales Persons	Craftsman and Foreman	Operatives	Service Workers	Laborers	Retired	Not in Labor Force	No Spouse
Any Two	10.0	3.0	1.0	-	-	-	-	-	84.0	2.0
Any Three	-	-	-	-	-	-	-	-	100.0	-
All Four	-	-	-	-	-	-	-	-	100.0	-
Sample Total	3.5	4.5	2.1	.1	1.4	5.8	.8	1.6	77.8	2.3

APPENDIX F-5

EDUCATION OF SPOUSES OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Education							
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	No Spouse	Not Stated
Any Two	3.0	5.0	39.0	31.0	8.0	8.0	2.0	4.0
Any Three	-	-	58.3	-	41.7	-	-	-
All Four	-	-	-	-	100.0	-	-	-
Sample Total[b]	21.1	24.4	35.0	8.9	5.0	1.1	2.3	1.9

[a]Includes completed part or all.

[b]3% of the sample had no education.

APPENDIX F-5

FAMILY INCOME OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Family Income Distribution					
	Less than $3000	$3000-$4999	$5000-$6999	$7000-$9999	$10,000-$14,999	Greater than $15,000
Any Two	-	5.0	7.0	25.0	19.0	22.0
Any Three	-	-	-	16.7	33.3	50.0
All Four	-	-	-	50.0	-	50.0
Sample Total	14.7	18.1	27.5	26.0	9.1	4.6

APPENDIX F-5

ETHNIC BACKGROUND OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Ethnic Background											
	British	German	French	Italian	Jewish	Negro	Polish	Other Slavic	Scandinavian	Other European	Other American	Asiatic
Any Two	39.0	24.0	5.0	2.0	8.0	7.0	7.0	2.0	2.0	1.0	-	3.0
Any Three	58.3	-	-	-	-	-	-	-	8.3	16.7	-	16.7
All Four	100.0	-	-	-	-	-	-	-	-	-	-	-
Sample Total	30.9	16.8	5.9	3.8	2.6	15.7	9.3	3.1	3.1	5.7	1.2	1.2

APPENDIX F-5

HOME OWNERSHIP AND TYPE OF DWELLING OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Home Ownership		Number of Units per Dwelling				
	Owns	Rents	1	2	3-4	5-9	10 and more
Any Two	99.0	1.0	98.0	2.0	-	-	-
Any Three	100.0	-	100.0	-	-	-	-
All Four	100.0	-	50.0	-	-	50.0	-
Sample Total	76.9	23.0	76.8	13.9	3.3	1.4	4.6

APPENDIX F-5

HOME VALUE OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Home Value (as a percentage of those who are homeowners)					
	Less than $7500	$7500-$9999	$10,000-$14,999	$15,000-$19,999	$20,000-$24,999	$25,000 or more
Any Two	-	2.0	11.1	23.2	26.3	37.4
Any Three	-	-	-	41.6	-	58.3
All Four	-	-	-	50.0	-	50.0
Sample Total	6.1	14.4	40.6	21.8	9.2	7.9

APPENDIX F-5

MONTHLY RENT OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Monthly Rent (as a percentage of those who rent)				
	Less than $40	$40-$59	$60-$74	$75-$99	$100 or more
Any Two	-	-	-	-	100.0
Any Three	-	-	-	-	-
All Four	-	-	-	-	-
Sample Total	4.6	28.0	35.9	21.0	10.4

APPENDIX F-5

NUMBER IN FAMILY OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Number in Family										
	1	2	3	4	5	6	7	8	9	10	11 or more
Any Two	2.0	21.0	15.0	19.0	14.0	19.0	7.0	1.0	2.0	-	-
Any Three	-	8.3	16.7	8.3	-	33.3	16.7	-	-	-	-
All Four	-	50.0	-	-	50.0	-	-	-	-	-	-
Sample Total	4.9	23.8	18.2	19.6	16.2	9.0	4.5	1.8	1.2	.5	.3

APPENDIX F-5

VACATION HABITS OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Had a Vacation	Length of Vacation				
		1 Week	2 Weeks	3 Weeks	4 Weeks	5 or more Weeks
Any Two[a]	85.0	10.6	36.5	23.5	20.0	7.1
Any Three	83.3	20.0	20.0	40.0	20.0	-
All Four	50.0	-	100.0	-	-	-
Sample Total[b]	59.2	13.2	42.9	29.2	8.7	4.8

[a]Length of Vacation Not Stated: 2.3%

[b]Length of Vacation Not Stated: 1.1%

APPENDIX F-5

VACATION HABITS (CONTINUED) OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Mode of Travel (as a percentage of those taking a vacation)[a]						
	No Travel	Car	Train	Bus	Plane	Boat	Ship
Any Two	15.3	65.9	-	-	22.4	1.2	-
Any Three	16.7	80.0	-	-	40.0	-	-
All Four	-	100.0	-	-	-	-	-
Sample Total	21.9	70.8	3.0	1.3	4.8	.6	.2

[a]Rows may not add to 100% due to respondents using more than one mode of transportation.

APPENDIX F-5

VACATION HABITS (CONTINUED) OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Total Miles Traveled (as a percentage of those who traveled)				
	Less than 100	100-599	600-999	1000-2999	3000 and further
Any Two	-	36.1	12.5	19.4	31.9
Any Three	-	-	10.0	50.0	40.0
All Four	-	100.0	-	-	-
Sample Total	3.6	26.5	17.9	34.3	17.7

APPENDIX F-5

DINING OUT HABITS OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations owned	Dines Out	Frequency of Dining Out per Month (as a percentage of those dining out)		
		1-4 times	5-9 times	10 or more times
Any Two	73.0	71.2	16.4	12.3
Any Three	100.0	66.7	33.3	-
All Four	100.0	50.0	50.0	-
Sample Total	40.2	84.5	10.2	5.3

APPENDIX F-5

MOTION PICTURE HABITS BY MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Products owned	Attended at least once per month	Type of Movie House (as a percentage of those who attended)			
		Theater	Drive-In	Elsewhere	Theater and Drive-In
Any Two	65.0	84.6	12.3	-	3.1
Any Three	75.0	100.0	-	-	-
All Four	50.0	100.0	-	-	-
Sample Total[a]	47.7	76.1	13.0	.3	10.4

[a]Other Combinations: .1%

APPENDIX F-5

AUTOMOBILE OWNERSHIPS OF MULTIPLE PRODUCT INNOVATIONS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations Owned	Owns at least one car	Number of Cars Owned			
		1	2	3 or 5	5 or more
Any Two	99.0	49.5	48.5	2.0	-
Any Three	100.0	25.0	58.3	16.7	-
All Four	100.0	100.0	-	-	-
Sample Total	84.7	77.1	21.4	1.5	-

APPENDIX F-5

AVERAGE NUMBER OF CHILDREN AND THEIR AGE DISTRIBUTION
OF MULTIPLE PRODUCT INNOVATORS
(as a percentage of owners of any 2, any 3, or all 4)

Number of Innovations Owned	Average Number of Children per Household	Age Distribution of Children (as a percentage of total households)			
		5 and younger	5-9	10-15	15-19
Any Two	2.12	42.0	45.0	45.0	21.0
Any Three	2.83	83.3	50.0	-	50.0
All Four	1.00	-	-	-	50.0
Sample Total	1.70	35.6	31.7	34.1	22.5

APPENDIX F-6

AGE DISTRIBUTION OF SPOUSES OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Age Distribution								
	15-19	20-24	25-34	35-44	45-54	55-64	65 and older	No Spouse	Not Stated
Hi-Fi	.2	6.1	24.3	35.1	20.6	9.2	2.9	1.6	-
Food Disposal	-	4.9	31.6	32.1	15.0	10.2	6.0	.2	-
Clothes Dryer	.1	7.1	35.4	30.6	15.7	8.0	2.4	.6	.1

$X^2 = 59.06$ Significant at all levels

Sample Total	.3	6.3	24.7	26.6	17.9	12.9	8.9	2.3	.1

APPENDIX F-6

OCCUPATION OF HEAD OF HOUSEHOLD OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adoption Stage	Occupations								
	Professional and Managers	Clerical	Sales Persons	Craftsmen and Foremen	Operatives	Service Workers	Laborers	Retired	Not in Labor Force
Hi-Fi	29.7	4.7	5.0	19.0	15.9	7.7	10.4	3.7	3.9
Food Disposal	46.2	4.1	6.1	15.9	10.2	3.9	4.1	7.1	2.4
Clothes Dryer	31.1	5.6	4.3	22.0	17.8	8.0	5.8	3.3	2.1

X^2 = 112.71 Significant at all levels

Sample Total	21.8	4.1	4.3	17.1	19.0	7.9	9.5	10.0	6.3

APPENDIX F-6

OCCUPATION OF SPOUSES OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Occupations									
	Professional and Managers	Clerical	Sales Persons	Craftsman and Foreman	Operatives	Service Workers	Laborers	Retired	Not in Labor Force	No Spouse
Hi-Fi	5.0	6.4	2.6	-	2.1	6.1	.2	.5	75.5	1.6
Food Disposal	3.9	5.3	1.4	.2	1.0	3.1	.8	.5	83.6	.2
Clothes Dryer	3.8	4.4	2.1	.3	1.4	4.6	.6	.6	81.7	.6
Sample Total	3.5	4.5	2.1	.1	1.4	5.8	.8	1.6	77.8	2.3

$X^2 = 33.13$ Significant at 95% level

APPENDIX F-6

EDUCATION OF HEAD OF HOUSEHOLD OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Education of Head of Household						
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	Not Stated[b]
Hi-Fi	19.5	25.1	28.4	14.3	7.7	3.9	1.1
Food Disposal	11.0	13.8	33.1	20.9	14.9	6.3	-
Clothes Dryer	14.0	23.8	29.9	17.3	9.5	4.8	.7
$X^2 = 69.30$ Significant at all levels							
Sample Total[c]	25.7	25.0	26.2	12.1	6.4	3.3	1.3

[a]Includes completed part or all.

[b]This column was not included in the X^2 analysis.

[c].4% of the sample had no education.

APPENDIX F-6

EDUCATION OF SPOUSES OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Education							
	Grade School[a]	Some High School	Completed High School	Some College	Completed College	Post Graduate	No Spouse	Not Stated
Hi-Fi	15.3	26.1	38.3	9.8	5.2	1.9	1.6	1.8
Food Disposal	9.4	17.7	41.1	17.2	11.9	.5	.2	1.9
Clothes Dryer	11.4	23.2	45.7	10.7	6.2	1.1	.6	.9

$X^2 = 85.19$ Significant at all levels

Sample Total[b]	21.1	24.4	35.0	8.9	5.0	1.1	2.3	1.9

[a]Includes completed part or all.

[b].3% of the sample had no education. Not included in the X^2 analysis.

APPENDIX F-6

FAMILY INCOME OF EARLY ADOPTERS
(as a percentage of owners of a category)

Products of the Early Adoption Stage	Family Income Distribution					
	Less than $3000	$3000-$4999	$5000-$6999	$7000-$9999	$10,000-$14,999	Greater than $15,000
Hi-Fi	7.1	15.4	28.9	29.6	10.3	8.7
Food Disposal	3.2	6.5	19.5	37.0	19.9	13.9
Clothes Dryer	3.5	12.0	32.1	32.5	13.1	6.8

$X^2 = 109.67$ Significant at all levels

Sample Total	14.7	18.1	27.5	26.0	9.1	4.6

APPENDIX F-6

ETHNIC BACKGROUND OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Ethnic Background											
	British	German	French	Italian	Jewish	Negro	Polish	Other Slavic	Scandinavian	Other European	Other American	Asiatic
Hi-Fi	32.5	15.9	7.6	4.0	2.6	14.4	7.9	3.1	4.5	4.0	1.6	1.9
Food Disposal[a]	36.7	21.7	3.4	3.9	7.1	2.2	6.6	3.2	4.1	7.5	1.2	2.2
Clothes Dryer[b]	36.5	21.2	6.4	4.6	2.4	4.8	8.4	3.2	3.6	6.2	.6	1.3
X^2 = 149.57 Significant at all levels												
Sample Total[c]	30.9	16.8	5.9	3.8	2.6	15.7	9.3	3.1	3.1	5.7	1.2	1.2

[a]Unknown: .2%

[b]Unknown: .8%

[c]Unknown: .7%

APPENDIX F-6

HOME OWNERSHIP AND TYPE OF DWELLING OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Home Ownership		Number of Units per Dwelling				
	Owns	Rents	1	2	3-4	5-9	10 and more
Hi-Fi	78.3	21.5	78.8	12.7	2.6	1.9	4.0
Food Disposal	95.6	4.4	95.9	3.6	.3	.2	-
Clothes Dryer	90.4	9.6	92.2	6.9	.4	.1	.4
X^2 = 97.53 Significant at all levels			X^2 = 153.52 Significant at all levels				
Sample Total	76.9	23.0	76.8	13.9	3.3	1.4	4.6

APPENDIX F-6

HOME VALUE OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Home Value (as a percentage of those who are homeowners)					
	Less than $7,500	$7,500-$9,999	$10,000-$14,999	$15,000-$19,999	$20,000-$24,999	$25,000 or more
Hi-Fi	2.9	12.9	36.7	25.9	9.4	12.3
Food Disposal	-	2.5	24.7	33.0	15.8	24.3
Clothes Dryer	2.5	10.7	40.8	26.4	8.3	11.3

X^2 = 156.76 Significant at all levels

Sample Total	6.1	14.4	40.6	21.8	9.2	7.9

APPENDIX F-6

MONTHLY RENT OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Monthly Rent (as a percentage of those who rent)				
	Less than $40	$40-$59	$60-$74	$75-$99	$100 or more
Hi-Fi	5.2	17.2	41.8	25.4	11.2
Food Disposal	3.8	7.7	-	30.8	57.7
Clothes Dryer	2.2	24.4	23.0	27.4	23.0
$X^2 = 45.73$ Significant at all levels					
Sample Total	4.6	28.0	35.9	21.0	10.4

APPENDIX F-6

NUMBER IN FAMILY OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adoption Stage	Number in Family										
	1	2	3	4	5	6	7	8	9	10	11 or more
Hi-Fi	.6	14.9	21.4	21.9	24.1	7.4	4.5	2.3	2.4	-	.5
Food Disposal	1.4	16.3	17.1	24.8	19.0	10.2	7.3	2.2	1.4	.3	-
Clothes Dryer	1.5	12.6	18.4	24.9	20.5	12.8	6.4	1.2	1.0	.3	.4

$X^2 = 47.01$ Significant at all levels

Sample Total	4.9	23.8	18.2	19.6	16.2	9.0	4.5	1.8	1.2	.5	.3

APPENDIX F-6

VACATION HABITS OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Had a Vacation	Length of Vacation				
		1 Week	2 Weeks	3 Weeks	4 Weeks	5 or more Weeks
Hi-Fi[a]	72.1	14.1	44.9	23.9	9.4	6.0
Food Disposal[b]	70.5	9.4	45.0	31.2	8.7	4.8
Clothes Dryer[c]	72.2	13.1	46.9	28.1	8.0	3.1
X^2 = .65 Not Significant at all levels		X^2 = 16.67 Significant at 95% level				
Sample Total	59.2	13.2	42.9	29.2	8.7	4.8

[a]Length of Vacation Not Stated: 1.8%

[b]Length of Vacation Not Stated: .7%

[c]Length of Vacation Not Stated: .8%

APPENDIX F-6

VACATION HABITS (CONTINUED) OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Days Away Overnight (as a percentage of those taking a vacation)			
	None	1-7	8-14	15 and more
Hi-Fi	32.7	20.4	30.9	16.0
Food Disposal	24.2	21.5	38.1	16.2
Clothes Dryer	28.8	23.9	32.8	14.5

$X^2 = 12.50$ Significant at 90% level

Sample Total	36.4	22.3	26.0	15.2

APPENDIX F-6

VACATION HABITS (CONTINUED) OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Category	Mode of Travel (as a percentage of those taking a vacation)[a]						
	No Travel	Car	Train	Bus	Plane	Boat	Ship
Hi-Fi	20.5	70.5	2.8	.7	6.8	.2	-
Food Disposal	18.6	72.5	3.5	-	10.4	.5	.2
Air Conditioner	21.9	71.5	2.6	.2	5.7	.4	.1
X^2 = 16.67 Not Significant at all levels							
Sample Total	21.9	70.8	3.0	1.3	4.8	.6	.2

[a]Rows may not add to 100% due to respondents using more than one mode of transportation.

APPENDIX F-6

VACATION HABITS (CONTINUED) OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Categories	Total Miles Traveled (as a percentage of those who traveled)				
	Less than 100	100-599	600-999	1000-2999	3000 and Further
Hi-Fi	6.3	21.8	16.0	35.0	20.8
Food Disposal	3.1	25.7	17.3	31.9	22.0
Clothes Dryer	2.9	28.0	17.4	34.5	17.2
Sample Total	3.6	26.5	17.9	34.3	17.7

$X^2 = 15.48$ Significant at 90% level

APPENDIX F-6

DINING OUT HABITS OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Dines Out	Frequency of Dining Out per Month (as a percentage of those dining out)		
		1-4 times	5-9 times	10 or more times
Hi-Fi	48.0	84.9	10.7	4.4
Food Disposal	61.4	78.9	14.4	6.7
Clothes Dryer	47.1	85.7	9.7	4.6
X^2 = 36.04 Significant at all levels		X^2 = 8.54 Not Significant at all levels		
Sample Total	40.2	84.5	10.2	5.3

APPENDIX F-6

MOTION PICTURE HABITS OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Attended at least once per month	Type of Movie House (as a percentage of those who attended)			
		Theater	Drive-In	Elsewhere	Theater and Drive-In
Hi-Fi	62.0	72.2	11.9	-	15.8
Food Disposal	56.3	79.1	8.2	.3	12.4
Clothes Dryer	52.1	73.7	11.4	.3	14.7
X^2 = 17.27 Significant at all levels		X^2 = 6.65 Not Significant at all levels			
Sample Total[a]	47.7	76.1	13.0	.3	10.4

[a]Other Combinations: .1%

APPENDIX F-6

AUTOMOBILE OWNERSHIP OF EARLY ADOPTERS
(as a percentage of owners of a product)

Products of the Early Adopter Stage	Owns at least one car	Number of Cars Owned			
		1	2	3 or 4	5 or more
Hi-Fi	93.1	68.2	28.2	3.6	-
Food Disposal	98.3	60.1	37.8	2.1	-
Clothes Dryer	96.6	69.2	29.0	1.8	-
X^2 = 24.11 Significant at all levels		X^2 = 22.90 Significant at all levels			
Sample Total	84.7	77.1	21.4	1.5	-

APPENDIX F-6

AVERAGE NUMBER OF CHILDREN AND THEIR AGE DISTRIBUTION
OF EARLY ADOPTERS

Products of the Early Adopter Stage	Average Number of Children per Household	Age Distribution of Children (as a percentage of total households)			
		5 and younger	5-9	10-14	15-19
Hi-Fi	1.95	35.3	36.2	45.7	32.4
Food Disposal	2.07	43.9	39.4	41.6	25.1
Clothes Dryer	2.15	50.5	41.0	40.2	22.6
		X^2 = 43.71 Significant at all levels			
Sample Total	1.70	35.6	31.7	34.1	22.5

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

Alderson, Wroe. Marketing Behavior and Executive Action. Homewood, Illinois: Richard D. Irwin, Inc., 1957.

Allan, Francis R., et al. Technology and Social Change. New York: Appleton-Century-Crofts, Inc., 1957.

Allen, Frederick Lewis. The Big Change. New York: Harper and Brothers, 1952.

Allen, G. H. (ed.) Individual Initiative in Business. Cambridge, Massachusetts: Harvard University Press, 1950.

Barnett, H. G. Innovation, The Basis of Cultural Change. New York: McGraw-Hill Company, Inc., 1953.

Bennis, Benne, Chin (eds.). The Planning of Change. New York: Holt, Rinehart, Winston, 1961.

Brozen, Yale. Social Implications of Technological Change. New York: Russell Sage Foundation, 1952.

Carter, Charles F. and Williams, Bruce R. Industry and Technical Progress: Factors Governing the Speed of Application of Science. London: Oxford University Press, 1957.

Carter, Charles F. and Williams, Bruce R. Investment in Innovation. London: Oxford University Press, 1958.

Chapin, F. Stuart. Cultural Change. New York and London: The Century Company, 1928.

Clark, John Maurice. Competition as a Dynamic Process. Washington, D. C.: The Brookings Institution, 1961.

Clark, Lincoln H. (ed.) Consumer Behavior, Dynamics of Consumer Reaction. Vol. I. New York: New York University, 1954.

Clark, Lincoln H. (ed.) Consumer Behavior. Vol. III. New York: Harper and Brothers, 1958.

Dobriner, William M. The Suburban Community. New York: G. P. Putnam's, 1958.

Galbraith, John K. The Affluent Society. Boston: Houghton Mifflin Company, 1958.

Gilfillan, S. C. The Sociology of Invention. Chicago, Illinois: Follett Publishing Company, 1935.

Graham, Saxon. American Culture: An Analysis of Its Development and Present Characteristics. New York: Harper and Brothers, 1957.

Hollander, Stanley C. (ed.) Explorations in Retailing. East Lansing, Michigan: Bureau of Business and Economic Research, Graduate School of Business Administration, Michigan State University, 1959.

Jewkes, John, Sawers, David and Stillerman, Richard. The Sources of Invention. New York: St. Martin's Press, 1959.

Katona, George. The Powerful Consumer. New York: McGraw-Hill Book Company, 1960.

Katona, George. Psychological Analysis of Economic Behavior. New York: McGraw-Hill Book Company, Inc., 1951.

Katona, George and Mueller, Eva. Consumer Expectations, 1953-1956. Ann Arbor, Michigan: Survey Research Center, University of Michigan, 1956.

Katz, E. and Lazarsfeld, Paul F. Personal Influence. Glencoe, Illinois: Free Press, 1955.

Laird, Donald A. Why People Buy. New York: McGraw-Hill Book Co., Inc., 1937.

Lazer, William and Kelley, E. J. (eds.) Managerial Marketing: Perspective and Viewpoints. Revised Edition. Homewood, Illinois: Richard D. Irwin, 1962.

Lazerfeld, Paul F., et al. The Peoples Choice. New York: Columbia University Press, 1948.

Levit, Theodore. Innovation in Marketing. New York: McGraw Hill Book Company, Inc., 1962.

Linton, Ralph. The Study of Man. Student's Ed. New York: Appleton-Century-Crofts, Inc., 1936.

Lionberger, Herbert F. The Adoption of New Ideas and Practices. Ames, Iowa: Iowa State University Press, 1960.

Lippitt, Ronald, Watson, Jeanne and Westley, Bruce. Planned Change. New York: Harcourt, Brace and Company, 1953.

Ludington, Carol (ed.). The Adoption of New Products: Process and Influence. Ann Arbor, Michigan: Braun and Blumfield, 1959.

Marting, Elizabeth. The Commercialization of Research Results. (AMA Special Report No. 20.) New York: American Management Association, 1958.

McCarthy, E. Jerome. Basic Marketing: A Managerial Approach. Homewood, Illinois: Richard D. Irwin, 1960.

Merton, Robert K. Social Theory and Social Structure. Glencoe, Illinois: Free Press, 1957.

Miller, Ben. Gaining Acceptance for Major Methods Changes. (AMA Research Study 44.) New York: American Management Association, 1960.

Mort, P. R. and Cornell, F. G. Adaptability of Public School Systems. New York: Columbia University Teachers College, 1938.

Mort, P. R. and Cornell, F. G. American Schools in Transition (How Our Schools Adapt Their Practices to Changing Needs--A Study of Pennsylvania). New York: Columbia University Teachers College, 1941.

Ogburn, William Fielding. Social Change. New Edition. New York: The Viking Press, 1950.

Packard, Vance. The Hidden Persuaders. New York: David McKay Co., 1957.

Packard, Vance. The Waste Makers. New York: David McKay Co., 1960.

Rogers, E. M. and Beal, G. M. Reference Group Influence in the Adoption of Agricultural Technology. Ames: Iowa State University, 1958.

Schumpeter, Joseph A. Business Cycles. Vol. I. New York: McGraw-Hill, Inc., 1939.

Scott, W. H., et al. Technical Change and Industrial Relations. Liverpool, England: Liverpool University Press, 1956.

Spicer, Edward H. (ed.) Human Problems in Technological Change. New York: Russell Sage Foundation, 1952.

Statistical Abstract of the United States 1962. Washington, D. C.: U. S. Department of Commerce, Bureau of Census, 1962.

Strassmann, W. Paul. Risk and Technological Innovation. Ithaca: Cornell University Press, 1959.

Articles And Periodicals

Arnoff, Paul and Stillson, E. Leonard. "Product Search and Evaluation," The Journal of Marketing, Vol. XXII, no. 1 (July, 1957), pp. 33-39.

Ayers, Eugene. "Social Attitude Toward Invention," American Scientist, Vol. XLIII (October, 1955), pp. 521-540.

Ayres, Clarence E. "Technology--The Role of Technology in Economic Theory," American Economic Review, Vol. XLIII (May, 1953), pp. 279-287.

Barnum, H. J., Jr. "How to Screen a New Product Idea," Dun's Review and Modern Industry, Vol. LXIII (June, 1954), pp. 36-38.

Beal, G. M., Rogers, E. M., and Bohlen, J. M. "Validity of the Concept of Stages in the Adoption Process," Rural Sociology, Vol. XXII (June, 1957), pp. 166-168.

Bennett, J. W. and McKnight, R. K. "Approaches of the Japanese Innovator to Cultural and Technical Change," The Annals of the American Academy of Political and Social Science, Vol. CCCV (May, 1956), pp. 101-103.

Bernard, L. L. "Invention and Social Progress," American Journal of Sociology, Vol. XXIX (July, 1923), pp. 1-33.

Bilkey, Warren J. "A Psychological Approach to Consumer Behavior Analysis," Journal of Marketing, Vol. XVIII (July, 1953), pp. 18-25.

Blake, James K. "How Much Thinking before Buying?" Dun's Review and Modern Industry, Vol. LXVI (August, 1955), pp. 38-41.

Boomer, Donald S. "Subjective Certainty and Resistance to Change," Journal of Abnormal and Social Psychology, Vol. LVIII (May, 1959), pp. 323-328.

Brown, George H. "Measuring Consumer Attitudes Toward Products," Journal of Marketing, Vol. XIV (April, 1950), pp. 691-698.

Brozen, Yale. "Invention, Innovation and Imitation," American Economic Review, Vol. XLI (May, 1951), pp. 239-257.

Burck, Gilbert. "What Makes Women Buy?" Fortune, Vol. LIV (August, 1956), p. 93ff.

Caplow, Theodore. "Market Attitudes: A Research Report from the Medical Field," Harvard Business Review, Vol. XXX (1952), pp. 105-112.

Coch, Lester and French, John R. P. "Overcoming Resistance to Change," Human Relations, Vol. 1, No. 4 (1948), pp. 513-532.

Coleman, J., Katz, E., et al. "The Diffusion of an Innovation Among Physicians," Sociometry, Vol. XX (1957), pp. 253-270.

Comish, Newell H. "Where do They Buy and Why?" Dun's Review and Modern Industry, Vol. LXIII (April, 1954), pp. 51-52ff.

Cook, J. W. "Innovation and Progress," Commercial and Financial Chronicle, Vol. CXCV (June 14, 1962), pp. 2779-2780.

Copp, J. H. "Toward Generalization in Farm Practice Research," Rural Sociology, Vol. XXIII (June, 1958), pp. 103-111.

Copp, J. H., Sill, M. L., and Brown, E. J. "The Function of Information Sources in the Farm Practice Adoption Process," Rural Sociology, Vol. XXIII (June, 1958), pp. 146-157.

Deute, A. H. "Why Some Products Fail," Printer's Ink, Vol. CLIII, part 2 (November 13, 1930), pp. 57-64.

Dittes, J. E., and Kelley, H. H. "Effects of Different Conditions of Acceptance Upon Conformity of Group Norms," Journal of Abnormal Social Psychology, Vol. LIII (1956), pp. 100-107.

Dodd, S. C. "Diffusion is Predictable: Testing Probability Models for Laws of Interaction," American Sociological Review, Vol. XX (August, 1955), pp. 392-401.

Doody, Francis S. "Research in the Process of Innovation," Boston Business Review, Vol. VIII, No. 4 (Spring, 1962), pp. 13-21.

Doutt, John T. "Product Innovation in Small Business," Business Topics, Vol. VIII, No. 4 (Autumn, 1960), pp. 58-62.

Duesenberry, James. "Innovation and Growth," American Economic Review, Vol. XLVI (May, 1956), pp. 134-141.

Duncan, J. A., and Kreitlow, B. W. "Selected Cultural Characteristics and the Acceptance of Educational Programs and Practices," Rural Sociology, Vol. XIX (December, 1954), pp. 349-357.

Fliegel, Frederick C. "A Multiple Correlation Analysis of Factors Associated with Adoption of Farm Practices," Rural Sociology, Vol. XXI (September-December, 1956), pp. 284-292.

Gear, E. V. "New Product: Any Way to Cut the Guess and Gamble?" Sales Management, Vol. CCL (January, 1955), pp. 52-54.

Gilfillan, S. C. "The Prediction of Technological Change," Review of Economics and Statistics, Vol. XXXIV (November, 1952), pp. 368-380.

Gillin, John. "Parallel Cultures and Inhibition to Acculturation," Social Forces, Vol. XXIV (October, 1945), pp. 1ff.

Graham, Saxon. "Class and Conservatism in the Adoption of Innovations," Human Relations, Vol. IX, No. 1 (1956), pp. 91-100.

Graham, Saxon. "Cultural Compatibility in the Adoption of Television," Social Forces, Vol. XXXIII (1954), pp. 166-170.

Greenberg, Joseph H. "Social Variables in Acceptance and Rejection of Artificial Insemination," American Sociological Review, Vol. XVI (1951), pp. 86-91.

Grey Advertising Agency, Inc. Grey Matter, National Advertisers' Edition, Vol. XXXI, No. 1 (January, 1960), pp. 1-4.

Griliches, Z. "Hybrid Corn, an Exploration in the Economics of Technological Change," Econometrica, Vol. XXV (October, 1957), pp. 501-22.

Gross, Neal. "The Differential Characteristics of Acceptors and Non-Acceptors of an Approved Technological Practice," Rural Sociology, Vol. XIV (1949), pp. 148-156.

Gross, N., and Taves, M. J. "Characteristics Associated with Acceptance of Recommended Farm Practices," Rural Sociology, Vol. XVII (December, 1952), pp. 321-327.

Hassinger, E. "Stages in the Adoption Process," Rural Sociology, Vol. XXIV (March, 1959), pp. 52-53.

Herrmann, Cyril C. "Managing New Products in a Changing Market," Journal of Marketing, Vol. XXVI, No. 1 (January, 1962), pp. 23-27.

Hillery, Victor. "People Who Are 'Highly Mobile' Start Trend to Product Acceptance, Survey Says," Wall Street Journal (Eastern Edition), June 5, 1959, p. 11.

"How Consumers Take to Newness," Business Week, September 24, 1955, pp. 41-46.

"How to Push a New Product," Business Week, December 7, 1957, p. 95.

Howell, Leland L. "Planned Innovation as a Marketing Tool," California Management Review, Vol. 4, No. 4 (Summer, 1962), pp. 66-71.

Johnson, S. C., and Jones, Conrad. "How to Organize for New Products," Harvard Business Review, Vol. XXXV (May-June, 1957), pp. 49-62.

Katz, E. "The Social Itinerary of Technical Change: Two Studies on the Diffusion of Innovation," Human Organization, Vol. XX (Summer, 1961), pp. 70-82.

Kelley, E. J., and Lazer, Wm. "Managing Innovation in Marketing," Advanced Management--Office Executive, Vol. I, No. 7 (July, 1962), pp. 10-13.

Lawrence, Paul R. "How to Deal with Resistance to Change," Harvard Business Review, Vol. XXXII, No. 3 (May-June, 1954), pp. 49-57.

Lionberger, H. F. "The Relation of Informal Social Groups to the Diffusion of Farm Information in a Northeast Missouri Farm Community," Rural Sociology, Vol. XIX (September, 1954), pp. 233-243.

Lionberger, H. F. "Some Characteristics of Farm Operators Sought as Sources of Farm Information in a Missouri Community," Rural Sociology, Vol. XVIII (December, 1953), pp. 327-338.

Lundberg, G. A. "Role of Key Families in the Formation of General Consumer Demand," Sociometry, Vol. 1 (January-April, 1938), pp. 375-419.

"Management Problem: Coming up with Something New," Business Week, December 24, 1960, pp. 80-82.

Manville, R., and Ungar, P. "Marketing Checklist for New Products," Printer's Ink, Vol. CCLVIII (February 1, 1957), pp. 26-28.

Marsh, C. P., and Coleman, A. L. "The Relationship of Farmer Characteristics to the Adoption of Recommended Farm Practices," Rural Sociology, Vol. XX (September-December, 1955), pp. 289-296.

Martineau, P. D. "Social Classes and Spending Behavior," Journal of Marketing, Vol. XXIII, No. 2 (October, 1958), pp. 121-130.

McArthur, Donald W. "How to be Sure the Customer Wants Your Product," Sales Management, Vol. LXXXIII (November 20, 1959), pp. 92-96.

McLaurin, W. Rupert. "The Sequence from Invention to Innovation and its Relation to Economic Growth," Quarterly Journal of Economics, Vol. LXVII, No. 1 (February, 1953), p. 97.

Menzel, H., and Katz, E. "Social Relations and Innovations in the Medical Profession: The Epidemiology of a New Drug," Public Opinion Quarterly, Vol. XIX (Winter, 1955-56), pp. 337-352.

Mueller, Eva. "Innovation-minded Families Key Group in Appliance Sales Picture," Advertising Age, Vol. XXIX (August 4, 1958), pp. 2ff.

Mueller, W. F. "A Study of Product Discovery and Innovation Cost," Southern Economic Journal, Vol. XXIV (July, 1957), pp. 80-86.

Newman, Joseph W. "New Insight, New Progress for Marketing," Harvard Business Review, Vol. XXXV, No. 6 (November-December, 1957), pp. 95-102.

O'Maara, John T., Jr. "Selecting Profitable Products," Harvard Business Review, Vol. XXXIX (January, 1961), pp. 83-89.

Pedersen, Harold A. "Cultural Differences in the Acceptance of Recommended Practices," Rural Sociology, Vol. XVI (1951), pp. 37-49.

"Planned Obsolescence," Part 1, Printer's Ink, Vol. CCLXXV (May 19, 1961), p. 23.

"Planned Obsolescence," Part 2, Printer's Ink, Vol. CCLXXV (May 26, 1961), p. 23.

"Predicting Consumers' Needs: Can Tastemakers Point the Way?" Printer's Ink, Vol. CCLXVIII (August 28, 1959), pp. 23-26.

Rogers, Everett M. "The Adoption Period," Rural Sociology, Vol. XXVI (March, 1961), pp. 77-82.

Rogers, Everett M., and Rogers, L. Edna. "A Methodological Analysis of Adoption Scales," Rural Sociology, Vol. XXVI (1961), pp. 325-336.

Schmookler, Jacob. "Invention, Innovation and Competition," Southern Economic Journal, Vol. XX (April, 1954), pp. 380-385.

Shomann, Louis F. "How to Break Down Prejudice Against a New and Different Product," Printer's Ink, Vol. CCXLIV (August 21, 1953), pp. 56-62.

Spielvogel, Carl. "Advertising: Giving Birth to New Product," New York Times, April 5, 1959, Section 3, pp. 12ff.

Staudt, Thomas A. "Program for Product Diversification," Harvard Business Review, Vol. XXXII (November-December, 1954), pp. 121-131.

"The Literature of Social Invention," The American Behavioral Scientist, Vol. V (December, 1961), pp. 10-32.

"The Process of Mass Acceptance," Modern Packaging, Vol. XXXII, No. 6 (February, 1959), pp. 75-78ff.

Tietjen, K. H. "How to Combat New Product Hostility," Industrial Marketing, Vol. XLIII (November, 1958), pp. 41-43.

Van Den Ban, A. W. "Some Characteristics of Progressive Farmers in the Netherlands," Rural Sociology, Vol. XXII (1957), pp. 205-212.

Wassen, Chester R. "What is New About a New Product?" Journal of Marketing, Vol. XXV, No. 1 (July, 1960), pp. 52-56.

"Who Are the Innovators?" Economist, Vol. CLXXXVI (February 15, 1958), pp. 596-598.

Wilkening, E. A. "Informal Leaders and Innovators in Farm Practices," Rural Sociology, Vol. XVII (September, 1952), pp. 272-275.

Wilkening, E. A. "Role of Communicating Agents in Technological Change in Agriculture," Social Forces, Vol. XXXIV (May, 1956), pp. 361-367.

Wilkening, E. A. "Joint Decision-making in Farm Families as a Function of Status and Role," American Sociological Review, Vol. XXIII (April, 1958), pp. 187-192.

Wilkening, E. A. "Social Isolation and Response of Farmers to Agricultural Programs," American Sociological Review, Vol. XVI (December, 1951), pp. 836-837.

Zander, Alvin. "Resistance to Change--Its Analysis and Prevention," Advanced Management, Vol. XV, No. 1 (January, 1950), pp. 9-11.

Bulletins

Beal, G. M. and Bohlen, J. M. The Diffusion Process. Ames: Iowa Agricultural Extension Service Special Report 18, March, 1957.

Copp, J. H. Personal and Social Factors Associated With Adoption of Recommended Farm Practices among Cattlemen. Manhattan: Kansas Agricultural Experiment Station Bulletin 83, September, 1956.

Hoffer, C. R. Acceptance of Approved Farming Practices Among Farmers of Dutch Descent. East Lansing: Michigan Agricultural Experiment Station Special Bulletin 316, June, 1942.

Hoffer, C. R. and Stangland, D. Farmers' Reactions to New Practices. East Lansing: Michigan Agricultural Experiment Station Technical Bulletin 264, February, 1958.

Lionberger, H. F. and Coughenour, C. M. Social Structure and Diffusion of Farm Information. Columbia: Missouri Agricultural Experiment Station Research Bulletin 631, April, 1957.

Rogers, Everett M. Characteristics of Innovators and Other Adopter Categories. Wooster: Ohio Agricultural Experiment Station Bulletin 882, 1961.

Stone, Gregory P. and Form, William H. The Local Community Clothing Market. East Lansing: Michigan Agricultural Experiment Station Technical Bulletin 262, 1957.

Subcommittee for the Study of Diffusion of Farm Practices. Adopters of New Farm Ideas: Characteristics & Communications Behavior. (North Central Regional Extension Publication No. 13.) East Lansing: Cooperative Extension Service, MSU, October, 1961.

Subcommittee for the Study of the Diffusion of Farm Practices, North Central Rural Sociological Committee. How Farm People Accept New Ideas. (North Central Regional Publication No. 1.) Ames: Iowa Agricultural Extension Service, November, 1955.

Wilkening, E. A. Adoption of Improved Farm Practices as Related to Family Factors. Madison: Wisconsin Agricultural Experiment Station Research Bulletin 183, December, 1953.

Wilkening, E. A. Acceptance of Improved Farm Practices in Three Coastal Plain Counties. Raleigh: North Carolina Agricultural Experiment Station Technical Bulletin 98, May, 1952.

Wilson, M. C. and Gallup, G. Extension Teaching Methods and Other Factors That Influence Adoption of Agricultural and Home Economics Practices. Washington: U. S. Department of Agriculture Federal Extension Service Circular 495, August, 1955.

Unpublished Material

Barnet, Edward M. "Recent Innovations in Retail Mass Merchandising." Unpublished Ph.D. dissertation, Columbia University, 1954.

Bennett, William R. "An Economic Analysis of Self-Service Meat Marketing A Study of the Application of the Theory of Innovation to the Development of Marketing." Unpublished Ph.D. dissertation, University of Illinois, 1951.

Diamond, Harold Simon. "Studies of Innovation Theory." Unpublished Ph.D. dissertation, Columbia University, 1951.

Edwards, George A. "Marketing an Innovation." Unpublished Ph.D. dissertation, Columbia University, 1955.

Fisk, George. "Consumer Information Channels." Unpublished Ph.D. dissertation, University of Pennsylvania, 1956.

Graham, Saxon. "Selection and Social Stratification: Factors in the Acceptance and Rejection of Five Innovations by Social Strata in New Haven, Conn." Unpublished Ph.D. dissertation, Yale University, 1951.

Noss, Theodore K. "Resistance to Social Innovations as Found in the Literature Regarding Innovations Which Have Proved Successful." Unpublished Ph.D. dissertation, Department of Sociology, University of Chicago, 1940.

Other Sources

Beal, G. M. "Information Sources in the Decision-Making Process," The Research Clinic on Decision Making, Pullman: State College of Washington, August, 1958, pp. 36-51.

Booz, Allen and Hamilton. Management of New Products. 3rd Edition, 1960.

<u>Environmental Change and Corporate Strategy</u>. Menlo Park, California: Stanford Research Institute, 1960.

Mansfield, Edwin. "Diffusion of Technological Change," <u>Review of Data on Research and Development</u>, No. 31. Washington, D. C.: National Science Foundation, October, 1961.

<u>Sixth Quinquennial Survey of the Detroit Market</u>. The Detroit <u>News</u>, 1962.

<u>Top Ten Brands Survey</u>. The Detroit <u>Free-Press</u>, 1961.