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Examination of women's attitudes toward electronic on-line in-home shopping for apparel information search and purchase

Harden, Amy J., Ph.D.
The Ohio State University, 1992
EXAMINATION OF WOMEN'S ATTITUDES TOWARD ELECTRONIC ON-LINE IN-HOME SHOPPING FOR APPAREL INFORMATION SEARCH AND PURCHASE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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CHAPTER I
INTRODUCTION

Recent technological advances such as videotex and electronic on-line shopping methods, along with lifestyle changes, have had an influence on consumers' shopping behavior. A recent trend in retailing has been an increase in the use of various in-home shopping methods which may include direct marketing, catalog shopping, television home shopping clubs, or electronic on-line shopping systems. Researchers (Darian, 1987; Fisher, 1990; Gillett, 1970, 1976; Moschis, Goldstucker & Stanley, 1985; Sarkissian, 1989; Sharma, Bearden & Teel, 1983; Shim & Drake, 1990; Talarzyk, Widing & Urbany, 1984; Waites, 1983) have attributed the increased use of in-home shopping methods to the following trends: (a) an increase in two-income households, (b) an increase in the number of women working outside of the home, (c) an increase in the number of elderly consumers (d) an increased emphasis on the lack of time available for leisure activities, and (e) an increase in the demand for more services and conveniences in shopping.

The growth and acceptance of in-home shopping methods that offer conveniences to consumers may be related to lifestyle changes that have resulted in a demand for efficient use of time for activities such as shopping. For
example, elderly consumers may use in-home shopping because of an inability to travel to stores. Individuals who experience a perception of time scarcity may find in-home shopping methods advantageous because shopping tasks may be performed conveniently any time of the day. In addition, working women may benefit from the convenience of in-home shopping. McQuade (1980) reported that women continue to do most of the shopping, even though more than one half of them are employed. Thus, working women may have less time available for shopping and other daily activities than non-working women. Overall, researchers (e.g., Moschis, Goldstucker & Stanley, 1985; Saporito, 1987) have recognized that services that provide convenience, such as in-home shopping, have a broad appeal to consumers with little disposable time and little inclination to travel to accomplish routine tasks.

Electronic on-line in-home shopping is one recent technological advancement that has been predicted to have an influence on consumers' future shopping patterns (Rosenfield, 1986; Scheiderman, 1980; Waites, 1983). This method which saves time and is convenient, allows consumers to make purchases of goods (e.g., apparel, electronics) or services (e.g., financial, travel) through the use of electronic devices (Moschis, Goldstucker, & Stanley, 1985; Peterson, 1988). The devices include the use of a television screen and key pad, or more often, a personal computer (PC) and a modem. Consumers access computer databases through the key pad or PC with a modem and receive information (verbal and/or visual) concerning a variety of merchandise
and services being offered. An order may then be placed with payment being made by credit card or identification account number.

Therefore, since electronic on-line, as well as other in-home shopping methods offer consumers advantages of convenience and speed, the time and energy required for shopping may be reduced. For example, time can be saved if consumers use in-home shopping methods rather than having to travel to retail stores, locate goods, and then travel home. Researchers (Antonoff, 1985; Buckley & Long, 1990; Galanti, 1985; "Retailers & Videotex", 1990; Urbany & Talarzyk, 1983) have identified these advantages as key components in the phenomenal growth of in-home shopping methods in recent years.

Statement of the Problem

Several researchers (Antonoff, 1985; Buckley & Long, 1990; Garretson & Mauser, 1963; McNair & May, 1978; Riggs, 1985) have predicted the inception and acceptance of in-home electronic on-line shopping methods into society. Garretson and Mauser (1963) recognized that advances in technology have been used in response to changing consumer needs. They anticipated that an increase in time pressure, resulting in a perception of time scarcity, would have an influence on consumer shopping behavior. They also speculated that the prosperous citizen of the future would become accustomed to buying services and products which offer convenience in order to provide themselves with as much free time as possible. Therefore, shopping methods, as well as products, that were convenient and functioned to conserve time would be sought. McNair
and May (1978) predicted that by the twenty-first century, basic household needs would be obtained through the use of an in-home computer system.

Researchers who have studied general in-home shopping behavior (e.g., Berkowitz, Walton & Walker, 1979; Cunningham & Cunningham, 1973; McCorkle, Planchon & James, 1987) have (a) compared the shopping behavior of consumers who use in-home shopping methods with those who do not use in-home shopping methods, and (b) profiled differences between consumers who use, or intend to use, different in-home shopping methods with those who do not use in-home shopping methods. Additionally, a limited number of research studies have examined electronic on-line systems as a viable in-home shopping method (Cunningham & Cunningham, 1973; Kono & Buatsi, 1984; Korgaonkar, 1984; Sharma, Bearden & Teel, 1983). The main focus of these research studies has been an attempt to identify consumer similarities and differences in order to develop general profiles comparing a variety of in-home shopping methods.

The product category consumers purchase may be a factor in the selection of shopping method to use. Consumers may perceive different levels of risk associated with different product categories. For example, Prasad (1975) stated that consumers perceive high levels of economic and social risk with products that are related to their public image. However, consumers perceive low levels of economic and social risk with utilitarian and inexpensive products. Additionally, products that are expensive or technically complex may be perceived as having high risk (Prasad, 1975). Spence, Engle and Blackwell
(1971) suggested that one explanation for consumers' perceptions of risk as a function of product category may be related to the lack of opportunity to examine the product prior to purchase.

Researchers in the textiles and clothing field have studied risk related to the purchase of apparel products. Kwon, Paek and Arzeni (1991) identified several dimensions of risk perceptions associated with shopping for apparel by catalog. They discovered that when compared to catalog shoppers, non-catalog shoppers perceived higher levels of risks in purchasing apparel from catalogs. Non-catalog shoppers were concerned that apparel purchased from catalogs would not fit, or would not be fashionable (social risks). Additionally, uncertainty about expected satisfaction with the apparel product or with the ability to incorporate the apparel product into an existing wardrobe (functional risks) was also expressed.

Mast, Oliver, and Shim (1991) conducted a simulation of an electronic on-line in-home shopping method in which two products, apparel and food, representing varying risk levels were selected. Differences between potential adopters and potential rejecters of this shopping method were explored through questioning consumers about their comfort level associated with various product categories that could be purchased through an electronic on-line in-home shopping system. Consumers reported that products such as records/tapes and books/magazines were associated with a high level of comfort or considered the least threatening to purchase, while products such as collector's items and jewelry were associated with a low level of comfort or a
high level of risk to purchase through electronic on-line in-home shopping methods. Although apparel was a product that could be selected, the researchers did not find a significant difference between potential adopters and potential rejecters regarding this product category. Both groups reported being uncomfortable in purchasing apparel through electronic on-line in-home shopping methods.

Apparel is an important product category to examine due to the fact that in catalog use, consumers have spent more money purchasing clothing than any other product category ("Mail-order", 1985). Since the use of in-home shopping methods has increased in recent years and is expected to continue to grow, the examination of apparel shopping through the electronic on-line in-home shopping method may provide marketers not only with an indication of consumers' attitudes toward shopping for apparel, but also electronic on-line in-home shopping in general.

Although researchers have examined electronic on-line in-home shopping in comparison to other in-home shopping methods and have identified consumer profiles, questions remaining unanswered include the lack of acceptance of electronic on-line in-home shopping for apparel products. Research and popular press authors have predicted that electronic on-line in-home shopping methods would be accepted by consumers, however, this hasn't occurred. Therefore, the purpose of this research is to investigate consumers' attitudes regarding utilization of electronic on-line in-home shopping systems for apparel information search or apparel purchase. From
this investigation, potential explanations may be identified as to why the adoption rate for this method of shopping has not been as rapid as has been predicted.

A theory that can be used to examine the adoption of innovations such as electronic on-line in-home shopping, is diffusion theory. Diffusion theory has been identified as the explanation of the process by which an innovation is communicated among members of a social system over a period of time (Rogers, 1962). Therefore, the elements of diffusion theory include: innovation, communication, social system and time. Innovation refers to an idea or product that is perceived as being new and may be classified based on the degree to which behavior must be adjusted in order to adopt. Communication is the process through which individuals share information about an innovation from personal or impersonal sources. Members of a social system consist of people who commonly associate with each other (e.g., family, friends, employment groups) and influence adoption decisions. Finally, time refers to the rate of adoption or the period of time members of a social system take to adopt.

The rate of adoption of an innovation may be influenced by consumers' adoption or decision-making processes. These processes involve a mental evaluative procedure that consumers use to reach a decision to accept or reject an innovation once awareness has occurred. It is through this procedure that consumers evaluate the potential benefits and risks associated with adoption of an innovation. The decision to continue to seek information or to discontinue the process may be made at any point throughout the process. Therefore,
depending on the evaluation of the advantages and disadvantages of an innovation, some consumers may reach a decision to adopt faster than other consumers.

The rate of adoption may also be influenced by consumers' adoption characteristics, specifically innovativeness or the "degree to which an individual...is relatively earlier in adopting new ideas than other members of a system" (Rogers, 1983, p. 268). Based on a normal diffusion curve, consumers who adopt an innovation may be categorized into five segments (innovators, early adopters, early majority, late majority, and laggards) relative to time. Innovators, the first individuals to adopt, tend to be venturesome or eager to try new ideas. Early adopters tend to be opinion leaders whose advice about an innovation is sought out by their peers. The early majority segment consists of consumers who take a greater length of time to reach a decision than innovators and early adopters. The late majority segment includes consumers who tend to be skeptical about an innovation and often adopt as a result of economic necessity or social pressures. The last segment, laggards, include consumers who are traditionalists and tend to be reluctant to change.

Consumers' perceptions of an innovation's attributes such as its relative advantage over other products or services, lifestyle compatibility, complexity of use, availability for trial before purchase or continued use, and observability of an innovation may have an influence on the rate of adoption (Rogers, 1962, 1983; Rogers & Shoemaker, 1971). Relative advantage is the extent to which consumers perceive an innovation to be better in some manner to the product
or idea that supersedes it. The more advantageous an innovation is perceived to be, the more rapid the rate of adoption may be. Compatibility is the extent to which consumers perceive that an innovation fits into their lifestyle. If a change in values and/or behavior is necessary for an innovation to be adopted, that rate of adoption may be slower than if a change in values and/or behavior is not necessary. Perception of the difficulty or the ease of using an innovation has been referred to as complexity. The more difficult or complex an innovation is perceived to be, the slower the rate of adoption.

Trialability, the opportunity to try an innovation on a limited basis, may reduce the level of uncertainty associated with an innovation. Therefore, the rate of adoption may occur more rapidly if consumers have an opportunity to try an innovation than if trial was not possible. Observability refers to an innovation's degree of visibility to consumers. Benefits associated with the adoption of an innovation may be observed, thereby reducing uncertainty leading to a more rapid rate of adoption. Overall, innovations which are perceived to be relatively advantageous, compatible, trialable, observable, and less complex may be adopted more rapidly than innovations not perceived in this manner.

Rogers' (1962, 1983; Rogers & Shoemaker, 1971) theoretical framework has been used by researchers to examine (a) acceptance of a new idea or innovation, (b) individual differences which influence some people to adopt innovations faster than other people, and (c) the communication process which enables individuals to become aware of the innovation. This framework has
also allowed the factors that influence the rate at which adoption occurs to be studied.

Research Objectives

Electronic on-line in-home shopping has not been adopted to the extent that marketers have predicted. However, consumer use of other in-home shopping methods for apparel products, such as catalogs, has increased in recent years. Thus, diffusion theory may be used to answer the primary question of why consumers are not utilizing electronic on-line in-home shopping methods for apparel to the same extent as other in-home shopping methods. As a result, the specific objectives of the study are to:

1. explore consumers' attitudes concerning the newness and degree to which behavior must be adjusted in order to use electronic on-line in-home shopping methods for apparel (innovation)
2. explore consumers' attitudes toward the source of information acquired about electronic on-line in-home shopping methods for apparel (communication)
3. explore consumers' attitudes concerning the influence of reference group members about the use of electronic on-line in-home shopping methods for apparel (social system)
4. explore consumers' attitudes concerning the rate of adoption of electronic on-line in-home shopping methods for apparel (time) by:
a). examining consumers' attitudes concerning the relative advantage of using electronic on-line in-home shopping systems to make apparel purchases (relative advantage)

b). examining consumers' attitudes concerning how the use of electronic on-line in-home shopping methods fit into their lifestyle in order to make apparel purchases (compatibility)

c). examining consumers' attitudes concerning the ease/difficulty of using electronic on-line in-home shopping systems to make apparel purchases (complexity)

d). examining consumers' attitudes toward the opportunity to try electronic on-line in-home shopping systems to make apparel purchases (trialability)

e). examining consumers' attitudes toward the opportunity to observe electronic on-line in-home shopping systems to make apparel purchases (observability)
Definition of Terms

The following definitions have been established for use in this study.

**Electronic On-line In-home Shopping.** Use of an electronic device, such as a personal computer (PC) with a modem, to access computer information services (e.g., CompuServe, Prodigy) and computer databases to receive information regarding a variety of products and services. Products may be purchased online with payment being made by credit card or an account number (Moschis, Goldstucker, & Stanley, 1985).

**Reference Groups** Groups of individuals related to each other through their shared values and behavior norms (Engle, Blackwell, & Miniard, 1982).

**Diffusion Theory Terms** (Rogers, 1983):

- **Cosmopolitaness**  Consumers' orientation beyond their local community.
- **Venturesomeness**  Eagerness to try new ideas.
- **Privilegedness**  Consumers' financial standing compared to others in the social system.
- **Social Mobility**  Consumers' movement on a social status hierarchy or willingness to change geographically or personally.
- **Social Integration**  Consumers' involvement in community activities and activity in public life.
- **Innovation**  An idea that is perceived as being new.
**Communication**  Process by which information is shared among individuals to reach a mutual understanding.

**Social System**  Interaction among a group of people who commonly associate with each other.

**Time**  Length of time members of a social system take to adopt an innovation.

**Innovation Attributes:**

- **Relative Advantage**  Consumers' perception as to the extent to which an innovation is advantageous over a product or idea that supersedes it.

- **Compatibility**  Consumers' perception as to the extent to which an innovation fits into their lifestyle.

- **Complexity**  Consumers' perception as to the difficulty of use or understanding of an innovation.

- **Trialability**  Consumers' perception of the opportunity to experience an innovation on a small scale or limited basis.

- **Observability**  Innovation's degree of visibility to consumers.
CHAPTER II
REVIEW OF LITERATURE

Lifestyle changes and advances in technology have been identified as factors affecting consumer shopping behavior and having an influence on the retail environment. One result of these changes has been an increased use of in-home shopping methods such as catalog shopping, television home shopping clubs, and electronic on-line shopping systems. These trends may be due to (a) an increase in the number of working women and (b) an increased emphasis on the lack of time available for leisure activities. These conflicting lifestyle trends (more time spent working while at the same time, more time is desired for leisure) may lead to feelings or perceptions of time scarcity (Berry, 1979; "Buying from 'non-stores'", 1987; Feldman & Hornik, 1981; Jones, 1984; Joyce, 1984; Lowenstein & Aller, 1985; McClure, 1988; "Revolt of Junk Receivers", 1990; Robinson, 1990; Samuelson, 1992; Waites, 1983).

Technological changes have provided consumers with shopping methods that may involve efficiency, convenience and time saving features.

Technological advances within a store setting such as the use of Universal Product Code (UPC) scanning and Electronic Data Interchange (EDI) systems may increase the efficiency and convenience of in-store shopping.
However, in-store shopping may still not be as convenient as in-home shopping. Downs (1961) identified three ways in which in-store shopping is less convenient than in-home shopping: money, time and energy. The expenditure of money consists of not only the cost of the product, but also the cost of transportation to the retail establishment as well as income lost by using time for shopping rather than for work. Time is spent by traveling between home and the place of shopping, locating a parking place, traveling between stores, and selecting and paying for the product. The final major expenditure involved with in-store shopping is energy. This includes not only the basic energy spent in direct proportion to time involved, but also the additional energy needed to handle packages, children and sales people during the shopping trip.

Therefore, in an attempt to make purchasing more efficient, consumers have utilized in-home shopping methods. In this manner, they have sought to compensate for in-store shopping difficulties and expenditures of money, time, and energy that are incurred above and beyond the product cost. Thus, through technological developments, consumers have been provided with a shopping method that may make shopping more efficient than other shopping methods.

Due to lifestyle changes, technological advances and changes occurring in consumer shopping patterns, in-home shopping has become a topic of interest in marketing and consumer behavior research (e.g., Barmash, 1987; Hall, 1988; Ivey, 1986; May, 1979; Nickels, 1973; Reda, 1990; Reynolds, 1974; Rosenberg & Hirschman, 1980). In addition to shopping methods becoming
more efficient and convenient, new technologies such as advances in zip code targeting, specialized mailing lists, and advances in telecommunications have contributed to the recent growth of in-home shopping. These technological improvements have also enabled marketers to more accurately identify and access their target markets (Sarkissian, 1989; Sharma, Bearden & Teel, 1983).

In order to provide the understanding and framework for this research, the review of literature has been divided into four major sections. These sections include: (a) general in-home shopping, (b) electronic on-line in-home shopping, (c) diffusion theory, and (d) summary.

General In-Home Shopping

In-Home Shopping Growth

Growth of the number of consumer purchases through in-home shopping methods (e.g., catalogs, telephone shopping, or electronic/computer shopping) has been examined by Management Horizons, the marketing segment of Price Waterhouse ("Buying from 'non-stores'", 1987). An analysis of the phenomenal growth of in-home shopping methods demonstrated that catalog sales have increased one-third faster than average retail sales throughout the 1980's. A comparison of the number of consumers purchasing merchandise from home from 1983 to 1990 revealed a 60% increase ("Revolt of Junk Receivers", 1990). Additionally, Joyce (1984) reported that a New York consulting firm's study of the electronic on-line and in-home shopping industry revealed that consumers could be expected to do up to approximately one half of their shopping from home.
The growth of in-home shopping has been a topic of frequent discussion ("Electronic retailing", 1983; Lowenstein & Aller, 1985). Predictions that in-home shopping systems would be adopted by the majority of consumers, have been suggested for many years. For example, in 1980, The Newspaper Advertising Bureau predicted that a major growth would occur in the area of in-home shopping over the ensuing years (Schneiderman, 1988). A Touche Ross, Inc. report ("Electronic Shopping", 1988) predicted that by 1992, television shopping sales would reach over $5 billion; mail order/direct mail shopping methods would be strong with an expected $60 to $70 billion in sales; and interactive (electronic/computer) shopping, although dominated by a few national companies, would grow with anticipated sales of over $3 billion. Rosenfield (1986) predicted that the figures for electronic on-line shopping would reach $5 to $10 billion by the end of the decade.

The National Science Foundation reported that technology would have an influence on consumer behavior (Waites, 1983). The report predicted that by 1990, consumers would "be on the crest of a revolution in electronic information technology that will transform American home, business, manufacturing, school, family, and political life as profoundly as did the automobile, the telephone and television" (p. 150). Technology was predicted to influence all aspects of daily living including shopping, thus changing the way consumers traditionally manage their time and information.
In-Home Shopping Profiles

Research published in the area of in-home shopping has resulted in the identification of a general profile of consumers utilizing various in-home shopping methods. Although the most common method of in-home shopping researched has been catalog use, other in-home shopping methods include direct mail, print ads (e.g., newspaper, magazine), and door to door sales. Gillett (1970) discovered that consumers who purchased general merchandise in-home, by catalog or telephone, were different from non-in-home shoppers. In-home shoppers tended to be well educated, have higher incomes and hold higher status occupations than non-in-home shoppers. Cunningham and Cunningham (1973) found that shoppers who purchased products in-home from large catalog outlets tended to be similar to in-home shoppers identified by Gillett (1970). In addition, Cunningham and Cunningham (1973) reported that, compared to non-in-home shoppers, in-home shoppers belonged to a higher social class, and had adventuresome attitudes.

Researchers studying in-home shopping have identified profiles of consumers utilizing catalog shopping methods. In-home shoppers, compared to non-in-home shoppers, are characterized by (a) early family life cycle stages (Cunningham & Cunningham, 1973; Darian, 1987); (b) high incomes (Berkowitz, Walton & Walker, 1979; Cox & Rich, 1964; Cunningham & Cunningham, 1973; Gillett, 1970; Greenberg & Lumpkin, 1981; Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Nevils, Sundel & Alston, 1982; Reynolds, 1974; Spence, Engle, & Blackwell, 1971; Stone, 1972; Tate, Daniels
& Ball, 1981); (b) high status occupations (Berkowitz, Walton & Walker, 1979; Cunningham & Cunningham, 1973; Gillett, 1970); and (c) high levels of education (Berkowitz, Walton & Walker, 1979; Cunningham & Cunningham, 1973; Darian, 1987; Gillett, 1970; Lumpkin & Hawes, 1985). Personal characteristics of in-home shoppers included a tendency to be less conservative (Cunningham & Cunningham, 1973), more cosmopolitan (Cunningham & Cunningham, 1973; Gillett, 1970), more innovative, more self confident and more venturesome (Berkowitz, Walton & Walker, 1979; Gillett, 1970, 1976; Reynolds, 1974) than non-in-home shoppers. Additionally, as compared to non-in-home shoppers, in-home shoppers tended to have (a) a positive attitude toward credit use (Berkowitz, Walton & Walker, 1979; Cox & Rich, 1964; Cunningham & Cunningham, 1973; Greenberg & Lumpkin, 1981; Kwon, Paek, & Arzeni, 1991; Lumpkin & Hawes, 1985); (b) a greater awareness of style, value and price (Gillett, 1970); (c) a more flexible shopping style (Berkowitz, Walton & Walker, 1979; Darian, 1986; Gillett, 1970); (d) a less favorable attitude toward local shopping (Berkowitz, Walton & Walker, 1979; Reynolds, 1974); and (e) a more convenience oriented disposition (Berkowitz, Walton & Walker, 1979; Cox & Rich, 1964; Darian, 1986; Gillett, 1970; Kwon, Paek & Arzeni, 1991). Therefore, a general profile of in-home shoppers consists of consumers who (a) are relatively young; (b) have high levels of income, education, and occupational status; (c) tend to be cosmopolitan, innovative, self confident, and venturesome; (d) have positive attitudes toward
credit and convenience; (e) have negative attitudes toward local shopping; and
(f) are aware of style, value and price.

McCorkle, Planchon and James (1987) identified problems with limited
or small samples, inconsistent definitions of in-home shopping, and questions
of validity and reliability of measurement instruments as restrictions to the
generalizability of the research completed in this area. Similar characteristics
and profiles are nevertheless useful in understanding consumers' adoption of
this method of shopping. Furthermore, in spite of the limitations of the various
research studies, the similarities noted between the profiles of in-home
shoppers provide additional support for the use of these findings in
understanding in-home shoppers.

Electronic On-line In-Home Shopping

Electronic on-line in-home shopping systems, which involve interactive
computer systems, allow consumers to purchase goods or services. Often, this
is accomplished through the use of a personal computer (PC) and a modem
(Moschis, Goldstucker, & Stanley, 1985; Petersen, 1988). This system is one
way in which technology, referred to as videotex, has been adopted. Urbany
and Talarzyk (1983) stated that videotex technology "represents a
communications medium through which users can interact with databases on
demand to request product information and execute transactions" (p. 76).

Videotex has been identified as a technology that has a great potential to
influence the future of retailing (Waites, 1983). Predictions of the use of
videotex in the retail industry suggested that videotex may be adopted by
traditional catalog and direct mail companies as a way to expand potential
customer bases. Additionally, manufacturers are expected to use videotex to
reach the customer directly, thus by-passing retailers. In either case, the major
influence of videotex would be to allow the manufacturer or retailer an
expansion of potential customers.

Information Services

Although videotex may have an influence on traditional retail companies
through expansion of the consumer base, videotex is commonly used today
with computer information services. Having evolved within the past decade,
each computer information system offers an electronic on-line shopping option
(among other options such as financial, entertainment, and news) through
which consumers may obtain product information or make purchases.

In order to make use of an electronic on-line shopping system, the
equipment necessary often includes a PC and modem. Through a report
developed by the National Electronic Home Services Test (Waites, 1983)
consumers were asked about their intention to purchase a PC. Only 14% of the
public indicated they would like to acquire a PC. However, when provided with
information concerning the various options available (news, information,
entertainment, home banking and shopping) by accessing diverse databases
through computer information services, the number of consumers interested
increased to 50%. Moschis, Goldstucker, and Stanley (1985) reported that
consumers were more likely to accept electronic on-line in-home shopping if it
was offered as a cluster of services rather than as a separate, individual service.
Overall, the National Electronic Home Services Test illustrated that the opportunity to obtain a variety of services increased consumers' interest in this technology. Additionally, consumer acceptance was judged as being so favorable that "videotex has the potential to become a 'must have' in most households" (Waites, 1983, p. 160).

A test of Viewtron, a videotex system introduced by AT&T and Knight Ridder, was conducted in 1980-1981 of approximately 200 homes. One half of the participants stated that they were interested in an innovation that would enable them to reduce the time required for shopping, get product information, pay bills, and keep up with the latest news ("Electronic retailing", 1983; Waites, 1983). The results of a study conducted with the introduction of this service revealed that the majority of consumers liked the system (90%) and stated that it provided an opportunity to increase their ability to obtain product information (90%). Eighty three percent of the participants rated Viewtron as convenient and 46% stated they would like to use the system to purchase bargain and sale items. Within the 14 month test period, 68% of the participants actually ordered something via Viewtron. Overall, consumers rated the system as "more convenient for shopping than catalogs, stores and the Yellow Pages" (Waites, 1983, p. 158).

Viewtron, one of the first videotex systems, had one major limitation. In order to use the system, subscribers were required to purchase a terminal that received only videotex data (Petersen, 1988). Although consumers expressed advantages and interest in using the system (especially for shopping), the
expense of the terminal and lack of a wide variety of services became detrimental. Thus, after approximately six years, the service was discontinued. Generalizations from Viewtron's introductory tests are limited due to a small sample size. Nevertheless, the tests did reveal that, given an opportunity to try an electronic on-line in-home shopping service, consumers indicated a desire to continue its use since the experience was viewed as enjoyable and beneficial.

An entrant into the electronic on-line in-home shopping system industry in 1979 was Comp-U-Card (Rosenfeld, 1985). Comp-U-Card, the first to offer a computer shopping service, timed its introduction to a period when marketing research reports suggested a sharp anticipated growth rate in the PC market. Merchandise was to be presented in an electronic, text only, catalog format. Whether by telephone or by PC, the process through which consumers could purchase products or obtain product information via Comp-U-Card was similar. Once connected, consumers could inquire about products or place an order either through an operator or by typing commands on a keyboard. Requests would then be entered into Comp-U-Card's computer system which would scan a list of bids from independent distributors, wholesalers, and retailers to select the resource with the lowest price for the selected item. Comp-U-Card then served as a merchandise broker and placed the order with the lowest bidder and had the merchandise sent to the requesting consumer.

Actual sales figures during Comp-U-Card's introduction, revealed that PCs were not selling at the pace anticipated (Rosenfeld, 1985). Emphasis was
therefore shifted to allow the telephone to function as the medium through which information could be passed. Although emphasis was reduced in the PC venue of the Comp-U-Card service, it was not eliminated. Consumers who had accessed Comp-U-Card through a PC continued to be able to shop via this method. Due to the fact that the adoption rate of consumers accessing the service via PCs was lower than expected, Comp-U-Card's electronic on-line in-home shopping service was apparently not an overwhelming success.

Another system, CompuServe, owned by H&R Block, has over 500,000 subscribers accessing news, information, home banking and shopping services (Sarsfield, 1988). The Electronic Mall, CompuServe's interactive electronic on-line shopping service, was introduced in 1985. A joint venture between CompuServe Information Service and Yellow Pages publisher, L.M. Berry, the Electronic Mall enabled subscribers to access a database of a wide variety of merchandise. The Electronic Mall provides product information through a text only format. Over a four month initial test of the system, the number of users increased from approximately 110,000 to 200,000. Participants paid between $6.00 and $15.00 in hourly connect charges (Bartolotta, 1985).

Results of the initial test of The Electronic Mall demonstrated that subscribers accessed the system approximately 31,000 times per month with about 2.1% of the connections resulting in a sale. This may be viewed favorably in comparison to a 1.5% response rate for direct mail/catalog format (Bartolotta, 1985; "Electronic in-home shopping", 1985; Rosenfeld, 1985). Additionally, the results of a 1988 survey of merchants offering merchandise on
the Electronic Mall demonstrated that the service generated a 3.5% response rate which revealed a better consumer response rate than previous tests.

Prodigy, an interactive electronic information service, was launched in 1988. Prodigy was targeted to the average consumer who was not necessarily computer literate, rather than to business professionals acquainted with and knowledgeable about computers. Approximately 160,000 households have subscribed to the service (Robins, 1990). Instead of charging consumers an hourly rate for their time on-line, Prodigy subscribers pay a flat fee which may encourage increased time spent on the system in exploration (Petersen, 1988). Services or options offered by this system include: consumer information, shopping, stock quotes and news, brokerage, travel and leisure, encyclopedia, learning opportunities, banking, and entertainment (Prodigy Press Release, 1990).

General Electric (GE) Information Services added electronic on-line shopping to its computerized information service, Genie (Graham, 1988; Sarsfield, 1988). This addition was incorporated in order to follow other major computer information service companies (e.g., CompuServe, Prodigy) by offering a greater variety of services to customers.

Electronic On-Line In-Home Shopping Growth

The growth of electronic on-line in-home shopping systems has been slower than predicted. However, in spite of some initial failures, marketers are still predicting that electronic on-line in-home shopping methods will influence the future of retailing. Often these predictions have been related to lifestyle
changes. A press release from Prodigy (1990) reported that consumers with two-income households, a frustration with time pressures, and a desire to simplify daily routines would have an influence on the extent to which electronic on-line in-home shopping systems may be adopted. It has been predicted that consumers who are interested in saving time, are elderly or home-bound will benefit from electronic on-line in-home shopping (Prodigy Press Release, 1990; Silverstein, 1989).

**Electronic On-Line In-Home Shopping Profiles**

**Electronic On-line In-home Shopping Adopters**

Profiles of consumers using electronic on-line in-home shopping systems have been identified from recent computer information services news reports (Graham, 1988; Strazewski, 1988; Talarzyk, Widing & Urbany, 1984). Services such as CompuServe, Prodigy, Genie and The Source have profiled subscribers and found them to be college graduated males who are relatively young (mid 20-40 years old), employed in professional and/or business occupations with an average income of approximately $50,000.

Talarzyk, Widing and Urbany (1984) reviewed information gathered for CompuServe and The Source over a two year period (1981-1983). They identified changes in consumers’ profiles. One change observed consisted of a reduction of the proportion of The Source’s subscribers described as computer hobbyists who used videotex primarily for data storage and for communication with other hobbyists (66% in 1981 to 40% in 1983). Changes in the typical CompuServe subscriber consisted of being less 'upscale' in income, younger,
more likely to be female and have children who also use the service. Any generalizations derived from these reported trends must be treated very cautiously. The length of time under consideration was short (two years), and the slight changes identified may be service specific in that consumers subscribing to each system may be unique. However, overall consumer profiles gathered from computer information services indicate that consumers utilizing videotex services were males approximately 25 - 49 years old who were college educated, employed in white collar occupations with incomes of $35,000 or more (Talarzyk, Widing & Urbany, 1984).

Through the examination of information gathered from computer information services (CompuServe, The Source, and Dow Jones News/Retrieval) Talarzyk, Widing and Urbany (1984) reported that a common consumer characteristic among those utilizing videotex technology (e.g., electronic on-line shopping) include being time poor or time constrained. Consumers identified as likely to be classified as being time poor include single parents, as well as those who have a willingness to pay for alternative activities for routine, 'less fun', tasks. Videotex adopters often reported having prior experience with computers and communication technology at work or school. In addition, adopters may experience an information overload. "Information is important to this group, but they are increasingly finding it difficult to process and organize their information resources" (Talarzyk, Widing & Urbany, 1984, p. 511). Therefore, videotex adopters include consumers who have become aware of computer technology through observations and are those who have
recognized a relative advantage in using computers to reduce information overload or for their convenience and time saving features.

Based upon information gathered from individuals subscribing to videotex systems, Talarzyk, Widing, and Urbany (1984) identified several consumer personality and lifestyle characteristics. Characteristics of videotex subscribers include a low resistance to change and a 'pro technology' attitude. These consumers were identified as striving toward self-improvement, and inwardly directed. In addition, they were viewed as having self-tailored lifestyles, placing a strong emphasis on their time, and as wanting things immediately. However, Talarzyk, Widing and Urbany (1984) warned that from a practical, basic perspective, future videotex subscribers would only adopt the service when "the value of the services and conveniences it provides is greater than or commensurate with alternatives available both in terms of charges for and the time involved in using it" (p. 511).

Published research that has been conducted to examine characteristics, attitudes and opinions of consumers who use a computer information service is scarce. Marketing research funded by commercial firms often remains unattainable by researchers outside of the firm. However, a recent study of subscribers to a national computer information service was conducted to investigate differences between electronic on-line shoppers and non-shoppers (Shim & Mahoney, 1991). Demographics of respondents were similar to previously reported computer information service profiles. The majority of respondents were males between the ages of 26 - 44 who were affluent
(reported incomes of $50,000 or more), had attended college and were employed in professional occupations.

Shim and Mahoney (1991) reported that subscribers who used the electronic on-line shopping option accounted for approximately 25% of the survey respondents. The results obtained from the mailed survey indicated that when compared to the non-electronic on-line shoppers, electronic on-line shoppers were more likely to perceive this method as being easy to use and were more likely to perceive electronic on-line shopping as not being complex. A relative advantage of not being costly to use was also reported. Surprisingly however, electronic on-line shoppers tended to be less concerned with the convenience aspect of this shopping method. Shim and Mahoney (1991) suggested that this may indicate that (a) electronic on-line shoppers may use this method for 'fun' rather than as a time saving device, or (b) videotex users under time pressure may choose to not browse through the electronic on-line shopping system and select another shopping method. As compared to non-electronic on-line shoppers, electronic on-line shoppers reported that electronic on-line shopping was more compatible to their lifestyle. Overall, electronic on-line shoppers enjoyed shopping via computer and were considered shopping innovators. Additionally, electronic on-line shoppers tended to use a variety of options offered through the computer information service as well as using other in-home shopping methods.
**Electronic On-line In-home Shopping Potential Adopters**

Prior to the introduction and promotion of electronic on-line shopping options through computer information services such as CompuServe and Prodigy, research was being conducted to determine the potential success or failure of other electronic on-line shopping systems. For example, Viewtron, introduced in 1980, was different from computer information services in that it required specific equipment or hardware in order to access the system. Computer information services provide access to their systems through the use of a PC and modem. Thus, the hardware needed for systems such as Viewtron, required an expensive, separate terminal to be purchased. Therefore, although the concept of each system is similar and profiles of consumers may be similar, the success or failure of each may be related to other factors beyond profiles of potential users such as the equipment costs and ease of use.

Researchers have attempted to identify factors that may affect consumers' acceptance of electronic on-line in-home shopping methods. Sharma, Bearden and Teel (1983) conducted an experiment comparing a simulated catalog shopping experience to a simulated electronic on-line shopping experience such as a Viewtron type system in which only videotex information was provided. The researchers attempted to examine the effect of a simulated electronic on-line shopping procedure on consumers' potential shopping behavior, perceptions of risk and confidence, as well as attitudes. Results indicated that participants chose to use the simulated catalog shopping method more often than the simulated electronic on-line shopping method for
comparison shopping behavior. The length of time the participants spent examining product information was comparable for both methods. Subjects using the simulated electronic on-line shopping method (Sharma, Bearden & Teel, 1983) reported more time pressure than subjects using the simulated catalog shopping method. In addition, participants reported having more confidence with using the simulated catalog shopping method.

Sharma, Bearden and Teel (1983) recognized that the simulation nature of their study made generalizations difficult. They did conclude however, that the unfamiliarity aspect associated with the simulated computer system, as compared to familiarity of catalog use, may be used as an explanation as to why the simulated electronic on-line shopping method was not viewed more positively than the simulated catalog shopping method.

Waites (1983) reviewed research conducted by the National Electronic Home Services Test and identified profiles of consumers expressing a desire to use computer information services for different features. Consumers who expressed an interest in information services, banking and electronic mail features tended to be college educated males under 50 years old, with high incomes. Consumers who expressed an interest in utilizing shopping options were identified as white collar workers who had a tendency to use catalogs, mail or telephone shopping and credit cards.

Mast, Oliver and Shim (1991) recently studied the differences between potential adopters and potential rejecters of electronic on-line in-home shopping. The researchers surveyed college students after they had witnessed
a simulation of the steps involved in an electronic on-line in-home shopping system using a computer information service. Subjects were asked to indicate whether they considered themselves as possibly utilizing electronic on-line in-home shopping systems. Based on the responses, characteristics of subjects expressing a willingness to adopt the innovation were compared to those displaying an unwillingness to adopt the innovation. Participants who were willing to adopt demonstrated a belief that the system could offer a variety of unique products, convenience, and an opportunity to gain information in order to make product comparisons. In addition, participants who reported a willingness to adopt electronic on-line in-home shopping, were more comfortable with the technology and more price conscious than those who did not report a willingness to adopt electronic on-line in-home shopping.

Electronic on-line in-home shopping adopters may be considered as a segment of computer adopters since this method of shopping requires the use of computers. Dickerson and Gentry (1983) hypothesized that a comparison of early innovation adopter characteristics including a high level of education, high income, and high occupation status identified from previous research could be used to identify potential computer adopters. A high level of education could enable computer adopters to have a better understanding of the functions of a computer and therefore perceive them as being less complex. A high income may be related to computer adopters in that the extent of financial risk perceived may be low since the cost of a computer system may be a relatively small portion of a household's disposable income. Finally, identification of high status
occupations may also identify potential computer adopters in that individuals employed in high status occupations may have more opportunities to work with computers and technology than potential non-adopters.

Dickerson and Gentry (1983) developed hypotheses based upon demographics, psychographics, and experiences to distinguish between adopters and non-adopters of PCs. They found psychographics to be the best indicator explaining group differences. The overall results demonstrated that adopters of PCs tended to be middle aged, owned their own residences, had higher levels of education and income, and have had more experience with computer related products and services when compared to non-adopters.

A comparison of early PC adopters and adopters of electronic on-line in-home shopping methods may reveal similar characteristics. A lack of intimidation with the use of computers may be observed in both PC adopters and electronic on-line in-home shopping adopters. This may be illustrated by PC adopters tendency to have had previous experience using high technology and computer related products and services (Dickerson & Gentry, 1983) while electronic on-line in-home shoppers frequently use a variety of videotex options and enjoy shopping by computer (Shim & Mahoney, 1991). In addition, both PC adopters and electronic on-line in-home shopping adopters tend to have innovator characteristics. Shim and Mahoney (1991) identified electronic on-line in-home shoppers as shopping innovators while Dickerson and Gentry (1983) identified PC adopters as being venturesome. Furthermore, since consumers who adopt electronic on-line in-home shopping methods are a
subset of those consumers who adopt a PC, it is reasonable to assume that they will share some characteristics.

Researchers of actual and potential electronic on-line in-home shoppers have revealed that electronic on-line in-home shoppers have characteristics which are similar to characteristics of other in-home shoppers. Characteristics of consumer profiles generated from other in-home shopping methods (e.g., catalog shopping) have consisted of consumers who are relatively young with a tendency to be venturesome and cosmopolitan. In addition, in-home shoppers tend to have high levels of income, education, and high occupational status. Characteristics of consumers using electronic on-line in-home shopping, or that have been identified as potential users, consist of consumers who are also relatively young, with high levels of income, education, and occupational status. However, electronic on-line in-home shopping methods have not been as widely accepted as general in-home shopping methods. Therefore, consumers who use electronic on-line in-home shopping methods may be different in a manner other than what the profiles of each segment identify.

**Electronic On-Line In-Home Shopping Advantages**

Marketers exploring possible future consumer shopping behavior have identified advantages specific to electronic on-line in-home shopping. These advantages have been promoted as reasons why consumers will adopt electronic on-line in-home shopping methods in the future. However, the advantages stated to be associated with electronic on-line in-home shopping may be related to other in-home shopping methods as well. Nevertheless,
marketers have proposed electronic on-line in-home shopping to have advantages not only similar to other in-home shopping methods, but to also provide consumers with more convenience and efficiency (Galanti, 1985).

A distinct advantage that has been identified with the use of electronic on-line in-home shopping systems is the ability of consumers to quickly obtain information in order to compare similar products (Galanti, 1985). Electronic on-line in-home shopping systems not only enable consumers to gather information to use for comparisons of products available through the electronic on-line shopping systems, but may also be used to make comparisons to products available from local retailers. In addition, consumers may be able to locate and select items that may not be readily available in retail outlets (Galanti, 1985).

Convenience and speed provided by electronic on-line in-home shopping systems are among the most outstanding relative advantages for consumers (Buckley & Long, 1990; Galanti, 1985; Urbany & Talarzyk, 1983). Therefore, electronic on-line in-home shopping may be beneficial for consumers who have little time available for shopping. Antonoff (1985) identified consumers of two population segments who may not have time to shop department stores as (a) those living in rural areas or as (b) urban professionals. He suggested that these consumers could use an electronic on-line or computer shopping system to look through a variety of products and the latest fashions, select merchandise, and place orders from home through the convenience of a keyboard.
One advantage that electronic on-line, as well as other, in-home shopping methods may have over in-store shopping methods is convenience, especially for consumers who experience a feeling of time scarcity which has become noticeable in today's society. In a survey of over 5,000 Americans (ages 18-64), thirty-two percent reported that they always felt rushed to do the things they had to do (Robinson, 1990). Compared to similar surveys conducted in 1970-1980, individuals who participated in the 1990 survey perceived a lack of time and reported spending more time working, involved in organizational activities and sports, and in child care. The length of time spent eating, sleeping, watching TV, and shopping for grocery items was reported as less in 1990 than the length of time spent in these activities in 1970-1980. In addition, the length of time spent doing housework, shopping for clothing and other products reported in 1990 did not significantly change from the length of time spent in these activities reported in 1970-1980 (Robinson, 1990).

Galanti (1985) stated that although not intended to replace traditional shopping methods, electronic on-line systems were meant to make shopping more convenient for the consumer. One way this may be done is "by shortening the time necessary to make a purchase" (p. 26). Even as far back as 1968, Weiss identified a shift of purchase behavior such that an increasing amount of the 'family dollar' was going to purchase service rather than merchandise. Therefore, the apparent overwhelming advantage of electronic on-line in-home shopping to consumers may be the ability to gather product information and shop in a convenient and efficient manner.
The advantages associated with electronic on-line in-home shopping systems are similar to the advantages of other in-home shopping methods such as convenience and time-saving advantages, especially in the reduction of the time and effort required for traditional or in-store shopping ("Behavior and Attitudes", 1987; Fisher, 1990; Galanti, 1985; Gallagher, 1988; McClure, 1988; Salmon, 1985; Schneiderman, 1988; Sharma, Bearden & Teel, 1983; Waites, 1983). One reason why in-home shopping is quicker and more convenient is because products can be ordered at any time (Buckley & Long, 1990). Additionally, consumers who shop in-home may decrease the length of time spent shopping by eliminating the need to transport goods, thus allowing time to be allocated in other ways.

Another motivation that may be related to time perceptions include lifestyle change. McClure (1988) suggested that an increased number of two-income families coupled with a wide variety of leisure activities and a greater emphasis placed on how time is used may result in consumers "with more money to spend and less time to spend it" (p. 13). Thus, time may be viewed as 'the next status symbol' (Weiss, 1968) resulting in a situation in which consumers attempt to save and control time (Waites, 1983). McClure (1988) predicted that electronic on-line shopping may be one way marketers could address this consumer's needs and offer an advantage of time savings and convenience in shopping.

Garretson and Mauser (1963) also recognized the role of time in consumers' shopping behavior. They predicted that the prosperous citizen of
the future would be accustomed to buying time rather than products. Consumers would be interested in providing themselves with as much free time as possible while the availability of a wide range of sophisticated products would be taken for granted. Therefore, the types of products sought and the shopping method selected, such as electronic on-line in-home shopping, would be those that would function to conserve time and provide convenience which would result in more time for leisure and pleasure.

McNair & May (1978) stated that in the future, consumers would seek ways to reduce the time required for daily living chores, such as the use of electronic on-line in-home shopping methods for shopping chores, in order to meet the needs resulting from the perception of time scarcity. Feldman and Hornik (1981) identified one way consumers may save time and achieve greater efficiency would be to reallocate the way time is currently spent. This has been demonstrated through the increased consumer demand for companies offering convenient, time-saving goods and services such as fast food restaurants and automated teller machines. Jones (1984) reported that the need to use time effectively has become important to consumers because of the complexity, cost, and labor intensity of daily living.

Due to the effects of lifestyle changes that have resulted in consumers demanding and utilizing convenience products and services, a change has occurred in the retail environment. The growth of general in-home shopping methods such as catalog shopping, have provided consumers a shopping alternative that may save time and energy. Time consuming tasks associated
with in-store shopping, such as traveling from store to store in order to locate products or to obtain information for comparisons, may be reduced. Electronic on-line in-home shopping methods offer consumers convenience and time saving features and enable them to locate desired products and information efficiently from home in a similar manner to other in-home shopping methods. Consumers may benefit from on-line product information being updated immediately providing them with accurate, up-to-date information on price as well as availability of products (Salmon, 1985). Thus, consumers may avoid wasting time through in-store product search of out-of-stock products. However, electronic on-line in-home shopping does not provide consumers with benefits beyond the benefits that may be obtained from other in-home shopping methods.

Electronic On-Line In-Home Shopping Disadvantages

An apparent disadvantage of electronic on-line in-home shopping systems has been the reliance on the PC (Moschis, Goldstucker & Stanley, 1985; Robins, 1990). Aspects of this reliance has been the cost of the hardware (PC and modem), and software (communication software, computer information system software that offers electronic on-line shopping), as well as limited services available in some geographic areas. In many cases, the only databases that could be assessed were those available locally or ones which required long distance telephone charges (Riggs, 1985).

In addition to the disadvantages associated with the reliance on PCs, most electronic on-line shopping systems charge a fee for the time spent on-
line. Thus, any time a consumer wished to browse through the available products, a fee was assessed. This may be viewed as detrimental when compared to catalog shopping in which a fee, if charged, is often minimal and is incurred only once for each copy. A recent change in the on-line charges for CompuServe's Electronic Mall may demonstrate this disadvantage. Within the past two years, charges for the time spent on-line were eliminated allowing consumers to browse through the Electronic Mall without cost.

A decrease in the number of merchants on-line in CompuServe's Electronic Mall had been observed prior to the elimination of on-line charges. For example, the total number of merchants listed in the Electronic Mall directory October, 1990 was 151 (with 6% being apparel merchants). By February, 1991 the total dropped to 137 (4% apparel merchants). However, the figures have reversed within the past few months. Total merchants listed in January, 1992 consisted of 167 (5% apparel), by February, 1992 the number increased by 72 to a total of 239 (6% apparel). The number of merchants on-line during this time may be an indication of how on-line charges may have hindered the use of the shopping option. CompuServe's recent elimination of on-line charges for the Electronic Mall may encourage subscribers to try this option and browse through the available products by providing a greater variety of merchants and free connect time.

Due to the dependence on a PC with which to access electronic on-line shopping systems, only a limited market segment has been reached. Schultz (1984) reported that 340,000 PCs were in U.S. homes in 1981. This number
increased to 2.5 million in 1982 (Schultz, 1984) and 6 million by 1983 (Waites, 1983). Research completed by Prodigy (Robins, 1990) indicated that by 1990, there were approximately ten million United States households which had the potential to access electronic on-line shopping systems through PC's located in the home or in the office with an annual growth rate predicted to be 25% to 30%. Robins (1990) indicated that 25% of all U.S. households had a PC and 25% of those PCs had a modem, consequently having a potential to access electronic on-line shopping systems. Thus, the reliance of electronic on-line in-home shopping on consumers owning, or having access to PCs with modems may illustrate the limited market segment that may be targeted.

There has been a growth in the number of consumers who have the potential to use electronic on-line shopping services (from 2.5 million in 1982 to 10 million in 1990). However, Robins (1990) reported that of the ten million households with the potential to access electronic on-line shopping systems, there are currently only approximately 1.5 million consumers who have subscribed to an electronic on-line in-home shopping service (e.g., CompuServe, GEnie, Prodigy).

An additional disadvantage of electronic on-line in-home shopping is that consumers may be unfamiliar with or uncomfortable using computers. They may perceive more of a risk in using an electronic on-line shopping system due to a lack of knowledge or skill than using other shopping methods (Harris, 1985). Another risk involved with in-home shopping, especially electronic on-line in-home shopping systems, has been identified as the lack of feeling, sight
and trialability of products (Ivey, 1988, Salmon, 1985). When questioned about this innovation in a news article ("Consumers plugging into new Electronic Mall", 1985), Sarah Ordover, commenting on CompuServe's Electronic Mall, stated that during their introduction, CompuServe concluded that merchandise offered on-line would have to be proven as direct-response types (e.g., books, magazines). Ordover stated that "since you don't actually see the merchandise being sold, we thought that people would never buy clothing or more expensive merchandise" (p. 74).

Information provided by CompuServe illustrated that after an initial test of the service, products other than those proven as direct-response types could be sold. However, this conclusion may have resulted from some of the companies offering merchandise on CompuServe's Electronic Mall recognizing the limitation of the lack of visual descriptions of some products. Those companies attempted to compensate for the visual deficiency by offering consumers free, or low cost, catalogs to supplement the on-line product description ("Consumers Plugging into new Electronic Mall", 1985; Robins, 1990). Additionally, CompuServe highlights select products by featuring pictures of them in a monthly user magazine. Therefore, when consumers are interested in product categories such as apparel or accessories, they may obtain illustrations of some of the products offered through the CompuServe magazine or catalogs provided by individual merchants. Thus, although companies have attempted to compensate for it, the visual deficiency of displaying merchandise on
electronic on-line in-home shopping systems that offer a text-only or basic graphic format is still considered a limitation to the system (Gatty, 1984).

Robins (1990) reported that some types of merchandise which work well for text-only systems (e.g., CompuServe) have been gift items, flowers, and food; computer-oriented items such as software packages; and items that are easily recognizable such as books and records. For systems that offer some graphics (e.g., Prodigy), staples and hard goods have sold well. Items which have not previously sold well include decorative items and apparel, possibly due to the lack of sight and/or touch of these items.

To encourage consumers to purchase through electronic on-line shopping systems, Joyce (1984) suggested that carrying basic brand merchandise would be beneficial. Consumers' perceived risk may be reduced somewhat by offering national brands (e.g., Levi's, Izod, Jockey) that are well known. However, as technology improves in the future and computer graphics begin to emulate television quality visuals, opportunities will expand for fashionable merchandise to be added to electronic on-line shopping systems.

Overall, electronic on-line in-home shopping methods, which allow consumers a way of shopping efficiently and conveniently, have been identified as an alternative shopping method providing consumers with relative advantages over traditional in-store shopping methods. Although several disadvantages have been identified with this method, marketers have nevertheless continued to anticipate an influence and acceptance of this shopping method. For example, the inability of current electronic on-line in-
home shopping systems to produce photograph-like quality illustrations may inhibit the use of the system for certain products such as apparel. However, as technology continues to advance in the future and photographic-like illustrations become available at a moderate cost, this disadvantage may be eliminated.

The disadvantages identified (reliance on PCs, costs, risks, limited product assortment, and consumers' unawareness of this shopping alternative) may be used to explain the differences in the extent to which electronic on-line in-home shopping systems have been accepted and used when compared to other in-home shopping methods. Consumers may also be unaware of the existence of electronic on-line in-home shopping systems and thus not know the benefits that could be amassed through these systems (Silverstein, 1989). Nevertheless, Silverstein (1989) predicted that electronic on-line in-home shopping will capture a noticeable portion of conventional retail and catalog market share within the next ten years (Silverstein, 1989).

Diffusion Theory

Diffusion theory offers a means by which the acceptance of electronic on-line in-home shopping can be understood. Diffusion has been defined by Rogers (1983) as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (p. 5). Diffusion research can be traced historically to several different disciplines including anthropology, sociology, education, marketing, and communication. Diffusion theory developed from an anthropological perspective (Rogers, 1962,
1983; Rogers & Shoemaker, 1971). This area of study involved the examination of whether similar ideas were developed independently in two different cultures or were developed in one culture and communicated to another. This research emphasized the social consequences of innovation on the exchange of ideas between cultures or societies, rather than the dissemination within a society.

One of the original areas of diffusion research was sociology. The French researcher, Tarde, pioneered in 1903, several ideas that had a significant influence on later researchers (Rogers, 1962, 1983; Rogers & Shoemaker, 1971). One of these ideas included the identification of an S-shaped diffusion curve of the adoption of innovations over time. At the introduction of an innovation, only a few individuals adopt, followed by greater numbers of adopters until the rate diminishes after the majority have adopted. Tarde also identified the process of imitation of opinion leaders and the influence of early adopters' characteristics of cosmopolitaness on acceptance of an innovation. Early sociological research tended to investigate the movement of an innovation through society or a geographic area (Rogers, 1962, 1983; Rogers & Shoemaker, 1971). Research emphasis was on innovations which would have a major contribution to societal changes (Rogers, 1962, 1983; Rogers & Shoemaker, 1971).

A study that became the classic diffusion study was conducted by Ryan and Gross (1943) in rural sociology. This research examined the diffusion of hybrid corn seed to Iowa farmers. Based on the research, the following were
identified: (a) a bell-shaped diffusion curve, (b) adopter categories of differences between early and late adopters of the hybrid seed, (c) stages in the adoption process (awareness, trial and adoption), and (d) influential sources of information between early adopters who relied on salesmen and late adopters who relied on neighbors. This study had an influence on the method and interpretation used in later research.

Although research has been conducted in other disciplines (e.g., marketing through the examination of the diffusion of new products, medical sociology through the examination of health information and practices), studies from anthropology and sociology have significantly influenced the topic of diffusion of innovations. Rogers (1962) recognized that information regarding diffusion research was not being communicated to other researchers since research in each discipline was being conducted in relative isolation from each other. Therefore, Rogers (1962) argued that because of the lack of "diffusion of diffusion research" (p. 39), an awareness of other disciplinary research was necessary.

By the mid 1960's, consensus regarding diffusion research was developing and the boundaries between disciplines were breaking down (Rogers, 1976; Rogers & Shoemaker, 1971). The main elements of the diffusion theory were recognized to include innovation, communication, time and social system. However, Rogers (1983) suggested that during the 1970's, diffusion research had begun to reach a point at which studies were becoming
stagnant in that the majority were similar with no new perspectives being introduced.

Criticisms of diffusion research were being raised through the 1970's. For example, an implied assumption of diffusion research was a pro-innovation bias (Rogers & Shoemaker, 1971). The implication was that an innovation "should be diffused and adopted by all members of a social system, that it should be diffused more rapidly, and that the innovation should be neither re-invented nor rejected" (Rogers, 1983, p. 92). In other words, all innovations were assumed to be 'good' and should be adopted. In addition, a major contribution made to the area of diffusion research during the 1970's was a common conceptual framework that was developed due to the increased multidisciplinary nature of diffusion research. Rogers (1983) recognized that diffusion and adoption of innovations involve social change, thus establishing an interest among social scientists from a variety of disciplines.

The diffusion theory consists of four elements: innovation, communication, social system and time. In order to gain a clear understanding of the theory of diffusion, it is necessary to examine these elements that produce the process.

**Innovation**

The first element, innovation, has been described as an idea that is perceived as being new (Rogers, 1962, 1983; Rogers & Shoemaker, 1971). This does not necessarily consist of new knowledge, rather a subjective perceived newness or perception of being different.
Innovations have been described as fitting into three classifications: discontinuous, dynamic continuous, and continuous (Robertson, 1971). Discontinuous innovations are those which require a change in behavior or establishment of new patterns of behavior in order to adopt (e.g., microcomputers). Dynamic continuous innovations require a change in behavior patterns, but do not need substantial adjustments (e.g., microcomputer mouse, modem, electronic on-line shopping). Continuous innovations do not require a change or modification in behavior. Often, these innovations are a modification of an existing product used to extend a product line, position the product, or an attempt to alleviate consumer boredom. Overall, most innovations fall into this category (e.g., software packages: DOS 3.0, 4.0; Wordstar; WordPerfect 5.0, 5.1; Microsoft Word).

The degree to which consumers must change or adjust their behavior may be related to the length of time necessary for a majority of the target population to accept different types of innovations. Robertson (1971) acknowledged that many studies based on Rogers' (1962, 1983; Rogers & Shoemaker, 1971) diffusion theory were typically technological innovations which were classified as discontinuous and may be associated with a slower diffusion rate. For example, Ryan and Gross's (1948) study of the diffusion of the innovation, hybrid seed corn demonstrates this. The length of time for the diffusion process of this discontinuous innovation to reach all possible buyers took fourteen years (Canton, 1977). However, most innovations actually fit into the continuous or dynamic continuous classifications which are faster to diffuse.
because they are compatible with consumers' behavior patterns (Robinson, 1971).

Consumers who have had experience with observing or using PCs at work or school may react to electronic on-line in-home shopping methods as dynamic continuous innovations in which a change in shopping behavior may be required. For these consumers, change in behavior may not be substantial in that behavior patterns in using a PC may already be established. On the other hand, consumers who have had no prior experience with PCs would require a substantial change in behavior in order to adopt electronic on-line in-home shopping systems. Therefore, the length of time necessary for consumers to adopt an innovation such as electronic on-line in-home shopping may be related to consumers' perceptions of the type of innovation and the amount of behavior change required to adopt.

**Communication**

Communication, the second element of the diffusion process has been defined as the process by which individuals share information in order to reach a mutual understanding (Rogers, 1962, 1983; Rogers & Shoemaker, 1971). Communication also may be defined as a transfer of ideas, opinions, or emotions, as well as information. For the process of diffusion to commence, the innovation must be experienced by the consumer, or the consumer must be made aware of it. The process occurs when an individual with experience or knowledge about an innovation expresses that information to another individual who is unaware of the innovation.
Communication of innovations may originate from a variety of sources. Innovations are originally communicated by the creator of the idea. However, consumers may receive information from personal sources (e.g., family, friends) or impersonal sources (e.g., mass media, advertisements, government publications) (Rogers, 1962, 1983; Rogers & Shoemaker, 1981). Additionally, information of a commercial or profit basis may be expressed by either personal or impersonal sources. The way this information is received and interpreted may influence the rate of diffusion. If the information is perceived as unbiased from the source (e.g., personal source with no commercial basis), adoption may occur faster than if the intention is suspect.

Communication may also occur through a two-step model in which information from an impersonal source (e.g., mass media) is received by consumers who are regarded as opinion leaders (individuals who exert influence are looked to for advice) who then communicate the information to the rest of their reference groups. Oren and Schwartz (1988) reported that consumers adopt products at different rates due to the degree to which they are influenced by different types or sources of communication. Therefore, the more innovative or discontinuous a product, the more consumers may rely on personal sources or those they consider to be knowledgeable. Thus, consumers receiving information concerning electronic on-line in-home shopping (a discontinuous or dynamic continuous innovation) may rely on personal sources rather than impersonal or media sources.
Social System

Rogers (1962, 1983; Rogers & Shoemaker, 1971) identified a further element of the diffusion process as the social system. The social system may be defined as the interaction among a group of people who commonly associate with each other. This group includes individuals who are interrelated in some manner and engage in joint problem-solving behavior. These groups may occur in formal or informal settings and consist of familial relations, employment groups, those who share interests, or common living situations. In essence, these people have similar characteristics based upon comparable lifestyles.

Adoption decisions within a social system may range along a continuum. At one end of the continuum, adoption decisions are made with little influence from other members of the social system (Rogers, 1962). Although information may be obtained from others, the decision is reached independently (e.g., method of shopping). In this case, the individual is the decision making unit, rather than the social system group making up the decision making unit. This process has been referred to as an optional innovation-decision (Rogers, 1983) in that information gathered from others is optional.

The next step along the continuum, collective innovation-decision (Rogers, 1983) involves the acceptance of the social system group. Only once the group adopts can an individual adopt the innovation (Rogers, 1962). This process often occurs by consensus. However, once a decision has been
reached, all members must conform to that decision (e.g., computer network system).

The authority innovation-decision, the last point on the continuum involves a group decision. This decision is often made by a small number of the social system group who possess authority (power, status, expertise) that forces the rest of the group to accept the decision. In this case, an individual has very little or no influence on the decision, s/he just implements it (Rogers, 1962, 1983). For example, all employees of a company must use the computer and software systems the company has identified.

The social system may influence the rate of diffusion of an innovation in several ways. Generally, the authority innovation-decision will result in the fastest rate of adoption since individual members do not make independent decisions, instead, the decision is implemented. The optional innovation-decision, in which individuals make independent decisions, will allow for a quicker diffusion rate than the collective innovation-decision in which a group consensus must be reached. Thus, the interrelationship between members of a social system may influence the adoption of an innovation such as electronic on-line in-home shopping. Since the decision to adopt electronic on-line in-home shopping is often an independent, optional-innovation decision, the importance placed on others' views, especially those who have similar interests and attitudes toward the use of technology, may influence the rate of adoption.
Time

The length of time taken by members of a social system to adopt an innovation is what Rogers (1962, 1983; Rogers & Shoemaker, 1971) identified as the last element of diffusion. Included in this element are the mental processes individuals go through once they have been alerted to the innovation's existence. This process was initially referred to as the adoption process (Rogers, 1962) and later as the decision-making process (Rogers, 1983). The adoption process is made up of several steps: awareness, interest, evaluation, trial and adoption. The diffusion process refers to the spread of an innovation within or between social systems. The adoption process differs from the diffusion process in that it incorporates individuals' acceptance of a new idea.

Also included in the element of time are consumer characteristic categories (innovators, early adopters, early majority, late majority, laggards) which have been developed in order to account for differences in the length of time needed by individual consumers to adopt an innovation. Attributes of an innovation and consumers' attitudes toward the importance of these attributes were also identified by Rogers (1962; 1983) as affecting the rate of diffusion. These attributes include relative advantage, compatibility, complexity, trialability, and observability.

Decision Making Process

In the awareness stage consumers are alerted to the existence of a new product. Through this step, however, the information remains incomplete as to
the specific features of the product. The interest step occurs once the consumer decides the innovation may be applicable to his/her situation. It is through this step that consumers decide whether the innovation could offer significant benefits in order to engage in an active search for additional information. Once the consumer has allocated time to search for additional information, evaluation takes place. It is at this step that consumers reach decisions as to the amount of risk they are willing to take in adopting the innovation. Perceived risk may be described in five dimensions (Solomon, 1992): (a) monetary risk: financial loss if the innovation does not perform satisfactorily; (b) functional risk: prospect that the innovation will not meet performance expectations; (c) physical risk: possibility of physical harm resulting from the use of the innovation; (d) psychological risk: discomfort resulting from the realization that a poor choice was made to adopt the innovation; and (e) social risk: potential loss of self-esteem, self confidence, or respect from relevant others caused by their disapproval of the use of the innovation.

If the innovation is still being considered for adoption, the next step is trial. During this phase, if possible, the innovation is tested on a limited scale. The final step is the adoption of the innovation. This is when the decision is made to use or continue to use the innovation. Adoption, however, is not necessarily the first purchase of an innovation but rather the decision to continue using the product following its trial.

The way in which consumers perceive an innovation such as electronic on-line in-home shopping, throughout the adoption process may influence the
rate of adoption. Reasons why consumers are not utilizing electronic on-line in-home shopping methods may be related to the adoption process. Once awareness has occurred, consumers may perceive electronic on-line in-home shopping methods as: not applicable to their lifestyle or living situation, and not offering significant benefits to justify an active search. Additionally, perceived risks, including monetary, functional, physical, psychological, and social, may be perceived as too high for consumers to be willing to adopt electronic on-line in-home shopping.

Rogers (1983) expanded the 1962 adoption process model to include not only the decision-making aspect of adoption/rejection, but to also include the antecedents and consequences of the process (e.g., information-seeking and information-processing activities). The revised process, the innovation-decision process, includes actions and choices over time through which an innovation is evaluated and a decision reached. These five stages consist of: knowledge, persuasion, decision, implementation, and confirmation.

An individual who has been exposed to the existence of an innovation and who has gained a basic understanding of how it functions is involved in the knowledge stage of the innovation-decision process (Rogers, 1983). Knowledge may include information necessary to use the innovations properly and information needed to deal with the principles underlying how the innovation works.

Through the persuasion stage, favorable/unfavorable attitudes are formed as the consumer becomes increasingly psychologically involved with
the innovation. It is during this stage that information is actively sought with importance placed on where the information was sought, what message was received, and how the information was interpreted. The development of a general perception of the innovation occurs at this stage and is based on the innovation's perceived attributes of relative advantage, compatibility, and complexity.

Once attitudes and perceptions have been formed, the consumer participates in activities that will lead to the decision stage in which the choice of adopting/rejecting the innovation is reached. Due to the uncertainty involved with the adoption of innovations, trial was included in this stage. The implementation stage occurs when the innovation is put into use. Prior to this stage, the process occurred mentally. However, implementation involves overt behavior change. The final stage, confirmation, occurs when information is sought as a reinforcement after a decision has been made.

Consumer Characteristics

The innovation-decision process and the adoption process are used by consumers when adopting an innovation. The time needed for this process differs by individual. Rogers (1962, 1983), Rogers and Shoemaker (1971), and Robinson (1971) have employed a classification system of adopter categories that identify consumers based on their relative time of adoption of an innovation within a social system. The basis of this classification is adopters' innovativeness or "degree to which an individual...is relatively earlier in adopting new ideas than other members of a system" (Rogers, 1983, p. 268).
Based on a normal curve, the following classification system was developed including: innovators, early adopters, early majority, late majority, and laggards (Rogers, 1962, 1983; Rogers & Shoemaker, 1971).

Innovators are individuals who are the first to adopt a new product or service. This category consists of approximately 2.5% of the target population. Robertson and Kennedy (1973) reported that characteristics of innovators tend to include venturesomeness, privilegedness, social mobility, social integration, and cosmopoliteness. Venturesome individuals are those who are eager to try new ideas. Privilegedness refers to consumers' financial standing when compared to others in the social system. It is through this financial standing that innovators are able to purchase the newest products and are able to recover from a poor decision.

Innovator characteristics of social mobility, social integration and cosmopoliteness refer to the way individuals fit into the social system. Social mobility may refer to movement on a social status hierarchy or may indicate a willingness to change geographically or personally such as going back to school or changing careers. Social integration refers to involvement in community affairs or the degree to which individuals may be active in public life. Finally, cosmopoliteness refers to an orientation beyond the local community which may lead to an interest in new experiences. Thus, innovators may be more open to new ideas and change than consumers in other adopter categories. Innovators also tend to have the ability to understand and apply complex, technical knowledge as well as having financial resources available
to absorb losses experienced from unprofitable innovations (Robinson & Kennedy, 1968).

As the time to adopt lengthens, additional classifications of consumers include early adopters who make up approximately 13.5% of the population. Consumers within this population segment are more integrated into the local social system than innovators are. They tend to have the highest degree of opinion leadership and are respected and sought out for advice.

The early majority segment, approximately 34% of the population, adopt innovations just prior to the average member of the society. This segment makes an important link between members of society in legitimizing the innovation. They deliberate longer than innovators and early adopters until the decision to adopt is reached.

The late majority (approximately 34% of the population) is characterized by a tendency to be skeptical about innovations. Adoption occurs just after the average society member adopts the innovation. This segment often adopts innovations as a result of economic necessity or social pressures. The final category, laggards, making up approximately 16% of the population, consists of individual who are very traditional and reluctant to change through the adoption of an innovation.

Through an extensive review of diffusion research, Rogers (1962, 1983) developed generalizations illustrating characteristics of early innovation adopters compared to late innovation adopters. Early adopters tended to (a) have higher social status and incomes, (b) be more rational, intelligent, and
cosmopolite, (c) be less dogmatic, and (d) have had a greater exposure to and more importance placed on personal and impersonal communication sources than late adopters. However, an examination of the characteristic, age, over time revealed inconsistent results. In 1962, Rogers indicated that early adopters tended to be younger than late adopters. By 1983, age was not considered significant. Thus, Rogers (1983) stated that age and innovativeness may not be related directly, but may be influenced instead by other factors such as the type of innovation.

Rogers' (1983) summary of diffusion research illustrated an increase in the number of characteristics being used to identify early adopters of innovations. Characteristics that have been included consist of: (a) tendency to use credit, (b) empathy, (c) achievement motivation, (d) social participation, and (e) ability to deal with abstract and risks.

**Innovation Attributes**

Rogers (1962) identified five innovation attributes (relative advantage, compatibility, complexity, trialability, and observability) which he posits affect the rate of diffusion. This was later expanded in Rogers (1983) research to include not only the five factors, but the type of innovation-decision (optional, collective, authority), the communication channel (personal, impersonal), and the nature of the social system (social norms, degree of interconnectedness which referred to the system's self-generated pressure toward adoption resulting in an increasing degree of influence on individuals as more people adopt), as noted above.
Relative Advantage. Relative advantage is the extent to which an innovation is perceived to be advantageous over the product or idea that it supersedes. The more consumers perceive an innovation to be advantageous, the more rapid the rate of adoption may be. In addition, the more significant the benefit, the more consumers may talk and pay attention to it, thus the faster it may diffuse.

Consumers' perception of the importance of time-efficient shopping methods has been identified by Berry (1990) who stated that "in the 1990s, a store that wastes people's time will be committing competitive suicide" (p. 32). In addition, Feldman and Hornik (1981) reported that consumers are becoming more sensitive to the time cost for an average shopping trip. Therefore, a company that wants to increase sales may do so through the addition of in-store equipment or techniques, as well as in-home methods, that will reduce shopping time. As consumers' perceptions of time scarcity continues or increases, more ways of using time efficiently will be necessary to meet this demand. Thus, in-home shopping, such as electronic on-line in-home shopping, may be perceived as a method of shopping that could provide a relative advantage over other shopping methods.

Compatibility. The extent to which an innovation is perceived to fit into consumers' lifestyle and is consistent with existing values, past experiences, and needs is the innovation's compatibility characteristic. A study comparing simulated electronic on-line and catalog shopping methods (Sharma, Bearden, & Teel, 1983) was designed to explore consumer reactions to the technology
and its influence on consumer behavior. The results indicated that the simulated catalog method offered greater comparison shopping opportunities than the simulated electronic on-line shopping method. This result was attributed to familiarity with the media. Most subjects had used a catalog prior to the study, but only a few were familiar with an electronic on-line system. The length of time spent in reviewing and evaluating product information was comparable for the simulated electronic on-line shopping and catalog methods (Sharma, Bearden & Teel, 1983). However, subjects using the simulated electronic on-line system reported feelings of time pressure. Most of the results were attributed to the subjects' unfamiliarity with the electronic on-line method.

Unfamiliarity with an innovation may influence consumers' judgements and they may be hesitant to adopt an innovation that does not easily fit, or is perceived to be incompatible with their experiences, values and lifestyle. Researchers (Rogers, 1962, 1983; Rogers & Shoemaker, 1971; Sharma, Bearden & Teel, 1983) speculated that if the adoption of an innovation requires consumers to change their values or lifestyles, the rate of adoption will be slower. However, if the adoption of an innovation does not require values or social norms to be revised, adoption may occur more rapidly.

In the case of the adoption of a discontinuous or dynamic continuous innovation such as electronic on-line in-home shopping, adopters could be required to change their lifestyle behavior in order to use the system. Even if consumers have an opportunity to try electronic on-line in-home shopping (e.g., free subscription to a computer information service such as CompuServe or
Prodigy), they may be unwilling to alter their shopping values and behavior in order to adopt electronic on-line in-home shopping.

**Complexity.** Complexity is the perceived difficulty of use or understanding of an innovation. The more complicated consumers perceive the innovation to be, the less likely they will be to adopt. Therefore, adoption of an innovation may be more rapid when perceived as being easy to use than when perceived as complex.

Electronic on-line in-home shopping methods allow consumers to make purchases through an electronic device, often a PC and modem. The reliance on the PC and modem to access electronic on-line in-home shopping services may be perceived as a very complex procedure, especially for consumers who are unfamiliar with computers. In addition, consumers who do not understand the process of electronic on-line in-home shopping; such as how it is used, the merchandise available, or uncertainty about returns/exchanges; may perceive this shopping method as more complex than other shopping methods. Thus, the more complex electronic on-line in-home shopping systems are perceived to be, the slower the rate of adoption may be.

**Trialability.** Similarly, trialability (referred to as divisibility, Rogers, 1962) of an innovation may enable the consumer to become more comfortable with it prior to complete adoption, thus reducing the degree of risk perceived. Uncertainty associated with the newness of an innovation may lead to perceived risks based upon the lack of predictability of the performance of an innovation. A lack of information available to the consumer is often associated
with a new product, especially those classified as discontinuous innovations. Therefore, consumers may be more reluctant to adopt due to uncertainty about the product's performance or effectiveness. In addition, the performance objectives for products vary in importance to different consumers. Oren and Schwartz (1988) suggested that "risk-averse consumers delay adoption and may benefit from additional information about performance" (p. 273). Trialability allows consumers to experience an innovation on a small scale or limited basis.

Consumers may perceive risk from the use of electronic on-line in-home shopping systems in several ways. Solomon (1992) identified five dimensions of perceived risk including monetary, functional, physical, psychological, and social. In order to use an electronic on-line in-home shopping method, consumers must purchase a PC and modem (or similar hardware), communications software, as well as subscribe to a computer information service such as CompuServe or Prodigy. Thus, a monetary commitment is required for consumers wanting to adopt this shopping method. Consumers who do not possess or have access to a PC and modem may perceive more monetary risk in adopting electronic on-line in-home shopping methods than consumers who possess or have access to a PC and modem. Therefore, consumers who have an opportunity to try electronic on-line in-home shopping on a limited basis, prior to making a financial commitment, may reduce the degree of perceived monetary risk. Similarly, trial prior to adoption may enable consumers to reach realistic expectations as to the performance of electronic on-line in-home shopping systems, reducing perceived functional risk.
Not only may consumers perceive risk associated with the performance of electronic on-line in-home shopping, but personal or internal risk may be perceived. Although the possibility of physical harm resulting from the use of electronic on-line in-home shopping methods is minimal, psychological risk (associated with the possibility of making a poor choice by deciding to adopt the innovation) or social risk (associated with disapproval of others) may occur. Thus, prior trial of electronic on-line in-home shopping methods may enable consumers to eliminate or reduce their uncertainty associated with the performance and expectations of this shopping method. In addition, the psychological and social implications resulting from the adoption of electronic on-line in-home shopping methods may be determined.

**Observability.** The final characteristic affecting the rate of adoption identified by Rogers (1983) was the observability of an innovation (referred to as communicability, Rogers, 1962). Observability refers to the innovation's degree of visibility to other consumers. If the results or benefits of adopting an innovation are observed by others, peer discussions may be stimulated which may lead to a greater rate of adoption. Electronic on-line in-home shopping is an innovation which may not be readily observed unless the system is accessed from work or other locations that are visible to other consumers. Although consumers may become aware of this innovation from sources such as advertisements, the way the system may be used is not observed. Thus, consumers who do not observe electronic on-line in-home shopping methods being used may not adopt the innovations as rapidly as consumer who observe
electronic on-line in-home shopping methods being used. Overall, innovation attributes that are perceived as being relatively advantageous, compatible, trialable, observable, and less complex will be adopted more rapidly than innovations not perceived in this manner (e.g., Hurt & Hibbard, 1989; Rogers, 1962, 1983; Rogers & Shoemaker, 1971).

Hurt and Hibbard (1989) examined consumers' perceptions of the innovation attributes (relative advantage, compatibility, complexity, trialability, and observability) for microcomputers. A self report measurement scale including the five innovation attributes as well as items designed to measure perceived expense of the innovation was developed. Consumers' perceptions of the influence of innovations attributes on the adoption decision were identified.

Undergraduate students were surveyed to determine their perceptions of the characteristics of microcomputers as information innovations. The results indicated that trialability and observability were not perceived as separate factors as identified by Rogers (1962, 1983) and Rogers and Shoemaker (1971). Hurt and Hibbard (1989) suggested two possibilities for this: (a) survey items may not have clearly discriminated between the factors, or (b) potential adopters may treat them as a single concept. In addition, a relative advantage characteristic did not emerge as a factor. It was proposed that computers have been available in some form long enough that consumers have become familiarized with their relative advantage. Furthermore, "it may well be the case that relative advantage is not a pre-adoption characteristic, which systematically
structures perceptions of a microcomputer innovation, but rather a post adoption perception structured entirely by previous use of the innovation" (p. 218).

Hurt and Hibbard (1989) suggested that additional research is necessary to examine innovation characteristics prior to adoption as well as post-adoption to assess consumers' perceptions of innovation adoption. However, innovation attributes such as compatibility, complexity, trialability, and observability may be used by potential adopters to reach a decision to adopt.

Summary

Electronic on-line in-home shopping is a relatively new innovation. Consumers may access a computer information service (e.g., CompuServe or Prodigy) from home or work through a PC with a modem to obtain product information and make purchases. This process therefore, may offer consumers the advantages of convenience and speed in shopping. Although electronic on-line in-home shopping methods are similar to other in-home shopping method in offering consumers convenience, electronic on-line in-home shopping methods have not been as widely accepted as other in-home shopping methods.

Diffusion theory may be used to provide the framework for determining potential explanations as to why electronic on-line in-home shopping has not been as widely accepted as marketers have expected. Thus, the elements of diffusion theory (innovation, communication, social system, and time) may be used to identify reasons for the lack of adoption of this shopping method. The element of innovation may be examined through consumers' perceptions of the
newness of electronic on-line in-home shopping, as well as the degree to which
behavior must be changed or altered in order to adopt. Consumers who
perceive electronic on-line in-home shopping to be very new and requiring a
substantial behavior change may be reluctant to adopt the innovation.

Communication is necessary in order to make consumers aware of an
innovation. Consumers receive information from a variety of sources, and
depending upon their perception of the communication source, the adoption of
electronic on-line in-home shopping may be influenced. Similarly, consumers
interact and communicate within a group of people who share some common
interest (e.g. family, employment). This group interaction is referred to as the
social system. Therefore, adoption of electronic on-line in-home shopping may
be influenced by members in the reference or social group.

The element of time refers to the length of time from awareness to
adoption of an innovation. There are several factors such as the decision
making process, consumer characteristics, and innovation attributes, that may
influence the rate at which an innovation is adopted. Consumers may use
different decision-making processes and the speed at which this process is
completed will have an influence on the rate of adoption. In addition,
consumers who have been classified as adopting products prior to others tend
to be venturesome and cosmopolite. Thus, consumers with similar
characteristics may tend to adopt electronic on-line in-home shopping methods
more rapidly than consumers who do not have these characteristics. Finally,
the rate of adoption may be influenced by innovation attributes. Overall,
depending on consumers' perceptions of these attributes, innovations that are considered as being relative advantageous, compatible, trialable, observable, and less complex may be adopted more rapidly than other innovations. Thus, diffusion theory may provide a framework in which to explore why electronic on-line in-home shopping of apparel products has not been widely accepted.

The research questions for this study include:

Innovation:

1. Do consumers view shopping for apparel by electronic on-line in-home methods as an innovation?
2. Do consumers view shopping for apparel by electronic on-line in-home methods as fitting into their behavior patterns?

Communication:

3. Are consumers aware of the availability of electronic on-line in-home shopping methods for apparel information search or purchase?
4. How have consumers gained information about electronic on-line in-home shopping methods?
5. How do consumers view their information sources?

Social system:

6. Do consumers discuss apparel shopping methods, such as electronic on-line in-home shopping, among their reference groups?
7. Are consumers influenced by the opinions of their reference group members in relation to the use of electronic on-line in-home shopping methods for apparel information search or purchase?

Time:

8. Do consumers view shopping for apparel by electronic on-line in-home methods as having a relative advantage over other shopping methods?

9. Do consumers view shopping for apparel by electronic on-line in-home methods as compatible with their lifestyle?

10. Do consumers view shopping for apparel by electronic on-line in-home methods as being easy (difficult) to use?

11. Have consumers had an opportunity to try electronic on-line in-home shopping methods?

12. Have consumers had an opportunity to observe electronic on-line in-home shopping methods being used?
CHAPTER III

METHODOLOGY

The purpose of this research was to investigate consumers' attitudes regarding the use of electronic on-line in-home shopping systems for apparel information search or purchase. From this investigation, potential explanations were sought for the reason that the adoption rate for electronic on-line in-home shopping methods has not been as rapid as some marketers have expected. Therefore, an exploratory research method was employed. In order to provide the framework for this research, information on the methodology has been divided into four sections: (a) focus group research, (b) procedure, (c) data analysis, and (d) reliability.

Focus Group Research

This study utilized an exploratory, qualitative research method. Focus group interviews were used to gain an understanding of consumers' attitudes toward electronic on-line in-home shopping based on the elements of diffusion theory (innovation, communication, social system, and time). Ary, Jacob and Razavieh (1985) identified exploratory research as a method that enables researchers to describe and interpret what currently exists. In addition, Goldman and McDonald (1987) stated that the goal of qualitative research is "to
explore in depth, the feelings and beliefs people hold, and to learn how those feelings shape overt behavior" (p. 7).

Descriptive research allows for the examination of how people feel (Axelrod, 1975) and "from where those attitudes arise, how they are structured, and what broader significance they may have for consumer behavior" (Goldman & McDonald, 1987, p. 8). It also allows consumers to express their practices, beliefs, or attitudes in an open manner rather than being provided with preselected choices from which to choose as in some survey research. This process permits participants to communicate their attitudes toward realistic situations and experiences in which they react and behave. Thus, through participants' discussions in focus groups, goals, expectations, needs and desires may be described. A focus group method may, therefore, allow for the examination of consumers' attitudes toward electronic on-line in-home shopping for apparel.

**Focus Groups.** In collecting data through the focus group interview method, a moderator facilitates a small, homogeneous group (6-12 participants) discussion in a relaxed, non-threatening atmosphere about a selected topic (Bers, 1989). Bellenger, Bernhardt and Goldstucker (1979) suggested that homogeneous groups should be used "based on the assumption that individuals who share a common problem will be more willing to talk about it amid the security of others sharing the problem" (p. 7).

Focus groups allow for several procedures to be used and results to be obtained that are relatively unique to qualitative research: (a) utilization of
participants' terminology, (b) direct interaction between moderator and participants, and (c) interaction between participants. The use of participants' terminology may enable researchers to identify subtle expressions or meanings associated with an innovation or product. Although this process is often advantageous, especially since clarification may be pursued, there are limitations as well. By recording participants' words, summary and interpretation may be difficult due to the open-ended nature of the questions posed and the unique way individuals may respond.

Another aspect unique to the focus group method of data collection is the direct interaction between moderator and participants. This interaction is advantageous to exploratory research in that its flexible nature provides an opportunity for questions and/or answers to be clarified. Furthermore, participants' responses may be probed to acquire a wider range of in-depth information than information acquired from other data collection techniques. On the other hand, the interaction between participants and moderator may introduce a bias into the study. The moderator may knowingly or unknowingly provide participants with feedback indicating what type of response or answer is desirable. The moderator bias may be controlled through the use of a semi-structured interview procedure in which the moderator selects questions from a predetermined list. Training of the moderator and practice prior to the data collection may assist in eliminating bias. Additionally, a non-participating group member or observer may be used to record gestures and nonverbal behavior
and note any feedback which may interject bias (Stewart and Shamdasani, 1990).

Stewart and Shamdasani (1990) identified several advantages of the interaction among participants that occurs during focus groups: synergism, bandwagon effect, spontaneity, and stimulation. Synergism, new ideas that develop that would not have been thought of individually, may be produced through participant interaction. The bandwagon effect refers to the situation in which one individual makes a comment that leads to a chain of responses from the other participants. In a focus group setting, often no one individual is required to answer any given question, therefore participants may respond at any time providing spontaneity. Finally, stimulation may occur when participants become entrenched in the topic, excitement may develop and they become eager to express ideas and feelings.

Disadvantages associated with the interaction among participants include limitations of the generalizability of the results. The synergism, bandwagon, spontaneity, and stimulation effects are based on responses that are dependent upon the mix of consumers participating in the focus group, rather than being independent thoughts (Stewart and Shamdasani, 1990). Therefore, each focus group is unique and may not be replicated exactly. Through the use of more than one focus group, the effect of these limitations may be reduced. The primary goal however, is to gain insight and understanding. Thus, the use of focus group interviews is an appropriate data collection method.
However, even though the use of focus group interviews have many limitations, they are nevertheless valuable. The major advantage of focus group research is the examination of consumers' attitudes. This may be enhanced by enabling additional, in-depth information to be gathered through the interaction between participants and moderator.

**Group configuration.** Researchers (Goldman & McDonald, 1987) have identified the configuration of focus groups to include participants who are representative of the target market for the product under investigation. It has been suggested that the configuration of focus groups should consist of individuals with relatively homogeneous characteristics. The degree of homogeneity depends on the specific research questions involved. Goldman and McDonald (1987) stated that participants should be separated when their differences may "carry strong implications of social, economic, or professional status" (p. 29). These differences may discourage honesty and impede participation leading to biased information and misrepresentation of the participants. Therefore, focus groups may be separated by variables such as age, sex, socioeconomic status, occupational status, race, ethnicity, personality traits (orientation toward group behavior), or expertise depending on the research questions.

An additional consideration in the configuration of focus groups is the identification of potential participants to be excluded from taking part in the study. This exclusion is based on the likelihood that the information contributed may be distorted in some manner. For example, individuals who have
participants frequently in focus group studies or those connected with marketing research, advertising, or involved in the industry may bias the information and the contribution of other participants in a focus group.

Therefore, the homogeneity of focus groups may be desirable in order for the participants to be compatible leading toward effective group performance (Stewart & Shamdasani, 1990). Biases that may occur in relatively heterogeneous groups are (a) dominance of participants who consider themselves experts, (b) inhibition of other participants due to uncomfortable feelings with other participants, and (c) lack of participation due to a lack of perceived commonality among participants. However, the decision as to the homogeneity of group participants should be based on the objectives of the study (Goldman and McDonald, 1987).

A consensus concerning the number of participants per focus group as ranging from six to twelve may be found in many research publications (Bellenger, Bernhardt & Goldstucker, 1979; Goldman & McDonald, 1987; Stewart & Shamdasani, 1990; Wells, 1979). Fewer than six participants limits the amount of information that may be obtained while adding pressure for participation. On the other hand, twelve or more participants may become difficult for the moderator to manage. Additionally, in large groups, each individual may not have an equal opportunity to participate.

The ideal number of focus groups per research study has not been determined. However, Goldman and McDonald (1987) stated that the number of focus groups necessary may be roughly related to the number of variables
under investigation. However, Wells (1979) stated that research topics may be addressed adequately with four focus groups, or no more than six to eight groups. After this point, the addition of more groups does not add a significant amount of new information.

Moderator. The moderator's role in focus groups is important to the information obtained. The moderator should facilitate, allowing group members to interact, and avoid the potential to conduct separate interviews within the group setting.

Bellenger, Bernhardt and Goldstucker (1979) identified several personal characteristics beneficial for an effective moderator. These characteristics include kindness, firmness, and permissiveness. Stewart and Shamdasani (1990) also identified personal traits associated with good qualitative moderators. Individuals who are genuinely interested in what participants have to say, can express their own thoughts and feelings, are enthusiastic and spontaneous, have a sense of humor, are emphatic, are insightful about people, and are flexible tend to be successful moderators. In addition, moderators should be able to maintain the groups' direction, allow the participants to disclose information on their own, stimulate participants' involvement and offer encouragement and sensitivity.

Location. There has been some disagreement among researchers as to the most effective type of location in which focus groups should be conducted. Often, the facilities selected are either conference rooms in which participants sit around a large conference table, or a living room in which participants are
seated in a relative circle. Each type of setting offers distinct advantages. The advantages of the conference room setting include (a) providing a business-like situation which may encourage alertness to the topic under discussion, (b) providing a closer proximity to other participants seated around a conference table which may facilitate social interaction, (c) providing an elimination of one possible source of discomfort relating to leg positions of participants, and (d) providing a psychological barrier in which the conference table serves as a protection of personal space. Advantages of the living room setting include providing an informal environment which may "foster a more relaxed, less guarded social climate" (Goldman & McDonald, 1987, p. 46).

Generally, it becomes the preference of the researcher as to the type of setting to use depending on the topic under discussion, the participants, and access to adequate facilities. Although a consensus as to the type of setting for conducting focus groups has not been reached, the importance of the location is to make participants comfortable in order to facilitate discussion. Overall, a setting which allows participants easy access, provides comfortable personal space or distance from others, and provides a seating arrangement in which other participants are easily seen is considered adequate.

Procedure

Five focus groups were conducted for this study. Based on the assumption that individuals who associate with each other will tend to be similar in background or have some common interest, participants selected included groups of women from women's church groups, women's clubs, professional
women's associations, and community groups. The use of these intact social
groups permitted participants who were believed to be relatively homogeneous
to be included. Women were chosen as subjects for the study because since
they tend to do the largest percentage of apparel shopping. The size of the
groups ranged from five to ten participants with and average of 6.8 per focus
group.

Potential participants were contacted by telephone to solicit their
participation in a focus group discussion of shopping methods. Intact women's
social groups were used with the focus group being conducted during each
group's normal meeting time.

Each focus group meeting took place in a home/living room setting or
conference room setting depending on the typical meeting location for each
social group. Participants were arranged in a circle in order to provide a
comfortable atmosphere to encourage participation. A moderator trained in the
topic for discussion, focus group procedures, and the use of nondirective
questioning conducted each focus group. Each focus group lasted
approximately 1 - 1 1/2 hours and was audio tape recorded.

Participants were informed at the start of each focus group that the topic
to be discussed included their opinions on shopping methods, and that the
moderator's role would be one of a facilitator. The participants were also
advised that the discussion would be audio taped in order to assist the
researcher in recalling the information provided. Additionally, the names of the
participants would be changed in the transcripts of the discussion to guarantee anonymity.

In order to assure that the same topics and aspects of in-home shopping methods were tapped, semi-structured questions were used (Appendix A). This type of questioning allowed for the flexibility of the focus group to occur while maintaining consistency among groups. A pilot focus group was conducted to test the appropriateness and quality of the questions and to encourage participation. Following the focus group discussion, each participant was asked to complete a short survey requesting demographic information (Appendix B).

**Data Analysis**

The data obtained from the focus group interviews were transcribed. Three judges were trained in the open coding method of grounded theory (Strauss & Corbin, 1990) and were provided with diffusion theory information. This provided a method of coding which served to lessen the effect of possible biases from a single judge. The method involves the "process of breaking down, examining, comparing, conceptualizing, and categorizing data" (Strauss & Corbin, 1990, p. 61). The first step in this process consisted of conceptualizing or breaking apart a paragraph or phrase and identifying the ideas expressed. Once an idea had been identified, it was labeled by answering questions such as: what is this, and what does it represent. Content units labeled were not isolated from the context of the interview narrative. Instead, the concepts were identified by making notes on the protocol and then recording the label, line number, and page number on a coding form.
After the judges coded the data, the researcher examined the open coding results for the presence of the elements of diffusion theory (innovation, communication, social system, and time). Since the concepts were identified within the context of the narrative, the data did not fit into mutually exclusive categories. Sometimes one sentence or paragraph contained more than one concept.

The category innovation was identified from coded results related to participants' discussion of the newness of electronic on-line in-home shopping and the degree or amount of change in behavior that would be necessary in order to adopt the shopping method. Communication, which refers to the process in which information is shared about an innovation, was identified from coded results related to participants' discussion as to the source of information acquired concerning electronic on-line in-home shopping, as well as the importance attributed to the source of information and how it has or will be used. The social system, the group of people with whom the participants commonly associate, was identified from coded results related to participants' discussion as to the influence the reference group has had, or may have, on participants' decision to adopt electronic on-line in-home shopping methods.

The last element of diffusion theory, time, refers to the length of time members of a social system take to adopt an innovation. Participants' attitudes toward electronic on-line in-home shopping attributes that influence the length of time members of a social system take to adopt an innovation were classified into the following factors: relative advantage, compatibility, complexity,
trialability, and observability. Relative advantage was identified from coded results related to participants’ discussions in which attitudes expressed were concerned with electronic on-line in-home shopping method as having (or lacking) an edge or advantage over other shopping methods.

Participants’ attitudes regarding the compatibility of electronic on-line in-home shopping were identified through coded results related to expressions of how the innovation fits into their lifestyles. Complexity is the perceived difficulty in understanding or using electronic on-line in-home shopping. Therefore, coded results related to statements which revealed an attitude of difficulty or ease of using electronic on-line in-home shopping methods were identified as complexity.

Coded results relating to participants’ attitudes toward having an opportunity to try electronic on-line in-home shopping were classified as the factor trialability. In addition, coded statements that expressed trialability as a way to reduce risk, gain knowledge, and become comfortable with computers and/or electronic on-line in-home shopping were classified in the same manner.

The final factor, observability is the degree of visibility participants’ have experienced with electronic on-line in-home shopping systems. Statements coded observability included participants’ identification of impersonal sources (e.g., advertisement) or personal sources (e.g., family, friends) of visual information such as an advertisement presentation or a personal demonstration. Therefore, elements of diffusion were determined present if participants expressed the aspects noted above.
Reliability

Reliability in qualitative research methods focuses on the degree to which individuals who judge the protocol agree on their interpretation. In this research, it was important for judges to reach similar decisions about the concepts expressed in the protocol.

The protocol of this study was derived from five focus group interviews in order to examine women’s attitudes toward electronic on-line in-home shopping methods for apparel information search or purchase. In many studies in which the content of the narrative is analyzed, content units are placed in one, and only one category (mutually exclusive). Therefore, intercoder reliability may be calculated. Since the protocol statements in the present research were analyzed in the context of the narrative and more than one concept expressed in a statement could have been judged to fit into more than one category, intercoder reliability could not be computed from a formula. However, since it is important for judges to agree on the identification of concepts expressed in the protocol, only concepts for which all judges agreed were included in the analysis.

Agreement between the three judges was determined from examination of their identification of the same ideas from the same part of the protocol text. Based upon the open coding method of the grounded theory, judges identified the ideas participants conveyed by labeling the concept. The degree of agreement was determined from a visual comparison of the judges’ labeled concepts and sections of the protocol text identified. Agreement was identified
when concepts were labeled using similar words or when consumers expressed essentially the same meaning. For example, a participant stated "I buy all sorts of gift warp and gift cards from Current, all the time, and, I buy clothes too, from Land’s End. … I don’t think I’d buy a dress, but blouses and things like that, that don’t actually have to be fitted, belts". One judge labeled this statement as “merchandise bought through in-home methods”. Judge 2 labeled this same statement as “types of products bought when shopping from home”. Judge 3 labeled the statement “types of in-home purchases”. Therefore, although the words used by the judges to identify the concept were different, the meaning was essentially the same. If uncertainty existed concerning the concept labeled, judges were asked for clarification. Examples of protocol statements that judges agreed upon may be found in Appendix C.
CHAPTER IV

RESULTS

The purpose of this study was to investigate consumers’ attitudes regarding the use of electronic on-line in-home shopping methods for apparel information search or apparel purchase. It was anticipated that potential explanations might be identified as to why the adoption rate for this method of shopping was not as rapid as predicted by marketers or why this method was not used to the extent other in-home shopping methods were used. The diffusion theory (Rogers, 1962; 1983; Rogers & Shoemaker, 1971) was used to investigate the adoption process of electronic on-line in-home shopping methods.

The diffusion theory is an examination process through which an innovation, such as electronic on-line in-home shopping, is communicated among members of a social system over a period of time (Rogers, 1983). Therefore, consumers’ attitudes were examined in connection with the elements of the diffusion theory. The results of this research will be divided into three major sections. These sections include: (a) sample characteristics, (b) findings, and (c) summary.
Sample Characteristics

For this study, five focus group interviews were conducted to examine women's attitudes toward electronic on-line in-home shopping for apparel information search or purchase. The characteristics of each group will be discussed separately then summarized as a whole.

Focus Group 1

Five consumers participated in focus group 1. Participants in this focus group ranged in age from 41 to 71 years with the average age being approximately 62 years (Table 1). Four participants (80%) were married. The number of years married ranged from 36 to 48 years with the average being 42 years. One participant (20%) was widowed (Table 2). Two of the participants (40%) reported having children living at home. In each case, one child, 18 years or older, was present in the home (Table 3).

Participants in focus group 1 described their occupations in the following way: two (40%) were retired, one (20%) was a homemaker, one (20%) was in a service position, and one (20%) was in a professional position (Table 4). Four of the participants (80%) had completed at least some college, and two (40%) had obtained a masters or doctorate degree (Table 5). Participants’ income levels ranged from $10,000 to $49,999. Two participants (40%) reported having incomes in the $25,000 to $39,999 range and two participants (40%) reported having incomes in the $40,000 to $54,999 range. One participant (20%) indicated an income in the $10,000 to $24,999 range (Table 6). Thus, participants in focus group 1 were relatively homogeneous (Table 7).
TABLE 1

AGE OF PARTICIPANTS AND SPOUSES

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TABLE 2

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PERCENT OF TOTAL

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### TABLE 4

**OCCUPATION**

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*The percentages may not equal 100. Participants were able to check more than one category, especially in the situation of part-time employment.*
TABLE 4 (continued)

OCCUPATION*

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<tr>
<th>FOCUS GROUP</th>
<th>CRAFT/FOREMAN</th>
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<th>LABORER/FARMER</th>
<th>HOMEMAKER</th>
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<th>RETIRED</th>
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<tbody>
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TOTAL 34  0   1   1   2   0   1   0   14  0   1   0   5   7

PERCENT OF TOTAL  0   3   6   0   3   0   41  0   3   0   15  21

* The percentages may not equal 100. Participants were able to check more than one category, especially in the situation of part-time employment.
### TABLE 5

**EDUCATION**

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TABLE 5 (continued)

EDUCATION

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<th>MASTERS</th>
<th>DOCTORATE</th>
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PERCENT OF TOTAL

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<td>$25 - 39.999</td>
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TABLE 7
HOMOGENEITY OF FOCUS GROUPS

<table>
<thead>
<tr>
<th>FOCUS GROUP</th>
<th>AGE</th>
<th>MARTIAL STATUS</th>
<th>OCCUPATION</th>
<th>EDUCATION</th>
<th>INCOME</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Range = 41-71</td>
<td>80% Married</td>
<td>40% Retired</td>
<td>80% Completed At Least Some College</td>
<td>40% = $25-$39,999</td>
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<tr>
<td></td>
<td>Average = 62</td>
<td>20% Widowed</td>
<td>20% Homemaker</td>
<td></td>
<td>40% = $40-$54,999</td>
</tr>
<tr>
<td></td>
<td>(60% = 70-71 years old)</td>
<td></td>
<td>40% Employed (Service/Professional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Range = 56-81</td>
<td>71% Married</td>
<td>43% Retired</td>
<td>100% Completed At Least Some College</td>
<td>43% = $55-$69,999</td>
</tr>
<tr>
<td></td>
<td>Average = 66</td>
<td>14% Widowed</td>
<td>29% Homemaker</td>
<td></td>
<td>29% = $70-$84,999</td>
</tr>
<tr>
<td></td>
<td>(58% = 50-60 years old; 42% = 75+ years old)</td>
<td></td>
<td>43% Employed (Management/Professional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Range = 30-59</td>
<td>86% Married</td>
<td>43% Homemaker</td>
<td>85% Completed At Least Some College</td>
<td>43% = $55-$69,999</td>
</tr>
<tr>
<td></td>
<td>Average = 36</td>
<td></td>
<td>43% Employed (Professional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(85% = 30-35 years old)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Range = 29-38</td>
<td>100% Married</td>
<td>50% Homemaker</td>
<td>70% Completed At Least Some College</td>
<td>60% = $40-$54,999</td>
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<tr>
<td></td>
<td>Average = 34</td>
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<tr>
<td></td>
<td>(90% = 30-38 years old)</td>
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</tr>
<tr>
<td>5</td>
<td>Range = 24-48</td>
<td>100% Married</td>
<td>60% Homemaker</td>
<td>100% Completed At Least Some College</td>
<td>20% = $40-$54,999</td>
</tr>
<tr>
<td></td>
<td>Average = 38</td>
<td></td>
<td></td>
<td></td>
<td>40% = $55-$69,999</td>
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<tr>
<td></td>
<td>(40% = 44-48 years old; 40% = 36-38 years old)</td>
<td></td>
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<td></td>
<td>20% = $60-$84,999</td>
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</table>
Spouses of participants in focus group 1 were an average of 71 years of age, ranging from 63 to 80 years (Table 1). One hundred percent of the spouses were retired (Table 4) and 50% had obtained a masters or doctorate degree (Table 5).

Information concerning participants’ access to and use of computer equipment at home and at work were assessed. Three of the participants (60%) reported owning a computer but did not own a modem (Table 8). Two participants (67%) used their computers daily, and one (33%) used her computer 3 - 4 times per week. Two of the participants (40%) reported having access to a computer at work. One hundred percent of these participants used a computer daily at work.

**Focus Group 2**

Seven consumers participated in focus group 2. Participants in this focus group ranged in age from 56 to 81 years with the average age being approximately 66 years (Table 1). Five participants (71%) were married. The number of years married ranged from 36 to 56 years with the average being approximately 41 years. One participant (14%) was widowed (Table 2). One participant (14%) reported having one child age 6 - 11 years old living at home (Table 3).

Participants in focus group 2 described their occupations in the following way: three (43%) were retired, two (29%) were homemakers, two (29%) were in professional positions, and one (14%) was in a managerial position (Table 4).
TABLE 8
COMPUTER INFORMATION

| FOCUS GROUP | OWN COMPUTER n | USE PER WEEK | OWN MODEM | # | % | # | % | # | % | # | % | # | % |
|-------------|----------------|--------------|-----------|---|---|---|---|---|---|---|---|---|---|---|
| 1           | 5              | 3            | 60        |   |   | 2 | 67 | 1 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2           | 7              | 1            | 14        |   |   | 0 | 0 | 0 | 0 | 1 | 10| 0 | 0 | 0 | 0 |
| 3           | 7              | 4            | 57        |   |   | 0 | 0 | 0 | 0 | 2 | 50| 2 | 50| 2 | 50|
| 4           | 10             | 3            | 30        |   |   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 100|
| 5           | 5              | 2            | 40        |   |   | 1 | 50| 1 | 50| 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL       | 34             | 13           | 3         | 2 | 5 | 2 | 5 | 5 |
| PERCENT OF COMPUTER OWNERS | 23 | 15 | 39 | 15 | 39 |
| PERCENT OF TOTAL | 38 | 9 | 6 | 15 | 6 | 15 |
TABLE 8 (continued)

COMPUTER INFORMATION

<table>
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<th>ACCESS AT WORK</th>
<th>USE PER WEEK</th>
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<td>TOTAL</td>
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</table>

PERCENT OF THOSE WITH ACCESS

| PERCENT | 59 | 0 | 23 | 35 |

PERCENT OF TOTAL

| PERCENT | 50 | 29 | 0 | 9 | 18 |
### TABLE 8 (continued)

#### COMPUTER INFORMATION

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</table>
All of the participants (100%) had completed at least some college, while four (57%) had obtained a four year or masters degree (Table 5). Participants' income levels ranged from $10,000 to $84,999. Three of the participants (43%) reported having incomes in the $55,000 to $69,999 range (29%) and $70,000 to $84,999 range (14%). One participant (14%) reported having an income in the $10,000 to $24,999 range (Table 6). Thus, participants in focus group 2 were relatively homogeneous (Table 7).

Spouses of participants in focus group 2 were an average of 61 years of age, ranging from 55 to 75 years (Table 1). Forty percent of the spouses were retired, 40% were employed in clerical/sales positions, 20% were employed in managerial positions, and 20% were employed in professional positions (Table 4). One hundred percent had obtained a four year (40%) or masters degree (60%) (Table 5).

Information concerning participants' access to and use of computer equipment at home and at work were assessed. One participant (14%) reported owning a computer but not owning a modem (Table 8). The extent of computer use by this participant consisted of using the computer 1 - 2 times per week. Three of the participants (43%) reported having access to a computer at work. One participant (33%) used a computer 1 - 3 times per week at work, and two (67%) did not use a computer at work.

Focus Group 3

Seven consumers participated in focus group 3. Participants in this focus group ranged in age from 30 to 59 years with the average age being 36 years.
Six participants (86%) were married. The number of years married ranged from 6 to 37 years with the average being approximately 11 years. One participant (14%) had never been married, and one (14%) was widowed (Table 2). Five of the participants (71%) reported having children 0 - 5 years living at home, and one reported having children 18 years or older living at home (Table 3).

Participants in focus group 3 described their occupations in the following way: three (43%) were in professional positions, three (43%) were homemakers, and one (14%) was in a clerical/sales position (Table 4). Six of the participants (85%) had completed at least some college, and one (14%) of them had obtained an associates degree, one (14%) had obtained a four-year degree, and two (29%) had obtained a masters degree (Table 5). Participants' income levels ranged from $10,000 to $69,999. Three participants (43%) reported having incomes in the $55,000 - $69,999 range. The remainder of the participants were varied in income with one participant (14%) in the $40,000 - $54,999 range, one (14%) in the $25,000 - $39,999 range, and one (14%) in the $10,000 - $24,999 range (Table 6). Thus, participants in focus group 3 were relatively homogeneous (Table 7).

Spouses of participants in focus group 3 were an average of 36 years of age, ranging from 28 to 63 years (Table 1). Sixty seven percent of the spouses were employed in professional positions, and 33% were employed in managerial positions (Table 4). Sixty seven percent had obtained a four year degree (Table 5).
Information concerning participants’ access to and use of computer equipment at home and at work were assessed. Four of the participants (57%) reported owning a computer with two (50%) of those individuals also owning a modem (Table 8). Two participants (50%) used their computers 1 - 2 times per week, and two (50%) did not use their computers. Four of the participants (57%) reported having access to a computer at work. One participant (25%) used a computer daily at work, one (25%) used a computer 1 - 2 times per week at work, and two (50%) did not use a computer at work.

Focus Group 4

Ten consumers participated in focus group 4. Participants in this focus group ranged in age from 29 to 38 years with the average age being 34 years (Table 1). All of the participants (100%) were married. The number of years married ranged from 5 to 20 years with the average being approximately 12 years (Table 2). Seven of the participants (70%) reported having children 0 - 5 years living at home, four (40%) reported having children 6 - 11 years living at home, three (30%) reported having children 12 - 17 years living at home, and two (20%) reported having children 18 years or older living at home (Table 3).

Participants of focus group 4 described their occupations in the following way: five (50%) were homemakers, two (20%) were in clerical/sales positions, and two (20%) were in professional positions (Table 4). Four of the participants (40%) had completed high school, three (30%) had completed some college, two (20%) had obtained an associates degree, and two (20%) had obtained a four year or masters degree (Table 5). Participants’ income levels ranged from
$25,000 to $69,999. Six participants (60%) reported having incomes in the $40,000 - $54,999 range, two (20%) in the $55,000 - $69,999 range, and two (20%) in the $25,000 - $39,999 range (Table 6). Thus, participants in focus group 4 were relatively homogeneous (Table 7).

Spouses of participants in focus group 4 were an average of approximately 39 years of age, ranging from 27 to 48 years (Table 1). Seventy percent of the spouses were employed in professional positions, 20% were employed in managerial positions, 20% were employed in craft/foreman positions, and 10% were employed in clerical/sales positions (Table 4). One hundred percent had completed some college and 60% of them had obtained a four year or masters degree (Table 5).

Information concerning participants' access to and use of computer equipment at home and at work were assessed. Three of the participants (30%) reported owning a computer with all of those individuals also owning a modem (Table 8). Additionally, all of those participants reported using their computers 1 - 2 times per week. Seven of the participants (70%) reported having access to a computer at work. Five participants (71%) used a computer daily at work, and one (14%) used a computer 1 - 2 times per week at work.

Focus Group 5

Five consumers participated in focus group 5. Participants in this focus group ranged in age from 24 to 48 years with the average age being 38 years (Table 1). All of the participants (100%) were married. The number of years married ranged from 2 to 23 years with the average being approximately 15
years (Table 2). One of the participants (20%) reported having children 0 - 5 years living at home, three (60%) reported having children 6 - 11 years living at home, and three reported having children 12 - 17 years living at home (Table 3).

Participants of focus group 5 described their occupations in the following way: three (60%) were homemakers, one (20%) was in a professional position, and one (20%) was a student (Table 4). Three of the participants (60%) had obtained a four year degree, one (20%) had obtained a doctorate degree, and one (20%) had completed some college (Table 5). Participants' income levels ranged from $40,000 to $149,999. Two participants (40%) reported having incomes in the $55,000 to $69,999 range, one (20%) in the $40,000 to $54,999 range, one (20%) in the $70,000 to $84,999 range, and one (20%) in the $100,000 to $149,999 range (Table 6). Participants in focus group 5 were relatively homogeneous in terms of education (Table 7). However, compared to the other focus groups, participants in focus group 5 were the least homogeneous.

Spouses of participants in focus group 5 were an average of 39 years of age, ranging from 27 to 48 years (Table 1). Eighty percent of the spouses were employed in professional positions, and 20% were employed in craft/foreman positions (Table 4). One hundred percent had completed some college and 80% of them had obtained a masters or doctorate degree (Table 5).

Information concerning participants' access to and use of computer equipment at home and at work were assessed. Two of the participants (40%) reported owning a computer but did not own a modem (Table 8). One
participant (50%) used her computer daily, and one (50%) used her computer 3 - 4 times per week. Two of the participants (40%) reported having access to a computer at work. However, none of them used a computer at work.

Summary

The total number of focus group participants consisted of 34 Caucasian females. The number of participants per focus group ranged from five to ten with the average being 6.8 participants per group. The age of participants ranged from 24 to 81 years. The average age of the participants was 46 years (Table 1). The average age range differed among the focus groups. Participants in focus groups 1 and 2 averaged in the 60 year old age range. Participants in focus groups 3, 4 and 5 averaged in the 30 year old age range.

Eighty eight percent of participants were married an average of 21 years (Table 2). Thirty eight percent of the participants reported having children between the ages of 0 - 5 years living at home, 24% reported having children between the ages of 6 - 11 years living at home, 18% reported having children between the ages of 12 - 17 years living at home, and 15% reported having children 18 years and older living at home (Table 3).

Participants reported their occupations as homemaker (41%), professional (26%), retired (15%), clerical/sales (12%), service (6%), laborer/farmer (3%), and student (3%) (Table 4). Thirty two percent stated they were employed full-time and 26% stated they were employed part-time. Seventy five percent of the participants had completed at least some college, while over 40% had obtained a four year degree or higher degree (Table 5). Sixty five
percent of participants’ incomes were above $40,000 including 10 participants (29%) in the $40,000 - $54,999 range, nine (27%) in the $55,000 to $69,999 range, two (6%) in the $70,000 to $84,999 range, and one (3%) in the $100,000 to $149,999 range. Eight participants (24%) reported incomes under $40,000: five participants (15%) in the $25,000 to $39,999 range, and three (9%) in the $10,000 to $24,999 range (Table 6).

Spouses of participants were an average of 45 years of age (Table 1). Fifty five percent of the spouses were employed as professionals (Table 4) and many (81%) had obtained a four year or higher degree (Table 5).

Information concerning participants’ access to and use of computer equipment at home and at work were assessed. Thirteen participants (38%) reported owning a computer with five participants (15% of all participants or 39% of those owning computers) reported owning a modem (Table 8). Twenty three percent of the participants used their computers daily, 15% used their computers 3 - 4 times per week, 39% used their computers 1 - 2 times per week, and 15% did not use their computers. Seventeen participants (50%) reported having access to a computer at work. The extent of computer use at work was discussed. Ten participants (59%) used the computer daily at work, 23% used the computer 1 - 2 times per week at work, and 35% did not use the computer at work. Overall, 18 participants (53%) reported having access to a computer at home or at work.

The configuration of the focus groups conducted for this study consisted of individuals with relatively homogeneous characteristics of age, marital status,
income, education, occupation, and number of children at home. Although consumers participating in this study were generally heterogenous (e.g., age ranged from 24 to 81 years), within each focus group they were relatively homogeneous (Table 7). The heterogeneity of participants overall permitted a wide range of opinions to be expressed while the need for homogeneity within groups (to encourage participation and honesty in discussions) was met.

The number of participants per focus group in the present study averaged 6.8. Researchers (e.g., Stewart & Shamdasani, 1990) suggest that focus groups with fewer than six participants might limit the amount of information that may be obtained and add pressure for participation. Additionally, focus groups with 12 or more participants may become difficult to manage. The number of participants per focus group in the present study ranged from five to ten. Although two of the focus groups consisted of five participants each, neither an added pressure nor a limitation as to the amount of information disclosed was noted. Participants within the focus groups knew each other since they belonged to the same social group. Therefore, it was assumed that five participants (rather than six as a minimum) would not add undue pressure or inhibit participation.

The total number of groups conducted per research study is another factor to be considered. Five focus groups were conducted for the present study. Wells (1979) stated than an adequate number of focus groups for a research study range from four to six. Five focus groups were selected for the present study to adequately address the research objectives. Overall, the focus
groups conducted for the present study met the criteria identified by researchers (e.g., Stewart & Shamdasani, 1990) for group configuration.

Findings

The purpose of this research was to investigate consumers' attitudes toward the use of electronic on-line in-home shopping methods for apparel information search or purchase. Therefore, the primary objective was to examine the use of diffusion theory (innovation, communication, social system, and time) in order to understand the reasons consumers are not utilizing electronic on-line in-home shopping methods for apparel to the same extent as other in-home shopping methods. Thus, the findings will be discussed in relation to the specific objectives for this study.

Objective 1 - Innovation

Objective 1 was developed to explore consumers' attitudes concerning the newness and degree to which behavior must be adjusted in order to use electronic on-line in-home shopping methods for apparel. Two research questions were generated in order to obtain an answer to this question.

Do consumers view shopping for apparel by electronic on-line in-home methods as an innovation? Participants did not directly express an attitude concerning the newness of electronic on-line in-home shopping methods. When asked about this method, many participants were curious about what was included in the method, how the method worked, and what products and brand names were carried on-line through this method revealing that little was known about this shopping method. Questions that were asked included: "...can you
shop for anything?", "...so it [would] be ... a company would hook up with this computer system then would tell you what they offered?", "...on the computer would you, by any chance, have a picture on the screen of what you're going to buy, of what you want?", "...are there specific companies that are on this, I mean, would you know who you were buying from? ... would I know where that was coming from?", "...would a computer have a print out that you could look at?", and "...do you actually get pictures of the item or do you just get descriptions of the item?".

**Do consumers view shopping for apparel by electronic on-line in-home methods compatible with their behavior patterns?** Participants expressed a familiarity with using general in-home shopping methods. However, in order to use electronic on-line in-home shopping methods, consumers must be familiar with using computers. Fifty three percent of the participants reported having access to computers at home or at work and 15% reported owning a modem (Table 7). However, only participants with modems had access to electronic on-line in-home shopping while 53% had access to computers in order to practice and become familiar with the technology. Nevertheless, over 50% of the participants who had access to computers used the technology 1 - 2 times per week or less.

Attitudes expressed during the focus group interviews indicated that participants felt their behavior patterns would have to be adjusted in order to use electronic on-line in-home shopping, but generally did not indicate the degree of change necessary. One participant who reported a high level of
computer knowledge would not consider using the electronic on-line in-home shopping method: "I spend at least eight hours a day at a computer anyway, and I don't get out enough.... I really, at this stage, do not use [electronic on-line in-home shopping] and I don't want to spend the time, I'd rather do something else".

On the other hand, participants who reported having little to no computer knowledge would not consider computer use. They stated that they would not be interested in using electronic on-line in-home shopping methods due to the time and effort it would take to learn how to use it. "I don't know anything about computers, I would have to learn how to run a computer before". Other participants stated "I can't do everything I want to right now. Rather than to tackle something new, I just can't handle it right now", "...although I do sometimes use catalogs ... I would not be inclined to use computers [in order to shop]", and "...I don't own a computer and decided that at my stage of life, that was not something I was going to convert to".

Participants expressed a familiarity with general types of in-home shopping methods such as catalogs, direct mail, home parties, and TV shopping networks. Familiarity with general in-home shopping methods may be used to identify current shopping behaviors. The shopping method, home parties, such as Tupperware, was reported being used over a relatively long period of time. One participant remarked that she had been involved with home parties over 20 years. Catalogs were also identified as being used for a relatively long period of time. When questioned as to how long this shopping method had been used,
Participants responded, “...since I had money”, “...since I could use the phone”, or “...since I had kids”.

Participants often related the number of children present in the home to their catalog usage. Generally, the more children present at younger ages, the more catalog shopping was reported being used. One participant stated “I can speak for all of us ... another reason we do catalogs is, by the time we get all our kids to bed, you know ... we can’t go to the store”. Another participant remarked “not much open at ten”. In responding to the inquiry concerning the length of time catalogs have been used, one participant stated “more since my kids have been born. I don’t have the time to go to the mall and spend 5 hours ... I just don’t have the time to do that ... that’s a luxury”. In addition, other participants stated “I used to shop a lot out of the catalog when the children were smaller and I couldn’t just go whenever I wanted. So, I go through the catalog to see what was there” and “...I find that when my kids were little I shopped a lot more out of catalogs ... because I couldn’t really go shopping, without them, and it was a lot easier to shop catalogs ... you go a couple of times with a two-year-old and the catalog looks really attractive”. This perception was summarized by a participant who stated “the more children we have the more we order”.

Conclusions. Through the focus group discussions, participants generally reported a lack of knowledge or information about electronic on-line in-home shopping methods. Although electronic on-line in-home shopping methods have been available since 1985, only two of the 34 participants stated
they had an awareness, but not a knowledge or understanding, of this shopping method.

The diffusion theory element innovation may be identified from participants’ expressions regarding the newness of electronic on-line in-home shopping. Participants reported a lack of previous knowledge about this shopping method. Thus, the presence of the diffusion theory element innovation was identified. In addition, participants’ curiosity and questions about this method may be a further indication of participants’ view of the newness of this method.

Participants generally expressed a familiarity with using a variety of in-home shopping methods (e.g., catalogs) which served to save time, especially if young children were present. Electronic on-line in-home shopping methods have an in-home shopping component that participants may be familiar with based on their use of other in-home shopping methods. However, the use of computers is a necessary component in using electronic on-line in-home shopping methods. Less than half of the participants who had access used the computer more than 1 - 2 times per week. This may be an indication that even though computers are available to 50% of the participants, they are generally not being used. Thus, participants’ attitudes toward the behavior adjustments needed in order to use electronic on-line in-home shopping methods may have been viewed as substantial.

Participants who did not have access to a computer either at home or at work may have perceived a substantial change in behavior necessary in order
to adopt electronic on-line in-home shopping methods. Participants did not
directly express this conclusion. However, statements concerning the
reluctance to use electronic on-line in-home shopping methods due to the need
to learn and become more comfortable with using computers may be an indirect
indication of attitudes toward the need to adjust behavior. Therefore, the
electronic on-line in-home shopping method may be considered an innovation
for this group of participants.

**Objective 2 - Communication**

Objective 2 was developed to explore consumers’ attitudes toward the
source of information acquired about electronic on-line in-home shopping
methods for apparel. Three research questions were generated in order to
obtain an answer to this objective.

*Are consumers aware of the availability of electronic on-line in-home
shopping methods for apparel information search or purchase?* Participants in
all focus groups reported an awareness of catalogs/direct mail, TV shopping
(e.g., The Home Shopping Network, QVC), telephone solicitation, and home
parties (e.g., Tupperware) for shopping from the home. Participants in four of
the five focus groups also identified door-to-door sales as an in-home shopping
method. Other in-home shopping methods reported included book/record/CD
clubs, newspaper ads, school/church/community fund raisers, and telephone
shopping or using the telephone for price checks on specific products or for
ordering merchandise.
Only two participants, in separate focus groups, reported having an awareness of the existence of electronic on-line in-home shopping methods for apparel information search or purchase. One participant discussed her awareness of electronic on-line in-home shopping methods by stating "I know there is a lot of different ways to shop and a lot of them are by computer. I think I have heard of ways where you can get a ... you can buy into certain kinds of programs or something where, I mean, I wouldn't be surprised where they have, you can get into it and have like a catalog in your computer. I think. I think I have heard of something like that, I'm not sure. I think I saw it on TV. They were just talking about new things that were coming out on computers and this is one of the options, and they also talked about encyclopedias and how you can buy an encyclopedia into your computer, or you can buy into a system. You have to pay a monthly fee or something to have this encyclopedia computer type thing on-line."

Another participant aware of electronic on-line in-home shopping methods stated that "there is a type of shopping called CompuServe, or whatever it is, you can pull up ... there are other things besides shopping on it, this is some kind of program that you buy into every month, it's like a minimal type of thing. There are several things on it for free which is the shopping part's free. Where you can pull it up on your computer and it will ... they'll have like different categories, like, gifts under $25, kids gifts, clothing or whatever, and you pull up one of those categories and it will give you descriptions and prices for several of these items".
How have consumers gained information about electronic on-line in-home shopping methods? After giving participants a brief description of electronic on-line in-home shopping methods, one to two participants in two of the five focus groups remembered some of the terms or company names. Although not recalling the actual source of information, participants in two of the focus groups stated that their knowledge of this shopping method was in relation to its future impact in that it would become the way of shopping in the future. For example, one participant stated that electronic on-line in-home shopping "is the way of the future, that we are going to do everything ... on computers". Another participant stated that "it is my understanding that that is how we are going to do everything ... groceries, practically everything". Another participant mentioned an awareness of electronic on-line in-home shopping methods “through these homes of tomorrow where your computer’s going to be hooked up...”.

Participants identified media sources as a method of obtaining information about electronic on-line in-home shopping. Participants reported seeing TV ads and newspaper ads in which the convenience and options of electronic on-line in-home shopping methods were discussed. One participant recalled receiving information about Prodigy's computer information service from an advertisement which portrayed the service as having "a lot of components. For instance, a kid can learn his ... you know, you can call up all kinds of information for his lessons, and the dad can do his banking, and the
mother can do her shopping ... I think I saw that advertised ... but I totally forgot about it".

Information regarding electronic on-line in-home shopping methods was gained from personal sources as well as media sources. One participant recognized the name CompuServe from people at work. She stated that she didn't pay attention to what the service was because she was not computer literate. Other participants reported a familiarity with the term CompuServe but did not know what it meant. In describing this situation, one participant stated “Ted talks about this kind of stuff, you know, where you can tie into stuff. I think Fred uses bulletin boards and stuff like that to cross by, and a lot of it is computer equipment that they are talking about, but I know that you can buy other stuff, that is the extent of my knowledge”. Another participant reported that “our friend across the street is really into computers and he always has their telephone line tied up ... he's on bulletin boards and talks to other people ... he would shop for computer stuff”.

How do consumers view their information sources? Those participants who reported an awareness and could recall the information source did not provide much insight into how the source was viewed or its importance. When asked about the importance of electronic on-line in-home shopping information sources, one participant summed up her views by stating that “it just wasn’t anything that made me curious”.

Conclusions. Participants were generally aware of a variety of in-home shopping methods. However, only two participants reported an awareness of
electronic on-line in-home shopping methods. These individuals stated that although aware of the existence of this shopping method, they had not given attention to it.

After being given a description, participants in two focus groups recalled advertisements they had seen regarding electronic on-line in-home shopping methods. The information sources identified by participants consisted of impersonal sources such as TV advertising, or personal sources such as information from colleagues. Since participants reported being uninterested in giving attention to information about electronic on-line in-home shopping methods, the importance of different information sources could not be determined.

The communication element of the diffusion theory (Rogers, 1983) refers to the process by which an individual who has knowledge or experience with an innovation shares that information with an individual who is unaware of the innovation. The participants in this study were generally unaware of electronic on-line in-home shopping methods. Therefore, the diffusion theory element, communication, was generally not present for the participants of this study.

Objective 3 - Social System

Objective 3 was developed to explore consumers' attitudes concerning the influence of reference group members toward electronic on-line in-home shopping methods for apparel. Two research questions were generated in order to obtain an answer to this objective.
Do consumers discuss apparel shopping methods, such as electronic on-line in-home shopping, among their reference groups? Participants did not discuss electronic on-line in-home shopping, but did express differing views as to the influence reference group members had on their shopping behavior in general. Some participants remarked that they felt no influence from others. For example, one participant stated "I go anywhere and everywhere, wherever I think, I don't worry about, if I like it, I get it. I don't worry or check it out prior with someone else like, oh is this place good. I just kind of like to go around to do my own thing. That is just me. I respect other people's opinions, and I listen, but I still do what I want to do".

However, other participants stated that reference group members had some influence. For example, participants suggested that reference group members may share knowledge of a sale, may be aware of a specific item that another individual was searching for, may locate an ad for a product in which the individual is interested, or may offer advice as to the appropriateness and fit of apparel being tried. One participant stated "I have a friend that always looks so nice and has things a little different, that when I learned where she shopped, why, I went to that shop too, to look". Another participant stated that she thought that some people are influenced: "The other day I was playing bridge with a friend, and she had on a real pretty blouse, and everyone commented on it, and it was such a nice color. She said, 'I got it at the Parisian', and she said, 'I have several friends who always look nice, and that's where they get their clothes,"
and so I went there. And I thought, well that's great ... evidently several people are influenced by what their friends do or say or wear.

In response to the influence reference group members may have on shopping behavior, one participant stated that when discussing apparel purchases with her mother, “what she thinks won't alter a lot, because it is my personal success with it that is going to alter it one way or the other and I have not ordered a lot of apparel for me through catalogs because I have never had a real tried and true way of doing it, you know, I have ordered through Avon and its been yucky things, ... some of this is going to make me try it again, but it's not going to alter the way I do it”. Other participants suggested that “I'll see a catalog at your place or whatever and say, oh this is a really neat catalog and you'll say, yea, I have gotten something through this and like, oh, did you like it, and then you go ... and the next time you get that catalog you may look at it with different eyes”, “…it might encourage you to try something”.

One participant suggested that the influence of reference group members could be a compromise. “I guess I do both, I mean I shop on my own, and I buy things without worrying about somebody else's opinions, but if I am with somebody, I guess I do listen to their opinion though ... and there are certain things that I would like somebody's opinion on, certain products. Like bathing suits. For some reason I feel like I need somebody else's opinion. I usually bring my daughter because she tells me the honest truth”.

Other participants suggested that word of mouth communication was important to them in that it “gives ideas of places that others have had good luck
with good quality or good service and ease of returns". Therefore, past experiences of others may be used to obtain new product ideas, uses, and price ranges. Participants stated that although reference group members may have input, they do not influence shopping or purchase decisions. One participant concluded that she might be inquisitive regarding where a product was purchased, but that would not alter her behavior as to where and when to shop. Another participant remarked that although opinions are given by friends and family, they do not really influence how she shops because she relied on her own individual taste.

Are consumers influenced by the opinions of their reference group members in relation to the use of electronic on-line in-home shopping methods for apparel information search or purchase? Participants overall lacked knowledge in relation to electronic on-line in-home shopping methods. Therefore, influence from reference group members concerning this method of shopping was generally not reported. In addition, the few participants who reported an awareness of electronic on-line in-home shopping did not indicate any influence by reference group members. Two participants reported an awareness of the shopping method rather than having given attention to its use. However, for other types of shopping methods as reported above, some participants stated that they do consider reference group members’ views in deciding where and when to shop. On the other hand, other participants reported very little influence from reference group members regarding their
general shopping behavior. The influence of reference group members thus varies by individual consumer.

**Conclusions.** Participants reported that reference group members did not have an influence regarding the use of electronic on-line in-home shopping methods. Generally, participants lacked knowledge of this method. Therefore, no influence was received. However, participants did discuss the general influence of reference group members on their shopping patterns. Participants revealed conflicting viewpoints regarding the influence of others. Participants generally felt that some influence occurs, but the degree of influence varies by individual consumer.

The diffusion theory element, social system, has been referred to as the interaction among a group of people who commonly associate with each other (Rogers, 1983). The diffusion of an innovation may be influenced by this interaction or interrelationship between social system members. In addition, the importance of others' views and attitudes may influence a consumers' response to an innovation. Since participants had generally not received communication about electronic on-line in-home shopping methods, no influence by reference group members could be determined.

**Objective 4a - Time: Relative Advantage**

Objective 4a was developed to explore consumers' attitudes concerning the rate of adoption of electronic on-line in-home shopping methods for apparel by examining consumers' attitudes concerning the relative advantage of using
electronic on-line in-home shopping systems to make apparel purchases. One research question was generated in order to obtain an answer to this objective.

**Do consumers view shopping for apparel by electronic on-line in-home methods as having a relative advantage over other shopping methods?**

Electronic on-line in-home shopping methods were viewed as being advantageous for people who hate to shop or who are home bound in some manner (e.g., "I could see myself using the computer, because I hate shopping"). Participants stated that this shopping method may offer time savings that could not be obtained from other in-home shopping methods in that an order may be placed faster (e.g., "it would be faster to be able to have a modem and order almost instantaneously"). This was expected to be a benefit especially during the Christmas holiday season rather than getting a busy signal when trying to call in an order to a catalog company. No other actual advantage over other in-home shopping methods was expressed. However, participants expressed several potential advantages they viewed as above and beyond the advantages associated with other in-home shopping methods.

Potential advantages were expressed by participants who generally lacked knowledge about existing electronic on-line in-home shopping methods. Participants stated that if an electronic on-line in-home shopping method could potentially perform certain functions (e.g., cross referencing), it would be viewed as a greater advantage than any other in-home shopping method.

Potential advantages of electronic on-line in-home shopping methods were often related to the price of the merchandise. Participants stated that they
would use the system if the merchandise available on-line were of a discount, wholesale, or outlet price. “I think the only way that I would order something ... if there were a good enough discount price, or a good enough, you know, wholesale price or something”. In addition, another participant stated “if I could hook up to a computer that I could get outlet prices, then I would sure, I would do it, I would be glad to do it then. If they just gave me a description and then I could look in the store and see what it is and maybe even try it on then buy it through a computer, I would do that”. Information could be gathered locally about a specific product and then ordered on-line. However, participants stated that although this would probably be a great advantage for big ticket items, it would not be for apparel. The need to visually see apparel merchandise would still restrict the use of this method for clothing.

Another potential advantage of electronic on-line in-home shopping methods included the ability to cross reference merchandise. One participant suggested that if a specific item was desired such as a denim jumper, the system could list (and illustrate) all that were available, the descriptions, the companies, and the prices for each. Similarly, participants stated that it would be advantageous if they were able to provide information such as a price range in which they were seeking a specific item and the system would provide all items available that met the criteria.

An additional potential advantage of electronic on-line in-home shopping methods identified by participants consisted of purchasing routine or staple items. A button could be pushed, or once a month, at a specified time, an order
would be placed for replenishment of staple items. For example, "if I could order staples through it, okay, great, punch it in once a month and have them just ship me the same old thing I always get, you know staple type products, maybe it would be faster on-line, get to the company quicker that if you mailed it or even had to call them". Additionally, another participant stated, "the only way I can see it being real useful is that, let's say you wanted to order all the things that you go through in a month that you repeatedly buy over and over, like two tubes of Crest toothpaste". However, this process was viewed as being limited for apparel since consumers do not routinely purchase staple apparel merchandise to the extent that they would purchase other product categories.

Participants did recognize several disadvantages with electronic on-line in-home shopping methods. One disadvantage identified was that the use of computers for shopping would tend to promote isolation from other people. For example, one participant stated that "life is really interacting with people and once you start being a recluse and doing all your shopping without really relating to another person, or seeing other people, you're going to be in trouble".

Participants stated that unless a consumer was 'computer-wise' a disadvantage of electronic on-line in-home shopping method is that it would take a long period of time to become comfortable with this method of shopping. Participants suggested that individuals of an older generation would be reluctant to try this type of shopping method. It was thought that this consumer group may be scared or just disinterested in the method.
Participants’ commented about the reluctance they perceived older
generations to exhibit in relation to electronic on-line in-home shopping
methods in the following focus group discussion segments. Participants in two
focus groups (whose average age was 35-36 years) stated: “I think we are over
the era where we are afraid of computers. I think that used to be common,
where no … I wouldn’t touch a computer, I might blow up the national debt … or
I might set the bomb off or something”, “…where they were intimidating”. “My
mother still won’t go near a computer, she doesn’t even go to the automatic
tellers”. “My mom doesn’t either, my mom doesn’t even touch our VCR”. “My
mom doesn’t do that, but she does use that ATM … no problem with that”.

Participants in two focus groups (whose average age was 35-36 years)
commented about an older generation’s potential adoption of electronic on-line
in-home shopping methods. One participant stated “I don’t think my generation
would … I mean I think it’s a guess, unless my grandchildren’s generation
might, I mean from the stand point they are in today”. Another participant stated
“I don’t see my mom doing it either”. Another remarked “they are scared of it, my
dad is really really scared of it”. The first participant clarified her statement by
stating “I think I am really not interested in computers at all, I don’t even care. I
mean, I know it sounds dumb. Like our son has one … and he is always trying
to tell me and I am like, that’s nice, and he says mom, we can put all this in
there, and I go, that’s fine…. but I want to do it myself and … I would not shop
through a computer even if I knew how to do it, I wouldn’t do it. I don’t think your
mother would, would she”. A participant responded, “she does some word
processing on it". Another participant stated "my mom works with a computer so I think she would", while someone else remarked, "my mom was nervous when they went to computers at her office".

The lack of visual information on electronic on-line in-home shopping systems was identified as a disadvantage of this method. One participant stated that she knew of networks available but that it was difficult to imagine what it is, how it would work, and how it would be different from catalogs. "I can't visualize with a computer. I don't know if you are asking my opinion about this, but if you can't see it in color, and part of what attracted me to Land's End is, I think their photography is excellent, you know, they make things look so good".

Participants discussed their attitudes regarding the advantages of several other shopping methods as well (e.g., in-store, TV shopping network, catalogs). These attitudes may provide an understanding of in-home shopping methods in general. Through this understanding, relative advantages of electronic on-line in-home shopping may be observed in the context of in-home shopping.

The attitudes participants expressed concerning the advantages of in-store shopping above and beyond the advantages associated with other shopping methods consisted of: (a) the ability to try apparel on, (b) the ability to feel the garments, (c) the ability to interact socially with other people, and (d) the ability to feel comfortable and successful in product search and purchases based on past experience.

Disadvantages were also identified by participants related to in-store shopping. Primarily, the variety of merchandise available was viewed as being
limited in local establishments, "I can't find anything in the store that I really like. So I go through the catalog ... I can't find the sizes in the stores" or "...a lot of the sizes I need are off the racks, everybody has bought them all, but through the catalog I can get the size I want. I don't have to go through that hassle of trying to find it". In addition, in-store shopping was viewed as being time consuming in that it is "very frustrating to go shopping because ... often times items are grouped by label or designer or whatever".

TV in-home shopping (e.g., The Home Shopping Network, QVC), although not used by many participants (one to two participants per focus group reported using TV in-home shopping at least once), was identified as having several advantages. The merchandise quality was regarded as being good by those who used this shopping method. However, other participants suggested that the merchandise was of a lower quality, 'cheap-looking', and gaudy. A wide variety of merchandise available on TV in-home shopping programs was also seen as an advantage by some participants while others stated a lack of variety. Several participants expressed the attitude that TV in-home shopping methods sold primarily jewelry. One participant stated that her husband made a joke about the products carried on TV shopping networks, "when they first started coming on there are like two channels now, or something. He goes, don't they sell anything but jewelry? You know ... he can't watch it all the time".

Although advantages were noted, participants did not indicate that TV in-home shopping was more advantageous than other in-home shopping methods (e.g., catalogs). In fact, participants generally suggested that TV in-home
shopping lacked a relative advantage. TV in-home shopping was considered inconvenient because an individual would have to sit and watch until a wanted item appeared on the television screen. "Convenience is the deal here, if I know what I want, I am not going to sit [watching] television and wait", "...yea, and you flip through and see if something catches my eye, and I'll say, oh, that's not a bad price, that's not, you know, that is pretty good, but ... I won't be in the market for it". Others expressed similar views, "I just don't think they are convenient enough, to sit and to watch", "...you would have to wait for hours I would think before, or else you would buy something that you really didn't need". Some participants also expressed a concern that this shopping method promoted impulse buying.

Other disadvantages of TV in-home shopping that were expressed by participants were related to the presentation of the merchandise. Some participants proclaimed that the presentation was obnoxious (e.g., "I'm offended by the way they do it, I don't like to watch it"), phoney, and deceptive in the portrayal of apparel on models (e.g., "I just don't like the way it, they show their models, everybody is either a size 6 or a size 8 that they show the clothes on, and I don't think it looks good on them, so if it doesn't look good on them, it isn't going to look [right] on me"). In addition, participants expressed a fear or lack of trust in giving credit card information over the telephone to the TV in-home shopping companies.

Participants identified several relative advantages in the use of catalogs for in-home shopping. The ease of locating products needed and the variety as
well as uniqueness of products were reported as primary advantages. For example, participants expressed advantages for catalog use by stating, “I think the main reason I buy anything at home is because it is almost always a really unique product that I couldn’t find if I was going to go out to a retail store where I had to go into a store and try to find it”, “…some stores aren’t really available around here. Like, I get a lot from the Speigel catalog and there is no Speigel store very close around here”, “…merchandise is more interesting in the catalogs than it is in the generic mall. Every mall’s got the same stores”, and “I shop much, much from catalogs because I can get things, like from Lillian Vernon, that I can’t buy anywhere else … there is [also] a catalog called Domestications. I bought curtains for the kitchen with cats on them, that cannot be purchased in a store”.

Catalogs were viewed as convenient for a wide variety of consumers. Participants suggested the convenience of using catalogs was related to: (a) location (e.g., living in a small town miles away from shopping mall), (b) time available for shopping, and (c) number and age of children present in the household. For example, one participant stated “don’t you find maybe it has something to do with where you live? Like you lived in the country. I noticed, my sister-in-law lived on a farm and she would always sit there with a catalog, and I think, ordered everything out of that catalog because it took too much time … to run … someplace. And so she did a lot of her shopping out of the catalog. Whereas for us that lived closer to the mall, you could zap out there … now with Meijers open all night, you could go shopping about anytime. But, I think too, it
has to do with where you live and what is going on in your life at the time”. Catalogs were also seen as being easy to use since most catalog companies offer an 800 toll free telephone number that consumers could use to place orders 24 hours a day.

Participants identified another advantage associated with catalogs which included the ability to locate special sizes at lower prices than what may be found in local stores. For example, one participant stated that “I use them for tall sizes. Because my husband … he can’t buy things in stores very much”. Another stated “that’s one thing we have to do all the time, shopping through the catalog. There was no big and tall stores for [my husband]. Granted there are big and tall stores, but they are so extremely expensive … the sale catalogs … we can get him clothes you know, at the prices we are used to paying … if we have to pay something full price for myself, for him it is sale price. So, if it wasn’t for catalogs, I don’t know what he would be wearing”.

Other frequently expressed advantages of catalog shopping were the ability to return products with no questions asked and the ability to talk with a sales associate to get answers to questions (e.g., “there is never any question of returning, and they’re very efficient with crediting and will take anything back if there’s anything wrong, you know, with it”). Additionally, the ability to ship products directly to another address (e.g., with catalogs, “you can have it sent to your home or you can have it sent to somewhere else. And have several methods of payment, so that you don’t have to deal with wrapping and the delivery”, “with my family scattered, that saves my getting it, wrapping it, boxing
it, and the extra postage"), and the ability to purchase personalized gift products at lower prices than what may be available locally were identified as advantages.

Primary disadvantages associated with catalog shopping identified by participants were related to returns and unmet expectations. The need to repackage, ship and pay additional postage in order to return an unacceptable product was recognized. Thus, additional money must be spent in order to return products with nothing to show for that money (e.g., "My problem is ... if you don't like it and it doesn't fit, you have to pay the postage and take the time and effort to package it back up again and get to a post office or whatever to send it back", "I guess it is kind of a hassle if you have to send it back and you are never sure what it is going to be like and you... it's a risk, sometimes I don't do it because I know if I don't like it, then I have to send it back, so I just don't...").

Participants in all focus groups reported that when products ordered from catalogs were received, they were often not what was expected (e.g., "so many times, when you order from catalogs, it looks so great in the book, but when you open that box, your eyes pop out"). The appearance of the product portrayed in the catalog looked different than the product received. In other words, the quality of the products was difficult to determine from the illustrations or photographs included in the catalogs.

Participants felt that the models used in catalogs to present the products were deceptive, thus making it difficult to visualize the self in the garments
portrayed. For example, one participant stated “my eye is not good enough to see some willowy, beautiful model in a dress and think, oh, that would look good on me”. Similarly, another participant remarked “I've seen outfits like in a magazine that I haven't seen other places and they look so appealing on a model that you think, oh, I'll look like that, I think I'll order that. And you get it and think, why did I order that. Spend $5 in the stupid shipping to send it back”

Sizing of garments available through catalogs was also viewed as a disadvantage of catalog shopping. Participants stated that a problem with ordering apparel through catalogs was in determining the right size. Each specific catalog, with its own sizing system, require the consumer to determine the proper sizes through a process of trial and error and having to return merchandise the appropriate size is discovered. One participant remarked “it is a process of having to return ... and never ordering those particular items again because the make just doesn't fit me”. Once this trial and error process has been completed, it may become easier to continue using that catalog.

Other problems expressed by participants regarding catalog use included stockouts, back orders and substitutions given that were considered unacceptable. Participants also expressed an annoyance with being put on other mailing lists of catalogs that are not desired. For example, one participant expressed this by stating that “I [have] gotten two catalogs of new age merchandise, and I don't appreciate that ... it is like tarot cards and ouija boards. As soon as I get it I pitch it, I mean twice. I have gone through it, it is a thick catalog full of all kinds of crystals ... my point was I don't appreciate getting
on that stupid mailing list because of having bought a necklace from a company”. “That does happen, when you place an order, then everybody does seem to, the computer … like gives it to everybody”. Another participant identified an undesired catalog received, “I got in a magazine the other day in the mail for guns and ammunition, and all this stuff and my husband was like … well he thought it was to him. He is like, why is somebody sending me a magazine like this. And I looked at it and I said, that has my name on it. That’s mine. So he said, what are you doing with it. Who knows what you are going to get in the mail”.

Conclusions. Relative advantage refers to consumers’ perceptions of advantage that an innovation has over another product (Rogers, 1983). Participants perceived many potential advantages but only perceived one actual advantage over other in-home shopping methods such as catalogs. The only actual advantage perceived was that of avoiding busy telephone lines, thus possibly being faster than other methods. Disadvantages however, were perceived.

Participants of this study only identified one actual advantage of electronic on-line in-home shopping methods beyond other in-home shopping methods. Therefore, electronic on-line in-home shopping was generally viewed as lacking a relative advantage. However, participants identified potential advantages (e.g., discount/outlet pricing, cross-referencing, staple item replenishment) that, if included, would give electronic on-line in-home shopping a relative advantage.
Objective 4b - Time: Compatibility

Objective 4b was concerned with the compatibility of electronic on-line in-home shopping with the participants' lifestyles in order to make apparel purchases. One research question was generated in order to obtain an answer to this objective.

Do consumers view shopping for apparel by electronic on-line in-home methods as compatible with their lifestyles? Some participants stated that electronic on-line in-home shopping would be compatible with their lifestyles. One participant stated that "it wouldn't bother me at all to use a computer because we use a computer at school. But ... I would have to have a reason that it is better than the way I do it now". Another participant suggested that others may try electronic on-line in-home shopping because they have access to and are familiar with using computers. Thus they are "more geared to it because of their lifestyle and their work or whatever, they would be on it and it would be like an automatic thing".

In describing the compatibility of electronic on-line in-home shopping methods for other consumers, participants remarked that some people may turn on a computer like other people turn on a television. "I could see it working more in an office type of setting, where you take a break and start ordering.... I can see, just like the one store in town called Gifts In Time, where, you know, you call up and get something for your whatever. I can see somebody in the office sitting down and saying, oh gosh, and next week is my brother's birthday or whatever and so I am going to take a quick look at the screen and see what
they have in basketball gear, you know, and doing that, but you know, I wouldn’t do it at home, but you know because I am not geared, I don’t know how to operate...”.

Compatibility may be also related to how participants view the need to change behavior patterns. As mentioned above, participants’ familiarity with and use of computers may be an indication of how compatible and therefore how easily electronic on-line in-home shopping methods will be adopted. Approximately half of the participants reported access to computers, but few used the computers often.

Conclusions. The innovation attribute compatibility, refers to the extent to which an innovation is perceived as fitting into consumers’ lifestyles (Rogers, 1983). An innovation’s perceived consistency with consumers’ values, past experiences, and needs may affect the length of time necessary for adoption to occur.

Participants generally did not recognize how electronic on-line in-home shopping methods would fit into their lifestyles but did speculate as to how it might fit into lifestyles of those reference group members who use computers at work. Therefore, participants of this study generally did not view electronic on-line in-home shopping methods as being compatible with their lifestyles. However, participants identified other consumers whom they thought would have compatible lifestyles and thus use electronic on-line in-home shopping methods. Through the focus group discussions, participants stated that
electronic on-line in-home shopping methods would be compatible for consumers who use computers extensively at work.

**Objective 4c - Time: Complexity**

Objective 4c was developed to examine consumers' attitudes toward the ease/difficulty of using electronic on-line in-home shopping systems to make apparel purchases. One research question was generated in order to obtain an answer to this objective.

*Do consumers view shopping for apparel by electronic on-line in-home methods as being easy (difficult) to use?* Although participants were asked why they would not consider using electronic on-line in-home shopping methods a number of times (e.g., why wouldn't you consider using computer shopping?... Is there any other reason why you wouldn't use it?), they generally did not directly discuss the complexity associated with using electronic on-line in-home shopping methods. Participants generally responded to the questions of why they don't use or wouldn't consider using electronic on-line in-home shopping methods by discussing compatibility with their lifestyles (e.g., "I don't own a computer and decided that at my stage of life, that was not something I was going to convert to").

However, comments were expressed which may indirectly indicate an attitude toward the complexity of this system. One participant remarked that she has enough trouble using a typewriter and didn't want to try anything more difficult. Another commented that she was too old and that this method would "rattle our brains". However, some participants expressed an interest in trying
electronic on-line in-home shopping methods if they could receive instruction in its use. One participant stated “I don't know anything about computers, I would have to learn how to run a computer before”.

The moderator questioned participants as to whether they would be willing to try computer shopping if they were provided with instruction. Although conflicting views were expressed, some participants stated that they would be willing to try if given instruction (e.g., “I would be willing to have someone come in and show me how”, “…if I felt comfortable with the computer to begin with I would be willing to try”).

Conclusions. The innovation attribute complexity refers to the perceived difficulty of use or understanding of an innovation (Rogers, 1983). When an innovation is perceived as being easy to use, adoption may occur more rapidly than if perceived as complex.

Participants generally did not directly discuss their attitudes toward the complexity of adopting electronic on-line in-home shopping methods. However, participants remarked that they would be willing to try this shopping method if they were given instruction. Thus, indirectly, electronic on-line in-home shopping methods may be viewed as relatively complex since instruction in its use would be required before adoption could occur.

Objective 4d - Time: Trialability

Objective 4d was developed to examine consumers’ attitudes toward the opportunity to try electronic on-line in-home shopping systems to make apparel
purchases. One research question was generated in order to obtain an answer to this objective.

Have consumers had an opportunity to try electronic on-line in-home shopping methods? No participant reported having an opportunity to try electronic on-line in-home shopping methods. However, participants expressed conflicting attitudes toward a willingness to try electronic on-line in-home shopping methods. Those participants who stated that they would not be willing to try this shopping method cited several reasons. A fear of the technology was identified as a hinderance to willingness to try electronic on-line in-home shopping methods. One participant remarked that other technological advances such as electronic banking was terrifying to consider or to use and therefore, electronic on-line in-home shopping methods may have the same effect.

Several participants stated that they would not be interested in trying electronic on-line in-home shopping methods due to the time it would take to learn how to use it which could be spent doing something else. “I don't know anything about computers, I would have to learn how to run a computer before I'd…” One participant stated that “I can't do everything I want to right now. Rather than to tackle something new, I just can't handle it right now”. Another participant stated that “although I do sometimes use catalogs … I would not be inclined to use computers [in order to shop]”.

A lack of desire to try electronic on-line in-home shopping methods was also identified, “I think it would be neat to have enough time and money to have
a modem and to spend every night talking to other people on a bulletin board or network. But, I don't think I want to do shopping that way. I want to be able to squeeze the peaches". Another participant stated that she did not have enough information to encourage her to try.

The shortage of visuals on the system was identified as a drawback to trying electronic on-line in-home shopping methods. One participant stated that she considered herself a 'hands-on' person and is even leery about ordering merchandise from catalogs because often items that are received are not the same as those pictured. Therefore, a system that did not provide pictures of items and relied on text would not provide enough information in order to use.

Several participants identified risks anticipated with electronic on-line in-home shopping methods as limitations to trying the system. Participants stated that they would not be willing to invest the money in order to try this shopping method, but would consider it if it did not cost anything such as having computer equipment provided and the cost of on-line charges as well as long distance phone charges paid.

One participant stated that she would not invest the money needed for "what I feel I would get out of it ... I am very comfortable with the way I'm doing it now". Although cost was identified as a major limitation to trying electronic on-line in-home shopping methods, participants also suggested that the lack of knowledge about electronic on-line in-home shopping methods would discourage them from trying this method. However, it was suggested that if instruction was provided, they might be willing to try.
Participants who stated they would be willing to try electronic on-line in-home shopping methods identified several reasons. Curiosity and the desire to be informed about futuristic possibilities were reasons some participants would be willing to try this method. One participant stated that if trial of this shopping method “turned out to be good, I might buy several things … However, I would probably not buy clothes as the first thing … I’d probably be a little afraid of the equipment and of the system … the computer, their situation, sending things out, being double billed or something of that nature”. Participants in each focus group suggested that the inclusion of major brand names on the system would encourage them to have a degree of trust in the system and thus would potentially reduce perceived risks associated with the use of the system.

Participants stated that they would be willing to try electronic on-line in-home shopping methods if they were assured of being able to find the right sizes and fashionable styles. “If it didn’t have something that would appeal to me, I wouldn’t use it at all. But, if there are things on there that I would like, that would be nice”. In addition, participants identified potential advantages (as discussed above) that could be related to computers and electronic on-line in-home shopping methods. The presence of these potential advantages would not only encourage a willingness to try, but a willingness to use this method of shopping.

Conclusions. The innovation attribute trialability, refers to the opportunity to try an innovation (Rogers, 1983). Through trial of an innovation, consumers may have the opportunity to become comfortable with the innovation prior to
adoPTION. However, participants indicated they did not have an opportunity to try electronic on-line in-home shopping methods.

Through the focus group discussions, participants expressed conflicting views as to their willingness to try electronic on-line in-home shopping methods. Some participants expressed an attitude against trial of this shopping method due to fear or risks perceived with the systems or a lack of interest. On the other hand, some participants expressed a positive attitude toward the trial of electronic on-line in-home shopping methods by stating a willingness to try. Thus, attitudes toward the opportunity to try electronic on-line in-home shopping methods may vary among individuals.

Objective 4e - Time: Observability

Objective 4e was developed to examine consumers’ attitudes concerning the opportunity to observe electronic on-line in-home shopping systems to make apparel purchases. One research question was generated in order to obtain an answer to this objective.

Have consumers had an opportunity to observe electronic on-line in-home shopping methods being used? One participant stated that she has had an opportunity to observe electronic on-line in-home shopping methods being used since her brother recently acquired a CompuServe membership. However, she stated that “I haven’t seen him actually use it … I don’t think they have used it yet”. Other participants who were aware of this shopping method expressed a lack of opportunity to observe. Therefore, all participants, except
one, reported a lack of opportunity to observe electronic on-line in-home shopping methods being used.

**Conclusions.** The innovation attribute observability, refers to the degree of visibility of an innovation to other consumers (Rogers, 1983). The observation of an innovation may stimulate peer discussions and thus may lead to a greater rate of adoption.

Participants in this study generally reported not having an opportunity to observe electronic on-line in-home shopping methods. Additionally, no participant indicated whether the opportunity to observe this shopping method would have an effect on her willingness to adopt and therefore rate of adoption.

**Summary**

The diffusion theory (Rogers, 1983) was used in order to obtain an answer to the question of why consumers are not using electronic on-line in-home shopping methods for apparel information search and purchase to the same extent as other in-home shopping methods. The results of this study demonstrated that the diffusion theory may be used as a framework for determining potential explanations as to why electronic on-line in-home shopping has not been widely accepted.

The elements of diffusion theory (innovation, communication, social system, and time) have been used to identify reasons for the lack of adoption of electronic on-line in-home shopping methods. Innovation was examined through participants' attitudes toward the newness of this shopping method, as well as the degree to which behavior must be changed or altered in order to
adopt. Participants stated that they generally had no previous knowledge of electronic on-line in-home shopping methods. Therefore, this method of shopping may be considered new to the consumers who participated in this study. Additionally, participants expressed the attitude that their behavior would need to be substantially adjusted in order to adopt this shopping method. Therefore, based on diffusion theory, these findings may be an indication of consumers' reluctance to adopt this innovation.

The communication aspect of the diffusion theory is necessary in order to make consumers aware of an innovation. Although participants were aware of a variety of in-home shopping methods, they were generally unaware of electronic on-line shopping methods as an in-home shopping method. Therefore, communication with regard to electronic on-line in-home shopping was not available for participants to become aware of and learn about this shopping method. Similarly, interaction with reference group members (social system) did not influence participants in relation to the use of electronic on-line in-home shopping methods. Since participants generally lacked information concerning this shopping method, no influence or communication was received.

The diffusion theory element time, was used to examine attributes of the innovation which may affect the length of time necessary for an innovation to be adopted. Innovations that are considered as being relatively advantageous, compatible, trialable, observable, and less complex may be adopted more rapidly than other innovations. Participants reported that electronic on-line in-home shopping methods (a) appeared to have no relative advantage beyond
that of other in-home shopping methods, (b) were not compatible with their lifestyles, (c) offered no opportunity for trial of this shopping method, (d) offered no opportunity for observation of this shopping method, and (e) was complex to use. Therefore, the rate of diffusion of the innovation, electronic on-line in-home shopping, based upon these results may be expected to be slow.
CHAPTER V
DISCUSSION

This chapter has been divided into four major sections. These sections include: (a) summary, (b) discussion, (c) implications, and (d) recommendations for further research.

Summary

The purpose of this study was to investigate consumers' attitudes regarding the use of electronic on-line in-home shopping methods for apparel information search or apparel purchase. It was anticipated that potential explanations might be identified regarding why the adoption rate for this method of shopping was not as rapid as predicted by marketers or why this method was not used to the extent that other in-home shopping methods were used. In order to investigate the adoption process of electronic on-line in-home shopping methods, the diffusion theory (Rogers, 1962; 1983; Rogers & Shoemaker, 1971) was used. The diffusion theory has been used in the past to offer a process of examination through which an innovation, such as electronic on-line in-home shopping methods, is communicated among members of a social system over a period of time (Rogers, 1962). Therefore, in this study,
consumers' attitudes toward electronic on-line in-home shopping methods were examined in connection with the elements of the diffusion theory.

Consumers' use of general in-home shopping methods, such as catalogs, for the purchase of apparel or for information search has increased in recent years. Marketers have predicted that electronic on-line in-home shopping methods would also increase. However, this has not been the case. Through the use of the diffusion theory, the primary question as to why consumers are not using this shopping method was examined. The objectives of the study included exploring consumers' attitudes concerning: (a) the newness and degree to which shopping behavior must be adjusted in order to use electronic on-line in-home shopping methods for apparel, (b) the information acquired about electronic on-line in-home shopping methods for apparel, (c) the influence of reference group members about the use of electronic on-line in-home shopping methods for apparel, and (d) the rate of adoption of electronic on-line in-home shopping methods for apparel consisting of relative advantage, compatibility, complexity, trialability, and observability.

Five focus group interviews were conducted in order to examine consumers' attitudes toward electronic on-line in-home shopping methods. The use of focus group interviews provided an opportunity for consumers to express their thoughts in an open process rather than conforming to preselected choices as in some survey research. Therefore, a realistic view of situations and experiences could be expressed.
The results of this study demonstrated that the diffusion theory may be used as a framework for determining potential explanations as to why electronic on-line in-home shopping has not been widely accepted. The elements of diffusion theory (innovation, communication, social system, and time) were used to identify reasons for the lack of adoption of electronic on-line in-home shopping methods. Innovation was examined through participants' attitudes toward the newness of this shopping method, as well as the degree to which behavior must be changed or altered in order to adopt. Participants generally had no previous knowledge of electronic on-line in-home shopping methods and may thus be considered new to the consumers who participated in this study. Additionally, participants' discussion of the needed behavior change revealed that a substantial behavior adjustment would be needed in order to adopt this shopping method.

Communication, in which consumers become aware of an innovation such as electronic on-line in-home shopping, is a necessary component of diffusion theory. Although participants were aware of a variety of in-home shopping methods, they were generally unaware of electronic on-line shopping as a type of in-home shopping method. Therefore, participants had not received communications regarding electronic on-line in-home shopping. There was no indication that reference group members (social system) used or were aware of electronic on-line in-home shopping methods either. Thus, interaction with reference group members did not influence participants in relation to the use of electronic on-line in-home shopping methods. Since participants generally
lacked information concerning this shopping method, no influence or communication was received.

Attributes of an innovation which may affect the length of time necessary for adoption were examined. Generally, innovations that are considered to be relatively advantageous, compatible, trialable, observable, and less complex may be adopted more rapidly than other innovations (Rogers, 1983). Participants in this study reported that they viewed electronic on-line in-home shopping methods as having only one relative advantage (avoiding busy telephone lines when placing an order). In addition, they did not feel that electronic on-line in-home shopping was compatible with their lifestyles. A lack of opportunity to try and/or observe this shopping method was expressed. Participants also viewed electronic on-line in-home shopping as being complex to use. Therefore, the results of this study may be used to gain an understanding regarding why electronic on-line in-home shopping methods have not been adopted as predicted by marketers.

Discussion

The discussion section is presented in two sections: (a) literature on in-home shopping methods, and (b) elements of diffusion theory (in relation to the objectives of this study).

Literature on in-home shopping methods

The research reported herein contributes to the literature on in-home shopping methods, specifically electronic on-line in-home shopping. The findings of this study provide plausible reasons for the lack of consumer
acceptance of electronic on-line in-home shopping. Salmon (1985) stated that "why consumers found electronic in-home shopping relatively unappealing is unclear" and that "considering the problems with other studies of potential consumer interest in revolutionary new products, we might conclude that the results are simply misleading" (p. 84).

An attempt was made to develop some "legitimate reasons for consumer indifference to electronic in-home shopping" (Salmon, 1985, p. 84). The 'legitimate' reasons identified by Salmon's (1985) study for lack of electronic adoption included a recognition by consumers of the inherent inability of this shopping method to duplicate the sensory aspects (e.g., touch, smell, sight) of in-store shopping. In addition, loss of social/entertainment aspects of in-store shopping, fear of temptation, perceived technological complexity, and time lapse between ordering and receiving merchandise resulting in delayed gratification were given as other reasons for electronic in-home shopping nonuse.

The results of the present research study demonstrated that although the lack of visual information provided on electronic on-line in-home shopping systems was viewed as an important limitation to this shopping method, other factors identified by Salmon (1985) were not expressed. Participants did not express a loss of social or entertainment aspects of in-store shopping or delayed gratification in receiving merchandise as factors which might hinder electronic on-line in-home shopping adoption in that these limitations occur with other in-home shopping methods as well (e.g., catalogs). Therefore, reasons
given by Salmon (1985) that electronic in-home shopping does not duplicate the sensory aspects of in-store shopping do not adequately explain the lack of adoption of electronic on-line in-home shopping methods.

Although Salmon (1985) described a 'legitimate' reason for the lack of adoption of electronic on-line in-home shopping methods as being a fear of temptation, participants in the present study did not express this view at all. However, a possible reason for the lack of adoption expressed by participants but not by Salmon (1985) consisted of a technological complexity. This was indirectly expressed by participants from discussion concerning a reluctance to use computers. Therefore, technological complexity may be accepted as a limitation to the adoption of electronic on-line in-home shopping rather than a fear of temptation.

The present study has provided a response to marketers' assumptions and predictions that consumers would adopt electronic on-line in-home shopping methods. The results of this study demonstrate that at least some consumers are not willing to adopt electronic on-line in-home shopping. In addition, the present research has added to the literature in which profiles of in-home shoppers and electronic on-line in-home shoppers were developed. Through the development of these profiles, researchers have attempted to identify those consumers who are potential electronic on-line in-home shoppers. This process may be used as an illustration that the predictions concerning this shopping method were primarily premature. Similarities were found among the profiles of consumers using a variety of different in-home
shopping methods (e.g., McCorkle, Planchon & James, 1987) and characteristics of participants in the present study. However, these individuals were not electronic on-line in-home shopping adopters and expressed a reluctance to consider this method as a feasible shopping option.

Participants in all focus groups in this study expressed a familiarity with in-home shopping methods. In addition, the demographics of participants in this study were similar to demographics of in-home shoppers in previous research. Overall, a review of the literature revealed that in-home shoppers tended to have higher education levels, higher income levels and higher status occupations than non-in-home shoppers (e.g., Gillett, 1970; Cunningham & Cunningham, 1973). The results of the present study illustrated a similarity. Participants' education level was relatively high with 70% having completed at least some college. Over 40% of the participants had obtained a four year degree or greater (Table 5). Income levels were relatively high with 56% of participants having an income between $40,000 and $69,999 (Table 6). Occupations were generally professional (26%), clerical/sales (12%), and service (6%) positions. One exception to the similarity of profiles was that 41% of the participants were homemakers. Therefore, although not specifically generalizable, this research generally supported previous research findings concerning in-home shoppers. Since a comparison between in-home and non-in-home shoppers was not conducted, the data must be considered in relative terms.
Researchers (e.g., Graham, 1988; Talarzyk, Widing & Urbany, 1984) examining consumers using computer information services identified a consumer profile consisting of college graduated males who were relatively young, employed in professional and/or business occupations with an average income of $50,000. Participants of the present study consisted of women with an average age of 46 who worked in a variety of positions as well as being homemakers. These participants have not adopted electronic on-line in-home shopping methods. Since participants in the present study differed demographically from the profiles of computer information service users (e.g., Graham, 1988; Talarzyk, Widing & Urbany, 1984), it is reasonable that they have not adopted electronic on-line in-home shopping methods.

In addition, Talarzyk, Widing and Urbany (1984) warned that future videotex subscribers would only adopt the service when the value and conveniences offered are greater than other alternatives. The results of this study generally support this warning. In terms of shopping for apparel, consumers' discussions did not reveal that electronic on-line in-home shopping methods add any additional value or convenience beyond that which is offered through other shopping methods.

The findings from the present study may be used in combination with previous research exploring the diffusion of computer use, in order to gain a better understanding of the diffusion of technological innovations. Since the use of electronic on-line in-home shopping relies on the use of computers, the
comparison of these two areas may provide information and insight regarding this method of shopping.

Dutton, Rogers and Jun (1987) examined research that had been completed on the diffusion of home or personal computers (PCs). Through the examination, social status was found to be a consistent predictor of adoption and use of PCs. Formal education was found to be the variable which was consistently related to PC adoption. Other characteristics included "an affluent family in which one or more members are well educated and employed in professional, scientific, or managerial positions [who have] greater access to computers and thus gain more of the benefits" (Dutton, Rogers & Jun, 1987, p. 231).

Through a comparison of the present study to the research conducted by Dutton, Rogers and Jun (1987), an understanding of the adoption of electronic on-line in-home shopping may be gained. Dutton, Rogers and Jun (1987) identified PC adopters as consumers who were male and middle aged. In addition, PC adopters tended to be interested in science and technology. The present study examined women's attitudes toward the adoption of electronic on-line in-home shopping methods. Women were chosen for the present study because females tend to shop for apparel more than men. A review of the literature revealed that PC adopters tended to be male and apparel purchasers tended to be female. Therefore, an explanation as to why shopping for apparel through electronic on-line in-home methods has not been accepted by a greater proportion of the population may be related to sex differences.
Dutton, Rogers and Jun (1987) reported that the adoption and use of PCs was dependent on consumers' network of friends and co-workers. Additionally, the consumers who became involved in this social system continued to integrate the PCs into their lifestyles by increasing the hours used per week and added a variety of application programs/software. Participants in the present study reported non-involvement with a network of friends and co-workers and reported that they were not influenced by members of their reference groups to adopt electronic on-line in-home shopping. Those participants who used computers did not report an increase in computer use. Rather, approximately half of the participants who reported access to a computer used it less than two times a week. Since participants in the present study were reluctant to use PCs, it is unlikely that they would adopt electronic on-line in-home shopping for apparel.

In addition, Sharma, Bearden and Teel (1983) concluded that the unfamiliarity aspect associated with the simulated computer system, which was used in an experiment examining catalog and electronic shopping methods, could be used to explain why on-line shopping was not viewed more positively than the simulated catalog shopping method. Those participants in the present study (53%) who had access to computers, did not use them extensively. Therefore, the explanation of unfamiliarity with computers as an inhibiting factor in adoption of electronic on-line in-home shopping (Sharma, Bearden and Teel, 1983) is consistent with results of the present study.
A comparison of research examining differences between the electronic shopping adopters and non-shopping adopters of computer information services (Shim & Mahoney, 1991) and the present study may be used to identify differences in diffusion theory elements that may offer additional understanding of the adoption process. The diffusion theory elements identified from the research conducted by Shim and Mahoney (1991) included compatibility and complexity. Electronic shoppers were reported to have incorporated the innovation into their lifestyles by being more likely to be high-tech in-home shoppers (e.g., use of TV shopping and enjoyment of computer shopping), to be more home shopping prone, and to use a larger variety of videotex services than non-electronic shoppers. In addition, electronic shoppers tended to believe that electronic shopping methods were easy to use.

Elements of Diffusion Theory

In order to gain an understanding of consumers’ attitudes toward electronic on-line in-home shopping, research questions were developed in relation to the elements of diffusion theory.

Innovation

The diffusion theory element innovation may be identified as an expression of an idea that is perceived as being new (Rogers, 1983). This is a subjective perception of an idea being new or different. Innovations have been classified by Robertson (1971) according to the degree of behavior change necessary for an innovation to be adopted. These classifications were identified as continuous innovations which require relatively no changes in behavior (e.g.,
from the use of DOS 3.0 to the use of DOS 4.0), dynamic continuous innovations which require relatively little to moderate changes in behavior (e.g., from the use of a computer to the use of a computer and mouse), or discontinuous innovations which require relatively substantial changes in behavior (e.g., use of a typewriter to the use of a computer). Robertson (1971) thus projected that the smaller the behavior change consumers perceive to be necessary to adopt an innovation, the more rapidly adoption may occur.

An indication as to the adoption of an innovation such as electronic on-line in-home shopping may be recognized from consumers' perceptions of the innovation, its newness and required behavior change. Based on diffusion theory, it might be expected that the adoption of electronic on-line in-home shopping would occur faster when participants' perceived a need for little to moderate behavior change in order to adopt. On the other hand, it might be assumed that the adoption of electronic on-line in-home shopping would be slower when participants' perceived a need for substantial behavior change in order to adopt.

According to Robertson (1971) the behavior change necessary for the use of an innovation would influence its adoption. Therefore, participants who have expressed familiarity with computers and in-home shopping methods may view electronic on-line in-home shopping methods as requiring little to moderate behavior changes and thus view electronic on-line in-home shopping as a dynamic continuous innovation. On the other hand, participants who have had no prior knowledge of in-home shopping methods or computers may view
electronic on-line in-home shopping methods as requiring substantial behavior changes and thus view electronic on-line in-home shopping as a discontinuous innovation.

The results of this study illustrated that participants did view electronic on-line in-home shopping as an innovation. This was demonstrated from participants' lack of knowledge about this shopping method which may indicate that they perceived electronic on-line in-home shopping as new. In addition, approximately half of the participants reported having access to computers at home or at work. Of those participants, less than half used computers more than 1 - 2 times per week. Therefore, there was little familiarity with computers. Thus, the adoption of electronic on-line in-home shopping may be viewed as requiring substantial behavior changes. This may be an explanation for consumers' reluctance to adopt. Although consumers did not express an attitude toward the degree of behavior change viewed as necessary to adopt, they did express a reluctance to use this shopping method.

Based on the results of this study, electronic on-line in-home shopping may have been viewed as a discontinuous innovation requiring substantial behavior change in order to adopt, even for computer users. Therefore, the lack of adoption of electronic on-line in-home shopping methods may be explained through the diffusion theory element innovation.

Communication

One of the steps in the diffusion process occurs when consumers become aware of an innovation through communication sources (Rogers,
1983). Communication, the way information is received and interpreted, is an element of the diffusion theory which may have an influence on the rate of adoption. Generally, when an information source is viewed as unbiased with no commercial or profit motive, the adoption may occur faster than when an information source is viewed as biased or as having profit motives.

Based on diffusion theory, participants who expressed an awareness and knowledge of electronic on-line in-home shopping may adopt this shopping method more rapidly than participants who expressed only an awareness of this method or lack of awareness of this method. Participants' expressions of the source and importance of the information obtained concerning this shopping method might have an influence on their adoption of this shopping method. Participants who received information from personal sources that were viewed as experts may adopt electronic on-line in-home shopping methods more rapidly than participants who received information from impersonal sources that were viewed as biased or profit motivated.

Generally, participants in this study were unaware of electronic on-line in-home shopping methods. This may be an important factor in determining potential explanations as to why this shopping method has not been adopted to the extent predicted by marketers. Since participants were not aware of the existence of electronic on-line in-home shopping methods, communication regarding this innovation has not been effective. Therefore, electronic on-line in-home shopping may not diffuse as anticipated. Only once awareness has taken place can the process of diffusion occur.
Social System

The social system element of diffusion theory is an aspect of communication which focuses on the interaction among a group of people who commonly associate with each other (Rogers, 1983). Reference group members may influence participants' adoption decisions. The decision to adopt an innovation such as electronic on-line in-home shopping may be an individual decision rather than a decision which relies on the influence of others. However, if consumers were part of a network, several individuals may be involved in the decision. The adoption of an innovation that is made as an individual decision may occur more slowly than if an authority figure made the decision. On the other hand, if the decision to adopt requires a group consensus, adoption may occur slower than either an authority or individual decision.

The relationship between a participant and members of her reference group may have an influence on the adoption of electronic on-line in-home shopping methods. In addition, the importance placed on the information received from a reference group member may influence the individual's decision to adopt. The degree of influence may be related to the importance attributed to the views of the reference group members. Therefore, based on the diffusion theory, participants who expressed being influenced by reference group members in support of a decision to adopt may adopt this shopping method more rapidly than participants who did not receive support from reference group members.
Since participants were not aware of the existence of electronic on-line in-home shopping methods, it might be assumed that no social system influence has occurred. Therefore, only once awareness has taken place can reference group members have an influence on the process of diffusion. The absence of information and reference group member influence may provide a potential explanation concerning the reasons for the lack of adoption of this shopping method.

**Time**

The element of time in the diffusion theory refers to the length of time members of a social system take in order to adopt an innovation (Rogers, 1983). Included in this element are innovation attributes which may affect the rate of diffusion. The innovation attributes include relative advantage, compatibility, complexity, trialability, and observability.

**Relative Advantage.** Relative advantage is the extent to which an innovation is perceived to be advantageous over the product or idea that supersedes it (Rogers, 1983). Based on the diffusion theory, participants who expressed benefits and advantages of electronic on-line in-home shopping over other in-home shopping methods might be willing to adopt this shopping method more rapidly than participants who expressed no benefits and advantages of this shopping method.

Participants in this study identified only one relative advantage for electronic on-line in-home shopping, that of sending a merchandise order directly to a company without having to wait for busy phone lines. This was
thought to be especially important during the Christmas holiday season when catalog telephone lines are often busy. At the same time, however, participants recognized several disadvantages of electronic on-line in-home shopping methods over other in-home shopping methods (e.g., isolation from others, lack of visual information).

The rate of adoption of electronic on-line in-home shopping methods for the participants in this study, based on the lack of relative advantages expressed, might be relatively slow if it occurred at all. Consumers may be reluctant to change their shopping patterns unless there is an advantage or a compelling reason to do so. Participants of the present study identified several potential advantages of electronic on-line in-home shopping. If these potential advantages were incorporated into an electronic on-line in-home shopping system, adoption might be encouraged. These potential advantages expressed by participants consisted of discount or outlet pricing, cross referencing of products, and a replenishment system for staple items.

Compatibility. Compatibility refers to the extent to which an innovation is perceived to fit into consumers' lifestyles and is consistent with existing values, experiences, and needs (Rogers, 1983). Participants who expressed a familiarity with in-home shopping methods and with computer use might view electronic on-line in-home shopping as being compatible with their lifestyles. This may be related to the extent of behavior change perceived to be necessary to adopt an innovation as previously argued. It might be assumed that the
innovation does not fit into consumers’ lifestyles when they perceive that an innovation is discontinuous and requires substantial behavior change.

Fifty three percent of the participants had access to a computer. However, computer use was not extensive. Due to the lack of extensive computer use and lack of knowledge of electronic on-line in-home shopping methods, participants did not view this type of shopping method as being compatible with their lifestyles. Based on this finding, it might be reasonable to expect that electronic on-line in-home shopping would require a relatively long period of time to be adopted.

Adoption of electronic on-line in-home shopping may require changes in shopping behavior as well changes in other behaviors in order to use computers. Therefore, lifestyle changes necessary for adoption may include changes in shopping patterns. Consumers may also need to become familiar with computers. Participants in this study expressed a need for substantial behavior change in order to adopt electronic on-line in-home shopping whether they were computers users or not.

Complexity. Complexity refers to the perceived difficulty of use or of understanding an innovation (Rogers, 1983). If participants are knowledgeable of and familiar with computers and modems they might be expected to view electronic on-line in-home shopping as less complex than participants with no knowledge of or familiarity with computers and modems.

Participants’ knowledge of and familiarity with using computers was not extensive. Therefore, it may be concluded that the participants in this study
viewed electronic on-line in-home shopping as being relatively complex to use. Since participants generally lacked knowledge regarding electronic on-line in-home shopping methods and how they would be used, they also lacked a clear idea as to what might be involved in order to use this method. Therefore, participants’ reluctance to generally use computers due to the complexity may also be used as an indication that the reluctance to use electronic on-line in-home shopping methods may be related to complexity.

Although participants generally did not discuss the complexity of electronic on-line in-home shopping methods, they did express a willingness to try this shopping method, especially if given instruction. An indication that this method of shopping was viewed as complex may be derived from some participants’ expressions of willingness to try electronic on-line in-home shopping methods only with instruction.

**Trialability.** Trialability refers to the opportunity for trial of the innovation to enable the consumer to become more comfortable with it prior to complete adoption (Rogers, 1983). Through this trial consumers may reduce the degree of perceived risk and increase the rate of adoption when compared to consumers who do not try the system. Participants in this study who had had an opportunity to try electronic on-line in-home shopping methods may adopt more rapidly than participants who had not had a lack of opportunity to try.

Although one participant expressed a potential opportunity to try electronic on-line in-home shopping, trial had not been completed prior to this study. Therefore, participants reported a lack of opportunity to try electronic on-
line in-home shopping methods. This lack of opportunity may help to explain why electronic on-line in-home shopping has not diffused to the extent predicted by marketers.

**Observability.** Observability refers to the innovation's degree of visibility to other consumers (Rogers, 1983). Participants who have seen electronic on-line in-home shopping being used or demonstrated may be more likely to express a willingness to adopt this shopping method than participants who have not seen this shopping method demonstrated. Participants in this study reported a lack of opportunity to observe electronic on-line in-home shopping. Additionally, in relation to the adoption of electronic on-line in-home shopping, participants did not indicate an interest in or the importance of seeing this shopping method being used. Therefore, this lack of opportunity may help explain why electronic on-line in-home shopping has not diffused to the extent predicted by marketers.

**Conclusion**

The purpose of this research was to examine consumers’ attitudes toward electronic on-line in-home shopping methods. Reasons or potential explanations as to why electronic on-line in-home shopping has not been adopted and used to the same extent as other in-home shopping methods have been explored. The diffusion theory may be used as a framework for identifying potential explanations. Participants in this study expressed attitudes indicating that they perceived this shopping method as very new. The behavior change that would be necessary in order to adopt this shopping method was viewed as
substantial and therefore not compatible with their lifestyles. Participants also viewed electronic on-line in-home shopping methods as lacking relative advantages and as being complex to use. Participants reported having received no communication about electronic on-line in-home shopping methods or influence from reference group members concerning this method. Additionally, they remarked that they had no opportunity to try or observe electronic on-line in-home shopping methods. Therefore, the rate of diffusion of electronic on-line in-home shopping and potential reasons that this shopping method has not been widely accepted may be explained through the diffusion theory.

The following potential explanations or reasons that electronic on-line in-home shopping has not diffused as rapidly as predicted by marketers have been proposed based on the results of this study:

1. electronic on-line in-home shopping may be viewed as a discontinuous innovation that would require substantial changes in consumers' behavior in order to adopt.

2. electronic on-line in-home shopping is viewed as lacking relative advantages beyond the in-home shopping methods consumers are currently using.

3. electronic on-line in-home shopping is viewed as not being compatible with consumers' lifestyles since computers are generally not used extensively and a change in shopping behavior is required for participants to adopt.
4. electronic on-line in-home shopping is viewed as relatively complex to use with consumers requiring instruction in its use in order to adopt.

5. consumers generally lack an awareness of and knowledge about electronic on-line in-home shopping methods.

Implications

Based on the results of this study, possible avenues to encourage the adoption of electronic on-line in-home shopping are suggested. However, additional research must be conducted in order to make any generalizations.

Participants generally viewed electronic on-line in-home shopping as lacking compatibility, as lacking a relative advantage, and as being complex. In addition, participants had received no communication about electronic on-line in-home shopping, nor did they have an opportunity to try or an opportunity to observe the method. This shopping method is perceived to require a substantial change in lifestyle and shopping behavior. To encourage use of electronic on-line in-home shopping, the following suggestions are offered.

1. Provide information and/or demonstrations to visually indicate to consumers how electronic on-line in-home shopping may require only little to moderate behavior change. This would be feasible especially for computer users. Participants reported a lack of awareness concerning this shopping method. Therefore, information provided in a variety of ways may be an important first step in encouraging adoption. Advertisements targeted to
subscribers of computer magazines such as that used in the CompuServe magazine promoting selected products available through The Electronic Mall, and a demonstration or outline of the procedure of using The Electronic Mall are examples of print information. Advertising that generally outlines the use of computer information services and specifically shopping options, may be aired during programs that explore future technology and trends. In addition, the use of infomercials (informational commercials) providing detailed information and demonstrations may enable consumers to see how electronic on-line in-home shopping methods may be used.

2. Provide instruction in the use of electronic on-line in-home shopping methods. This may be accomplished in a variety of ways: a) seminars or a series of short instructional classes offered through a computer store, b) development of an instructional video for consumers to borrow and play on their VCR while learning the electronic on-line in-home shopping system, and c) provide support personnel who are available to respond to questions through an 800 telephone number, or to travel to a location convenient for consumers, or to travel to consumers’ homes.

3. Donate equipment, computer information service subscriptions, and on-line charges to a company, school, or households of opinion leaders in a geographical area. One of the reasons
expressed by participants for the lack of adoption of electronic on-line in-home shopping was the cost of this method compared to other in-home shopping methods (e.g., catalogs are received free or for nominal fee that is recovered through purchases made, TV shopping networks are received free to cable TV subscribers, mail-order promotions are received free through the mail). For example, costs may be drastically reduced for the individual consumer who could shop from the office rather than from home. This process could also permit trial of the system before purchasing the equipment for use at home.

4. Provide better graphics/photos of the merchandise available on-line than is currently available. This is significant for apparel offered through electronic on-line in-home shopping. Some participants expressed a dissatisfaction with pictures or illustrations available in catalogs and would not consider purchasing apparel without some visual representation. Some merchants currently on-line with computer information services (e.g., CompuServe, Prodigy) offer catalogs free or for a small fee. These catalogs may be ordered on-line. However, often once consumers receive catalogs ordered on-line, the catalogs become a primary shopping source. Thus, merchandise is ordered using a telephone or a mail order form rather than using on-line ordering. Therefore, no other advantage for using the computer system is
gained. A high quality visual representation of the desired merchandise on the computer screen could offset this limitation.

5. Provide consumers with the ability to search through a wide range of merchandise easily. Participants expressed a willingness to at least try electronic on-line in-home shopping methods if they could input specific information (e.g., a garment such as a jumper, a price range, desired color, desired material or fabrication) with the system responding by providing a list of all available merchandise that fit the criteria, or listing all companies selling the desired brand. In addition, manufacturers' size specifications may be provided by the system. This may eliminate the guessing and trial and error process that many consumers perform in order to obtain the correct size. Quality of materials used may also be obtained from manufacturers' production specifications such as fabric weight, yarn count, weave, fiber information, stitch classifications, and seam types.

Therefore, this research may be important to the retail industry overall. Consumers tend to use nonstore or in-home shopping methods to a great extent and marketers have predicted this pattern to continue. Electronic on-line in-home shopping methods may have an influence on shopping patterns in the future. However, changes need to be made in order for adoption to occur.

Findings of this research illustrate that computer information service companies, retailers, and manufacturers who currently offer or are considering
offering products through electronic on-line in-home shopping methods must consider several changes in order to encourage consumers to adopt and to be successful. Participants were generally unaware of electronic on-line in-home shopping methods. Therefore, the first step required by computer information service companies, retailers, or manufacturers is promotion and advertisement of this method. Until consumers are aware of the existence of this shopping method, the adoption process cannot proceed. In addition, participants expressed a need for instruction to reduce the perceived complexity of using electronic on-line in-home shopping methods. Thus, computer information service companies may encourage consumers to use this method by providing personal instruction either individually or in a seminar situation.

Not only did consumers express a reluctance to adopt electronic on-line in-home shopping methods due to the perceived complexity, but they were unwilling to spend money in order to purchase the needed equipment and pay for the costs incurred in using this method. Therefore, by providing consumers with an opportunity to try and observe electronic on-line in-home shopping as well as providing specific instruction, the adoption rate may increase.

Through the examination of participants’ discussions of conditions under which they would be willing to try or use electronic on-line in-home shopping methods, marketers, retailers, and manufacturers may gain valuable insight as to potential technological and system improvements. Participants stated that they would consider using electronic on-line in-home shopping if the system
offered discount/outlet priced merchandise, cross-referencing capability, staple replenishment, and a high quality visual display of merchandise.

Limitations of the Study

A limitation of this research is the lack of generalizability. One generalizability limitation is related to the use of focus group interviews. Data obtained from focus groups are generally unique to the participants in each group. Since participants interact with each other and with the moderator, the discussion that takes place cannot be replicated exactly. However, since the purpose of the study was to gain an understanding concerning consumers' attitudes toward electronic on-line in-home shopping for apparel information search or purchase, the use of focus group interviews was an appropriate method to use.

Focus group interviews offer several advantages that could not be obtained from other research methods. Participants are permitted to discuss topics freely using their own terminology rather than making a forced choice selection as in some survey research. This process gives the researcher the opportunity to gain information that may not have been expressed in other studies. In addition, the moderator and participants may pursue clarification of any statements that are unclear, misleading, or confusing. Therefore, in a study that centers around understanding a phenomenon, rather than explaining or predicting, focus group interviews are a valuable method of data collection.

Another limitation is that subjects were neither randomly selected nor randomly assigned to groups. Therefore, no generalization can be made about
participants' representativeness of the general population or to any population. Additionally, the present study surveyed only one geographic area. However, since no method was used to randomly select and assign participants to groups, generalizations cannot be made regarding representativeness within the geographic area.

Results from this study can be used to understand the way some women consumers think about electronic on-line in-home shopping methods. Women were selected for this study since they are typically apparel purchasers. On the other hand, men are often purchasers of scientific and technological products such as computers. Many of the consumers who subscribe to and use computer information services (e.g., CompuServe, Prodigy) are men. The possible differences between men and women in relation to attitudes toward electronic on-line in-home shopping methods were not examined. However, results from this research may be used as a foundation for further research. By identifying potential explanations why some consumers have not adopted electronic on-line in-home shopping methods to the extent marketers have predicted, an understanding may be obtained.

Recommendations for Further Research

Based on the research findings, future investigation into consumers' attitudes toward electronic on-line in-home shopping methods would be valuable. Continued analysis (e.g., in-depth interviews, survey research, examination of consumers in other geographic regions) of electronic on-line in-home shopping methods based on consumers' attitudes in relation to each
element of diffusion theory would provide a better understanding of consumers' thoughts and perceptions of this shopping method. In addition, examination of the extent to which diffusion theory may be used to explain the adoption of electronic on-line in-home shopping methods may be explored.

This study did not consider the personal characteristics of consumers or decision making processes consumers use in adopting an innovation. Therefore, exploration of these aspects may add to the literature on diffusion theory and lead to the identification of consumer differences in attitudes toward adoption of electronic on-line in-home shopping.

Another direction for this research would be to expand the number and characteristics of consumers interviewed. This research examined only female Caucasians. By expanding the study to include different cultural or ethnic groups as well as males, greater understanding may be gained and differences in the adoption process may be identified. In addition, the examination of the attitudes of consumers who are generally aware of electronic on-line in-home shopping methods but have not adopted would offer additional explanations as to consumers' reluctance to use this shopping method.

In the future, computer information service companies may not only be interested in consumers' attitudes toward adoption, but may also consider the importance of the aspects of the system to consumers (e.g., how important is visual information; what quality of visuals would be acceptable, sketches, drawings, photographs, three-dimensional representations) and the amount of money consumers are willing to spend for various potential advantages. Since
other in-home shopping methods are relatively inexpensive (e.g., catalogs, TV shopping network, 800 phone numbers) as compared to electronic on-line in-home shopping methods, it would be advantageous to determine functions and advantages for which consumers might be willing to pay in order to use electronic on-line in-home shopping.
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APPENDIX A

FOCUS GROUP INTERVIEW QUESTIONS
The following list consists of semi-structured interview questions. These questions are listed as a guideline for the focus group interviews. However, the order and the extent to which each is asked is determined by the moderator in response to the discussion specific to each focus group. The moderator may provide additional probes and clarifying statements or questions as needed to obtain participants’ thoughts and attitudes.

1. Do you shop from home? If so, what methods do you use? Why? (innovation)

2. Can you think of any shopping methods from home that you don’t use? (innovation)

3. How long have you used in-home shopping methods? (does the length of time vary by the method being used? What influences this?) Why? (innovation, compatibility)

4. What kind of products have you purchased (or can see yourself purchasing) from in-home shopping methods? Why? Would you purchase apparel through these methods? Why? (compatibility, relative advantage)

5. Have any of you heard of computer (on-line) shopping? If so, what? Where? (If no -- briefly describe). (communication)

6. Do you have access to a computer and/or modem? Where? (compatibility)
7. Have you ever seen computer shopping? When? Where? What was your reaction to this shopping method? (observability)

8. Would you be willing to try computer shopping? Why/why not? (compatibility, complexity). Other ideas as to why/why not? (trialability, compatibility, complexity)

9. Under what conditions would you be willing to try computer shopping? (no cost, instruction offered) (trialability, complexity, relative advantage)

10. Those who stated a willingness to try computer shopping, would you purchase apparel? Why? (relative advantage, complexity)

11. What advantage and/or disadvantages do you associate with the different in-home shopping methods? What advantages or disadvantages would computer shopping have for you? (relative advantages, complexity)

12. Do you rely on other people’s advice on how or where to shop? Why? (social system)
1. Do you own a computer?
   ___ Yes — How many times do you use it in an average week? _______
   ___ No

2. If you own a computer, do you also own a modem? ___ Yes ___ No

3. Do you have access to a computer at your place of employment?
   ___ Yes — How many times do you use it in an average week? _______
   ___ No

4. What best describes you and your spouse's (if married) current occupation?
   (please check)
<table>
<thead>
<tr>
<th>You</th>
<th>Your Spouse</th>
</tr>
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<tbody>
<tr>
<td>Professional</td>
<td>___</td>
</tr>
<tr>
<td>Managerial</td>
<td>___</td>
</tr>
<tr>
<td>Clerical / sales</td>
<td>___</td>
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<tr>
<td>Craftsperson / foreman</td>
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<td>Service</td>
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<td>Laborer / farmer</td>
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<td>Homemaker</td>
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<td>Student</td>
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<td>Retired</td>
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<td>Other</td>
<td>___</td>
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<td>(please specify)</td>
<td>______</td>
</tr>
</tbody>
</table>

5. What is your current employment status? (please check one)
   ___ Full-time
   ___ Part-time
   ___ Other (please specify) __________________________

6. For each age category, please fill in the number of children living with you.
   - under 6 years old _______
   - 6 to 11 years old _______
   - 12 to 17 years old _______
   - 18 years and older _______
7. What is your marital status? (please check one)
   ____ Married ---- Please indicate the number of years married: ________
   ____ Never married
   ____ Divorced / Separated
   ____ Widowed

8. What is your age _____ Your spouse’s (if married) age? _____

9. What is the highest level of formal education you and your spouse (if married) have attained to date? (please check)

   11 years of school or less __ __
   High school ___ ___
   Some college ___ ___
   Associate degree ___ ___
   Four-year degree ___ ___
   Master’s degree ___ ___
   Doctoral degree ___ ___

10. What is the total yearly income of your household before taxes? (please check one)
    ____ Under $10,000
    ____ $10,000 to $24,999
    ____ $25,000 to $39,999
    ____ $40,000 to $54,999
    ____ $55,000 to $69,999
    ____ $70,000 to $84,999
    ____ $85,000 to $99,999
    ____ $100,000 to $149,999
    ____ $150,000 and above

11. What is your race or ethnic origin? (please check one)
    ____ Caucasian
    ____ Hispanic
    ____ Asian
    ____ Black
    ____ American Indian
    ____ Other (please specify) __________________________

THANK YOU SO MUCH! YOUR CONTRIBUTION TO THE STUDY IS GREATLY APPRECIATED
APPENDIX C

SAMPLE PROTOCOL STATEMENTS AGREED UPON BY ALL JUDGES
<table>
<thead>
<tr>
<th>DIFFUSION THEORY ELEMENT</th>
<th>PROTOCOL STATEMENTS</th>
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<tbody>
<tr>
<td><strong>INNOVATION</strong></td>
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<tr>
<td>Information seeking</td>
<td>&quot;Can you shop for anything?&quot;</td>
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<td></td>
<td>&quot;So it [would] be ... a company would hook up with this computer system then would tell you what they offered?&quot;</td>
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<td></td>
<td>&quot;On the computer, would you, by any chance, have a picture on the screen of what you're going to buy, of what you want?&quot;</td>
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<td></td>
<td>&quot;Are there specific companies that are on this, I mean would you know who you were buying from? ... would I know where that was coming from?&quot;</td>
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<td>&quot;Would a computer have a printout that you could look at?&quot;</td>
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<td>&quot;Do you actually get pictures of the item or do you just get description of the item?&quot;</td>
</tr>
<tr>
<td>Behavior changes necessary to use</td>
<td>&quot;I spend at least eight hours a day at a computer anyway, and I don't get out enough ... I really, at this stage, do not use [electronic on-line in-home shopping] and I don't want to spend time, I'd rather do something else&quot;</td>
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<td></td>
<td>&quot;I don't know anything about computers, I would have to learn how to run a computer before...&quot;</td>
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<td>&quot;I can't do everything I want to right now. Rather than tackle something new, I just can't handle it right now&quot;</td>
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<tr>
<td>COMMUNICATION</td>
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<tr>
<td>Awareness</td>
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"Although I do sometimes use catalogs ... I would not be inclined to use computers [in order to shop]."

"I don't own a computer and decided that at my stage of life, that was not something I was going to convert to."

"I know there is a lot of different ways to shop and a lot of them are by computer. I think I have heard of ways where you can get a ... you can buy into certain kinds of programs or something where, I mean, I wouldn't be surprised where they have, you can get into it and have like a catalog in your computer. I think ... I think I saw it on TV. They were just talking about new things that were coming out on computers and this is one of the options, and they also talked about encyclopedias and how you can buy an encyclopedia into your computer, or you can buy into a system. You have to pay a monthly fee or something to have this encyclopedia computer type thing on-line."

"There is a type of shopping called CompuServe, or whatever it is, you can pull up ... there are other things besides shopping on it, this is some kind of program that you buy into every month, it's like a minimal type of thing. There are several things on it for free which is the shopping part's free. Where you can pull it up on your computer and it will ... they'll have like different categories, like, gifts under $25, kids gifts, clothing or whatever, and you pull up one of those categories and it will give you descriptions and prices for several of these items. ... no, it doesn't have pictures, it'll just, just words and price descriptions and then from that point you tell the computer yes or no whether you want it, you know, want anything off of there, and then you can just order. You can use a credit card ... it would be convenient for ... last minute shopping you had to do because you could pull it up on that and have it sent out."
```
### DIFFUSION THEORY ELEMENT

<table>
<thead>
<tr>
<th>Information source</th>
<th>protocol statements</th>
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</thead>
<tbody>
<tr>
<td>media</td>
<td>&quot;[electronic on-line in-home shopping] is the way of the future, that we are going to do everything ... on computers&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;It is my understanding that that is how we are going to do everything ... groceries, practically everything&quot;</td>
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<tr>
<td></td>
<td>&quot;...[aware of electronic on-line in-home shopping] through these homes of tomorrow where your computer's going to be hooked up...&quot;</td>
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<td></td>
<td>&quot;I've read about it, I think, but I've never participated&quot;</td>
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<tr>
<td>personal</td>
<td>&quot;... now that you mention Prodigy, last year before Christmas, didn't they have a bug push for selling this and there are a lot of components. For instance, a kid can learn his ... you know, you can call up all kinds of information for his lessons, and the dad can do his banking, and the mother can do her shopping ... I think I saw that advertised ... but I totally forgot about it&quot;</td>
</tr>
<tr>
<td>How information sources are viewed</td>
<td>&quot;Ted talks about this kind of stuff, you know, where you can tie into stuff. I think Fred uses bulletin boards and stuff like that to cross by, and a lot of it is computer equipment stuff that they are talking about, but I know that you can buy other stuff, that is the extent of my knowledge&quot;</td>
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<tr>
<td></td>
<td>&quot;it just wasn't anything that made me curious&quot;</td>
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<tr>
<td>SOCIAL SYSTEM</td>
<td>PROTOCOL STATEMENTS</td>
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<tr>
<td>Influence from others</td>
<td>&quot;I go anywhere and everywhere, wherever I think, I don’t worry about it, if I like it, I get it. I don’t worry or check it out prior with someone else like, oh is this place good. I just kind of like to go around to do my own thing. That is just me. I respect other people’s opinions, and I listen, but I still do what I want to do&quot;</td>
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<tr>
<td></td>
<td>&quot;I have a friend that always looks so nice and has things a little different, that when I learned where she shopped, why, I went to that shop too, to look&quot;</td>
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<td></td>
<td>&quot;the other day I was playing bridge with a friend, and she had on a real pretty blouse, and everyone commented on it, and it was such a nice color. She said ‘I got it at the Parisian’, and she said, ‘I have several friends who always look nice, and that’s where they get their clothes, and so I went there’. And I thought, well that’s great... evidently several people are influenced by what their friends do or say or wear’</td>
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<td></td>
<td>&quot;what she [mother] thinks won’t alter a lot, because it is my personal success with it that is going to alter it one way or the other and I have not ordered a lot of apparel for me through catalogs because I have never had a real tried and true way of doing it, you know, I have ordered through Avon and its been yucky things ... some of this is going to make me try it again, but it’s not going to alter the way I do it’</td>
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<td></td>
<td>&quot;I’ll see a catalog at your place or whatever and say, oh this is a really neat catalog and you’ll say, yea, I have gotten something through this and like, oh, did you like it, and then you go ... and the next time you get that catalog you may look at it with different eyes’</td>
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<td></td>
<td>&quot;...it might encourage you to try something&quot;</td>
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<tr>
<td>DIFFUSION THEORY ELEMENT</td>
<td>PROTOCOL STATEMENTS</td>
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<tr>
<td>Importance of information</td>
<td>&quot;I guess I do both, I mean I shop on my own, and I buy things without worrying about somebody else's opinions, but if I am with somebody, I guess I do listen to their opinion through ... and there are certain things that I would like somebody's opinion on, certain products. Like bathing suits. For some reason I feel like I need somebody else's opinion. I usually bring my daughter because she tells me the honest truth&quot;</td>
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<td></td>
<td>&quot;...[information] gives ideas of places that others have had good luck with good quality or good service and ease of returns&quot;</td>
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<tr>
<td></td>
<td>&quot;I think sometimes word of mouth gives you the idea of places that maybe people had good luck with good quality items or good service. If it didn't work, they knew they weren't going to have any trouble taking it back. And I think that's a big plus nowadays because if you get something and you're not happy with it, you don't want a hassle to return it, or to only get credit, not get your money, if you've already given them your money. I think these are things you hear from word of mouth&quot;</td>
</tr>
<tr>
<td>TIME -- RELATIVE ADVANTAGE</td>
<td>&quot;It would be faster to be able to have a modem and order almost instantaneously. by the way I do it now, I don't call 800 numbers and order because I get tired of getting the message that says, thank you for calling Blair, if you would hold ... you know. And I sit and listen to elevator music for 20 minutes&quot;</td>
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Electronic on-line in-home shopping

Actual advantages
**Potential advantages**

- cross referencing

> "If there was a cross-referencing I could see a real strong advantage in that ... I was looking for a denim jumper, if I could look at the Spiegel denim jumper and the JC Penney denim jumper, I've got one ordered from Talbots right now, you know, if I could see all of those. That's what I did, I went to all these different catalogs and found a denim jumper and I found ... and narrowed it down to the one I wanted. If I could just do that, like hit denim jumpers and that would be wonderful"

> "I wanted to order something for Sally out of the Disney catalog ... I looked in the Disney catalog and it was one price, I looked at Domesticaions catalog, it was less, and you know, different places had different prices, and that is for the same product, same brand, it can b different prices, if you could cross-reference"

> "It would be better in [electronic on-line in-home shopping] came with a catalog too, you know, if it just came with a catalog and it could cross reference it. In other words, you key up what you are looking for specifically, dollar range or if it's an appliance or something, however you access the data, and then if it said see something, you know, with a code, and then you could look at it, you could see what it looks like, that would be great"

> "I think an advantage could be with technology, you could ... it could sort through different things for you, you know, like somebody was saying, if you put in a dollar amount and said okay, I want a dollar range of this, this category, bring up only things from that so that you wouldn't have to ... and I am sure they could do that, I am sure that would be easy enough to do"

> "If I could have somebody ... I'd say I could spend 35 dollars, you buy my clothes, and maybe have 2 or 3 pictures on the screen of different styles and they would say, this would look good on you. I'd let them do that"
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<thead>
<tr>
<th>DIFFUSION THEORY ELEMENT</th>
<th>PROTOCOL STATEMENTS</th>
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<tbody>
<tr>
<td>· discount/outlet pricing</td>
<td>&quot;[visuals] would make a difference to me ... if they have a size 8 model, what is this going to look like on a size 16. And, you know, are those stripes going to be so wide I'll look like a road barrier or something of this nature&quot;</td>
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<td></td>
<td>&quot;I think the only way that I would order something ... if there were a good enough discount price, or a good enough, you know, wholesale price or something&quot;</td>
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<td></td>
<td>&quot;If I could hook up to a computer that I could get outlet prices, then I would sure, I would do it, I would be glad to do it then. If they just gave me a description and then I could look in the store and see what it is and maybe even try it on then buy it through a computer, I would do that&quot;</td>
</tr>
<tr>
<td>· staple replenishment</td>
<td>&quot;If I could order staples through it, okay, great, punch it in once a month and have them just ship me the same old thing I always get, you know staple type products, maybe it would be faster online get to the company quicker than if you mailed it or even had to call them&quot;</td>
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<td></td>
<td>&quot;The only way I can see it being real useful is that, let's say you wanted to order all the things that you go through in a month that you repeatedly buy over and over, like two tubes of Crest toothpaste&quot;</td>
</tr>
<tr>
<td>DIFFUSION THEORY ELEMENT</td>
<td>PROTOCOL STATEMENTS</td>
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<tr>
<td>Disadvantages</td>
<td></td>
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<tr>
<td>• isolation</td>
<td>&quot;Life is really interacting with people and once you start being a recluse and doing all your shopping without really relating to another person, or seeing other people, you’re going to be in trouble&quot;</td>
</tr>
<tr>
<td>• computer literate</td>
<td>&quot;I wouldn’t shop computer for thousands of reasons. One, I am not comfortable with it, and I don’t, unless you are really, I think, geared computer wise, I think it would take you a long time. Because I am on a screen 4 hours a day and I am not comfortable with it, much less somebody that has no...&quot;</td>
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<td></td>
<td>&quot;I think Barb has a good point though, I think the people that are on [computers], it is like us turning on the TV, if you are that geared, like just because you have it at home doesn’t mean that you are on it everyday, we just aren’t geared that way&quot;</td>
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<td></td>
<td>&quot;...someone that is on [computers], like the Marathon people, they sit in front of them all the time and during a break or whatever, I could see people like that using [electronic on-line shopping], that are geared that way, you know, like we turn on the TV, they turn on their computer&quot;</td>
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<td></td>
<td>&quot;[computer literate people] would be more geared to [electronic on-line shopping] because of their lifestyle and their work or whatever they would be on it and it would be like an automatic thing&quot;</td>
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<td></td>
<td>&quot;I think we are over the era where we are afraid of computers. I think that used to be common, where no ... I wouldn’t touch a computer, I might blow up the national debt ... or I might set the bomb off or something&quot;</td>
</tr>
<tr>
<td>DIFFUSION THEORY ELEMENT</td>
<td>PROTOCOL STATEMENTS</td>
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| • affect on older generations | "My mother still won't go near a computer, she doesn't even go to the automatic tellers"
| | "My mom doesn't either, my mom doesn't even touch our VCR"
| | "My mom doesn't do that, but she does use that ATM ... no problem with that"
| | "I don't think my generation would ... I mean I think it's a guess, unless my grandchildren's generation might, I mean from the stand point they are in today"
| | "I don't see my mom doing it either"
| | "They are scared of it, my dad is really really scared of it"
| | "I think I am really not interested in computers at all, I don't even care. I mean. I know it sounds dumb. Like our son has one [computer] ... and he is always trying to tell me and I am like, that's nice, and he says, mom, we can put all this in there, and I go, that's fine ... but I want to do it myself and ... I would not shop through a computer even if I knew how to do it, I wouldn't do it. I don't think your mother would, would she?"
| | "My mom was nervous when the went to computers at her office"
| • lack of visual information | "I can't visualize with a computer. I don't know if you are asking my opinion about this, but if you can't see it in color, and part of what attracted me to Land's End is, I think their photography is excellent, you know, they make things look so good"
<table>
<thead>
<tr>
<th>DIFFUSION THEORY ELEMENT</th>
<th>PROTOCOL STATEMENTS</th>
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<tbody>
<tr>
<td>In-store shopping</td>
<td>&quot;[visuals] would make a difference to me ... if they have a size 8 model, what is this going to look like on a size 16. And, you know, are those stripes going to be so wide I'll look like a road barrier or something of this nature&quot;</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>&quot;I can't find anything in the store that I really like. So I go through the catalog ... I can't find the sizes in the stores&quot;</td>
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<td></td>
<td>&quot;A lot of the sizes I need are off the racks, everybody has bought them all, but through the catalog I can get the size I want. I don't have to go through that hassle of trying to find it&quot;</td>
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<td>&quot;[in-store shopping is] very frustrating to go shopping because ... often times items are grouped by label or designer or whatever, you know, he would like to see all the blue pants lined up in one line ... which I guess I kind of agree, instead of going around in circles trying to find them&quot;</td>
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<tr>
<td>TV shopping</td>
<td>&quot;I should have worn some of my rings to show you ... they are gorgeous ... they're guaranteed for life&quot;</td>
</tr>
<tr>
<td>Advantages</td>
<td>&quot;Convenience is the deal here, if I know what I want, I am not going to sit [watching] television and wait&quot;</td>
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<td>DIFFUSION THEORY ELEMENT</td>
<td>PROTOCOL STATEMENTS</td>
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<tr>
<td>Catalog shopping</td>
<td>“Yea, and you flip through and see if something catches my eye, and I’ll say, oh, that’s not a bad price, that’s not, you know, that is pretty good, but … I won’t be in the market for it”</td>
</tr>
<tr>
<td>Advantages</td>
<td>“I just don’t think they are convenient enough, to sit and to watch”</td>
</tr>
<tr>
<td>• uniqueness and variety</td>
<td>“You would have to wait for hours, I would think, before, or else you would buy something that you really didn’t need”</td>
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<td>“I am offended by the way they [present the merchandise], I don’t like to watch it”</td>
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<td>“I just don’t like the way it, they show their models, everybody is either a size 6 or a size 8 that they show the clothes on, and I don’t think it looks good on them, so if it doesn’t look good on them, it isn’t going to look [right] on me”</td>
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<td></td>
<td>“It is easy to order it and go out to the store to pick it up or have it delivered to your door”</td>
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<td></td>
<td>“I think the main reason I buy anything at home is because it is almost always a really unique product that I couldn’t find if I was going to go out to a retail store where I had to go into a store and try to find it”</td>
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<td>“some stores aren’t really available around here. Like, I get a lot from the Speigel catalog and there is no Speigel store very close around here”</td>
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<td>DIFFUSION THEORY ELEMENT</td>
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<td>&quot;merchandise is more interesting in the catalogs than it is in the generic mall. Every mall's got the same stores&quot;</td>
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<td></td>
<td>&quot;I shop much, much from catalogs because I can get things, like from Lillian Vernon, that I can't buy anywhere else ... there is [also] a catalog called Domestications. I bought curtains for the kitchen with cats on them, that cannot be purchased in a store&quot;</td>
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<td></td>
<td>&quot;If you went to the stores around here, you know, you see 3 or 4 of the same thing in about 4 different sizes. So, this way [catalogs] it is kind of like I'm going to have something that maybe nobody else has in this area&quot;</td>
</tr>
<tr>
<td>• convenience</td>
<td>&quot;[catalog shopping is] recent for me because its not as convenient [to shopping in stores] ... since we moved... it just isn't as convenient to go to a store, I mean you have to drive to Northgate, you really have to plan to do it. And this is the first time we've lived in a town that was so limited in its ... articles they have&quot;</td>
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<td>&quot;don't you find maybe it has something to do with where you live? Like you lived in the country. I noticed, my sister-in-law lived on a farm and she would always sit there with a catalog, and I think, ordered everything out of that catalog because it took to much time ... to run ... someplace. And so she did a lot of her shopping out of the catalog. Whereas for us that lived closer to the mall, you could zap out there ... now with Meijers open all night, you could go shopping about anytime. But, I think too, it has to do with where you live and what is going on in your life at the time&quot;</td>
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<td>&quot;If we were in a metropolitan area, you know, where it is very difficult to get out to the store, and if my time ... if I didn't have the time to so it, then maybe I would appreciate being able to shop from the home&quot;</td>
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<tr>
<td><strong>DIFFUSION THEORY</strong></td>
<td><strong>PROTOCOL STATEMENTS</strong></td>
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<tr>
<td><strong>ELEMENT</strong></td>
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<tr>
<td>• children present</td>
<td>&quot;I can speak for all of us too, another reason we do catalogs is, by the time we get all our kids to bed, you know ... we can't go to the store&quot;</td>
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<td></td>
<td>&quot;I don't have time to just do to the mall and spend 5 hours ... I just don't have the time to do that ... that's a luxury&quot;</td>
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<td>&quot;I found that when my kids were little I shopped a lot more out of the catalogs ... because I couldn't really go shopping without them, and it was a lot easier to shop catalogs&quot;</td>
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<td>&quot;You go [shopping] a couple of times with a two-year-old and the catalog looks really attractive&quot;</td>
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<td>• special sizes</td>
<td>&quot;I use them [catalogs] for tall sizes. Because my husband ... he can't buy things in stores very much&quot;</td>
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<td>&quot;That's one thing we have to do all the time, shopping through the catalog. There was no big and tall stores for [my husband]. Granted there are big and tall stores, but they are so extremely expensive ... the sale catalogs ... we can get him clothes you know, at the prices we are used to paying ... if we have to pay something full price for myself, for him it is sale price. So, if it wasn't for catalogs, I don't know what he would be wearing&quot;</td>
</tr>
<tr>
<td>• ease of returns</td>
<td>&quot;There is never any question of returning, and they're very efficient with crediting and will take anything back if there's anything wrong, you know, with it&quot;</td>
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<td>DIFFUSION THEORY ELEMENT</td>
<td>PROTOCOL STATEMENTS</td>
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<tr>
<td>• direct shipment</td>
<td>&quot;[with catalogs] you can have it sent to your home or you can have it sent to somewhere else. And have several methods of payment, so that you don't have to deal with wrapping and the delivery&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;With my family scattered, that saves my getting it, wrapping it, boxing it, and the extra postage&quot;</td>
</tr>
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<td></td>
<td>&quot;I think with a lot of [catalogs] are convenient, too, is ... that you can have it sent to your home or you can have it set to somewhere else. And have several methods of payment, so that you don't have to deal with wrapping and the delivery&quot;</td>
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<table>
<thead>
<tr>
<th>Disadvantages</th>
<th>PROTOCOL STATEMENTS</th>
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<tbody>
<tr>
<td>• returns</td>
<td>&quot;My problem is ... if you don't like it and it doesn't fit, you have to pay the postage and take the time and effort to package it back up again and get to a post office or whatever to send it back&quot;</td>
</tr>
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<td></td>
<td>&quot;I ordered a pair of ... a skirt from Land's End early this summer, and it was just awful. I mean, I sent it back ... well, of course they took it back, but it's really a nuisance when you have to return something, even though you can return it in the same envelope&quot;</td>
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<td>&quot;I had to send one back last week and it still cost me postage and handling with nothing to show for it&quot;</td>
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<td></td>
<td>&quot;I paid 11 dollars postage and handling for a dress that I sent back, and then I had to pay 4 something to send it back ... with nothing to show for it&quot;</td>
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<td>DIFFUSION THEORY</td>
<td>PROTOCOL STATEMENTS</td>
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<tr>
<td>ELEMENT</td>
<td></td>
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<tr>
<td>• merchandise does not meet expectations</td>
<td>“I guess it is kind of a hassle if you have to send it back and you are never sure what it is going to be like and you ... it's a risk, sometimes I don't do it because I know if I don't like it, then I have to send it back, so I just don't ...”</td>
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<td>• deceptive models</td>
<td>“So many times, when you order from catalogs, it looks so great in the book, but when you open that box, your eyes pop out”</td>
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<td>• sizing</td>
<td>“My eye is not good enough to see some willowy, beautiful model in a dress and think, oh, that would look good on me”</td>
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<td>“I really would rather try on something that I'm going to wear all the time, because I can't visualize, really, how I would look. I'm certainly not like the models”</td>
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<td>“I've seen outfits like in a magazine that I haven't seen other places and they look so appealing on a model that you think, oh, I'll look like that. And you get it and think, why did I order that. Spend $5 in the stupid shipping to send it back”</td>
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<td>“It is a process of having to return ... and never ordering those particular items again because the make just doesn't fit me”</td>
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<td>DIFFUSION THEORY ELEMENT</td>
<td>PROTOCOL STATEMENTS</td>
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<td>• stockouts, back orders</td>
<td>&quot;I have also had a lot of problems, like Victoria Secret as an example, for my honeymoon, I ordered a ton of clothes through them, and ... they called me back on very short notice and said, we have nothing that you ordered, in stock, we'll get it to you in a month, and by then it would have been too late, so in the mean time I had waited all of that time, I hadn't done any other shopping and I was really depending on them and everything was out of stock, and I have had that happen a lot, especially for clothing&quot;</td>
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<td>&quot;Out of stock is a problem I think, frequently call and say it is on back order and then sometimes they call you again or send you cards, still on back order&quot;</td>
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<td>• unwanted mailing</td>
<td>&quot;I [have] gotten two catalogs of new age merchandise, and I don't appreciate that ... it is like tarot cards and ouija boards. As soon as I get it I pitch it, I mean twice. I have gone through it, it is a thick catalog full of all kinds of crystals ... my point was I don't appreciate getting on that stupid mailing list because of having bought a necklace from a company&quot;</td>
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<td>&quot;That does happen, when you place an order, then everybody does seem to, their computer ... like gives it to everybody&quot;</td>
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<td>&quot;I got in a magazine the other day in the mail for guns and ammunition, and all this stuff and my husband was like ... well he thought it was to him. He is like, why is somebody sending me a magazine like this. And I looked at it and I said, that has my name on it. That's mine. So he said, what are you doing with it. Who knows what you are going to get in the mail&quot;</td>
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<tr>
<td>TIME --- COMPATIBILITY</td>
<td>&quot;It wouldn't bother me at all to use a computer because we use a computer at school. But ... I would have to have a reason that it is better than the way I do it now&quot;</td>
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<td>&quot;[others might use it because they are] more geared to it because of their lifestyle and their work or whatever, they would be on it and it would be like an automatic thing&quot;</td>
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<td>&quot;I could see it working more in an office type of setting, where you take a break and start ordering ... I can see, just like the one store in town called Gifts in Time, where, you know, you call up and get something for your whatever. I can see somebody in the office sitting down and saying, oh gosh, and next week is my brother's birthday or whatever and so I am going to take a quick look at the screen and see what they have in basketball gear, you know, and doing that, but you know, I wouldn't do it at home, but you know because I am not geared, I don't know how to operate...&quot;</td>
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<td>&quot;I don't own a computer and decided that at my stage of life, that was not something I was going to convert to&quot;</td>
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<td>TIME --- COMPLEXITY</td>
<td>&quot;I have enough trouble with the typewriter, I don't want to go into anything more difficult&quot;</td>
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<td>&quot;We are getting too old, it [electronic on-line in-home shopping] would rattle our brains&quot;</td>
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<td>&quot;[computers are] intimidating. Don't you think they are intimidating?&quot;</td>
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<td>&quot;I don't know anything about computers, I would have to learn how to run a computer before...&quot;</td>
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<td>&quot;I would be willing to have someone come in and show me how&quot;</td>
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<td>&quot;If I felt comfortable with the computer to begin with I would be willing to try&quot;</td>
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<td>TIME --- TRIALABILITY</td>
<td>PROTOCOL STATEMENTS</td>
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<td>not willing to try</td>
<td>&quot;I can't do everything I want to right now. Rather than to tackle something new, I just can't handle it right now&quot;</td>
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<td>&quot;There would have to be a real incentive ... the merchandise would have to be a good quality and cheaper than I could get it anywhere else&quot;</td>
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<td>&quot;I think it would be neat to have enough time and money to have a modem and to spend every night talking to other people on a bulletin board or network. But, I don't think I want to do shopping that way. I want to be able to squeeze the peaches&quot;</td>
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<td>&quot;I wouldn't want to invest the amount of money into it for what I feel I would get out of it. And I am very comfortable with the way I'm doing it now. And so I wouldn't ... there are other things I would rather spend my time&quot;</td>
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<td>willing to try</td>
<td>&quot;Yes, if it didn't cost me anything&quot;</td>
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<td>&quot;If I didn't have to buy anything&quot;</td>
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<td>&quot;[if it] turned out to be good, I might buy several things ... However, I would probably not buy clothes as the first thing ... I'd probably be a little afraid of the equipment and of the system ... the computer, their situation, sending things out, being double billed or something of that nature. I would probably buy a toy or something and then as I gained confidence in the system, I'd be willing to probably buy clothing. But I would have to buy, I think, brand names. That is, if Blair went onto the system, then, since I already know them, I'd be more willing to work with a company I know&quot;</td>
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<td>&quot;I would be willing to try. I guess just for the thrill of it&quot;</td>
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<td>&quot;If it didn't have something that would appeal to me, I wouldn't use it at all. But, if there are things on there that I would like, that would be nice&quot;</td>
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<tr>
<td>TIME --- OBSERVABILITY</td>
<td>&quot;I haven't seen him actually use [CompuServe] ... I don't think they have used it yet&quot;</td>
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