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Online Atmospherics: An Investigation of Feeling and Internet Purchase Intention

Kelly Price Rankin

University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a dissertation written by Kelly Price Rankin entitled "Online Atmospherics: An Investigation of Feeling and Internet Purchase Intention." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Ann Fairhurst, Major Professor

We have read this dissertation and recommend its acceptance:

Youn-Kyung Kim, Candance White, Laura D. Jolly

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Anne Mayhew_____
Vice Chancellor and Dean of
Graduate Studies

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Online Atmospherics:
An investigation of feeling and Internet purchase intention

A Dissertation
Presented for the
Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Kelly Price-Rankin
December 2004

DEDICATION PAGE

This study is dedicated to the following persons:

…to Dr. Ann Fairhurst, who provided wisdom, direction and encouragement throughout the study and throughout my entire doctoral career

…to Dr. Laura Jolly, Dr. Youn-Kyung Kim and Dr. Candace White, each of whom provided special guidance and expertise

…to my husband, Adam, whose love and dedication helped me through all the ups and downs

…to my father, Lloyd, who gave me continual support and my little brother, Casey, who never let me lose my sense of humor

…to my uncles, Dr. Chris Jones and Dr. Joe Jones, who let me join the "Jones Dr. Club"

…to my friends and peers in the doctoral program who exemplified excellence and who taught me the meaning of true friendship

…to my mother, Dr. Julia Jones Price, who taught me the art of life-long learning, who gave me the love of knowledge and most of all, always motivated me to ask, "Why"

Abstract

This study examines the online atmospheric cues of color and music and their impact upon feeling, attitude and purchase intention of consumers in the online environment. The research design was experimental and used data from a questionnaire. A pilot test of the instrument was conducted. The final questionnaire contained 39 items and a demographic section. A total of 200 questionnaires were collected. Participants were randomly assigned to one of four groups. Each group of 50 participants was exposed to a specific set of online atmospheric elements. The results indicated that Hypotheses 1, 3 and 4 were rejected while Hypotheses 2 and 5 were accepted. Managerial and theoretical implications are discussed along with future research suggestions.

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Chapter One
Introduction

Statement of the Problem

The Internet is an increasingly important and viable channel for retailing. As e-commerce becomes more profitable for retailers on the Internet, retailers are recognizing the online environment as a unique context in which to operate. Online retailers are finding that service and atmospheric elements may influence consumers just as they impact physical stores (Menon & Kahn, 2002).

Online shopping has been increasing in recent years. In addition, a recent study forecasted that online sales will reach approximately $269 billion in 2005 which is an increase from $45 billion in 2000 (Rohm & Swaminathan, 2004). As consumers began to accept and use the Internet for shopping, the retail store may be surpassed by the unique characteristics of the online shopping environment. These unique characteristics have been suggested to include time and space differences. Other characteristics and advantages of online shopping include 24-hour availability, instant gratification and interactivity (Van den Poel & Leunis, 1999).

E-commerce is still developing in many ways. As of August 2000, 56% of online users were 18-24 years of age (United States Department of Commerce, 2000). In addition, the 18-29 aged group has been the most active on the Internet. Sixty-three percent of individuals age 18-29 have bought products online (Pew Research Center, 2002). Furthermore, just as retail stores have used atmospheric and differentiation techniques to stimulate profit in the past, online retailers are now facing new challenges. It has been suggested that three main differences exist between traditional and online

retailers. The online environment can be visually different than a retail store. In addition, time and distance are compressed in the online environment. Finally, the consumer possesses the unique ability to control information retrieval and which web sites he or she visits (Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer, & Wood 1997).

With online sales now in the billions, retailers are analyzing the online environment as an opportunity to provide their product in color, far reaching, low cost and instant fashion. Online retailing, during its development, however, has not been given significant attention in regard to the nature of the channel (Eroglu, Machleit, & Davis, 2001). Therefore, the call for exploratory research has been made by academics to study the atmospheric qualities that exist in the distinctive context of online shopping.

The current study seeks to understand the impact of some online atmospheric qualities. With the development of a conceptual model, the relationships among selected atmospheric qualities will be investigated to explore how these qualities impact consumer purchase activities.

Purpose of the Study

Most atmospheric studies have been performed relative to physical store atmospherics. Atmospheric variables such as lighting (Golden & Zimmerman, 1986), scent (Bone & Ellen, 1999; Hirsch, 1995); music (Hui, Dube, & Chebat, 1997; Yalch & Spangenburg, 2000), and color (Crowley, 1993; Belizzi & Hite, 1992) have all been found to be a significant influence in consumer shopping behavior. Other studies regarding the development of the overall online environment have called for further study in expanding knowledge regarding differences between traditional and online

environments (Davis, Buchanan-Oliver, & Brodie, 1999). A limited number of studies have concentrated on online atmospherics (Childers, Carr, Peck, & Carson, 2001; Eroglu, Machleit & Davis, 2001, 2003) and their impact upon consumer behavior. Therefore, this research focuses on specific atmospheric cues and their impact on the well-established consumer behavior constructs of feeling and purchase intention.

Conceptual Framework

Eroglu, Machleit and Davis (2001) developed a model positing that certain atmospheric qualities would influence consumer cognitive states which would, in turn, affect shopping outcomes in the online shopping environment. The authors suggested that two categories of online atmospheric cues exist. First, high-task relevant cues are those cues suggested to be web site descriptors that are required for the consumer to complete the shopping goal. Examples of these cues may be merchandise descriptions, price and return policies. Low-task relevant cues are suggested to be atmospherics that are not required to be present to complete the shopping task. Examples of low-task relevant cues are color, music, fonts or animation. In 2003, the same authors tested the suggested model and found that atmospheric qualities impact consumer attitudes, satisfaction and outcome behaviors in the online environment. In addition, involvement and atmospheric responsiveness were found to possess moderating effects.

The current study will utilize a conceptual model adapted from the Eroglu, Machleit and Davis (2001, 2003) model. The modified model, shown in Figure 1, focuses on the effect of low-task relevant cues upon feeling and purchase intention in the online shopping environment.

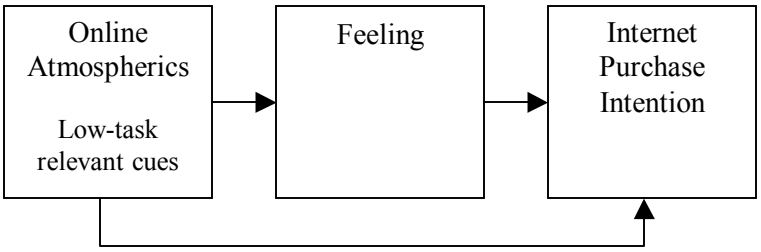

Figure 1: Proposed Conceptual Model

The proposed conceptual model focuses on the relationships among low-task relevant online atmospheric cues specifically color and music, consumers' feeling and Internet purchase intentions. The model places emphasis on the importance of low-task relevant cues when shopping on a retailer's web site. These cues are believed to lead to consumer feeling. Feeling is then anticipated to lead to Internet purchase intention.

Potential Contributions

The primary contribution of this study is to conduct an empirical examination of low-task relevant online atmospheric cues and consumer feeling and purchase intention. The results of this study will aid in the understanding of these constructs in the online environment. The findings should also benefit academia and practitioners in the field by adding to the knowledge of how these constructs influence the online environment. The current research is expected to answer the following research question:

What is the relationship between the low-task relevant online atmospheric cues of color and music and consumers' feeling and Internet purchase intention?

Dissertation Organization

The dissertation is organized in a five-chapter format. Chapter One presents an overview of the online retailing phenomenon and provides justification for the study. In addition, Chapter One also explains the conceptual framework for the study, formalizes the statement of the purpose and discusses potential contributions of the study.

Chapter Two provides a review of the literature. This review will examine each construct in the conceptual framework. Hypotheses are also stated.

Chapter Three offers a discussion of the research methodology used in the study. This discussion encompasses an explanation of the research design, measurement, pretest results, sample selection, and data analysis procedures used.

Chapter Four discusses data analysis undertaken for the current study. Validity and reliability is confirmed for each construct included in the conceptual framework.

Chapter Five describes the theoretical and managerial implications of the results of the current study. Limitations are also given. The study is concluded with suggested future research directions.

Chapter Two
Review of the Literature

Chapter Two is organized into six sections. Part one investigates the development of the online retailing phenomenon. Part two examines the store atmospherics literature. Part three presents a discussion of online atmospherics research. The fourth part discusses the construct of pleasure. Part six investigates purchase intention research. The chapter concludes with a summary of the review of literature.

Online Retailing

Adoption, Acceptance, Satisfaction and Motivation

Online shopping is becoming an increasingly used channel for retailing (Menon and Kahn, 2002). Consequently, the amount of online purchasing doubled from the year 1999 to 2000 (Wolfinbarger & Gilly, 2001). Internet purchases have been projected to range from $46 billion to $73 billion in the year 2000 (Van den Poel & Leunis, 1999). It has been suggested that the store environment possesses some of the same attributes as the online environment. However, retailing in the online environment presents itself with new challenges and opportunities. Analogous to retail stores, online retailers are trying to find new methods in which to differentiate themselves. Because the Internet offers a new channel for shopping, new experiences and values emerge. In addition, consumers who value control and convenience often choose the Internet (Mathwick, Malhotra & Rigdon, 2001). Online retailing is unique also because business-to-consumer transactions are expanded to create a richer shopping environment that is not necessarily available in the traditional non-electronic environment (Childers, Carr, Peck & Carson, 2001).

Adoption and acceptance of the Internet as a shopping venue has been suggested to be an important factor of online retailing. For example, it has been posited that the future success of the Internet depends upon, to some extent, its current users (Citrin, Sprott, Silverman & Stem, 2000). The consumer characteristic of innovativeness has been proven to be a determinant of product adoption in such products as cell phones or satellite television. It has also been suggested that this innovativeness is associated with increased Internet product purchasing (Citrin, Sprott, Silverman & Stem, 2000). In regard to adoption, some determinants such as compatibility, complexity and communicability have been identified as important (Verhoef & Langerak, 2001).

Because of several advantages such as 24-hour availability, instant gratification and the ability for the consumer to control the flow of information, the Internet is quite attractive for some consumers (Hoffman & Novak, 1996). Though some issues, such as security have been identified as problematic for online consumers, security experts claim this issue will be resolved with cryptography (Adam, Awerbuch, Slonim, Wegner & Yesham 1997). It has been found that the Internet is a shopping medium that is already accepted (Van den Poel & Leunis, 1999).

Online retailers are also beginning to understand the importance of satisfaction in the online environment. For instance, it has been found that a consumers' perception of online convenience, merchandising, site design and security all influence overall satisfaction (Szymanski & Hise, 2000). In addition, the field of cognitive computing, which is described as the study of cognitive and computer behavior allows online retailers to better understand consumers (Bakos, 1997). Therefore, there are opportunities for online retailers to satisfy the consumer in the online context.

As already established within the traditional retailing channels, online retailing has begun to diversify and expand in regard to consumer experiences and offerings (Mathwick, Malhotra & Rigdon, 2001). Therefore, consumer value has emerged within the online context. Just as in the store environment, consumers demand value as a result of marketing activities (Holbrook, 1994). Online shopping value may be extrinsic (objective-based) or intrinsic (pleasure-based) (Babin & Dardin, 1995 and Crowley, Spangenburg and Hughes, 1992). Research has shown that the nature of the task has a significant influence upon the value and shopping enjoyment (Mathwick, Malhotra & Rigdon, 2001).

Online retailing has also been defined in terms of consumer motivation. Many online shoppers have been described as experiential. It has been suggested that up to one-third of online consumers are not engaged in goal-oriented behaviors, but are instead searching for fun in the online environment (Babin, Darden & Griffen, 1994). As retailers become more aware of the motivations of their consumers, planning and executing a strategy will become more clear and will provide satisfaction to online consumers (Wolfinbarger & Gilly, 2001). Retailers may encourage motivation in the online environment by including such media as the ability to download music, web-casting and video streaming. Studies have indicated that navigation and convenience of the online environment were all predictors of online attitudes (Childers, Carr, Peck & Carson, 2001). In addition, characteristics such as structural design elements (graphics and text), media (video streaming) and site layout (organization) were all suggested to be important in consumer motivation and could influence the enhancement or the detraction of the online experience (Pine & Gilmore, 1999).

In conclusion, online retailers just as traditional retailers, are influenced by the acceptance, adoption, satisfaction and motivation of consumers. Because consumers are increasingly using the Internet for browsing, shopping and research of products and services, retailers have acknowledged the need to differentiate themselves not only in the traditional environment, but in the online environment as well.

Demographics of Online Shoppers

The demographics of online shoppers have also been investigated. Demographics such as age and gender have been examined. A study conducted in 2001 (Pastore, 2001) found that the number of female users exceeded male online users in that year. Girard, Korgaonkar & Silverbatt (2003) found that more women are shopping on the Internet than men. Further, demographics also influenced purchasing in certain product categories. Studies have also been conducted to explore very specific geographic and Internet usage relationships. The highest proportion of female Internet users resides within the Mid-Atlantic region of the United States while most male users reside in the New England area of the United States. The youngest users live in California, the Rockies and the lower mid-west. The oldest users live in the Pacific Northwest. Internet use in the Southern United States is behind the rest of the United States (Pew, 2003). Ethnicity is also an important variable. Caucasians in the United States are using the Internet more than African-Americans or Hispanics (Pew, 2003). Therefore, such demographic variables as gender, age and geographic location have been found to influence online usage.

Store Atmospherics

The Development of Store Atmospherics

Phillip Kotler (1973) is credited with the phrase "store atmospherics." Kotler started the study of store atmospherics and retail environmental cues. He defined atmospherics as the "conscious designing of space to create specific effects in buyers" (Kotler, 1973). He also defined it as the "effort to design buying environments to produce certain emotional effects in the consumer that enhance purchase probability" (Bellizzi & Hite, 1992). According to Kotler, atmospherics have been neglected by business people because business people have tended to be very functional and utilitarian in their thinking and behavior. Atmospherics can be perceived as a silent form of communication and thus, ignored. Kotler suggested that elements such as noises, shapes, colors and sizes all contribute to the purchase behavior of consumers. Kotler also suggested that patronage decisions may be influenced by a store's sensory qualities." (Kotler, 1973).

Kotler propelled and initiated the study of atmospherics as an element of environment. In addition to Kotler's benchmark work, another study measured consumer's response to the store environment. Albert Mehrabian and James Russell (1974) wrote one of the most influential books in environmental psychology, "An Approach to Environmental Psychology." This study first introduced the concept that people would react in one of two ways: approach or avoidance. In relation to those two responses, the authors then proposed that three basic emotional states would mediate the approach-avoidance responses in any environment. These three emotional states are pleasure, arousal and dominance or PAD. The basis of the Mehrabian-Russell theory is

predicated by the S-O-R paradigm, which relates "the environment (S) to approach-avoidance behaviors (R) within the environment and thus mediated by the individual's emotional states (O) that are aroused by the environment: pleasure-displeasure; arousal-non arousal; and dominance-submissiveness" (Donovan, Rossiter, Marcoolyn & Nesdale, 1994). The PAD paradigm became the premier measure in environmental psychology for measuring an individual's emotional response to his or her respective environment (Machleit & Eroglu, 2000). The reactions that resulted were positive between arousal and approach behavior and negative arousal resulted in avoidance behavior (Morrin & Ratneshwar, 2000). Mehrabian and Russell (1974) hypothesized the following: 1) Pleasure would be significantly related to approach-avoidance measures, 2) Arousal would have an interactive effect with pleasantness and that arousal would be positively related to approach behaviors in pleasant environments, but related negatively in unpleasant environments, and 3) Dominance would be positively related to approach behaviors, but only for theoretical reasons.

Another typology that influenced the study of store atmospherics is the proposal by J.D. Lindquist (1974) in his benchmark article, "Meaning of Image: Survey of empirical and hypothetical evidence." Prior to Lindquist, numerous authors proposed differentiating attributes and characteristics that are part of an overall image of a store. Thus, Lindquist in his synthesis of the store image literature, combined models from nineteen studies and suggested nine major elements that influence the consumer: merchandise, service, clientele, physical facilities, comfort, promotion, store atmosphere, institutional and post-transaction satisfaction (Lindquist, 1974, Bloemer & Ruyter, 1998). Lindquist adhered to the "gestalt" view of store image which suggested store image is

more than an opinion. Lindquist thought that consumers had a very limited cognitive capacity and motivation. Therefore, the consumer produces a cognitive construction that narrows and simplifies the complex information that the image can create. Lastly, Lindquist grouped store attributes into several perceived risk dimensions. They are physical risk (product quality and assortment), financial risk (pricing, guarantees, ease of return, credits), time and convenience risk (delivery to home).

Russell W. Belk (1975) introduced the idea of situational variables as having an impact on consumer behavior. He contended that a behavior in relation to a product or service will be a direct response from that source of behavioral influence (Belk, 1975). Belk believed that Mehrabian-Russell did not completely depict the number of possible situational dimensions. Therefore, he proposed five major situational characteristics. First, Belk suggested that physical surrounding was the most apparent in a situation. This dimension included décor, lighting and aromas. The social surrounding, a second dimension, included other people present and the roles they play. The third dimension included time components referred to as the temporal perspective. Task definition was suggested to be the intent to obtain information about a specific task. The final dimension suggested by Belk was the presence of antecedent states or momentary moods or conditions that influence choice.

C.E. Izard's (1977) Differential Emotions Theory also influenced store atmospheric research. He suggested ten fundamental emotions that influence behavior. The emotions that he conceptualized were joy, surprise, anger, disgust, contempt, shame, guilt, fear, interest, and sadness. According to this view, these emotions were a part of the main functions of the human central nervous system. Therefore, he claimed that a maturational

process would result in the emotions he listed. Izard's theory contended that these emotions were integrated into the human system and thus, influenced behavior.

Donovan and Rossiter (1982) investigated approach-avoidance behavior prediction from emotional states inside a store. With the independent variables consisting of pleasure, arousal, dominance and information rate, and the dependent variables being approach-avoidance behavior intentions, it was found that dominance does not appear to influence behavior. It was also reported that as arousal increases, enjoyment, money spent in the store and time spent in the store increased. The study was important since it tested the well-established Mehrabian-Russell theory in a retail specific environment. The study established the relationship between retail environmental emotional states and behavioral intentions. Results indicated arousal and pleasantness influenced the consumer's shopping-related intentions inside the retail store. Arousal and pleasantness were found to be channeled via enjoyment of shopping in the store, time spent browsing and exploring the store's offerings, sales personnel's willingness to communicate, spending more money than planned and future patronage.

The study of the retail environment has slowly emerged as a viable and important area of study in consumer behavior. These classic studies were the benchmarks that guided researchers to explore store atmospherics as a marketing tool. The literature stream began with these innovative theories and has thus resulted in further research devoted to store atmospherics.

Store Atmospherics Research

There are numerous and well developed areas of literature regarding store atmospherics, although they have been concentrated in the store setting. Atmospheric cues are often categorized into three main areas: ambience, design and social. Specific low-task relevant concepts highlighted in store atmospheric literature are color, music, lighting, crowding and salespeople.

Color has been found to impact consumer behavior in the retail setting. Bellizzi, Crowley and Hasty (1983) found color was associated with physical attraction but did not influence approach behavior. Study subjects were attracted to warm colors, but warm colors were found to be unpleasant. Bellizzi and Hite (1992) conducted two studies to test the impact of store color. Colors focused upon were red and blue due to their extreme differences in properties. The blue environment elicited higher simulated purchase rates and a more favorable reaction from consumers. The study concluded that pleasure and arousal were strongly linked to color. Crowley (1993) studied wavelengths of red and blue and found that red was perceived as a more active environment. The study showed that the more the wavelength moved from red to blue, the more positive the behaviors became. The results also indicated that impulse buying may be more likely from an aroused consumer. In addition, the study revealed that color may impact perceptions of the merchandise in the traditional store environment.

Music has also been studied widely within the atmospheric literature. Smith and Curnow (1966) believed that loud music would be related to store sales. Though sales were not found to be influenced by the loud music, the study found less time was spent in the loud environment. Milliman (1982) studied music tempo in relation to traffic pace,

sales volume and awareness of the music in a supermarket environment. Results indicated that consumers spent thirty-eight percent more time shopping while listening to slow music versus fast music (Milliman, 1982). Milliman (1986) tested the atmospheric variable of music again in the restaurant environment. Results indicated that slow music tempo did not impact service time or food purchases, but did positively impact time spent at a table and gross margin. Yalch and Spangenburg (1990) investigated the impact of music in relation to age, mood, time perception and impulse behavior. Consumers were found to prefer foreground music to background music. When shopping, consumers completed fewer impulse purchases if foreground music was present. The younger subjects spent more time in the store when background music was present and the older subjects exhibited the same behavior when foreground music was present. The type of music has also been examined in an atmospheric study. Areni and Kim (1993) found significantly higher sales resulted when consumers were exposed to classical music. The study indicated that classical music induced consumers to buy more expensive items. Age was also found to be a variable in shopping behavior. Gulas and Schewe (1994) stated that baby-boomers reacted more positively and purchased more in the classic rock condition. Older participants reacted more strongly to big band music. Hui, Dube and Chebat (1997) explored pleasurable music and its relationship to time estimation, emotional evaluation to the environment, and emotional response to waiting. Results also indicated that music made an impact on the three presented variables and that the effects were moderated by whether consumers liked or disliked the music.

Two atmospheric variables later emerged in the literature pertaining to the human element of an environment: crowding and salespeople. Crowding was perceived as an

unpleasant experience by consumers (Bateson & Hui, 1987) while shopping. Machleit, Kellaris and Eroglu (1994) analyzed the impact of perceived crowding, satisfaction and crowding expectations upon the independent variable of crowding. By using both field experiments and lab experiments, results in the laboratory suggested that crowding was negatively correlated to satisfaction. A conclusion made by the authors suggested people have preexisting crowding perceptions in regards to shopping. Sharma and Stafford (2000) studied the influence of store atmospherics on the level of persuasion generated by salespeople in the store. Results indicated store ambience and design positively influenced perceptions of salespeople.

Online Atmospherics

Online shopping is becoming a new frontier and distribution channel for retailers. Kalakota and Whinston (1997) suggest that online retailing allows the constraints of time and space to disappear. Online shopping has been recognized as having some of the same psychological and behavioral qualities as the traditional store environment. In the traditional retail store, certain aspects of the physical environment have been shown to impact shopper behavior. It has been suggested that similar aspects such as satisfaction, patronage, time spent in the online store and amount purchased are all influenced by online atmospherics (Eroglu, Machleit, & Davis, 2001).

As online shopping has become increasingly prevalent, it has been suggested that researchers in the field of retailing, marketing and management take a more scientific approach to studying this issue. Eroglu, Machleit, and Davis (2001) produced a conceptual model based on the S-O-R framework (Stimlus – Organism – Response) to

show consumer response to online shopping. The model introduced environmental cues identified as "high-task relevant" and "low-task relevant." "High-task relevant" cues refer to all the web site descriptors that appear on the computer screen which allow the user to reach his/her shopping goals. These goals refer to anything verbal or pictorial in character. Elements such as terms of sale, price and return policies are examples. "Low-task relevant" cues are irrelevant to the completion of the shopper's goals. Items of this nature may include colors, fonts, backgrounds, music, animation, and amount of white space.

The Eroglu, Machleit and Davis model (2001) also presented the "Organism" level, in which the authors present the "affective" and "cognitive" states. The cognitive state refers to "everything that goes into the consumers' minds concerning the acquisition, processing, retention, and retrieval of information. Cognitions describe consumers' internal mental processes and states and include attitudes, beliefs, attention, comprehension, memory and knowledge" (Eroglu, Machleit, & Davis, 2001). The affective state refers to the PAD paradigm proposed by Mehrabian and Russell, by placing focus on the Dominance element. The Eroglu, Machleit and Davis model (2001) proposed that consumers will choose to shop online due to the dominance or control online shopping gives. Consequently, dominance may be decreased in the instances that a link does not work or the web site is difficult to navigate.

Finally, the Eroglu, Machleit and Davis (2001) model exhibited the atmospheric responsiveness variable. This is defined as "the tendency to base patronage and purchase decisions on the store's physical qualities (McKechnie, 1974.) Therefore, the authors

proposed that this responsiveness will ultimately affect the relationship between online shopping stimuli and the emotional status of the consumer.

To test the Eroglu, Machleit and Davis (2001) model the same authors tested the conceptual model for effectiveness (2003). By constructing a hypothetical retail web site, named the XYZ Shirt Co., the authors were able to use the web site to test "high-task" and "low-task" cues. By manipulating the task cues, the researchers found that atmospheric qualities positively affect consumer atmospheric responsiveness. The 2003 study also found the levels of pleasure increased. The results of the study found that the atmosphere of the web site influenced the feelings of the consumer. This feeling impacted attitude which then had a significant effect on satisfaction and approach/avoidance behavior (Eroglu, Machleit, & Davis, 2003).

Another study confirmed that online atmospherics had a significant influence on consumer choice (Mandel & Johnson, 2002). It was found that by manipulating atmospheric variables, such as color and the presence of images, that product choice was affected.

Feeling

Many studies have shown that atmospherics such as color and music in the traditional retail environment have significantly impacted feeling, emotions and arousal (Kotler, 1973, Milliman, 1982). Mehrabian and Russell (1974) first introduced the idea of feelings (emotions and arousal) in a physical environment and posited that feeling produces an interaction effect in regard to the environment and defined feeling as the degree to which an individual has favorable feelings toward a certain situation (Russell &

Snodgrass, 1987). Consumer behavior research has employed the pleasure variable in the atmospheric context. For example, a consumer's willingness to spend time and money in a retail setting is mediated by pleasure (Donovan & Rossiter, 1982; Dube, Chebat & Morin, 1995; and Wakefield & Baker, 1998). It has also been suggested that consumers are better able to cope in situations that are more pleasurable (Holbrook & Gardner, 1993). Additionally, situations in which consumers feel safe occurred when the consumer was influenced by pleasure (Kahn & Isen, 1993).

Feeling also plays a role in outcome behavior. For example, a positive affect allows consumers to handle an increased level of complexity in a situation and consumers are more likely to be optimistic of the situation (Isen, 1987). It has also been suggested that consumers use feeling as a guide when no evaluative goals are established (Schwartz, 1986).

Much of the existing atmospheric literature regarding feeling has focused upon elements such as music, color and lighting in the store setting. In addition, traditional retail elements such as crowding can contribute to the overall stimulation in that environment. However, e-commerce has brought forth a new channel to explore. It has been suggested via new research regarding feeling, that the Internet will also possess similar pleasure characteristics as the store environment. Menon and Kahn (2002) found that a optimistic impact feeling is the result of high levels of pleasure while shopping in the online context. Thus, subjects participated in more pleasurable activities such as more exploration of the website and produced much higher response rates to promotional activities.

It has also been suggested that emotions that are positive in nature may influence an individual's orientation. For example, Schwartz (1986) suggested that consumers who perceive the given environment as positive or happy with no apparent negative conclusion will influence consumers to explore the environment. Therefore, this may explain why feeling may influence consumers to approach innovative ideas such as online shopping. Consequently, it was found that people may have the ability to manage an increased level of arousal in situations that were seen as pleasurable (Holbrook & Gardner, 1993). This may also be applicable to the online environment. If the web site is pleasing, consumers would be encouraged to browse and be more prone to impulse buying (Menon & Kahn, 2002). Another study concluded that a better store layout resulted in an increased level of pleasure. Pleasure was also found to be the link between atmospherics and consumer behavior (Ang, Leong & Lim, 1997).

Attitude in regard to behavioral theory may be defined as a "mediating evaluative response" to an object and is usually positive, negative or neutral in nature (Fishbein, 1974). Possibly the best known model in the attitudinal literature is the Theory of Reasoned Action (Ajzen & Fishbein, 1980). Later studies addressed how behavioral options and responses were evaluated. Other subsequent studies explored the factors that impact the relationships between other behavioral decisions. Some of the characteristics that have been analyzed are confidence (Berger, 1992) and accessibility (Fazio, 1990). Attitudes toward the object and its relationship to patronage behavior (Dick & Baru, 1994) along with the consistency of the attitude when consumers have a genuine interest in the outcome (Ratner & Miller, 2001) have been addressed. Attitudinal models have also been identified and used in attitudinal research. One model of note was the

Attitudinal Comparison Model (Jaccard, 1981). This model posits that the consumer forms an attitude toward each behavioral option and thus will exhibit the behavorial option which has the most positive impact (Jaccard, 1981).

Attitudinal strategy, or the process by which attitudes direct consumer decisions, is also important to attitude research. Consumer decisions have been determined by strategies that focus on the features of the options (Payne, Bettman, & Johnson, 1993) and by the benefit and/or cost of the behavior (Ajzen & Fishbein, 1980). In addition, attitude has been studied in regard to awareness. For example, attitudes may be able to predict decisions when consumers have a high level of self-awareness (Hutton & Baumeister, 1992). Attitudes may also be predicted when the object is placed into a category such as a product or service (Lord, Lepper, & Mackie, 1984).

Though most research has been concentrated within the traditional retail store context, online attitudinal research has recently emerged. Most attitude research has been established upon memory-based models of attitude formation. However, newer attitudinal research regarding processing in the online context has been developed. Memory-based models convey the process in which consumers access information from memory that was acquired from a previous situation. Newer online processing models place emphasis on the constant revision of the attitude. An attitude is developed after a piece of information is obtained. After the information is retrieved, the attitude is then revised as further information is acquired (Jacoby, Jaccard, Currim, Kuss, Ansair, & Troutman, 1994).

The Technology Acceptance Model or TAM (Davis, 1989) is a model explains technology in the workplace and it has been proven to be appropriate for e-commerce as

well. The original constructs of the model were usefulness and ease of use (Davis, 1989). However, as e-commerce has progressed, such elements such as enjoyment consumer traits and situational influences (Dabholkar & Bagozzi, 2002), opinion leadership (O'Cass & French, 2002) and control (Venkatesh, 2000) have been added. This model has shown several determinants of attitude toward the online shopping environment and technology.

Based upon early attitudinal studies, the Higher Order Cognitive Tracing (Jacoby, Morrin, Jaccard, Gurhan, Kuss, & Maheswaran, 2002) framework was developed to test online attitude. The procedure was produced to study the impact of single pieces of information and how those pieces were related to the development of the mental processes that occur while online. Results of the study indicated that the impact of information decreased in the later stages of the information retrieval process. Further results showed the more inconsistent the information was perceived to be, then an increased level of influence occurred. Finally, the more redundant the information, the lower the impact upon the user (Jacoby, et al, 2002).

In regard to attitude toward purchase intention, attitude studies have shown that in the online context, attitudinal elements accounted for almost one-third of the variation in regard to apparel purchase intention (Shim & Drake, 1990). Attitude formation online has infiltrated online commerce. Attitudinal elements such as prior computer experience and demographics were found to influence attitudes in online banking (Karjaluoto, Mattila, & Pento, 2002).

Purchase Intention

Store environment becomes an opportunity for retailers to differentiate themselves. When price, merchandise, promotion and location become too similar to distinguish among stores, retailers have the opportunity to utilize the store environment as a means to influence purchase intention. Studies have suggested numerous factors that influence purchase intention in the traditional store environment. Some of these factors are service level, and pricing polices (Morey, 1980). In addition, the physical attractiveness of the store has been shown to generate higher purchase intentions in comparison to merchandise quality, price level and selection (Baker, Levy, Grewal, 1992). Many retail purchase decisions are made in the store environment (Keller, 1987).

Purchase intention has been found to be a major result of store atmospheric manipulation. It has been suggested that emotional responses produced by the store environment can influence purchase intention (Donovan, Rossiter, Marcoolyn and Nesdale, 1994). Even relatively minor manipulations in store atmospheric stimuli can impact purchase intention. Misuse of just one atmospheric element could have a negative impact on purchase behavior (Turley & Chebat, 2002). Though consumers will shop in an environment that is unattractive, they will spend less money in that environment (Sherman, Mathur & Smith, 1997). Conversely, if the consumers enjoy the environment, they are likely to re-patronize that environment (Wakefield & Baker, 1998).

As previous purchase intention based studies have focused upon the store environment, some have placed emphasis on purchase intention in the online shopping environment. As purchase intention has been recognized as a factor in online shopping, a model has been posited to explain this role. The Online Prepurchase Intentions Model

investigated the predictors of intention to use the Internet for purchasing reasons (Shim et al., 2001). The model suggested that attitude, subjective norm, perceived behavioral control and Internet purchase experience lead to the intention to use the Internet for information. This intention will lead to the intention to use the Internet for purchase. The model supports the previous suggestion that information sources may influence purchase intention (Engel, Blackwell & Miniard, 1995). Results from research using the Online Prepurchase Intentions Model found that intention to use the Internet for searching was a major predictor for purchase intention. A relationship between purchase intention and attitude toward Internet shopping with previous online purchase experience was found (Shim, Eastlick, Lotz, &Warrington, 2001).

Past purchase behavior may also predict purchase intention to shop via the Internet. It has been found that consumers with strong intentions to shop the Internet had experience with computers and non-store formats (Shim & Drake, 1990). Weber and Roehl (1999) found that past online purchasing may have an influence on future purchase intentions in the online environment. Past research regarding online shoppers have been based upon convenience, innovative and variety-seeking factors (Donthu & Garcia, 1999). Several categories have been identified in which to categorize consumers. Categories include the economic (Stone, 1954), recreational (Stephenson & Willett, 1969), and apathetic (Lesser & Hughes, 1986). However, it has been suggested that the same type of categories exist among Internet shopping. Some of the categories found to influence purchase intention were product type, prior purchase and gender (Brown, Pope & Voges, 2003). Overall, the information available and accessible to the consumer has given the consumer an increased choice and responsibility in the manner in which they

choose to purchase products and services online (Jayawardhena, Wright, & Masterson, 2003).

Online retailing has grown to play a significant role in retailing. The adoption, acceptance, satisfaction and motivation of Internet shoppers are important factors for retailers. Store atmospherics have led to the exploration of online atmospherics. Finally, the well-established constructs of feeling, attitude and purchase intention are all important to the further study of online retailing.

Summary

Store atmospheric research in the physical store environment has been plentiful and is well established. As retailers use the online environment to reach consumers, research on online atmospherics is critical. Challenges to online atmospherics research are to develop valid and reliable measurement tools for responses to atmospherics and to develop an understanding of diverse consumer responses during the shopping experience. In addition, online atmospheric research should investigate interactive factors between atmospheric parameters and other service offerings (Chebat & Dube, 2000).

This chapter discussed store atmospherics and the constructs of feeling, attitude and purchase intention in regard to store atmospherics. In addition, online atmospheric literature was presented. The constructs of the proposed conceptual framework are well-established and reliable methods of measurement are available for studying these constructs. Based upon the literature review the following hypotheses are posited:

Hypothesis 1:

There will be differences between the group exposed to warm color and the group exposed to cool color, in terms of feeling.

Hypothesis 2:

There will be differences between the group exposed to warm color and the group exposed to cool color, in terms of Internet purchase intention.

Hypothesis 3:

There will be differences between the group exposed to fast music and the group exposed to slow music, in terms of feeling.

Hypothesis 4:

There will be differences between the group exposed to fast music and the group exposed to slow music, in terms of Internet purchase intention.

Hypothesis 5:

Feeling will influence Internet purchase intention.

Chapter Three
Methodology

Introduction

The purpose of this chapter is to discuss the methodology used to test the hypotheses posed in Chapter Two. See Figure 2 for the Hypothesized Model. The research hypotheses are:

Hypothesis 1:

There will be differences between the group exposed to warm color and the group exposed to cool color, in terms of feeling.

Hypothesis 2:

There will be differences between the group exposed to warm color and the group exposed to cool color, in terms of Internet purchase intention.

Hypothesis 3:

There will be differences between the group exposed to fast music and the group exposed to slow music, in terms of feeling.

Hypothesis 4:

There will be differences between the group exposed to fast music and the group exposed to slow music, in terms of Internet purchase intention.

Hypothesis 5:

Feeling will influence Internet purchase intention.

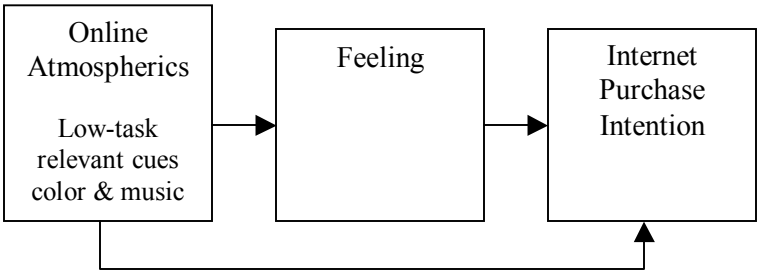

Figure 2: Hypothesized Model

The measurements used in the current study were modified from previously established measures. The construct of low-task relevant online atmospheric cues (color and music) served as the independent variable. The dependent variables consisted of feeling and Internet purchase intention.

This chapter is organized into six sections. First, the research design is discussed. Next, the development of the instrument and the pre-test are explained. The procedure, sample selection and experimental design are discussed. The method of analysis is explained and a summary is provided.

Research Design

An experimental methodology was used to test the relationships among the constructs presented in this study. Experimental methodology was employed to gather the data necessary to test the variables of the atmospheric variables of color and music on feeling and purchase intention.

Experimental design was deemed appropriate for several reasons. First, an advantage of this method is the ability to identify causal relationships. This inferential

strength results from the degree of control that may be exercised. The experimental method allows for the greatest amount of control. In order to obtain a clear answer to the research question and test the hypotheses, it is necessary to implement control in order to eliminate or hold variables constant. Another major advantage of the experimental method is the ability to manipulate one or more variables of the researcher's choosing. The experimental approach enables the researcher to precisely control the manipulation of variables by specifying the exact conditions of the experiment. The results can then be interpreted clearly because the participants respond to the variables introduced by the researcher. Finally, the experimental method produces results that have traditionally lasted over a long period of time and have suggested new studies and solutions to practical, real-world problems (Christensen, 1997).

Instrument Development

Measurement

All of the variables (online atmospheric cues of color and music, feeling and purchase intention) have established and reliable measurements found in the literature. Based on the atmospheric literature regarding color and music and a group interview, two established web sites were located and analyzed. Each of the established scales was modified to fit the online atmospheric context. A questionnaire was used for several reasons. First, a questionnaire possesses the ability to gather data from a sizable population. It also allows for quantifiable results. The instrument asked questions regarding feeling and Internet purchase intention (Appendix D).

The first section of the questionnaire was intended to measure the construct of feeling. Question one stated, "Please circle the number that most reflects how you felt about the web page you just visited." The scale was modified from a reliable scale (Broach, Page & Wilson, 1995). Five statements in a seven-point Likert scale format were given. Question one intended to measure how the participant felt after viewing the experimental web page. Question two stated, "Rate your emotions according to the way the web page made you feel." The scale was adapted from a valid and reliable scale from a previous study (Donovan, Rossiter, Marcoolyn & Nesdale, 1994). Again, a seven-point Likert scale was given for response. Question two intended to again measure how the participant felt after viewing the experimental web page. Though questions one and two were very similar, the feelings that were stated in each question were different.

The next section of the questionnaire included items regarding Internet purchase intention. Question number 4 stated, "Please indicate your agreement or disagreement with the following statement by circling the number that most represents your opinion." Following this instruction were three statements to which participants responded. Statement "a" specified, "It is very likely that I will buy apparel on the Internet." Statement "b" stated, "I will purchase on the Internet the next time I need apparel" and Statement "c" indicated, "I will definitely try shopping on the internet for apparel." Question four was a modified version of a reliable scale from a previous work by Putrevu, & Lord (1994). Question four was intended to measure the agreement or disagreement with statements regarding purchasing apparel on the Internet.

Question five stated, "Please answer the following questions by circling the number that most represents your opinion." Again, three statements accompanied the

question. The first statement was phrased, "Would you like to try shopping online?" The second stated, "Would you buy apparel if you happened to see it online?" The last statement asked, "Would you actively seek out apparel in an online store in order to purchase it?" Each statement was presented on a seven-point Likert scale with the value of one equaling "Definitely Not" and seven indicating "Definitely." Question five was modified from an established reliable scale (Neese & Taylor, 1994) and intended to measure Internet purchase intention.

Question six stated the following phrase: "Please circle the number that best represents your agreement or disagreement with the statement." The next three questions were adapted from an established and reliable scale (Taylor & Baker 1994) and measured Internet purchase intention in regard to apparel. The first statement under question six was, "The next time I need to purchase apparel, I will choose to shop online." The second statement specified, "If I had needed apparel during the past year, I would have selected to purchase it online." The final statement indicated, "In the next year, if I need apparel, I will look for it online." Each statement was posed to the participant in a seven-point Likert scale format. The answer "Strongly Disagree" was indicated by an answer of one and "Strongly Agree" was indicated by an answer of seven.

Question seven was intended to measure the Internet purchase intention in regard to the specific web page the participant viewed. Question seven posed the statement, "Please indicate the likelihood of purchasing apparel from the web page you just saw on the following scale." "Very Unlikely" was indicated by the number one and "Very Likely" was indicated by the number seven. The scale was a seven-point Likert scale format.

Question eight was designed to measure Internet purchase intention in a percentage format. The question was stated, "Please indicate your likelihood of purchasing apparel online in terms of a percentage." The answer of "Very Unlikely" was indicated by 0%, and 100% was indicated by the answer of "Very Likely." The percentage scale was given in a 10%, 20%, 30%, etc, format. Questions seven and eight were developed by the researcher.

The final section of the questionnaire included demographic information. Previous Internet shopping experiences and the amount of money the participant had spent online within the past year (Shim, Eastlick, Lotz, & Warrington, 2001) were asked along with age and gender.

Each question, with the exception of the originally developed questions of seven and eight were developed or modified from established scales. The scales' strength was that each was valid and reliable as tested in their respective studies. A possible weakness of using the scales might have been that they were adapted from studies not within the Internet shopping context.

Pre-test of the instrument

The questionnaire was pre-tested using a convenience sample of 20 participants. Participants were recruited by the researcher in a classroom building at a major southeastern university. The participants in the pre-test sample were all between the ages of 18 and 29. The questionnaire instrument was given in the actual experimental setting. Personal interviews with the participants after the questionnaire was taken allowed the researcher to gather feedback on the questionnaire. The researcher asked

each participant if the questions were clear and if the web page and the music operated properly. This analysis indicated that there were only minor wording improvements needed to refine. Formatting of the questions was altered to improve clarity as found through the interviews.

Procedure

Group Interview

A group interview was conducted to identify the product category for web page selection. Also, the interview was designed to confirm "warm" and "cool" colors.

Twelve participants were recruited by the researcher on a voluntary basis. The researcher recruited the participants by announcing the opportunity to earn extra credit in a classroom building in which the researcher visited at a major southeastern university.

Questions asked during the interview focused on online usage, products, and atmospherics (Appendix B). The first two questions related to online usage among the participants. After the researcher determined all participants had some level of online experience, the interview proceeded. Question three referred to the expected pleasure of the web page and question four probed for specific products for which the participants shopped online. Questions six and seven referred to which colors the participant thought of when presented with the terms "warm" color and "cool" color. The first purpose of the group interview was satisfied with the unanimous choice of apparel as the product. Though many products were mentioned such as jewelry, books and DVDs, the entire group had at some point browsed for apparel online.

Product Selection

Apparel was chosen for several reasons. First, the group interview indicated that apparel was one of the most popular items shopped for online. Secondly, apparel is purchased by many consumers. Though not all consumers purchase apparel online, it is a product category that is universal and is not specific to one demographic segment. Thus, apparel was chosen as the product for the study.

The second purpose was to verify literature review results that stated which colors represented "warm" and "cool" colors. The group agreed that colors such as red, yellow, and orange constitute "warm" colors. The group also stated that colors such as green, blue and purple comprised "cool" colors.

Web page Selection

Web pages were selected using a set of criteria established by the researcher. These criteria were: 1) the web page was chosen in regard to a single page only since the participants would be allowed to view a predetermined single page during the experiment; 2) apparel was required to be sold on the web page; 3) to avoid gender bias, the web page was to sell apparel for both men and women and both males and females were required to be present on the page; 4) in regard to the low-task relevant atmospheric cues of color, the web page was required to possess a single color, either "warm" or "cool" visually, that comprised over 75% of the screen. Two web pages were chosen which met all of the predetermined criteria (Appendix E). Two web pages were chosen to maintain timeliness of the study.

Music Selection

A fast-paced and a slow-paced piece of music was selected and added manually to the web page by the researcher. The music was originally recorded by a professional local band to eliminate familiarity or bias associated with any popular music performers. After meeting with the band members, it was determined that the instrumentation would include a guitar, a bass guitar and a drummer. No vocals were added to the music. The slow-paced and the fast-paced recordings were instrumental and of a soft rock orientation. Each piece of music selected by the band and the researcher were original in interpretation. Therefore, the participant would not recognize the music, be biased to a particular song or to a particular artist.

Sample Selection

The convenience sample was comprised of 200 participants ranging in age from 18-29. The researcher recruited participants by three methods. First, flyers were placed in numerous locations around a building at a major southeastern university. Second, the researcher attended several classes and asked eligible students to voluntarily participate. Finally, the researcher continuously recruited participants by simply asking people who walked by or entered a computer lab in a classroom building at a major southeastern university. Males and females participated in the study. Upon completion of the questionnaire, each participant was given $1.00 as an incentive to participate in the study. Data collection lasted ten days. The five unusable questionnaires were discarded and two hundred useable questionnaires were used for data analysis.

The Experimental Design

An experimental design was used for the study. The researcher developed four groups in which to categorize the atmospheric variables. See Figure 3. The treatments may be defined as:

- Treatment 1: Participants who will visit the web page containing Color A and Music A
- Treatment 2: Participants who will visit the web page containing Color A and Music B
- Treatment 3: Participants who will visit the web page containing Color B and Music A
- Treatment 4: Participants who will visit the web page containing Color B and Music B

A computer lab in a classroom building at a major southeastern university was reserved for the researcher as the setting for the experiment. The web pages were loaded on the computer before the experiment began. All of the computers in the lab were loaded with the appropriate web page and music as follows:

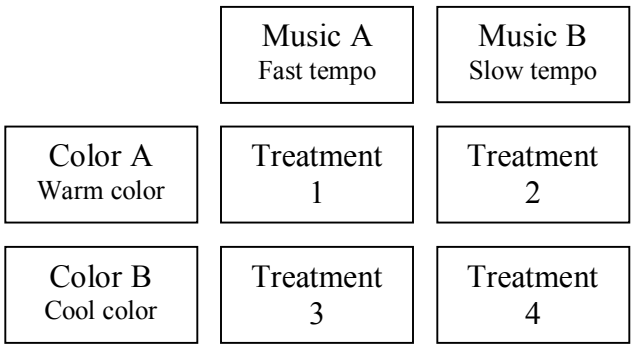

Figure 3: Experimental Design

- Computers 1,2,3 - Group 1
- Computers 4,5,6 - Group 2
- Computers 8,9,10 - Group 3
- Computers 12, 13, 14 - Group 4

Computers 7 and 11 were not used in order to maintain an equal number of computers for each group. (Appendix A)

Headphones were placed at each computer. The headphones were used so that each participant could hear the music loaded on that computer only. As participants entered the lab, they were greeted by the researcher, given an instruction sheet (see Appendix C), the questionnaire (see Appendix D) and a pencil.

The researcher separated the questionnaires into four sets. Each set of questionnaires represented the group to which the participant was assigned. For example, the first participant was given a questionnaire from the first set of questionnaires. The researcher then randomly assigned the participant to a computer which corresponded with Treatment 1 (computer 1, 2 or 3). The second participant was also given a questionnaire and randomly assigned to a computer which corresponded with Treatment 2. This process continued until all questionnaires were completed. The participants were instructed to read the instruction sheet, use the headphones, view the web page and complete the questionnaire.

After the web page was viewed, and before the participant left the computer lab, the participant completed a written questionnaire regarding the online experience he or

she encountered. To ensure anonymity, the researcher asked the participant not to write their name on the questionnaire.

Summary

This chapter discussed the research methodology used for the current study. The model presented in Chapter One was reintroduced. Instrument development, procedure, sample selection, experimental design and method of analysis were explained. Chapter Four will explain the methods of analysis that were used in the current study.

Chapter Four
Results and Analysis of Data

Introduction

Chapter Four includes the results obtained from the data gathered in this study. Chapters Two and Three stated the research question and hypotheses, which were tested to determine the influences of low-task relevant online cues of color and music on consumers' feeling and Internet purchase intention.

The data collected for this study were obtained using an experimental design as explained in Chapter Three. Participants completed a 39 statement questionnaire following the experimental treatment. The statements measured consumer feeling and Internet purchase intention. The questionnaire also contained a demographic section which gathered data regarding participants' age, gender, ethnicity, previous number of Internet shopping experiences within the past six months and how much money the participant spent on apparel bought online in the past year. Two hundred useable surveys were collected.

Development of Measurement

Feeling

The first two items on the questionnaire were intended to measure how the participant felt about the web page they had just viewed. The ten items on the questionnaire were combined to form a scale. Analysis using Cronbach's alpha indicated that the ten items were related and represent the construct of "feeling" (.9283, Table 1).

Reliability Analysis for Feeling: Table 1

Feeling Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
Negative/Positive	51.0300	70.3408	.7799	.9183
Bad/Good	51.0450	71.0080	.7362	.9204
Awful/Nice	51.0050	70.8593	7088	.9217
Sad/Happy	50.9850	68.6983	.7137	.9216
Unpleasant/Pleasant	50.7850	70.0892	.7299	.9206
Annoyed/Pleased	51.2800	69.1574	.7616	.9189
Unsatisfied/Satisfied	51.3900	68.2290	.7119	.9219
Discontented/Contented	51.2800	70.4740	.7069	.9217
Despairing/Hopeful	51.2300	69.7860	.7390	.9201
Bored/Relaxed	51.6200	70.9403	.6488	.9249

Reliability Coefficients
N of Cases = 200
N of Items = 10
Alpha = .9283

Therefore, responses to the ten items were summed to form one variable named "feeling."

Internet Purchase Intention

Questions four, five and six were intended to measure Internet purchase intention. Since each question was similar, a reliability analysis was conducted to observe if the items could be combined into one variable. A Cronbach alpha of .941 was found. No single item was dropped. Every item helped to increase the Cronbach alpha level. Therefore, questions four, five and six were combined to form the variable, "Internet Purchase Intention" (Table 2).

Internet Purchase Intention Variable: Table 2

Purchase Intention Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
It is very likely that I will buy apparel on the Internet	36.9550	101.772	.814	.931
I will purchase on the Internet the next time I need apparel.	38.5900	105.620	.780	.933
I will definitely try shopping on the Internet for apparel.	36.9550	103.279	.793	.933
Would you like to try shopping online?	36.2550	112.673	.658	.940
Would you buy apparel if you happened to see it online?	36.6650	106.576	.769	.934
Would you actively seek out apparel in an online store in order to purchase it?	37.1050	104.969	.753	.935
The next time I need to purchase apparel, I will choose to shop online.	38.4100	107.680	.805	.932
If I had needed apparel during the past year, I would have selected to purchase it online.	38.5800	106.868	.788	.933
In the next year, if I need apparel, I will look for it online.	37.7250	107.155	.801	.932

Demographics

A total of 143 (71.5%) females and 57 (28.5%) males took part in the experiment. In regard to ethnicity, 1% (2) were Asian, 7% (14) responded as African American/Black, and 92% (184) of the participants were Caucasian/White. The minimum age of any respondent was 18 and the maximum was 29 years of age. The mean age was 22. The number of experiences a respondent has had online within the past six months ranged from zero to 100. However, the mean was 4.06 shopping experiences during the past six months. Finally, the amount of money a respondent had spent online within the past year ranged from $0.00 to $1500.00. The mean amount was $195.00.

Hypotheses Testing

Hypothesis 1 stated there will be differences between the group exposed to warm color and the group exposed to cool color, in terms of feeling. The F-value of 1.387 with a p-value of .240 indicated that there was no difference between the two groups, in terms of feeling (Table 3). Therefore Hypothesis 1 was rejected. The mean value for the cool group was 57.620 and the mean value for the warm group was 56.080 as found in Table 4.

Feeling and Color ANOVA: Table 3

Tests of Between-Subjects Effects
Dependent Variable: FEEL_TOT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	118.580	1	118.580	1.387	.240
Intercept	646384.500	1	646384.500	7558.302	.000
COLOR	118.580	1	118.580	1.387	.240
Error	16932.920	198	85.520		
Total	663436.000	200			
Corrected Total	17051.500	199			

a R Squared = .007 (Adjusted R Squared = .002)

Feeling and Color Means: Table 4

Estimates
Dependent Variable: FEEL_TOT

	Mean	Std. Error	95% Confidence Interval	
COLOR			Lower Bound	Upper Bound
cool	57.620	.925	55.796	59.444
warm	56.080	.925	54.256	57.904

Hypothesis 2 stated there will be differences between the group exposed to warm color and the group exposed to cool color, in terms of Internet purchase intention. The F value of 3.161 suggested the two color groups were different in terms of purchase intention and that consumers differed on purchase intention (Table 5). Although the significance level of .077 did not reach .05, the significance level was accepted due to the exploratory nature of the research. Therefore, Hypothesis 2 was supported. As shown in Table 6, the mean value of the group with cool color exposure (43.60) is higher than the group with warm color exposure (40.71). This result suggests cool colors might be more appropriate than warm colors to increase consumer Internet purchase intention.

Hypothesis 3 stated there will be differences between the group exposed to fast music and the group exposed to slow music, in terms of feeling. As shown in Table 7, the F value of .956 with the significance level of .329 is suggesting that the two music groups are not different, in terms of feeling. Therefore, Hypothesis 3 was rejected. The means in regard to the group exposed to the slow music was 56.210 and the means for the group exposed to fast music was 57.490 (Table 8).

Internet Purchase Intention and Color ANOVA: Table 5

Tests of Between-Subjects Effects
Dependent Variable: PI

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	417.605	1	417.605	3.161	.077
Intercept	355408.805	1	355408.805	2690.577	.000
COLOR	417.605	1	417.605	3.161	.077
Error	26154.590	198	132.094		
Total	381981.000	200			
Corrected Total	26572.195	199			

a R Squared = .016 (Adjusted R Squared = .011

Internet Purchase Intention and Color Means: Table 6

Estimates
Dependent Variable: PI

	Mean	Std. Error	90% Confidence Interval	
COLOR			Lower Bound	Upper Bound
cool	43.600	1.149	41.701	45.499
warm	40.710	1.149	38.811	42.609

Feeling and Music ANOVA: Table 7

Tests of Between-Subjects Effects
Dependent Variable: FEEL_TOT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	81.920	1	81.920	.956	.329
Intercept	646384.500	1	646384.500	7541.974	.000
MUSIC	81.920	1	81.920	.956	.329
Error	16969.580	198	85.705		
Total	663436.000	200			
Corrected Total	17051.500	199			

a R Squared = .005 (Adjusted R Squared = .000)

Feeling and Music Means: Table 8

Estimates
Dependent Variable: FEEL_TOT

	Mean	Std. Error	95% Confidence Interval	
MUSIC			Lower Bound	Upper Bound
slow	56.210	.926	54.384	58.036
fast	57.490	.926	55.664	59.316

Hypothesis 4 stated there will be differences between the group exposed to fast music and the group exposed to slow music, in terms of Internet purchase intention. As shown in Table 9, the F value of .444 with the significance level of .506 suggests the two music groups are not different, in terms of Internet purchase intention. Therefore, Hypothesis 4 was rejected. The means for the group exposed to the slow music was 41.610 and the mean for the group exposed to the fast music was 42.700 (Table 10). Hypothesis 5 stated feeling will influence Internet purchase intention. A correlation was conducted to test for any significance between feeling and Internet purchase intention. A positive correlation was found among the variables; .300 ($p < .000$). As scores on feeling among the participants increased, Internet purchase intention increased (Table 11). Therefore, Hypothesis 5 was supported.

Internet Purchase Intention and Music ANOVA: Table 9

Tests of Between-Subjects Effects
Dependent Variable: PI

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	59.405	1	59.405	.444	.506
Intercept	355408.805	1	355408.805	2654.226	.000
MUSIC	59.405	1	59.405	.444	.506
Error	26512.790	198	133.903		
Total	381981.000	200			
Corrected Total	26572.195	199			

a R Squared = .002 (Adjusted R Squared = -.003)

Internet Purchase Intention and Music Means: Table 10

Estimates
Dependent Variable: PI

	Mean	Std. Error	95% Confidence Interval	
MUSIC			Lower Bound	Upper Bound
slow	41.610	1.157	39.328	43.892
fast	42.700	1.157	40.418	44.982

Feeling and Internet Purchase Intention Correlation: Table 11

		Feeling	Internet Purchase Intention
Feeling	Pearson Correlation	1.000	.300
	Sig. (2-tailed)	.	.000
	N	200	200
Internet Purchase Intention	Pearson Correlation	.300	1.000
	Sig. (2-tailed)	.000	
	N	200	200

** Correlation is significant at the 0.01 level (2-tailed).

Summary

Chapter four presented the descriptive data for the 200 participants included in this study. First, the development of the Feeling and Internet purchase intention variables were presented. Demographic results from the questionnaire were discussed. Following the demographic results, the results from hypothesis testing were presented. Hypothesis 1 was rejected, Hypothesis 2 was supported, Hypothesis 3 was rejected, Hypothesis 4 was

rejected and Hypothesis 5 was supported. Chapter Five provides a discussion of these results and also provides conclusions and recommendations.

Chapter Five
Conclusions and Implications

Introduction

The purpose of this study was to focus on the specific online atmospheric cues of music and color and their relationship to the consumer behavior constructs of feeling and Internet purchase intention. This study was unique because it analyzed traditional atmospheric cues in the online context. Previous research has found that atmospherics influence consumer shopping behavior (Belizzi & Hite, 1992, Bone & Ellen, 1999, and Yalch & Spangenburg, 2000). Web sites have been analyzed in regard to usability and aesthetic appeal (Loiacono, Watson & Goodhue, 2002) and also characterized as having information content, interface design, security and privacy of transaction (Ranganathan & Ganapathy, 2002). However, a very limited number of inquires have concentrated on online atmospherics (Childers, et al, 2001, Eroglu, Machleit & Davis, 2001, 2003). This study incorporated specific low-task online atmospheric cues to study consumer feelings and Internet purchase intentions.

The following is a review of the results of this study. A discussion of the findings is given and a summary of each hypothesis is included. Additionally, managerial and theoretical implications are presented and future research suggestions are stated. Limitations of the study and concluding remarks are specified.

Discussion of Findings

Hypothesis 1 stated there will be differences between the group exposed to warm color and the group exposed to cool color, in terms of feeling. Hypothesis 1 was not

supported by the results which tested possible differences between warm and cool colors. The results indicated that the low-task relevant online atmospheric cue of color (warm or cool) did not have a significant impact upon feeling. Researchers have found that many atmospheric stimuli are not realized by consumers as they shop. However, they do consistently form opinions about the store based on these environmental cues (Baker et. al, 1994). Though this finding is not consistent with traditional store atmospheric results, it presents a new context of how online atmospherics should possibly be studied.

Hypothesis 2 stated there will be differences between the group exposed to warm color and the group exposed to cool color, in terms of Internet purchase intention. Hypothesis 2 was supported by the results which showed differences between warm and cool colors in regard to Internet purchase intention. Store atmospheric research has suggested that atmospheric cues, such as color, positively influence consumers. Because of the unique environment of the Internet, consumers are presented with a new venue in which to perform tasks and which to respond to these same cues. The cool color in the current study was found to influence Internet purchase intention. Therefore, if the web page has a cool color orientation, the consumer is more likely to purchase on that web site. Cool color and Internet purchase intention are positively associated.

Hypothesis 3 stated there will be differences between the group exposed to fast music and the group exposed to slow music, in terms of feeling. Hypothesis 3 was not supported by the results. According to the results, no matter what speed the music, the consumer did not experience any feelings. Music was not significantly associated with feeling and no differences were found between the music types. Therefore, music did not influence the consumer in regard to feelings toward the web page.

Hypothesis 4 stated there will be differences between the group exposed to fast music and the group exposed to slow music, in terms of Internet purchase intention. According to the results of this study, music does not influence Internet purchase intention and thus, could be omitted from the web site or altered to better match the image of the web site. Studies have shown that image is a factor for retailers when selecting music to be played or color to be used in their stores. When music is in conflict with the retailer's image, consumers become confused or avoid the store (Areni, 2003). A conflict of image in the online setting could possibly be an explanation for this result. Store atmospheric literature has found music to affect consumer response (Hui, et al, 1997) and stimulate emotions (Dube, et al, 1995) and influence purchase intention (North & Hargreaves, 1998).

Hypothesis 5 stated that feeling will influence Internet purchase intention. Hypothesis 5 was supported ($p = .300$). Much research has concluded that the consumers' emotional response is influenced by the store environment via color or layout of the store. Recent research has found that emotional response to web site information and imaging significantly impacts the level to which a consumer will approach or avoid the web site (Huang, 2002).

Purchase intention has been found to be impacted by feeling, quality of merchandise and product selection (Darden, Erdem & Darden, 1983). Hoque & Lohse (1999) found that the online environment was consistent with previous findings of store atmospheric research. A well developed web site that acknowledges the impact of consumer behavior may therefore influence Internet purchase intention. The results of this study indicated an increase in Internet purchase intention with an increase in feeling.

A pleasing online experience has been found to impact purchase intention (Eroglu, Machleit & Davis, 2003) in the online context. Previous research has shown that consumers are influenced by the store environment which will thus impact purchase intent (Baker, 2002). The Internet has been found to exhibit the same results in regard to such characteristics as the environment, merchandise quality, security and customer service (Park & Kim, 2003). According to this study, feeling could be added to the growing list of items that influence purchase intention in the online environment.

Implications of the Study

Managerial Implications

As numerous retailers continue to extend their physical stores into online stores and as exclusively online stores develop, retailers and managers should acknowledge the possible commonalities and dissimilarities between physical stores and online stores.

For example, a certain color used in a store may or may not be appropriate for the online consumer. Retailers could allocate appropriate time and/or money in regard to web site construction and development by addressing low-task relevant cues to match the retailer's image on the web site when applicable.

Managers should be aware of possible explanations in regard to the results of this study. The timeliness of this research could play a role in why the results are important in comparison to past research. First, online shoppers are constantly changing. The demographic makeup of the user has changed since previous studies have been conducted. Age, gender, and ethnic groups are changing and cannot necessarily be compared to past studies. Also, technology has changed and advanced as technology

tools become more sophisticated. Low-task relevant atmospheric cues are more technologically advanced than in previous studies. In addition, the factors that were used in previous research may not have been included in the current study and vice versa. The online environment may have many levels of consumer behaviors that are unique to particular types of web sites, certain products, differing target markets or strategies. All of these factors should be considered when managers develop their web sites.

Theoretical Implications

There are several important theoretical implications of this study. First, this study contributed to filling the existing gaps in the online atmospheric literature. Since this field is still growing, there is opportunity for theory development. One noted opportunity in online atmospheric research is taxonomy development (Eroglu, Machleit & Davis, 2001). The task of discovering, identifying and organizing an exhaustive taxonomy listing is needed for further investigation of this field. Though some online concepts have been identified, such as "telepresence" (Schloerb, 1995) and "psychophysics" (Aldersey & Williams, 1996), further theoretical research is needed to ensure the continuation of appropriate theory application.

This study was developed upon the existing literature regarding store atmospherics, feeling and purchase intention. However, the constructs were placed into a new context for investigation. By inserting proven store atmospheric theory into the online atmospheric context, new opportunities could arise for traditional theory to be tested in a new environment. Recognized physical store atmospherics such as color,

music and crowding theory could be applied to the online environment. This study has focused on color and music to accomplish this theory testing process.

A final theoretical implication could be the introduction of other fields into the theory building process for online retailing. Applying theory from such disciplines as environmental psychology or ecological psychology (the study of human perception and how humans use perception to interact in the environment around them) could benefit online atmospheric theory with new ideas, concepts and visions that may enhance online retailing.

Finally, this study contributes to retail theory by its timeliness. The results are important theoretically partially due to the currency of the subject. Online retailing is projected to be a major contributor to future revenue opportunities for retailers. Therefore, the results are significant because new information was made available in one of the most innovative channels of retailing. Online retailing may be considered widespread and plentiful, but the theory supporting it is still underdeveloped. This study contributed to the current research and improvement of this expanding area of retailing.

Limitations

Important contributions were made with the results of this study. However, some limitations of the study also exist. First, this study was restricted to a particular age and geographic sample. Though the age group of the sample was deemed appropriate since it included the age group that purchases most frequently online as found in the literature, other age groups should not be ignored. Also, a different geographic area should be

studied. A different sample in a different age and geographical area could produce different results.

Secondly, this study was limited to two atmospheric and web page combinations. It must be acknowledged that a different web page, color and music combination could produce a different result. In addition, one of the web pages sold products and the other web page did not sell a product.

Lastly, a manipulation check was not performed in the current study. In future studies, questions should be included that ask perceptions of color. A Likert Scale format could be employed to gather the information. The definitions of "cool", "warm", "fast" and "slow" were based on the group interview and the review of literature.

Future Research Suggestions/Recommendations

As stated in previous chapters, the area of online retailing is still in its early stages of growth. Therefore, a major goal in this area should be to continue to build a strong theoretical framework in which academics and practitioners could benefit to advance their knowledge of online retailing.

Another goal of this study is to propose how online atmospherics play a role in online retailing. This study has shown that the low-task relevant online atmospheric cues of color and music are not significant in relation to feeling or purchase intention. However, further study could discover if other possible online atmospheric cues could influence other online behaviors or emotions.

Finally, future research could involve the investigation into online atmospheric elements which are yet to be discovered. Some traditional atmospherics as indicated by

the existing literature have been identified as color, music, lighting and scent. Currently, only a limited number of these stated atmospherics may be transferable to the online environment. However, the online environment may possess undiscovered atmospheric elements that unknowingly influence online consumer behavior. "Cyberspherics", as termed by the researcher, could be the term to which all online atmospherics could be categorized. This could include known atmospherics such as color and music and could influence future atmospherics yet undiscovered.

Concluding Remarks

The primary goal of this study was to answer the research question, "What is the relationship between low-task relevant online atmospheric cues (color and music) and consumers' feeling and Internet purchase intention?" The results indicated that low-task relevant online atmospheric cues of color and music did not significantly influence feeling. Finally, a positive correlation was found between the variables of feeling and Internet purchase intention.

Consumers are becoming more knowledgeable of the Internet. The Internet has allowed consumers to engage in such activities as accessing a larger amount of pricing information, locating products not available to them locally and shopping competitors as never before (Ahmed & Forsythe, 2004). All of these activities have been suggested to relate to the online environment in which consumers shop.

Overall, this knowledge could be useful to academics and practitioners. Because online retailing could be viewed as the future of retailing, these findings could benefit

online retailers and help them produce more effective strategies to attract, maintain and satisfy online consumers.

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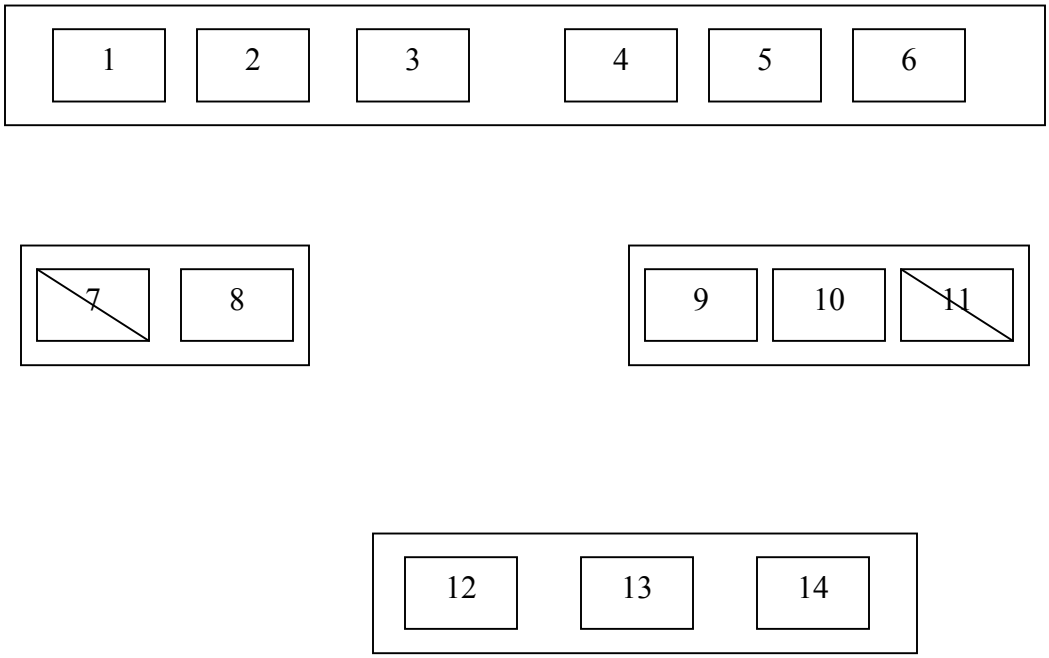
Appendices

Appendix A
Computer Lab Set-up



Cool-fast	Cool-slow	Warm-fast	Warm-slow
1	4	8	12
2	5	9	13
3	6	10	14

Appendix B
Group Interview Questions

1. Do you shop online?
2. Have you ever purchased an item online?
3. When you shop online, do you stay at a page that is visually pleasing?
4. When shopping online, for what type of product do you shop?
5. What type of music would you prefer to hear on an online web page while shopping if any?
6. What colors do you consider to be warm colors on a web page?
7. What color do you consider to be cool colors on a web page?
8. Other comments?

Appendix C

Online questionnaire Instruction Sheet

Thank you for participating in my dissertation questionnaire! Please read the instructions below.

You may take this questionnaire only once!!!

1. Read the cover page of the questionnaire.

2. Click on the file named, "Shortcut to Kellysurvey" on the desktop of the computer at which you are sitting.

3. View the web page that appears for as long as you wish. Please do not use the mouse once the page has loaded. The links are NOT active.

4. After you have viewed the web page, proceed to the questionnaire and answer all of the questions.

5. Close the web page and give the questionnaire to the administrator before you leave.

6. **Be sure to get your $1.00!!!**

Appendix D
Online Shopping Questionnaire

This is a questionnaire designed to examine your Internet shopping experience. After reviewing the web pages provided, please answer the questions to the best of your ability. If you have a question, the administrator will assist you.

There is no risk expected to participants. Your participation is greatly appreciated. Your responses, in combination with other participants' responses, will enhance and extend the consumer behavior body of knowledge.

Your responses will be kept confidential and will only be used for this study. Storing the data for this study will be the responsibility of the researcher, and only the primary researcher will have access to the data.

If you have questions about the study or the procedures, you may contact the primary researcher, Kelly Price-Rankin, at The University of Tennessee (krankin@utk.edu). If you have questions about your rights as a participant, you may contact Research Compliance Services at (865) 974-3466.

Your participation in this study is voluntary, and you may decline to participate without penalty. Returning your completed questionnaire constitutes your consent to participate. If you agree to participate, please begin with the screening question below.

Thank you.

Screening question:

To participate in the study, you must be between the ages of 18-29. If you are not within this age range, you should not continue the questionnaire. If you are within this age range, please continue the questionnaire.

1. Please circle the number that most reflects how you felt about the web page you just visited.

a. Negative	1	2	3	4	5	6	7	Positive
b. Bad	1	2	3	4	5	6	7	Good
c. Awful	1	2	3	4	5	6	7	Nice
d. Sad	1	2	3	4	5	6	7	Happy
e. Unpleasant	1	2	3	4	5	6	7	Pleasant

---

2. Rate your emotions according to the way the web page made you feel.

a. Annoyed	1	2	3	4	5	6	7	Pleased
b. Unsatisfied	1	2	3	4	5	6	7	Satisfied
c. Discontented	1	2	3	4	5	6	7	Contented
d. Despairing	1	2	3	4	5	6	7	Hopeful
e. Bored	1	2	3	4	5	6	7	Relaxed

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3. How important to you are the following characteristics when shopping online? Please rate the importance of the following characteristics and circle the number that most represents that importance based upon the following scale:

Not important	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Important**
a. Merchandise variety		1	2	3	4	5	6	7
b. Price		1	2	3	4	5	6	7
c. Security		1	2	3	4	5	6	7
d. Social shopping		1	2	3	4	5	6	7
e. Speed		1	2	3	4	5	6	7
f. Time saving		1	2	3	4	5	6	7
g. Money savings		1	2	3	4	5	6	7
h. Return policy		1	2	3	4	5	6	7
i. Latest product info		1	2	3	4	5	6	7
j. Product guarantees		1	2	3	4	5	6	7
k. Seeing the product		1	2	3	4	5	6	7
l. Fun		1	2	3	4	5	6	7
m. Sales assistance		1	2	3	4	5	6	7
n. 24-hour access		1	2	3	4	5	6	7
o. Payment flexibility		1	2	3	4	5	6	7
p. Ability to get product		1	2	3	4	5	6	7
q. Brand choice		1	2	3	4	5	6	7

(Please continue to the next page.)

4. Please indicate your agreement or disagreement with the following statements by circling the number that most represents your opinion.

a. It is very likely that I will buy apparel on the Internet.
Disagree 1 2 3 4 5 6 7 Agree

b. I will purchase on the Internet the next time I need apparel.
Disagree 1 2 3 4 5 6 7 Agree

c. I will definitely try shopping on the Internet for apparel.
Disagree 1 2 3 4 5 6 7 Agree

---

5. Please answer the following questions by circling the numbers that most represent your opinion.

a. Would you like to try shopping online?
Definitely Not 1 2 3 4 5 6 7 Definitely

b. Would you buy apparel if you happened to see it online?
Definitely Not 1 2 3 4 5 6 7 Definitely

c. Would you actively seek out apparel in an online store in order to purchase it?
Definitely Not 1 2 3 4 5 6 7 Definitely

---

6. Please circle the number that best represents your agreement or disagreement with the statement.

a. The next time I need to purchase apparel, I will choose to shop online.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

b. If I had needed apparel during the past year, I would have selected to purchase it online.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

c. In the next year, if I need apparel, I will look for it online.
Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

(Please continue to the next page.)

7. Please indicate likelihood of purchasing apparel from the web page you just saw on the following scale:

Very unlikely 1 2 3 4 5 6 7 Very Likely

---

8. Please indicate your likelihood of purchasing apparel online in terms of a percentage.

Very unlikely 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% Very Likely

---

Age: ____

Gender: M F

Which of the following best describes your race? Please circle one.

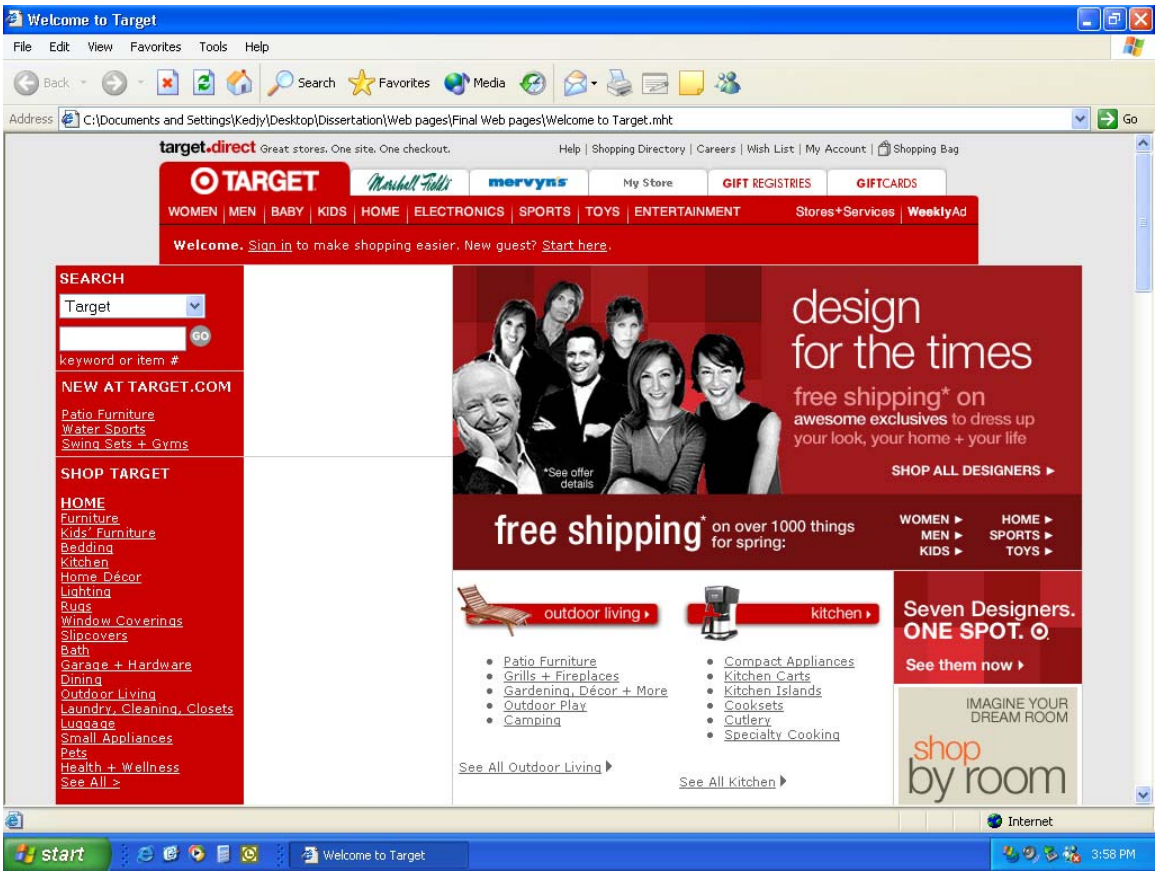
American Indian/Alaska Native
Asian
Black/African American
Hawaiian/Pacific Islander
Hispanic/Latino
White/Caucasian
Other

Previous number of Internet shopping experiences within the past 6 months: _____

How much money you have spent on apparel online in the past year: $_____

Thank you for your participation!

Appendix E
Web pages used for the Experiment
Web page - Warm



Appendix E
Web pages used for the Experiment
Web page - Cool

VITA

Kelly Price-Rankin was born in Tennessee and graduated from the Hamblen Co. public school system in 1991. She received a Bachelor of Science in Fashion Merchandising from East Tennessee State University in 1995. After completing her undergraduate degree, she held the position of Softlines Manager for K-mart Corporation and later a Manager/Buyer position for the Broadmoor Hotel and Resort. Kelly completed her Master of Arts in Professional Communication from East Tennessee State University in 2001. Immediately following graduation, she began her doctorate in the Department of Retail and Consumer Science at the University of Tennessee, Knoxville. In December 2004, she completed her doctoral program with a major in Human Ecology with a minor in Communication. Her doctoral degree was conferred in December 2004.