Chapter II

REVIEW OF LITERATURE
CHAPTER II

REVIEW OF LITERATURE

THE INTERNET AND MARKETING

With its rapid growth in the past decade, the internet has become an important tool in international marketing (Samiee, 1998). The gathering of market intelligence, product promotions and transactions such as receiving orders, accepting payments, and arranging for delivery, etc all conducted entirely online. As a global medium, the internet facilitates all these marketing activities, even when firms deal with their customers that are geographically distant.

An increasingly significant number of people around the world are accessing the Internet. The number of Internet users has grown significantly over the last few years, from virtually nothing to an estimated 1.2 million worldwide users (Internetworldstats, 2008). This rapid growth in the number of Internet users had promoted a belief in many business circles that the Web represents a huge marketing opportunity (Hoffman, 2000). However, there is much evidence to suggest that initial forecasts of the value in business-to-consumer sales were overly optimistic (Biswas and Krishnan, 2002; Ranganathan and Ganapathy, 2002). Smith and Sivakumar (2002) contend that while online retailers have gone to great lengths to establish brand recognition, they still have many questions regarding how to successfully induce purchase behavior and build customer loyalty. Many researchers assert that this apparent lack of translation from predictions to reality may be as a consequence of our (i.e. both academic researchers and practitioners) limited understanding of e-consumer purchase behavior (Shim et al, 2001; Hoffman, 2000).
Understanding the mechanisms of the behavior of the online consumer is a priority issue for practitioners competing in the fast expanding online marketplace. This topic is also increasingly drawing the attention of researchers. Indicative of this is the fact that more than 120 relevant academic papers were published in 2001 alone (Cheung et al., 2003). Given the continuous expansion of the Internet in terms of user numbers, transaction volumes and business penetration this massive research endeavor is not surprising. More than 20 per cent of Internet users in several countries already buy products and services online (Taylor Nelson Sofres, 2002) while more than 50 per cent of US net users regularly buying online (Forrester Research, 2003). These developments are gradually transforming e-commerce into a mainstream business activity while at the same time online consumers are maturing and virtual vendors realize the importance and urgency for a professional and customer-oriented approach. Yet the Internet meltdown at the end of the 1990s and plenty of more recent anecdotal and empirical evidence indicate that many online firms still do not completely understand the needs and behavior of the online consumer (Lee, 2002) while many of them "... continue to struggle with how effectively to market and sell products online" (Joines et al., 2003, p. 93).

The reasons to use the Internet for purchasing cannot be univocally defined due to its immense scope (e.g. retailer websites, comparison or review websites, auction sites, peer-to-peer networks) and the variety of purchasing goals consumers may have (e.g. type of product). Researchers used different perspectives with varying scopes to investigate how and to what degree the Internet affects online consumer behavior. For example, some researchers focus exclusively on a part of the website, i.e. the atmospherics of the website (De Haes, Lievens and Van Waterschoot 2004;
Eroglu, Machleit and Davis 2001); whereas others investigate the website’s interface and use (Ranganathan and Ganapathy 2002; Supphellen and Nysveen 2001); still others go beyond the website and attempt to measure the total shopping experience (e.g. Francis and White 2002; Parasuraman et al. 2002; Wolfinbarger and Gilly 2003). Scholars have developed attributes to predict website quality (Yoo and Donthu 2001), satisfaction with a website (e.g. Muylle, Moenaert and Despotin 2004), intention to return to the website (e.g. Supphellen and Nysveen 2001), intentions to buy from a website (Loiacono, Watson and Goodhue 2002; Wolfinbarger and Gilly 2003), satisfaction with online shopping (Evanschitzky et al. 2004; Szymanski and Hise 2000), and e-loyalty intentions (Anderson and Srinivasan 2003; Srinivasan, Anderson and Ponnavolu 2002). Some researchers focus on service providers (De Ruyter, Wetzels and Kleijnen 2001; Montoya-Weiss et al. 2003; Zeithaml et al. 2000), whereas others focus on online retailers that offer merchandise (Chen and Dubinsky 2003; Wolfinbarger and Gilly 2003). These studies have all contributed to a better understanding of the motivations of consumers to use the Internet for their purchasing, but still authors call for more research on this topic (Black 2005; Gupta et al. 2003; Inman et al. 2004; Nicholson et al. 2002; Schoenbachler and Gordon 2002).

**IS THE ONLINE CONSUMER DIFFERENT FROM THE OFFLINE ONE?**

While researchers tend to agree that online shopping is somehow different from its offline counterpart, there is not much agreement on the nature or extent of these differences. Also, caution must be exercised when drawing exact analogies between online and offline consumer behavior as this approach relies on the assumption that the actions of an online consumer are similar in significance to their offline counterparts. For example, a recent study on the likelihood of consumers to abort online transactions started with the assumption that such actions “represent potentially significant lost sales for e-retailers” (Cho, 2004), neglecting the
fact that the online consumer, unlike their offline counterpart, may abandon a transaction not because of perceptions of risk or attitudes to online shopping but simply because they never meant to complete the transaction in the first place. The relative ease and anonymity with which the consumer can load and subsequently abandon an online shopping cart gives this action a considerably different slant from abandoning a shopping trolley in the middle of a busy supermarket.

With this caveat in mind, the following describes some examples of possible differences between offline and online consumer behavior.

Technology Adoption

One possible factor affecting online consumer behavior is the area of technology adoption and how general use of the Internet affects consumer behavior online. Eastin (2002) showed that consumer adoption of online shopping could be best predicted by Internet self-efficacy, followed by perceived financial benefits, previous adoption of telephone shopping, and perceived convenience. However, this leaves open the question of whether the level of self-efficacy could actually predict how the consumer will behave once such technology is adopted. In fact, it would seem online consumers place different priorities on motivating factors such as perceived usefulness and price sensitivity (O'Cass and Fenech, 2003), and experience in online shopping itself shapes behaviors over time as the consumer's environment is affected by such phenomena as the feedback and product/vendor information gathered online (McCarthy and Wright, 2004).

Convenience and Decision Support

The approach of researchers such as Keen et al. (2004) and Miles et al. (2000) to understanding online consumer behavior centered around e-Commerce as simply a facilitator of various stages of traditional consumer behavior, particularly decision making, implying that the only difference
between a offline and an online consumer is a desire for convenience and timesaving.

However, Srinivasan et al. (2002) showed that convenience itself does not appear to be a significant factor in loyalty to an online vendor, but this could also suggest that convenience has become a hygiene factor – something online consumers take for granted and which is only noticeable by its absence.

As for decision making, the fact that the depth and breadth of information available on the Internet meets the consumer’s need for information in a way that a conventional retail environment cannot, suggests that the online consumer looks to e-Commerce to do far more than simply facilitate traditional consumer decision making.

Market Dynamics

The information gathering capability of the online consumer can profoundly affect behavior through changes in market dynamics. Traditional Eol (Economics of Information) theory, which states that as consumers are not perfectly informed about all alternatives available in the market, their perceptions of price dispersion (variations in pricing for the same products in different markets) or information variation will drive them to search behavior during the decision making process. In addition, the extent to which consumers are willing to search for information will be dictated by the perceived benefits versus costs of the search and their previous experience and knowledge.

However, for online consumers, factors such as lower search costs and greater availability of information can increase the extent of searching done and the amount of information gathered, allowing the online consumer to consider more alternatives that their offline counterpart. Biswas (2004) suggested that over time, this activity could actually reduce price dispersion
amongst vendors who traditionally relied on information asymmetries to maintain differential pricing, leading to online consumers becoming less price-conscious in favor of other factors such as personalization and brand loyalty, and consequently more willing to pay a premium for higher levels of service, customized offerings, recognized brands, etc. These phenomena may be one explanation for Amazon’s continuing domination of their market, despite the fact that they are not necessarily the cheapest vendor.

**Loyalty and Trust**

The facilities and opportunities inherent in e-Commerce suggest that consumer loyalty can manifest itself differently in the online environment (Srinivasan et al., 2002). For example, the ability to customize not only the products and services shown to the consumer, but the actual transactional environment itself is a facility far beyond the capability of an offline store. Also the importance of consumer loyalty may take on a different characteristic when access to the competition is only a click away, and when brand loyalty may become a defense against perceptions of risk (Gupta et al., 2003).

This leads on to the issue of trust. Whether viewed as an expectation based on past performance (Shneiderman, 1998), a strategy for reducing uncertainty (Egger, 2000), a willingness to rely on an exchanging partner (Lee et al., 2001), or a perception of reliability (Fogg, 2002), it is clear that trust plays a role in online consumer behavior. The question is – how important is that role to the online consumer?

For the offline consumer trust is merely one of many factors in purchasing behavior and as Adcock et al. (2001) and Solomon et al. (2003) pointed out, it is by no means the most important. Much of the background data used in studies of online trust is based on consumer attitude surveys done in 2000 or earlier, and may not take into account subsequent changes
in attitudes and behavior. Recent studies by Cho (2004) and Wolfinbarger and Gilly (2003) suggest that online consumers may not see trust as a major contribution to their shopping experience, but it is not clear whether this is because online consumer trust is becoming, like offline consumer trust, another hygiene factor (as could be argued for established online vendors such as Amazon), or whether this is an indication that online consumers are becoming more accepting of risk.

Products versus Services

In a offline environment, products are generally tangible during shopping, of relatively uniform quality, can be stored and inventoried, and product production proceeds sale which proceeds consumption. Services, on the other hand, are intangible, can vary greatly in quality, cannot be stored and the production and consumption of a service is normally simultaneous and follows the sale, consequently there is more scope for customer dissatisfaction if there are any problems with place or time or vendor resources. But for the online consumer, both products and services are effectively intangible at point of purchase, services are often standardized in quality to a degree not found terrestrially as they are not as dependent on time and place, product quality may vary due to shipping and handling processes, and while services cannot be stored online the fact that they can be purchased and consumed at any time means that online consumers can derive immediate satisfaction from purchasing services but satisfaction from products is subject to the delays inherent in shipping.

In applying this perspective to consumer intention to adopt e-Commerce, Liu and Wei (2003) found that when contemplating online shopping consumers were consequently more concerned about risk for products rather than services, and more concerned about perceived ease of use for services than products.
Site Design

Given the contention of researchers such as Turley and Milliman (2000), Eroglu et al. (2001) and Childers et al. (2001) that the design of retail environments is both influenced by and influences offline consumer behavior, it would seem reasonable to assume principles of retail design may be relevant to online consumer behavior.

Some correlations between offline and online design elements are relatively straightforward such as the impact of the shop window versus the impact of a site's home page (Lohse and Spiller, 1999). Other correlations can be more problematic, such as the impact of store layout versus site layout. In offline design, Grid layout (rectangular arrangement of displays and long aisles) is considered more effective for repetitive planned purchases and is therefore the layout most commonly used in supermarkets, while Freeform layouts (asymmetric arrangement of displays and aisles in different sizes and shapes) is favored for department stores and other environments where consumers are being encouraged to browse. However, Vrechopoulos' (2000) experiment translating these layouts to online equivalents suggested that for online supermarkets the online equivalent of a Grid layout (strict hierarchical structure of products categories, subcategories, etc.) is less effective than a Freeform-type equivalent. This would imply that there may be some differences in the relationship between retail design and online behavior, or at least a problem in translating retail design principles to an online environment. In any event, what is clear is that more study is needed to examine what design elements affect online consumer behavior.

Empowerment, Persuasion and Entertainment

One of the main aspects of the online consumer experience that takes it beyond offline behavior is that of empowerment. The ability to shop
world-wide in relative anonymity at anytime from virtually any location, combined with the availability of real-time product and competitor information can only serve to increase the consumer’s sense of freedom and power. Combined with the interactivity inherent on the Web, this empowerment allows them to more effectively fulfill desires and fantasies, as illustrated by the ongoing success of gambling and pornography sites. Even for those consumers with more mainstream tastes, features such as Amazon’s personalized welcome pages and tailored recommendation lists can provide consumers with a “powerful feeling of discovery” (Nielsen, 2003).

But is a consumer truly empowered when using the Internet? In his landmark paper on online experiences, Shih (1998) described the concept of Bricolage on the Internet, whereby consumers can manipulate objects such as links and bookmarks to control the flow and direction of information. Shih stated that Bricolage is not only a powerful tool for learning and retaining product information, but also allows consumers to come away with their own selective understanding of the information and bypass unwanted or extraneous data. However, as Wachbroit (2000) pointed out, the drawback to personalized information handling is that it can lead to filtering out of information not just deemed irrelevant but also information that may contradict established viewpoints. A consumer in a supermarket who must pass through most of the aisles in order to complete their week’s shopping will be exposed to various products that they may not have initially been interested in or even knew existed, but by virtue of display or appeal to the senses may decide to purchase. That same consumer online, by controlling what parts of the online supermarket they visit, will reduce if not completely eliminate this exposure, minimizing their likelihood of making unplanned purchases but also in the long run possibly limiting rather than expanding their shopping experience by not being exposed to new products
or services they may find useful or enjoyable. Consequently, the online consumer may be losing power rather than gaining it.

The emphasis on empowerment may also suggest that online consumers are so independent that they are impervious to selling techniques. However, Fogg's (2003) work on Persuasive Technology suggested that online consumers can and do react to persuasive media, and that a well-programmed e-Commerce site can not only adjust its sales pitch depending on feedback from the customer, but unlike a salesperson can be more persistent, offer anonymity, handle large volumes of data, use multiple modes of influence, and be ubiquitous – in effect, become more effective than a human at selling.

One common limitation with much of the research comparing offline and online behavior is a tendency to slip into a utilitarian view of shopping, thereby neglecting the hedonic aspects of online shopping. To many consumers, shopping is often not simply a task but also a form of entertainment and/or social interaction (Chen et al., 2002) and it is not unreasonable to assume that consumers may also have similar expectations of online shopping, especially those already using the Internet for entertainment and interaction (Shang et al., 2005). Parsons (2002) identified personal and social motivators such as diversion, self-gratification and peer group identification as significant motivators for online consumers. In fact, Childers et al. (2001) demonstrated that even for such a prosaic activity as grocery shopping, enjoyment could be a significant factor in attitudes, showing that the desire for change, creativity and self-expression must be considered part of the online consumer experience.

A possible source of entertainment in online shopping is that of "flow" – the psychological state reached during an activity of high concentration, a sense of time distortion and a feeling that one is using the
optimal balance of skills and challenges. Smith and Sivakumar (2004) argued that flow, which produces prolonged feelings of pleasure and is normally associated with tasks such as sports, games and hobbies, can also be experienced using the Internet. This would suggest that for those consumers already experiencing flow while using the Internet, there is the potential to entice consumers by providing an experience of flow during online shopping through Telepresence – a vivid, interactive and user-controlled environment (Shih, 1998). However, Smith and Sivakumar also raised the possibility that too intense or too prolonged an experience could actually distract the consumer from making a purchase, or alienate the consumer if ill-timed. For instance, a multi-media virtual reality tour of a holiday package may enchant the consumer who is deciding where to travel, but could quickly become annoying during the booking process.

It is obvious from the previous studies that though much of the determinants of offline consumer behavior may be applicable to online behavior as well, yet there are certain additional factors that come into play as a result of the unique nature of the media, its interaction with the consumers and the delivery processes. It is thus imperative for the marketers to have an understanding of these factors which mould the consumers' behavior in online marketplaces.

DETERMINANTS OF ATTITUDE AND BEHAVIOR TOWARDS ONLINE SHOPPING

An important managerial question is why consumers choose to shop online. There are a lot of researches about online shopping. Most studies intended to investigate factors affecting consumers' purchasing behavior on the Web. Swaminathan, Lepkowska-White, and Rao (1999) preferred vendor characteristics, security of transactions, content for privacy, and customer characteristics as factors influencing electronic exchange. Wolfinbarger and Gilly suggested that consumers purchase and shop online with both reasons:
goal-oriented and experience-oriented. According to Miyazaki and Fernandez (2001), perceived risk affected consumer online purchasing behavior negatively. They also found that Internet experience is negatively related to the existence of concerns regarding the privacy and security of online purchase and the perceived risks of conducting online purchases. Donthu and Garcia (1999) proposed that risk aversion, innovativeness, brand consciousness, price consciousness, importance of convenience, variety-seeking propensity, impulsiveness, attitude toward advertising, attitude toward shopping, and attitude toward direct marketing would influence online shopping behavior and found that among them, age, income, importance of convenience, innovativeness, risk aversion, impulsiveness, variety-seeking propensity, attitude toward direct marketing, and attitude toward advertising were factors influencing online shopping behavior. Li, Kuo, and Russell (1999) found that "Consumers who make online purchase perceive the Web to have higher utilities in communication, distribution, and accessibility than those who do not make online purchases, and frequent online purchases perceive higher utility than occasional online purchasers" and "Consumers who make online purchases consider themselves more knowledgeable about the Web as a channel than those who do not make online purchases, and frequent online buyers consider themselves more knowledgeable than occasional online buyers." According to Jarvenpaa, Tractinsky, and Vitale (1999), perceived size, perceived reputation, trust in store, attitude, and risk perception would be factors affecting online purchasing behavior.

The two most commonly cited reasons for shopping on the Internet have been price and convenience. The ability to shop online without leaving the house or office and to have the ordered products delivered to the door is of great interest to many consumers. In addition, the use of price as a bait to win over consumers is evident in the success of Amazon.com who heavily
advertises lower prices for the same books one can find from local bookstores. Also, the Internet allows for efficient price search and comparison by employing Internet tools such as recommendation agents, allowing consumers to screen alternatives online, and comparison matrix, an online matrix with in-depth comparisons among selected alternatives (Haubl and Trifts, 2000). With a simple request, a service site, such as Yahoo Shopping and Bizrate, can provide a quick price comparison among several online vendors. It makes sense for consumers, who know what they are looking for, to search the Internet and find an Internet marketer who is able to offer competitive prices. For consumers who are not certain about which products best serve their needs, the Internet has become a convenient and rich source of information for product comparisons. Compared with traditional brick-and-mortar retailers, online marketers often offer extensive product information on demand. On the other hand, privacy and security have been of great concern for Internet shoppers (Grabner-Kraeuter, 2002; James, 1999; Kiely, 1997; Yianakos, 2002).

Attitude towards Online Shopping

Attitude is one of the most popular constructs in consumer research and commands an immense number of published theoretical and empirical offline (MacKenzie et al., 1986; Brown and Stayman, 1992) and online (Chen et al., 2002; Schlosser et al., 1999) studies. Eagly and Chaiken (1993, p. 1) define attitude as:

A psychological tendency that is expressed by evaluation a particular entity with some degree of favor or disfavor [. . .]. [P]sychological tendency refers to a state that is internal to the person, and evaluation refers to all classes of evaluative responding, whether overt or covert, cognitive, affective or behavioral.
Although an attitude is a complex construct, in simple terms it represents the kind of things we like or dislike. Attitudes towards purchase behavior are believed to be shaped by many factors such as direct experience with the product, information acquired from others, exposure to mass media etc. In information technology literature, a growing body of research shows that attitudes have a strong influence on a person’s adoption of computer technologies and adaptation of purchasing behavior (Swanson, 1982, 1988). Klobas (1995) shows that attitude affects one’s intention to use special information technology. According to this study, attitude towards intention to use information technology is multidimensional, involving perceived usefulness, accessibility and quality. Jeong and Lambert (2001) show that customer attitudes towards using a website together with the perceived usefulness of the website information, and the information quality are the best indicators for predicting consumers’ purchasing behavior.

The attractiveness of the attitude construct in market segmentation is due to a number of reasons. First of all, actions and intention can be forecasted by the positive or negative attitude towards an object (Lingenfelder and Loevenich, 2003). Second, results of attitude segmentation can be very helpful for designing marketing instruments (Lynch et al., 1991).

The next few paragraphs elaborate on the discussion in previously published literature on the factors that ultimately affect consumers’ attitude and subsequent behavior towards shopping on the Internet.

Perceived Usefulness

"Usefulness" is defined as the individual's perception that using the new technology will enhance or improve her/his performance (Davis, 1989, 1993). Applying this definition to our research context, as the new
technology we classify shopping on the Internet, and as the individual's performance the outcome of the online shopping experience. Then, "usefulness" refers to consumers' perception that using the Internet as a shopping medium enhances the outcome of their shopping experience. These perceptions influence consumers' attitude toward online shopping and their intention to shop on the Internet. TAM posits a weak direct link between "usefulness" and attitude, and a strong direct link between "usefulness" and intention (Davis et al., 1989). This was explained as originating from consumers intending to use a technology because it was useful, even though they did not have a positive affect toward using. Apart from this, "usefulness" is also linked with "ease of use" to determine consumers' attitude toward online shopping. According to TAM, "usefulness" is influenced by "ease of use", because the easier a technology is to use, the more useful it can be (Venkatesh, 2000; Dabholkar, 1996; Davis et al., 1989).

Nah and Davis (2002) define Web usability as "the ability to find one's way around the Web, to locate desired information, to know what to do next, and, very importantly, to do so with minimal effort. Central to this idea of usability are the important concepts of ease of navigation and search" (Nah and Davis, 2002, p. 99). Usability is considered as an important quality criterion of information systems (Preece et al., 1994) and Web sites (Osterbauer et al., 1999). Elements enhancing the Web site usability are the convenience of using the site, the loading speed of the pages, the information structure etc. Creating a user-friendly Web site not only requires high quality, state-of-the-art technology but also thorough knowledge of the needs and characteristics of the potential Web site user.

Usability of Web sites has been constantly improving over the years (Internet Confidence Index, Yahoo /AC Nielsen, 2002, American Customer Satisfaction Index (ACSI), 2003) not only because online firms and Web
designers gain more experience but also as a result of technological developments.

**Convenience**

A number of previous studies (Jarvenpaa and Todd, 1997; Burke, 1998) contend that convenience is the principal reason behind consumers making Internet purchases. Swaminathan *et al.* (1999) presented empirical results suggesting that consumers who are primarily motivated by convenience are more likely to make purchases online, and that those who value social interactions are less interested in e-shopping. Li *et al.* (1999) also found convenience orientation as one of the most robust predictors of whether and how frequently Internet users make purchases online.

In a study conducted by Darian (1987) on in-home shoppers, he found that there were five types of convenience that in-home shoppers were after:

1. reduction in shopping time;
2. timing flexibility;
3. saving of physical effort;
4. saving of aggravation; and
5. the opportunity to engage in impulse buying or directly responding to an advertisement.

As online shopping is another form of in-home shopping, one would expect the Internet shoppers to perceive the same set of benefits. This is confirmed by Technowledge's (1999) finding that the top reasons given for shopping online were convenience, unique merchandise and competitive prices. According to CATALOG AGE's Consumer Shopping Survey (Chiger, 2001), about 67 percent of the online shoppers agreed that convenience was the main reason they had bought via the Internet and 41 percent mentioned price as another factor.
Ease of Use

"Ease of use" is defined as the individual's perception that using the new technology will be free of effort (Davis, 1989, 1993). Applying this to the research context, "ease of use" is the consumer's perception that shopping on the Internet will involve a minimum of effort. Whereas "usefulness" referred to consumers' perceptions regarding the outcome of the online shopping experience, "ease of use" refers to their perceptions regarding the process leading to the final online shopping outcome. In a simplified manner, it can be stated that "usefulness" is how effective shopping on the Internet is in helping consumers to accomplish their task, and "ease of use" is how easy the Internet as a shopping medium is to use. According to TAM, "ease of use" has a dual effect, direct as well as indirect, on consumers' intention to shop online. The indirect effect on intention is through "usefulness", as already explained in the previous section. The direct effect is explained by the fact that in behavioral decision making consumers attempt to minimize effort in their behaviors, as is also the case with consumers' perceptions regarding the "ease of use": the perception that Internet shopping will be free of effort (Venkatesh, 2000). The easier and more effortless a technology is, the more likely consumers intend to use this technology.

Understanding that "ease of use" affects consumers' attitude and intention toward online shopping, it is important to identify the latent dimensions of this construct in the Internet setting. According to TAM, "ease of use" is particularly of influence in the early stages of user experience with a technology or system (Davis, 1989, 1993). Following this, Venkatesh (2000, p. 343) stated: "...With increasing direct experience with the target system, individuals adjust their system-specific ease of use to reflect their interaction with the system". Implying that if consumers get more experienced with Internet they will adjust their perceptions regarding
the "ease of use" of the Internet as a shopping medium in a positive direction. Besides "experience" with the technology or system, also three other latent dimensions of the "ease of use" construct are incorporated in our framework: "control", "computer playfulness", and "computer anxiety" (Venkatesh, 2000). "Control" relates to an individual's perception of the availability of knowledge, resources, and opportunities required to perform a specific behavior, in our case online shopping. "Computer playfulness" is the degree of cognitive spontaneity in computer interactions. Playful individuals may tend to underestimate the difficulty of the means or process of online shopping, because they quite simply enjoy the process and do not perceive it as being effortful compared to those who are less playful (Venkatesh, 2000). "Computer anxiety" is defined as an individual's apprehension or even fear when she/he is faced with the possibility of using computers. This influences consumers' perceptions regarding the "ease of use" of the Internet as a shopping medium in a negative way, since using a computer is one of the necessary requirements for online shopping.

**Enjoyment**

Next to the evidence for the critical role of extrinsic motivation for technology use (Hirschman and Holbrook, 1982; Babin et al, 1994), there is a significant body of theoretical and empirical evidence regarding the importance of the role of intrinsic motivation (Davis et al., 1992; Venkatesh and Speier, 1999, 2000). Intrinsic motivation for Internet shopping is captured by the "enjoyment" construct in our framework. Intrinsic value or "enjoyment" derives from the appreciation of an experience for its own sake, apart from any other consequence that may result (Holbrook, 1994). Applying this to our research context, "enjoyment" results from the fun and playfulness of the online shopping experience, rather than from shopping task completion. The purchase of goods may be incidental to the experience of online shopping. Thus, "enjoyment" reflects consumers' perceptions
regarding the potential entertainment of Internet shopping. Childers et al. (2001) found "enjoyment" to be a consistent and strong predictor of attitude toward online shopping. If consumers enjoy their online shopping experience, they have a more positive attitude toward online shopping, and are more likely to adopt the Internet as a shopping medium.

**Consumer Characteristics**

Consumer purchases are influenced strongly by cultural, social, personal and psychological characteristics. For the most part, marketers cannot control such factors, but they must take them into account (Armstrong and Kotler, 2000). The external influences upon consumer behavior include demographic, economic, social, situational and technological factors. The internal factors, such as beliefs and attitudes, learning, motives and needs, personality, perception, and values are involved. The lifestyle is between the external and internal influences on consumer buying behavior, because it truly involves elements of both. Although external factors have a substantial effect on the behavior of buyers, no less important are the internal factors (Keegan et al, 1992). Wells and Prensky (1996) divided these underlying factors into two broad components that were the key parts of the framework for consumer analysis: consumer background characteristics, and behavioral processes. Consumer background characteristics are an innate part of a consumer's makeup. These are the things that consumers are - the way that individuals describe themselves and the way they label others. These characteristics are stable aspects of a consumer's life that cannot be changed. Demographic characteristics, such as gender, age, or ethnic background, are examples of background characteristics. Behavioral processes are the motivational, perceptual, learning, attitude formation, and decision-making tools consumers use to complete the activities that satisfy their needs. Unlike background characteristics, behavioral processes can be affected by a
person's environment because they are applied on specific occasions. The background characteristics are the influence factors of behavioral processes. Marketers and public policy actors are particularly interested in these processes because they offer opportunities for them to exert their influence over consumers. Because attitudes are easier to change than beliefs or values, they are often the focus of marketing efforts to get consumers to buy. Following paragraphs discuss how these two sets of consumer characteristics — demographic and psychographic, affect the consumers' attitude and behavior towards online shopping.

**Demographic Characteristics**

Four relevant demographic factors - age, gender, education, and income - (Burke, 2002) have a significant moderating effect on the relationship between the three basic determinants "ease of use", "usefulness", and "enjoyment" and consumers' attitude toward online shopping. The influence of age is noticeable through the fact that compared to older consumers, younger adults, especially those under age 25, are more interested in using new technologies, like the Internet, to find out about new products, search for product information, and compare and evaluate alternatives (Wood, 2002). A reason for this is that older consumers may perceive the benefits of Internet shopping to be less than the cost of investing in the skill needed to do it effectively, and therefore avoid shopping on the Internet (Ratchford et al, 2001). Next to the higher interest in using new technologies, consumers younger than age 25 are the group most interested in having fun while shopping. They respond more favorably than older shoppers to features that make online shopping entertaining. When it comes to gender, men express a greater interest in using various types of technology in the shopping process. They are more positive about using the Internet as a shopping medium, whereas female shoppers prefer using catalogs to shop at home. But the female consumers that do prefer to
shop on the Internet, shop more frequently online than their male counterparts (Burke, 2002; Li et al, 1999). Education also plays a moderating role in the relationship between the three basic determinants and consumers' attitude toward online shopping. Higher educated consumers are more comfortable using non-store channels, like the Internet to shop (Burke, 2002). A reason for this is that education is often positively correlated with an individual's level of Internet literacy (Li et al, 1999). A final demographic factor of interest is income. Consumers with higher household incomes (above $75,000 annually) intend to shop more online compared to lower income consumers. A reason for this is that higher household incomes are often positively correlated with possession of computers, Internet access and higher education levels of consumers (Lohse et al, 2000).

In examining the relationship between age and internet shopping motivations, Dholakia and Uusitalo (2002) found that younger consumers reported more hedonic and utilitarian benefits of online shopping than older consumers. They did not measure online search or buying behavior, only the perceived benefits of shopping. The relative impact of demographic factors such as age when compared with attitudinal or motivational factors has only been addressed by a small number of studies. Korgaonkar and Wolin (1999) found that motivational factors as well as age and gender impacted the likelihood of online purchasing. In their study, older males were the group that had the highest online purchase behavior. This is consistent with the results of Donthu and Garcia's (1999) research, who found that older internet users were more likely to buy online when compared to younger users, even though the younger users had more positive attitudes towards internet shopping. Joines et al. (2003) found that web usage motivations significantly predicted both online purchasing and online information searching for products or services. When age and other demographic factors
were added to the equation, the incremental R2 for these variables improved the fit but by a rather small amount. They concluded that motivational factors were more powerful than demographic factors in predicting online buying. It is interesting to note that the effect of the age variable was opposite of that found by Korgaonkar and Wolin: Joines et al. (2003) found that their younger respondents were more likely to shop online.

Hanson (2000, p.95) argues that online marketing requires careful monitoring of current and potential customers' demographics. Research suggests that gender, education, income, race and occupation all influence use of the Internet. Socio-demographic indicators such as income and education are significant factors for distinguishing between Internet users and non-users.

According to studies carried out by Technowledge Asia in 1999 and 2000, cybershoppers in the four Asian regions (Singapore, Hong Kong, Taiwan and Malaysia) were found to be mainly males, in the age group of 26 to 35 years and better educated. This profile is not very different from that discovered by Donthu and Garcia (1999) who concluded that Internet shoppers in the USA were "mainly males with above-average education, income, and occupation".

Roehl's (2001) study demonstrates that education, income and attitudes towards the use of credit cards for online purchases are statistically significant in predicting consumers' browsing, searching and purchasing behaviors. Again gender is not found to have a major influence on purchasing behavior, although it is significant in terms of browsing and searching for information on the Internet. Lang (2000) argues that, initially, access to the Internet tended to be linked to affluent, young, educated and 'upscale' individuals.
Past adoption studies have also suggested that adopters of new communication technologies are more upscale, better educated, and younger than non-adopters (e.g., Atkin, 1993; Atkin & LaRose, 1994; Dutton et al., 1987; Garramone et al., 1986; James, et al., 1995; Rogers, 1995; Leung & Wei, 1998, 1999; Li & Yang, 2000; Lin, 1998). This is because (a) higher education enables people to be more aware of technology's benefits, (b) higher income allows people to afford new technologies, and (c) young people are adventuresome in trying new innovations (Atkin, et al., 1998; Rogers, 1995). For example, James et al. (1995) found that BBS users tended to be higher educated, received higher income and were professional males. Garramone et al. (1986) found that the adopters of computer bulletin services were younger and better educated than non-adopters. Lin (1998) found that PC adopters were younger, better educated, and more affluent than non-adopters. Leung and Wei (1998) obtained similar results in their study of iTV adoption in Hong Kong. Jeffres and Atkin (1996) found that income and education had an inversely weak relation with interest in adopting specific Internet utilities such as sending or receiving messages and ordering goods, even when the Internet was still in the early stages of diffusion. They argued that those applications may be less expensive substitutes for functions performed by traditional media and that communication needs were more explanatory than social categories. In their further study of Internet adoption, Atkin et al. (1998) found that a young, educated, and affluent adopter was typical in the early stage of diffusion.

**Gender**

Women and men seem to differ in their shopping orientation. Although sex roles have blurred, shopping is still a gendered activity, particularly in married households (Dholakia 1999; Fischer and Arnold 1990). For working women, shopping along with other household tasks, become a particular challenge (Thompson 1996) and can be associated with negative
feelings. Time-pressured working women, in particular, have been observed and targeted by direct marketers (Schiffman and Kanuk 1997, 54). Shopping is also recreational for women, generating positive feelings (Bellenger and Korgaonkar 1980). The influence of gender on shopping is likely to be quite complex.

According to Sheehan (1999), males and females appear to use computers differently (failing to capitalise on "gender-free potential" for both sexes), women using online communication as a means of building and sustaining relationships, whereas men favour task-oriented communications. Sheehan (1999) observed also that women appear to be more concerned about personal privacy (particularly about receiving unsolicited e-mails) and more cautious about online shopping. This supports GVU's (1998) findings that 55.4 per cent women and 50.9 per cent men were "very" concerned about confidentiality and privacy (people reading e-mails, finding out which Web sites were visited, etc.).

Previous studies have indicated that gender differences exist in consumer behavior. Areas where gender differences have been found include; media use (Stern 1988); information processing (Meyers-Levy and Maheswaran 1991, Darley and Smith 1995); reactions to advertising message appeals (Widgery and McGaugh 1993); shopping habits and credit card use (Hayhoe, Leach, Turner, Bruin and Lawrence 2000). Similar differences have also been noted in on-line behavior. Prior research indicates that men are more likely to shop online than are women. Gummert (2000), using 1999 data, found that 43% of male internet users shop online while only 28 percent of female internet users shop online. The profile of the internet consumer has been a young, well educated, male consumer who has above average income.
Age

Consumers' needs, interests, and resources vary according to age. Previous studies indicate that consumer innovativeness is lower among older consumers (Steenkamp et al. 1999; Venkataraman and Price 1990). Older consumers also tend to be satisfied with conventional shopping methods (May and Greyser 1989). Darian (1987), on the other hand, report mixed evidence regarding the influence of age on consumers' tendency towards non-store shopping. The age groups that are most likely to be in-home shoppers included single males less than 40 years old and households where the female head is 40-49 years. Because younger people, who are more time poor, are capable of using computers, we feel they are especially likely to be attracted to computer shopping. Older consumers, because of their lower familiarity with computers, because they are not constrained by time and because they enjoy the socializing associated with store shopping, are less likely to show an interest in computer shopping.

The technology acceptance literature suggests a strong relationship between age and the acceptance of new technologies (e.g. Gattiker, 1992; Harrison and Rainer, 1992). Older consumers are found to have problems with new technologies and, hence, are expected to have negative attitudes towards innovations. Trocchia and Janda (2000), for instance, find that many older consumers have a more negative attitude to change. However, they argue that a person's overall perception of technology has a greater effect than age. Similarly, Jarvenpaa and Todd (1997) found that age had a relatively weak impact on attitude and intention towards the acceptance of new technology.
**Education**

Adoption behavior is likely to be influenced by education as innovators tend to be more educated than non-adopters. Previous studies have found a positive relationship between inhome shopping and education (see Darian 1987, p. 169; Donthu and Garcia 1999). What is more, Internet users have above-average education (Donthu and Garcia 1999; Hoffman, Kalsbeek and Novak 1996).

**Income**

Previous studies support the positive relationship between in-home shopping and consumer income. Darian (1987) found that households in the middle income groups were most likely to be in-home shoppers. Internet-using households are also likely to have higher than average income (Donthu and Garcia 1999; Hoffman, Kalsbeek and Novak 1996).

**Family Composition**

Number and age of children constitute a major component of the family and household life cycle concept (Gilly and Enis 1982; Schaninger and Danko 1993). The presence/absence of children as well as the age of the youngest child has a significant influence on households’ needs, resources and expenditures (Solomon 1999). Darian (1987) found housewives and part-time female workers with preschool children to be one group of potential in-home shoppers.

However, according to Rogers' (1995) predictions, demographics tend to be less important when the innovations have reached critical mass on their diffusion curves (Atkin, 1993; Atkin 1995; Atkin & LaRose, 1994; Lin, 1994). For example, Atkin’s (1993) study found that when cable TV had penetrated more than 60% of US households, demographics had less predicting power than other variables in predicting subscription to cable TV.
Psychographic Characteristics

Next to these demographic factors, personality characteristics also have a moderating effect on the relationship between "ease of use", "usefulness", and "enjoyment" and consumers' attitude toward shopping on the Internet. Some of the relevant personality traits are "expertise" (Ratchford et al., 2001; Alba and Hutchinson, 1987), "self-efficacy" (Eastin and LaRose, 2000; Marakas et al., 1998; Bandura, 1994), and "need for interaction" (Dabholkar and Bagozzi, 2002; Dabholkar, 1996).

"Expertise" is defined as an individual's level of knowledge or skill. In order to shop on the Internet, a considerable amount of knowledge or skill is required. Aside from the basic knowledge of computer use, consumers also have to learn the skills needed to obtain the desired information on the Internet. Because learning to shop on the Internet is costly and time-consuming for those who are computer illiterate to start with, consumers weigh the costs and benefits before deciding whether to invest in learning the required skills. Since learning-by-doing is an important component of acquiring such skills, those who have the most experience at shopping on the Internet are likely to be the most skilled (Ratchford et al., 2001). Once consumers have the required level of knowledge and skills to shop on the Internet, this will attenuate the relationship between "ease of use" and "usefulness" and their attitude toward online shopping, because these factors are then of less influence to them in forming a positive attitude toward shopping on the Internet.

A personality characteristic that is closely related to expertise is self-efficacy. "Self-efficacy" refers to individuals' beliefs that they have the ability and the resources to successfully perform a specific task (Bandura, 1994). Since online shopping requires basic knowledge of computer use as well as knowledge about the Internet, a distinction has been made in this
context between "computer self-efficacy" and "Internet self-efficacy". Marakas et al. (1998) define general "computer self-efficacy" as an individual's judgment of efficacy across multiple computer application domains, whereas "Internet self-efficacy" is a person's judgment of his or her ability to apply Internet skills in a more encompassing mode, such as finding information or troubleshooting search problems (Eastin and LaRose, 2000). Thus, consumers with low self-efficacy are uncertain and less comfortable shopping on the Internet, and therefore need simple procedures that require little knowledge and guide them through the online shopping process. This indicates that, in case of low self-efficacy, the level of "ease of use" of Internet as a shopping medium must be high in order to achieve a positive attitude toward online shopping. On the other hand, high degrees of computer self-efficacy and Internet self-efficacy proved to have an attenuating effect on the relationship between "usefulness" and attitude toward using the Internet (Eastin and LaRose, 2000). A reason for this attenuating effect is that self-efficacy judgments are positively related to outcome expectations (Oliver and Shapiro, 1993). The stronger a person's self-efficacy beliefs, the more likely he or she tries to achieve the desired outcome. In addition to this, it is explained by the fact that consumers are more likely to attempt and persist in behaviors that they feel capable of performing (Eastin and LaRose, 2000).

A final personality characteristic that is of relevance in the context of online shopping is the "need for interaction" with a service employee or salesperson (Dabholkar and Bagozzi, 2002). This "need for interaction" is defined as the importance of human interaction to the consumer in service encounters (Dabholkar, 1996). In online shopping, the human interaction with a service employee or salesperson is replaced by help-buttons and search features. Therefore, consumers with a high "need for interaction" will avoid shopping on the Internet, whereas consumers with a low "need
for interaction" will seek such options (Dabholkar and Bagozzi, 2002). This implicates that the consumer characteristic "need for interaction" has a strengthening effect on the relationship between the three basic determinants and consumers' attitude toward Internet shopping. Owing to the lack of physical contact with service employees and sales persons in an online shopping environment, these relationships need to be stronger in order for consumers with a high need for interaction to have a positive attitude toward shopping online.

Another interesting way to studying Internet shoppers was to examine their typology. Donthu and Garcia (1999) were one of the first to examine the significant differences between Internet shoppers and non-shoppers. They found the two groups to differ significantly in terms of age, income, importance of convenience, risk aversion, impulsiveness, variety-seeking propensity, attitude toward direct marketing and attitude toward advertising. Media Matrix and McKinsey (Hamilton, 2000) also examine online shopper typology. In that study, online consumers were classified into six categories described as follows:

1. The simplifiers - these Net users are impatient but lucrative. They spend just seven hours a month online yet account for half of all Internet transactions.
2. The surfers - these are consummate browsers and spend 32 percent time online. They look at four times more pages than other users.
3. The connectors - they are new to the Internet and less likely to shop. They also prefer brick-and-mortar brands they know.
4. Bargain shoppers — these are consumers who look out for bargains and enjoy finding good deals.
5. The routine followers — these are termed information addicts who frequent the Internet mainly for information.
Lesser and Hughes (1986) and Westbrook and Black (1985) suggest that common segments can be found among the detailed descriptions of shopper types found across a range of earlier studies. Similarly, in our review of the literature, we identified six core shopper types in addition to other, less commonly found classifications. Some studies have clearly expanded upon Stone’s (1954) original shopper typology (consisting of economic, personalising, ethical, and apathetic shoppers), while others have reduced the number of orientations.

Stone’s economic shopper is the segment most frequently identified in the literature. Comparisons can be drawn with the price-bargain-conscious shopper (Stephenson and Willett, 1969), the special shopper (Moschis, 1976), the low-price shopper (Williams et al., 1978), the economic-convenience shopper (Bellenger and Korgaonkar, 1980), the price shopper (Lesser and Hughes, 1986), and the price conscious, “value-for-money” consumer (Shim and Mahoney, 1992). These shoppers are essentially concerned with buying products at the lowest price or getting the best value for the money they spend.

The recreational shopper was first identified by Stephenson and Willett (1969). A similar type of shopper has also been labeled as active (Lesser and Hughes, 1986; Lumpkin, 1985) and shopping process involved (Westbrook and Black, 1985). Recreational shoppers enjoy the act of shopping regardless of whether a purchase is made or not. Bellenger and Korgaonkar (1980) contend that this group represents a sizeable proportion of consumers, a view supported by Gehrt and Carter (1992) in specific relation to catalogue shoppers.
The apathetic shopper – also referred to as the inactive shopper by Lesser and Hughes (1986) – has emerged in many shopper typologies as the single largest segment of consumers, yet it has been relatively under-explored by empirical researchers (Brown and Reid, 1997). Convenience-oriented shoppers have been identified in a number of studies, notably in those investigating the shopping orientations of catalogue users (Gehrt and Carter, 1992). Convenience has often been conceptualised as a time-oriented construct, though there is evidence that it also involves space and effort dimensions (Gehrt et al., 1996). Individuals may be motivated by only one of these dimensions or all simultaneously.

Two other major groups appear in the literature with some consistency. The ethical shopper is distinguished by loyalty, with studies investigating store loyalty, brand loyalty, or both. The dominant stream of research into this type has concentrated on store loyalty, often conceptualised as "loyalty to local merchants" in studies of in-home shopping behaviour. The personalising shopper orientation refers to consumers who demonstrate a propensity to value relationships with store personnel. These six orientations are relatively distinct from one another, reducing the potential for redundancy among consumer shopping characteristics.

In general, typologies divide individuals or objects into groups according to typical behavior or other patterns and thus contribute to a clearer view of a diverse and confusing number of individuals or objects. According to this perspective, typologies are a line-up of groups whose descriptive features are based on a similarity of distances, and in which the individual types represent part of the totality. In this respect, the typologies can also be interpreted as structured totalities (Hoyer and MacInnis, 2004).
According to Wedel and Kamakura (2003) the term consumer typology serves as a collective concept for a number of typological approaches whose objective is the identification of different consumer groups in order to focus marketing activities on consumer segments. The genesis of consumer typologies in the broader sense is based on the methodology that consumers are being described based on several characteristics, and persons similar to each other are being grouped into types (Dillon and Goldstein, 1984). Strictly speaking, consumer typologies comprise concrete models of advertising agencies, management consultancies, and magazine publishers, which, on the one hand, serve for the identification of distinguishable market segments, and, on the other hand, are to provide support for addressing markets in a segment-specific fashion by applying relevant marketing actions. As a variant of market segmentation, the construction of consumer typologies aims at the identification of different types of consumer groups. Several researchers consider consumer typologies as being equivalent to market segmentation (Blackwell et al., 2001, Brehm et al., 2005).

However it should be noted that there is no typology which can be described as correct per se or universally accurate. As a heuristic instrument, typologies have to be functional and problem-oriented. Their special character results from the fact that a predisposition and the actual behaviour of a consumer can be different according to product or situation (Blackwell et al., 2001; Holt, 1995).

Situational Factors

In order to fully understand consumers' motivations to engage in online shopping, situational factors have to be taken into account as well. A wide variety of situational aspects can moderate the relationship between attitude and consumers' intention to shop on the Internet, but for the
purpose of this paper only the most relevant are discussed: "time pressure", "lack of mobility", "geographical distance", "need for special items" and attractiveness of alternatives". To most consumers important attributes of online shopping are convenience and accessibility (Wolfinbarger and Gilly, 2001): because consumers can shop on the Internet in the comfort of their home environment, it saves time and effort, and they are able to shop any time of the day or night. Especially for consumers that, owing to their extended working hours, only have a small amount of free time, online shopping is an excellent opportunity. Thus, the situational factor "time pressure" has an attenuating impact on the relationship between attitude and consumers' intention to shop online. Because the Internet is time saving and accessible 24 hours a day, this becomes the main drive for online shopping and attitude toward Internet shopping is less important. A second situational factor is "lack of mobility" (Avery, 1996). Consumers who are not able to shop in traditional stores owing to an illness or other immobilizing factors, have the ability to shop on the Internet to fulfill their shopping goals. Furthermore, for consumers who have to travel large distances to stores that provide them with the articles needed, shopping on the Internet is a viable alternative to overcome this "geographical distance". A fourth situational factor that attenuates the relationship between attitude and consumers' intention to shop online is the "need for special items" (Wolfinbarger and Gilly, 2001). In case consumers need to acquire tailored products, like special sized clothing or large sized shoes, that are not available in conventional stores, shopping on the Internet is an option for them to purchase these special items anyhow. Finally, the last situational factor that moderates the relationship between attitude and intention is "attractiveness of alternatives". In case consumers are drawn by the attractiveness of a certain store in their neighborhood that, for example, sells the same products as the online store, the relationship between
attitude and intention will be attenuated. The reason for this is that the consumer, although he might have a positive attitude toward online shopping, is lead by the strong attractiveness of the brick-and-mortar alternative. Therefore, he will choose to shop offline, despite his positive attitude toward shopping on the Internet.

**PRODUCT CHARACTERISTICS**

Consumers' decisions whether or not to shop online are also influenced by the type of product or service under consideration. Some product categories are more suitable for online shopping than other categories. The lack of physical contact and assistance in shopping on the Internet is one factor that influences this suitability. Another factor is the need to feel, touch, smell, or try the product, which is not possible when shopping online. Following this, clearly standardized and familiar products such as books, videotapes, CDs, groceries, and flowers, have a higher potential to be considered when shopping on the Internet, especially since quality uncertainty in such products is virtually absent, and no physical assistance or pre-trial is needed (Grewal et al, 2002; Reibstein, 1999). On the other hand, personal-care products like perfume and lotion, or products that require personal knowledge or experience like computers and cars, are less likely to be considered while shopping online (Elliot and Powell, 2000). Thus, if personal interaction with a salesperson is required for the product under consideration, consumers' intention to shop on the Internet is low. Furthermore, if consumers need to pre-trial the product under consideration, or have the necessity to feel, touch or smell the product, then their intention to shop online is low as well. However, in case of standardized and familiar goods, or certain sensitivity products that require a level of privacy and anonymity, consumers' intention to shop on the Internet is high (Grewal et al, 2002).
Products have been widely discussed in e-commerce literature as an important factor of electronic exchanges. Many schemes for product characterization exist in the traditional marketing literature—convenience goods, shopping goods and specialty goods (Copeland, 1923), low involvement and high involvement products (Krugman, 1965), search goods and experience goods (Nelson, 1970), and durable and non-durable goods (Norton and Norton, 1988). Similarly, electronic commerce literature has classified products as digitizable, low-priced and easily described products (Strader and Shaw, 1997), information goods (Bakos, 1998), and based on information intensity (Palmer and Griffith, 1998).

Perceptions of the products to be found at a given retailer, Internet-based or traditional, are one key determinant of where consumers choose to shop (Cronin, 1996). The most influential factors cited in the literature for general purchases are perception of price, product quality, and product variety (Arnold et al., 1996; Baker et al., 1992). Cho and Park (2001) have identified “variety of products” as one of the seven key dimensions that influence Internet shopper satisfaction. Page and Lepkowska-White (2002) have pointed out that a suitable selection of products/services is one of the important ingredients for developing consumer value in online companies. Alba et al. (1997) also recognize the importance of product types in their comparison of the benefits and costs to consumers of six retail formats including Internet retailing and a more advanced form of electronic shopping which they term interactive home shopping.

More recently, Rosen and Howard (2000) examine actual and projected sales of different product categories on the Internet, and predict that services such as travel, entertainment, and financial services would dominate business-to-consumer electronic commerce. In the goods sector,
they give the advantage to standardized or homogeneous products such as books, music and video over differentiated or heterogeneous products.

Similar analysis is offered by de Figueiredo (2000), who suggests that products can be classified on a continuum based on the ability of consumers to gauge the quality of products in a digital environment. Commodity products, (i.e. products whose quality can be communicated without ambiguity), anchor one end of the spectrum, while at the other end are look and feel goods with variable quality whose quality is more difficult to assess (e.g. original art).

Whether it is based on economic rationale, media richness or consumer behavior, there is strong theoretical support for the proposition that the moderating effects of product characteristics cannot be ignored in assessing the strengths and weaknesses of retail channels. Next, some of the empirical studies that have attempted to verify this proposition in the context of electronic shopping channels including the Internet are discussed.

George (1987) identified some "negative" factors that might account for the low demand for in-home electronic shopping via videotext. Among them were cost, system complications, consumer phobia toward technology, loss of sensory shopping, elimination of instant gratification, and loss of social benefits. Jarvenpaa and Todd's (1996-1997, 1997) survey of 220 consumers found limitations including difficulty of navigating the Internet, obstacles to finding specific items, the lack of variety and assortment of product offerings, disappointing customer service, and wariness about unknown Internet retailers. Similarly, Spiller and Lohse (1997-1998) in their investigation of 137 Internet retail stores found several sites with little product information, low quality pictures, limited product selection, few service features, and poor interfaces.
Some studies have compared the Internet with these more traditional channels. For example, Palmer (1997) examined differences among four retail formats - in-store, catalog, cable television and the Web. He found that there were significant differences across the four formats on product description, shopping availability, speed of delivery, and time taken to shop. Results from this study showed that the Web fared poorly on most dimensions including inadequate product descriptions, longer time to find products, online store navigation difficulty, and problems with product delivery.

Another study (Jones and Vijayasarathy, 1998) adopted the eight image scale items - economical, enjoyable, safe, easy, fast, convenient, sensible and practical - used by Settle et al. (1994) to examine differences between print and Internet catalogs. Results from this study showed that only one of the image scale items - risky-safe - was different between the two types of catalogs. Specifically, Internet catalogs were found to be more risky than its print counterpart. A comparable study that compared print and Internet catalogs on shopping factors such as product value, shopping experience, customer service, and consumer risk, revealed that print catalogs were more positively perceived on the dimensions of reliability, tangibility, and consumer risk (Vijayasarathy and Jones, 2000a, b).

Although the above studies provide insights on the merits and drawbacks of the Internet as a retail channel, they do not shed light on the moderating effect of product characteristics that has been theoretically conceptualized in the literature. This omission has been addressed by a few researchers such as Liang and Huang (1998) who conducted a study to determine why some products are better suited to electronic marketing. They found that different products have different levels of consumer acceptance based on the transaction costs associated with purchasing a
product in the electronic market. Further evidence of the importance of the product sought in channel choice decisions is provided by Morrison and Roberts (1998). Their study showed that consumer perceptions about the appropriateness of an electronic delivery mode (PC with modem) for banking services were influential in their (consumer's) consideration of the mode for banking services.

A few studies have compared consumer intentions to shop for specific types of products using the Internet. Vijayasarathy and Jones (2000b) tested for differences in salient beliefs and normative beliefs about shopping for music CDs/cassettes and clothing, and found that intentions to shop online for the former were viewed more favorably by student subjects. The influence of product characteristics on consumers' choice of retail channels has also been demonstrated by Phau and Poon (2000). Their study among Singaporean consumers showed that low cost frequently purchased products and services that are intangible and highly differentiated are more likely to be purchased on the Internet.

A common theme that is emphasized in all of the above conceptual studies is that any discussion on the merits of the Internet as a commercial medium would be misleading if it fails to incorporate product differences and the concept of fit or congruence between product and channel characteristics.

**ONLINE VENDORS/STORES CHARACTERISTICS**

Many researchers have been conducted to identify the criteria that consumers may consider when selecting an online vendor (e-store). For instance, Jarvenpaa and Todd (1997) reported four factors that consumers found salience as they browsed through selected electronic malls on the World Wide Web: product perceptions, shopping experience, customer service, and perceived consumer risk. Lee (1998) argued that the spatial and
temporal separation among consumers and marketers would increase fears of Web retailer opportunism arising from product and identity uncertainty. Lohse and Spiller (1998) offered six categories of attributes that influenced e-store traffic and sales: merchandise, service, promotion, convenience, checkout, and navigation.

In contrast to traditional consumer behavior, online transactions have some unique dimensions, such as (a) the extensive use of technology for transactions, (b) the distant and impersonal nature of the online environment, and (c) the implicit uncertainty of using an open technological infrastructure for transactions (Pavlou and Stewart, 2000). Wolfinbarger and Gilly (2002) identified a number of factors that influenced consumer's e-store image: merchandise assortment, service policies, layout and institutional factors (i.e. reputation).

By analyzing physical retailer stores, paper catalogs, and online outlets, Lim (2001) concluded sixteen attributes which consists of six factors of e-store: merchandise, convenience, interactivity, reliability, promotions, and navigation. He indicated that some physical store factors (e.g. store atmosphere, physical facilities) are not applicable for Internet outlets.

A key characteristic of online shopping is the absence of a physical store. In the traditional environment location is all-important; in the online world it becomes (almost) irrelevant. While this may have advantages, the absence of physical cues creates a number of challenges. Hart et al. (2000) note that certain aspects of retail marketing theory do not transfer easily from a physical to a online store, specifically image and patronage decisions; thus a new set of image dimensions is required. They observe further that in relation to the retail product offering it is important to recognize that the "physical product" still requires merchandising, and that
customer-related "services" need to be carefully designed and delivered online (Hart et al, 2000).

Still online stores incorporate many of the same characteristics as traditional retail stores (Lohse and Spiller, 1998; Spiller and Lohse, 1998). Thus, the Web design features can be identified from previous studies on retail store design. Much research has been done on retail store design and evaluation. Lindquist (1975) examined previous consumer behavior research and proposed a set of retail store attributes. Jarvenpaa and Todd (1997) surveyed 220 shoppers and identified several factors that affect consumer behavior. Spiller and Lohse (1998) adopted Lindquist's store attributes in their study of Internet retail stores classification. They modified Lindquist's original attributes to classify Internet retail stores as based on five categories: merchandise, service, promotion, navigation, and user interface.

Lindquist (1974) has underlined the importance of store image as a predictor of consumers' store choice. A person's behavior is not only a function of knowledge and information but also is predicated on the consumer's image of a product or store. From a marketer's viewpoint, store image is characterized by two elements:

1. a store's "tangible or functional qualities" (e.g. merchandise selection, price ranges, credit policies, store layout); and
2. "intangible or psychological attributes" (e.g. a sense of belonging, the feeling of warmth or friendliness, a feeling of excitement or interest).

"Attributes" represent the combined concept of functional and psychological factors that exist in a store. When making a store choice decision, consumers evaluate store alternatives on a number of store attributes (Lindquist, 1974). Patrons and non-patrons have different perceptions of a store's image. As such, retailers need to ensure that
dimensions that their loyal customers view as being important are designed to be attractive to them.

Similarly, online store image is likely to have a major influence on online customers when they determine from which online vendors to buy. Online store image, though, will likely be defined differently from bricks-and-mortar store image. After all, the way in which consumers shop in online retail venues is different from how they shop in a physical store, owing to the absence of a physical store milieu. Conceivably, then, consumers seemingly will likely assess some unique store attributes in online shopping vis-a-vis those utilized in physical store shopping.

Arguably, online stores do share some common features with a physical store in terms of merchandise, service, and promotion. There is also some similarity between traditional modes of in-home shopping, such as TV and catalog shopping, and online shopping. Owing to the nature of computer-mediated communication, however, online retail stores have unique features that do not exist in either the physical store or in-home shopping.

EVALUATIVE CRITERIA OF ONLINE VENDORS

Online retail stores have some similar features to physical retail stores and catalogs. For example, online retailers offer e-mail addresses of sales associates or frequently asked questions (FAQ) sections to communicate with their customers, just as physical stores have sales personnel. Also, they share common attributes with paper catalogs by providing consumers with the convenience of in-home shopping and purchase delivery. And like catalogs, retail Websites typically provide a toll-free telephone number through which their customers may contact sales associates for further information. Compared to other retail formats, however, many online retail stores have the advantage of seemingly
unlimited merchandise and product information. Furthermore, online vendor store design and layout have distinct features compared to those found in physical stores and paper catalogs (Spiller and Lohse, 1998).

The online vendor attributes presented in Exhibit 2.1 were drawn from an analysis of literature pertaining to physical retail stores, paper catalogs, and online vendors. However, store dimensions of a physical store that are not applicable for online outlets (e.g. clientele of the store, physical facilities, and store atmosphere) were excluded.

**Merchandise characteristics**

Merchandise can be defined as either goods or services offered by a retail store (Eastlick, 1989; Lindquist, 1974). Because of the unique nature of the online shopping environment, consumers' evaluation criteria for online vendor merchandise might be somewhat different from those for traditional retailers. For instance, unlike a physical store, online vendors can provide customers with as much variety as they want without physical space restrictions. Also, consumers can compare product prices more easily than ever before. Online vendor dimensions traditionally ascribed to merchandise-related aspects include product information, brand selection, and price.

As in catalog shopping, accurate reproduction of descriptive and experiential *product information* is a critical factor influencing consumers' choice in online shopping because consumers cannot touch or see products (Alba et al, 1997; Lohse and Spiller, 1998; Lynch and Ariely, 2000; Ward and Lee, 2000). Interestingly, despite the advantage of the lower cost in delivering text and images through the Internet versus paper catalogs, more than 50 percent of online vendor sites provide fewer than three lines of text describing each product (Lohse and Spiller, 1998).
Exhibit 2.1 Summary of online vendor attributes used in previous studies

<table>
<thead>
<tr>
<th>Online Vendor factors</th>
<th>Attributes</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise</td>
<td>Product information</td>
<td>The perceived depth of product information</td>
</tr>
<tr>
<td></td>
<td>Brand selection</td>
<td>Well-known national brands</td>
</tr>
<tr>
<td></td>
<td>Price</td>
<td>Merchandise price</td>
</tr>
<tr>
<td>Convenience</td>
<td>Timely delivery</td>
<td>Delivery on time, delivery options</td>
</tr>
<tr>
<td></td>
<td>Ease of ordering</td>
<td>Fast check out, order confirmation by e-mail</td>
</tr>
<tr>
<td></td>
<td>Product display</td>
<td>Product lists with both click buttons and pictures</td>
</tr>
<tr>
<td>Interactivity</td>
<td>Customer support</td>
<td>Software downloading, e-form inquiry, order status checking, customer comment and feedback</td>
</tr>
<tr>
<td></td>
<td>Personal-choice helper</td>
<td>Keyword search, improved search functions</td>
</tr>
<tr>
<td></td>
<td>Surfer postings</td>
<td>Customer review of product/service experience</td>
</tr>
<tr>
<td>Reliability</td>
<td>Reputation</td>
<td>Company information</td>
</tr>
<tr>
<td></td>
<td>Security</td>
<td>Information on transaction security</td>
</tr>
<tr>
<td></td>
<td>Privacy</td>
<td>Privacy policies for personal information</td>
</tr>
<tr>
<td>Promotions</td>
<td>Promotion on the cybermall home page</td>
<td>Clearance, free shipping, frequent buyers' incentives, prizes for participation</td>
</tr>
<tr>
<td>Navigation</td>
<td>Time to get to home pages</td>
<td>The time taken from ads on other sites to home pages</td>
</tr>
<tr>
<td></td>
<td>Expected waiting time</td>
<td>The perceived duration of time to download pages on the site</td>
</tr>
<tr>
<td></td>
<td>Waiting information</td>
<td>Duration information at the beginning of the wait, countdown information</td>
</tr>
</tbody>
</table>

Source: Lim and Dubinsky, 2004

Previous studies about store attributes have shown that merchandise selection has an influence on consumers' store choice (Berry, 1969; Lindquist, 1974; McDaniel and Burnett, 1990; Tigert, 1983). The vast number of product alternatives is a key benefit for online retailers. However, Alba et al. (1997) argue that consumers might become tired and stressed by examining information on hundreds of products. Lohse and Spiller (1998) dispute the importance of merchandise variety in online retailing. In particular, their work showed that the number of products increases online store traffic, but it does not affect sales. Apparently, whether or not an online vendor has a specific product a customer is looking for is more important than simply having a large variety of items (Lohse and Spiller, 1998). Therefore, brand selection might well be more likely to affect customers' buying decisions and subsequent online store patronage than merchandise variety (Degeratu et al., 2000). Indeed, brand names also
appear to affect consumers' buying decisions, especially when they are unfamiliar with an online vendor (Ernst & Young, 1998). Further, when consumers have difficulty in searching for products on the Internet, they tend to rely on brand names (Ward and Lee, 2000).

*Price* is a key attribute for customers when forming perceptions of retailers (Berry, 1969; Eastlick, 1989; Lindquist, 1974; McDonald, 1993; Tigert, 1983). Online shopping enables consumers to reduce search costs and compare product information and prices simultaneously. This benefit, concomitantly, has accelerated retailers' competition and made online vendors especially concerned about consumers' increasing price sensitivity (Shankar et al, 1999; Ward and Lee, 2000). However, previous studies have also found that price sensitivity can be reduced by increasing the usability and perceived depth of online information (Lynch and Ariely, 2000; Shankar et al, 1999).

**Convenience characteristics**

Convenience is a key motive behind in-home shopping (Eastlick and Feinberg, 1999). Convenience is measured by effort savings (e.g. ease of locating a product in a store) and location convenience (e.g. ease of locating a store and finding a parking space) (Lindquist, 1974). In online shopping, convenience includes timely delivery, ease of ordering, and product display (Lohse and Spiller, 1998).

Lohse and Spiller (1998) discerned that several factors can be subsumed under the convenience attribute of online shopping: number of links into the site, number and type of different shopping modes, average number of items per product menu listing, number of lists that require scrolling, presence of price information in product listings, and type of product lists. Among these attributes, they found that *product display* has a significant impact on site visits and sales. Specifically, displaying product
lists using both click buttons and pictures leads to more positive reactions from consumers than simply displaying a product list using only a button or pictures in online catalogs.

*Ease of ordering* appears to influence home-shoppers' buying decisions (Eastlick, 1989; McDonald, 1993). Therefore, order processing on Web sites should be easy for customers to do. Moreover, receiving order confirmations via e-mail, including information about shipping, returns, and order tracking numbers, facilitates order-processing behavior. If order processing is time consuming and complicated, customers will likely become frustrated and give up purchasing from the online vendor (Lohse and Spiller, 1998).

With online shopping, physical store dimensions of convenience, such as geographical location and parking, do not exist. Instead, online shoppers seek convenience through use of mail or phone shopping and through *timely delivery* (to home). A Price Waterhouse Coopers study revealed that "the biggest sources of dissatisfaction among e-shoppers had to do with gifts not arriving on time for the [Christmas] holidays" (eMarketer, 2001).

**Interactivity characteristics**

From an interpersonal communication perspective, interactivity has been defined as the extent to which messages in a sequence relate to each other, and especially the extent to which later messages describe the relatedness of earlier messages (Rafaeli and Sudweeks, 1997). Interactivity is also defined as the extent to which the communicator and the audience respond to each other's communication need (Ha and James, 1998; Rafaeli, 1988; Fox, 2000; Levine et al., 2000; Newman et al., 2004).

Previous studies have established interactivity as a critical feature of online media. Consumers no longer interact with salespeople or have a direct physical experience with the store and its products. Instead, their
experience is mediated through the web, using a graphical display without any face-to-face interaction with the online vendors (Koufaris and Hampton-Sosa, 2004). Nelson (1990) suggested that human-computer activities exemplify the human impulse to create interactive representation.

For online vendors, the degree of interactivity influences the perceived quality of the Web site (Ghose and Dou, 1998). Ghose and Dou (1998) surveyed 101 Web sites to identify key interactivity factors that influence Web site appeal by usage frequency of each factor. They found that customer support was the interactivity aspect most frequently used by customers. In addition to customer support, several additional dimensions can be classified as "interactivity" characteristics - personal-choice helper, surfer postings, and promotion.

In a business setting, interactivity tends to be seen as the "combination of rich content, active intelligence, and collaborative communications to create a compelling consumer experience" (Robb et al., 1997) or a person-to-person or person-to-technology exchange designed to effect change in the knowledge or relevant behavior of at least one person (Haeckel, 1998). Online retailers provide several types of online service that can increase interactivity with customers, such as software downloading, e-form inquiry, order status tracking, customer comment, and feedback. In a physical store, customers interact with sales personnel; their friendliness and knowledge can affect consumers' purchasing decision (Berry, 1969; Lindquist, 1974; McDaniel and Burnett, 1990; Tigert, 1983). On the Internet, online retailers offer consumers with sales clerk service in different forms, such as a toll-free phone number, e-mail addresses, FAQs, and customer feedback. Research has found that having FAQ sections and feedback increases online store visits and sales (Lohse and Spiller, 1998). Empirical work about the usage frequency of customer support functions (e.g. e-
inquiry, comments, and feedback) reveals that customers prefer two-way communication with online retailers rather than merely being passive recipients of information (Ghose and Dou, 1998).

Online outlets provide various forms of search functions for customers to locate items for which they are searching. Ghose and Dou (1998, p. 32) define a personal-choice helper as "a function that can make relatively sophisticated recommendations on consumers' choices based on their input of preferences and decision criteria". This function (such as a keyword search) gives customers more refined alternatives. For example, multi-layered information assists customers to narrow down target items based on their decision criteria (e.g. www.apartmentsplus.com; Shankar et al, 1999).

Web sites provide customers with interactivity not only with online retailers but also with online communities. Ghose and Dou (1998) found that online customers frequently use surfer postings, which are customers' reports of their feelings and experiences with products and online retailers. Online retailers often provide a page of customer reviews (e.g. www.amazon.com), which gives customers indirect experience with the products and service.

Consumer behavior tends to be influenced by external environments, such as promotion. The behaviorist approach in consumer research posits that "the reinforcement of a series of behaviors will gradually bring the consumer to the desired final behavior" (Wilkie, 1994, p. 271). For instance, a "clearance sale" sign on a store window can stimulate consumer store traffic. In physical stores, the purpose of promotional activities for particular products is to encourage consumers to buy either a particular product or some other products. Spiller and Lohse (1998) have drawn analogies among retail store, paper catalogs, and online catalogs and have
characterized e-store promotion activities as being special offers, online games and lotteries, links to other sites of interest, and appetizers. Subsequently, they have also discerned that hours of promotion on the online store entrance appears to increase consumers' buying decisions (Lohse and Spiller, 1998).

**Reliability characteristics**

Company reliability is an important criterion consumers utilize when making a store choice decision (Lindquist, 1974). Consumers might wish to protect themselves from unreliable online retailers by paying close attention to company information. According to GVU's WWW user surveys (Graphics, Visualization, and Utilization Center, 1998), reliability of online companies is the third most important attribute consumers consider. In addition, security and privacy are gaining increased concern among online users (Bellman *et al*, 1999) and thus merit research attention.

In home-based shopping, a retailer's *reputation* has a significant influence on consumers' purchase decisions (McDonald, 1993). The provision of service information (including company history) can help a customer feel more comfortable about dealing with a given firm and about sending credit card information through the Internet (Lohse and Spiller, 1998). So, in-depth company information might abate consumers' uncertainty and perceived risk in dealing with online retailers.

Transactions in online shopping tend to be made with a credit card. However, consumers have been warned not to release their credit card information online but to make a phone order for online purchasing (Furger, 1996). Nearly two out of three Americans do not trust online retailers, and consumers are worried about the security of credit card information (Jeffrey, 1999). By informing customers about the *security* of online
transactions, online retailers can help reduce online risk perceived by customers (Ernst & Young, 1998).

Company Web sites collect a vast amount of customer information through the Internet, which is a fundamental asset for companies. Consumers, in contrast, may feel uncomfortable releasing their personal information (such as credit card and social security numbers) via the Web (Ernst & Young, 1998). The top privacy concern of US consumers appears to be whether or not a Web site asks permission to share personal information with other companies (eMarketer, 2001). A recent report reveals that almost 65 percent of respondents gave up online purchasing because of privacy concerns (eMarketer, 2001). Consumers are discomfited when they receive e-mail from a company with which they are unfamiliar (Sheehan, 1999).

**Navigation characteristics**

Lowering search costs for shopping is a key motivation for consumers to shop online. As the total number of working hours of households increases, online shopping has attracted working families, thus enabling them to save time by purchasing products and services in a non-traditional way. In physical-store shopping, consumers seek to lower their search costs (e.g. time and efforts): physical effort is employed when going into a store, finding products, and comparing alternatives across stores (Bell et al., 1998). In online shopping, navigation time and efforts are analogous to the physical effort expended to locate items in traditional shopping.

Gupta and Chatterjee (1997) define search costs on the Internet as:

1. Internet connection time;
2. Actual time and effort taken for the user to search an online retailer's site (e.g. use of online search engines, links from related pages, suggestions from newspapers/magazines/ friends); and
(3) time to download information from an online restore (which essentially depends on the connection speed, usage charges, traffic on the network, traffic at the site, and the kind of information being obtained).

Internet users are not tolerant of the waiting time to arrive at a Web site's homepage. GVU's WWW user surveys showed that consumers are confused by and annoyed with long waits to download an online retailer's homepage from Web ads (Graphics, Visualization, and Utilization Center, 1998). When downloading is delayed, potential customers are likely to drift to alternative online retailers or give up online shopping, at least for that time (Weinberg, 2000).

Consumers are more affected by their perceived duration of download waiting time than by the actual waiting time (Dellaert and Kahn, 1999). That is, when the wait to download is shorter than expected, consumers' satisfaction with the service increases. Conversely, if the wait is longer than expected consumers' satisfaction decreases.

Consumers are likely to feel disturbed by the wait when they are uncertain about the actual waiting duration (Weinberg, 2000). By providing waiting time information (e.g. time bar indicator at the bottom of the Web page), online retailers might help consumers become more tolerant of the wait and more favorably disposed toward the site.

PREVIOUS ONLINE SHOPPING EXPERIENCES

Intention to shop online is also influenced by consumers' Internet shopping history (Shim et al, 2001). It is demonstrated by past research findings that prior online shopping experiences have a direct impact on Internet shopping intentions (Eastlick and Lotz, 1999; Weber and Roehl, 1999). Kelson (1964) suggests that an individual's response to a judgmental task is based on three aspects:
To the extent that minimal context or system-specific information is given, the individual will make system-specific evaluations based on prior experiences with the system. In the online shopping context, consumers evaluate their Internet shopping experiences in terms of perceptions regarding product information, form of payment, delivery terms, service offered, risk involved, privacy, security, personalization, visual appeal, navigation, entertainment and enjoyment (Burke, 2002; Parasuraman and Zinkhan, 2002; Mathwick et al., 2001). In case prior online shopping experiences resulted in satisfactory outcomes and were evaluated positively, this leads consumers to continue to shop on the Internet in the future (Shim et al., 2001). Such past experiences decrease consumers' perceived risk levels associated with online shopping. However, if these past experiences are judged negatively, consumers are reluctant to engage in online shopping in future occasions. This illustrates the importance of turning existing Internet shoppers into repeat shoppers by providing them with satisfying online shopping experiences (Weber and Roehl, 1999).

Bellman et al. (1999) investigated several predictors for whether an individual will buy online. These authors concluded that demographic variables such as income, education and age have a modest impact on the decision of whether to buy online. They found that the most important determinant of buying on the web was previous behavior such as earlier online purchases. "Once people are online, whether they buy there and how much they spend has more to do with whether they like to buy online and whether the time they have for buying is limited" (Bellman et al., 1999, p. 37). This is consistent with Forrester Research that concluded "demographic
factors such as age, race and gender don't matter anywhere near as much as the consumers' attitudes toward technology" (Modahl, 2000).

Several academics and practitioners have identified the "online shopping experience" as a crucial e-commerce marketing issue. Tamimi et al. (2003) define the online shopping experience as a process of four stages describing the successive steps of an online transaction. Considering that an online customer is not simply a shopper but also an information technology user (Cho and Park, 2001) one can argue that the online experience is a more complicated issue than the physical shopping experience: the Web experience can be defined as the consumer’s total impression about the online company (Watchfire Whitepaper Series, 2000) resulting from his/her exposure to a combination of virtual marketing tools "...under the marketer's direct control, likely to influence the buying behavior of the online consumer" (Constantinides, 2002, p. 60). The Web experience embraces elements like searching, browsing, finding, selecting, comparing and evaluating information as well as interacting and transacting with the online firm. The virtual customer’s total impression and actions are influenced by design, events, emotions, atmosphere and other elements experienced during interaction with a given Web site, elements meant to induce customer goodwill and affect the final outcome of the online interaction. It should be noticed here that the Web experience is important not only for Web sites marketing products or services but also for sites targeting customers interested in informational content (news, weather, sports etc.), sites acting as online intermediaries and generally to all types of Internet ventures competing for the attention of the online public.

The primary means of delivering the Web experience is the corporate Web site. Sites delivering superb Web experience are designed in a way not only addressing the client’s product needs and expectations but also
assisting the customers through the steps of the buying process. In that respect the back-office e-commerce infrastructure (O'Keefe and McEachern, 1998) is also of crucial importance. Web sites must be seen therefore as vital instruments of customer service and persuasion rather than simply as online brochures or catalogues of the company's products.

Experience with the Internet is an important consideration in making on-line purchases (Hoffman et al., 1999). Hoffman and colleagues found that consumer concerns over control of personal information actually increase with Internet experience, while concerns over functional barriers to shopping online decrease. Novice Internet users are less likely to make a purchase on-line: 27 per cent of users with less than six months experience using the Internet bought something online, compared to 60 per cent of those with three or more years of Internet experience (Fox, 2000). In addition, newcomers worry more about online credit card theft (70 per cent) than do experienced Internet users (46 per cent) (Fox, 2000).

A review study conducted by Constantinides in 2004 identified the controllable elements influencing the online buying behavior grouped into three main categories and five sub-categories, each one including several of these elements (see Exhibit 2.2).

The definitions used in describing the main building blocks of the Web experiences, as basis of the classification are the following:

**Functionality factors**

Factors enhancing the online experience by presenting the virtual client with an good functioning, easy to explore, fast, interactive Web site. Functionality includes "Usability" and "Interactivity" elements.
Exhibit 2.2 Main Building Blocks of Web Experience and their sub-categories

<table>
<thead>
<tr>
<th>Functionality Factor</th>
<th>Psychological factors</th>
<th>Content factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usability</td>
<td>Interactivity</td>
<td>Trust</td>
</tr>
<tr>
<td>Convenience</td>
<td>Customer service/ after sales</td>
<td>Transaction security</td>
</tr>
<tr>
<td>Site navigation</td>
<td>Interaction with company personnel</td>
<td>Customer data misuse</td>
</tr>
<tr>
<td>Information architecture</td>
<td>Customization</td>
<td>Customer data safety</td>
</tr>
<tr>
<td>Ordering/ payment process</td>
<td>Network effects</td>
<td>Uncertainty reducing elements</td>
</tr>
<tr>
<td>Search facility and process</td>
<td>Guarantees/ return policies</td>
<td></td>
</tr>
<tr>
<td>Site speed</td>
<td>Findability/ accessibility</td>
<td></td>
</tr>
</tbody>
</table>

**Psychological factors**

Web sites must communicate integrity and credibility in order to persuade customers to stop, explore them and interact online. Psychological factors are those playing a crucial role in helping online customers unfamiliar with the vendor or unfamiliar with online transactions to overcome fears of fraud and doubts as to the trustworthiness of the Web site and vendor.

**Content factors**

Factors referring to creative and marketing mix related elements of the Web site. These factors exercise a direct and crucial influence on the Web experience. They are divided in two sub-categories: “Aesthetics” and “Marketing mix”.

The above terms reflect the nature and/or the effect of the Web experience elements on the buying process. As an example the policies regarding the use of customer data by online vendors and product return
policies, factors likely to affect the customer trust, were classified as psychological issues while design and atmosphere, typical aesthetic elements were considered as elements of the Web site content.

**TRUST, PRIVACY AND RISK CONCERNS**

One of the most frequently relationship in online consumer behavior is the effect of perceived trust, privacy and risk over online purchase decisions. This relationship seems to be one of the most favorite subjects of study among researchers as much of previous research is devoted to these three factors. However, the study of trust, privacy and risk is a very complex process as not only these factors influence each other, but they themselves influence many other and in turn are being influenced by many other factors. Following paragraphs discusses these relationships as studies by previous researchers.

**RISK**

The inclusion of risk itself in the study of online consumer behavior is important, because there is a whole body of literature based in rational economics that argues that the decision to buy is based on a risk adjusted cost-benefit analysis. Thus, perceived risk is a long rooted central concept in study of online consumer behavior (Cox and Rich, 1964).

Consumer perceptions of risk have been widely dealt with in the past literature and have been shown to shape all purchase decisions to varying degrees, and thereby influence consumer behavior (Bauer, 1960; Bettman, 1973; Chaudhuri, 1997; Cox, 1967; Cunningham, 1967; Mitchell, 1992, 1999). A purchase decision involves risk when the consequences connected with the decision are uncertain and some results are more desirable than others (Kogan and Wallach, 1964, 1967; Pollatsck and Tversky, 1970; Rapoport and Wallsten, 1972; MacCrimmon and Wehrung, 1986). A situation where the only possible result is a sure loss of some magnitude is not risk, since there
is no variance among the possible results. Kogan and Wallach (1964) describe the concept of risk as having two dimensions: first, the chance aspect where the focus is on probability and second, the danger aspect where the emphasis is on severity of negative consequence. Although many refinements to the definition of risk have been proposed, including expected value theory (Cunningham, 1967) and expected utility theory (Bonomo and Johnston, 1979; Currim and Sarin, 1983; Hauser and Urban, 1979), risk remains a subjectively determined expectation of loss by the consumer (Stone and Winter, 1987); thus the term, perceived risk.

It is theorized that when perceived risk falls below an individual's acceptance value, it has little effect on intended behavior and is essentially ignored (Greatorex and Mitchell, 1993). On the other hand, an extremely high level of perceived risk can cause a consumer to postpone or avoid a purchase entirely. The extent of the exposure depends on the importance or magnitude of the goal, the seriousness of the penalty for not attaining the goal, and the amount of means committed to achieving the goal (Cox, 1967; Dowling and Staelin, 1994). Perceived risk is usually measured as a multidimensional construct: physical loss, financial loss, psychological loss, time loss, performance risk, and social risk (Roselius, 1971; Jacoby and Kaplan, 1972).

Generally, perceived risk is conceptualized as a typical influence that is addressed during the early stages of the consumer buying process (Zeithaml and Bitner, 2003; Cox, 1967; Dowling and Staelin, 1994; Murray, 1991; Murray and Schlater, 1990). The consumer buying process is commonly described as a five-stage linear process (Blackwell et al, 2003; Hawkins et al, 2003): (stage one) need recognition, (stage two) information search, (stage three) alternatives evaluation, (stage four) purchase decision, and (stage five) post-purchase behavior. In the need recognition stage,
consumers first perceive risk when they recognize the need for a product or service. In the presence of uncomfortable levels of perceived risk, consumers apply risk reduction strategies during the second and third stages, such as reliance on personal recommendations (Cunningham, 1967; Midgley, 1983; Perry and Hamm, 1969), seeking additional information about a product or service (Beatty and Smith, 1987; Cox, 1967; Lutz and Reilley, 1973), a preference for national brands (Bauer, 1960; Locander and Herman, 1979; Lutz and Reilley, 1973), and the security of warranties (Bettman, 1973; Cox, 1967; Dowling and Staelin, 1994).

The majority of research on perceived risk is focused on traditional purchasing situations. However, internet shopping is much different than shopping in stores. Online shopping technologies are essentially self-service technologies that offer the benefits of round-the-clock convenience, ubiquitous availability, time and money savings, and a reduction in the anxiety caused by judgmental service representatives (Bitner, 2001; Meuter et al., 2000). Of course, some would argue there are disadvantages to online shopping such as computer system complications, computer phobia, and loss of pleasure and social interaction (George, 1987). As a self-service technology, internet places a significant burden and responsibility on the consumer. The consumer is responsible for searching multiple vendors, comparing prices, and proper transactions (Law and Leung, 2000). Mistakes are the sole blame of the consumer who has very limited recourse for correcting errors and thus heighten the online consumers' concerns.

The risk dimensions typically considered are economic, performance, personal, (Simpson and Lakner, 1993) and privacy (Javenpaa and Todd, 1996-97). Economic risk encompasses monetary losses associated with poor purchase decisions, the inability to return a product, and the non-receipt of a product ordered (Peterson et al., 1989). Performance risk involves the
consumer's perception that a product or service may fail to meet expectations or the "fear of not getting what they want" (Cox and Rich, 1964). The possibility of harm to the consumer resulting from either the product or the shopping process is referred to as personal risk. Credit card security is a key personal risk factor when participating in an e-commerce retail transaction (Javenpaa and Todd, 1996-97). Privacy risk reflects the degree to which a consumer may lose privacy because of a loss of confidential information that may be made available when participating in a retail e-commerce transaction (Javenpaa and Todd, 1996-97). Each of the determinants described above (product perception, shopping experience, customer service, and perceived risk) will be examined in an effort to better understand how they affect students' decisions to purchase textbooks from Internet e-commerce sites in lieu of traditional bookstores.

Apart from these, both users and non-users generate perceived risks regarding other risk components. Miyazaki and Fernandez (2001) mention that perceived risks derive from the relative novelty of the Internet. However, we view novelty itself as an independent risk component. Public surveys as Nielsen and Gallup address some other risk types. In their analysis of the Gallup poll scores regarding e-mail users, Jones and Carlson (2001) direct attention to such risks as being tracked by Internet "cookies", monitoring of use by Internet provider or employer, and receiving undesired e-mails. The risk of unwanted junk mail is also identified by Pew Research Center (1998).

Two additional perceived risk components are dealt with on a much more limited scale in the literature. Armstrong et al (2000) refer to Internet addiction as potential perceived risk. High fees are a source of perceived financial risk to Israeli users (Pew Research Center, 1998). Concern about slow connection and responses can be interpreted as some sort of
technological risk. As shown by Pew Research Center (1998), consumers worry about slow operation as well. This finding has been identified by other researchers such as Hoag (1998) and Sevcik and Bartlett (2001). Interestingly enough, in terms of physical perceived risk, a recent study conducted by Vividence Corporation (2001) before and after September 11, 2001 shows that 29 per cent of the respondents claim that they would shop more online since they are concerned about safety in stores.

Based on reviewing scientific literature following nine different risk components were identified:

1. Internet credit card stealing;
2. supplying personal information;
3. pornography and violence;
4. vast Internet advertising;
5. information reliability;
6. lack of physical contact;
7. not supplying Internet products purchased;
8. missing the human side in Internet purchases; and
9. Internet usage addiction.

PRIVACY CONCERNS

The concept of privacy is in itself not new and it has generally been defined as an individual's ability to control the terms by which his personal information is acquired and used (Westin, 1967; Galanxhi-Janaqi and Fui-Hoon Nah, 2004). Consumers have worried for years about how personal data are used by the government and, more recently, by businesses. Their anxiety and action have led to the passing of various privacy protection laws. The consumer privacy issue is taking on greater magnitude, as the number of people accessing the Internet's information resources grows
exponentially and the public becomes more technologically savvy (Reda, 1996; Rubin, 1995).

The computer's ability to gather and sort vast amounts of data - and the Internet's ability to distribute it globally - has magnified the concern of privacy and anonymity on the Web (Boswald et al., 1999; Federal Trade Commission, 1999a, 1999b, 1999c). Once an individual has ventured into cyberspace, it is hard to remain anonymous. One can expect to receive unwanted advertising e-mail. Cyberspace also has "snoopers" and con men. Maintaining privacy is partly the responsibility of the user. When visiting a site, users should look for a privacy statement. Sites that are sensitive to privacy concerns should have privacy policies clearly displayed, and should also offer the user a choice to share their personal information or restrict its use. These sites also have some declarations on how the information would be used.

Privacy concerns have often been cited as one of the key reasons consumers do not make on-line purchases over the Internet. A March 2000 poll of Internet users who had not yet purchased anything over the Internet found that 94 per cent of respondents were either very or somewhat concerned that companies they might buy from might use their information to send them unwanted information (BusinessWeek, 2000). A September 2000 survey found that 8 per cent of former Internet users had left the online world due to concerns about privacy, while 54 per cent of those who had never gone online believed the Internet to be "dangerous" (Lenhart, 2000). An October 2001 survey revealed that 72 per cent of respondents were either "extremely concerned" or "very concerned" about their control over the release of private information after they had bought something online (Better Business Bureau, 2001). In this same survey, 56 per cent of
respondents reported they would be more willing to make online purchases if they had access to a secure ordering process.

Privacy concerns about the Internet can be classified into four primary areas (Wang et al, 1998):

1. improper acquisition of information (e.g. preference tracking);
2. improper use of information (e.g. third-party distribution);
3. privacy invasion (e.g. direct mailing); and
4. improper storage (e.g. no opting-out).

Concerns about privacy have led some to begin to develop models of privacy for the Internet. One example is Byford's (1998) extensive treatment of privacy issues related to cyberspace, which focuses on two different theoretical concepts of privacy. The first is a social relationships view, in which privacy is understood to act as a balance to the development of social relationships. Only through a consideration of the self can clear development of the boundaries of social relationships be developed. Privacy is not so much the right to be let alone, as defined in US jurisprudence, as it is an important mechanism in social processes. This concept of privacy on the Internet would be manifested in anonymous interactions and assumed identities, as in chat rooms and MUDs, where social relationships among members of various Internet communities are being worked out.

A second concept of privacy is the better-known property view (Byford, 1998) in which individuals see privacy as the extent to which they control their own information in all types of Internet exchanges. The property view manifests itself in willing exchanges of personal information in exchange for valued services such as free e-mail or special discounts from merchants.
Both concepts of privacy could influence individual attitudes toward the Internet, but the extent to which each view actually does influence attitudes is an open question at this time.

Although both of Byford's conceptualizations of privacy are important to understanding individual behavior on the Internet, most of the concerns about privacy related to Internet purchasing seem to fall under the property view of privacy.

For example, results from the 1997 GVU Internet surveys indicate that 53 percent of online users are wary of the collection of personal data by commercial Web sites, and 66 percent do not register with Web site for fear that their personal information may be misused (GVU, 1997). In a more recent study, in which respondents were allowed to articulate their own concerns about Internet purchasing, 5.6 percent named the unauthorized sharing of personal data as one of their key concerns about Internet purchasing, while 7.1 percent named unauthorized access to personal information, and 20.1 percent named unauthorized access to credit card information (Miyazaki and Fernandez, 2001). The Ernst & Young (2001) and Better Business Bureau (2001) studies mentioned in the introduction echo these concerns about control over personal information.

Privacy has long been a concern in the information systems literature, especially in the work of Culnan and Smith, and concern about control over personal information has been one of the key aspects of privacy that has been investigated in this literature. Culnan (1993), in a study on direct marketing and attitudes toward secondary information use, developed two scales for measuring two different facets of attitudes towards privacy, loss of control and unauthorized secondary use. The loss of control scale makes references to the loss of control over personal information by consumers, but it also references the loss of privacy due to having a credit card.
Secondary use refers to personal information being used for some additional purpose other than that for which it was originally collected. Culnan found that people who are less sensitive about unauthorized secondary use of information are more positive about shopping by mail, have developed coping strategies for dealing with unwanted mail, and have a lower concern about privacy, as measured by loss of control over personal information, than do those individuals who are more sensitive about the secondary use of their information. Although her study did not focus on privacy and the Internet, its measure of attitudes towards unauthorized secondary use and its associated findings are applicable to studies of Internet privacy.

Smith et al. (1996) developed and validated an instrument that measures dimensions of organizational information privacy practices. Their work revealed four dimensions of information privacy practices: collection, errors, unauthorized secondary use (similar to Culnan's concept), and improper access. Although the focus of their instrument development and validation was on people's attitudes towards how organizations dealt with their own personal data, Smith and colleagues' measurements could easily extend to attitudes toward how Web sites, and the organizations that operate them, deal with personal information.

Given past research on information systems and privacy, with its focus on unauthorized use of personal information, and given the primacy of consumer fears about the misuse and unauthorized sharing of their personal data, beliefs about privacy are conceptualized in this study in terms of the authorized use and sharing of personal data by Internet entities that collect it. This approach differs from past studies that have considered the role of privacy in Internet purchasing. Limayem et al. (2000) and Khalifa and Limayem (2003) had a single global measure for privacy ("[p]rivacy violation is a major problem for purchasing through the Web"), as did Jarvenpaa and
Miyazaki and Fernandez (2001) collapsed responses to open-ended questions about online shopping concerns into the presence of absence of three categories of concerns: privacy, system security (i.e. Internet security), and security (i.e. fraudulent behavior on the part of Internet retailers). George (2002) used pre-existing GVU survey items to measure Byford's social relationships and property views of privacy. Swaminathan et al. (1999) also analyzed the GVU data, using 11 items to measure four aspects of privacy, two of which were similar to George's measures of Byford's views of privacy. The measure of privacy most similar to the one used in this study was designed by Suh and Han (2003). They used five indicators of privacy, three of which dealt with unauthorized use of personal information. Their other two items asked about the selling of personal information by a Web site and whether or not a Web site would remove personal information if asked to do so.

The findings from these studies regarding privacy and Internet purchasing are mixed, partly because the research models differ across studies in terms of what other constructs privacy is hypothesized to be related to. Where privacy is hypothesized to directly affect intention to shop online, there appears to be no relationship (Limayem et al., 2000; Khalifa and Limayem, 2003; Jarvenpaa and Todd, 1997a, b). On the other hand, there is support for a hypothesized relationship between privacy and attitudes toward Internet shopping (Jarvenpaa and Todd, 1997a, b; George (2002)). A direct link between privacy concerns and actual online purchasing behavior is tenuous: Miyazaki and Fernandez (2001) found no relationship between privacy concerns and Internet purchasing behavior, while Swaminathan et al. (1999) found two of their four measures of privacy to be related to Internet purchasing behavior: concerns about the creation of laws protecting Internet privacy were associated with higher levels of Internet...
purchasing, and beliefs about marketers' need for information about consumers had a slight (p < 0.1) negative effect on the amount spent on Internet purchases. Two other studies found a relationship between privacy concerns and trust in online commerce (Mukherjee and Nath, 2003; Suh and Han, 2003).

**TRUST**

 Online trust plays a key role in creating satisfied and expected outcomes in online transactions (Pavlou, 2003; Yousafzai et al., 2003; Gefen and Straub, 2004; Wu and Cheng, 2005; Flavian and Guinaliu, 2006); where trust exists it increases consumers' beliefs that e-vendors will not engage in opportunistic behaviour (Gefen et al., 2003). Gefen et al. (2003) summarise the conceptualisations of trust from prior research as:

- a set of distinct beliefs consisting of integrity, benevolence, and ability;
- a general belief or trusting intentions that another party could be trusted, or "the willingness of a party to be vulnerable to the actions of another" (Mayer et al., 1995, p. 712);
- "feelings of confidence and security in the caring response of the other party" (Rempel et al., 1985, p. 96); and
- a combination of these factors.

 Yoon (2002) describes the mechanisms of online trust as: security assurance, reputation, web searching, fulfilment (i.e. willingness to customise), presentation (i.e. web quality), technology, and interactions (e.g. e-forums). These mechanisms are categorised into three dimensions of online trust:

- (1) technical-based: web searching, technology and presentation;
- (2) uncertainty of transactions and security: security assurance; and
- (3) competency-based: reputation, fulfilment, and interactions.
The most frequently cited definition of trust in various contexts (according to Rousseau et al. 1998) is "willingness to be vulnerable," proposed by Mayer, Davis, and Schoorman (1995). Adapting from this definition, Lim et al. (2001) define consumer trust in Internet shopping as "the willingness of a consumer to expose himself/herself to the possibility of loss during an Internet shopping transaction, based on the expectation that the merchant will engage in generally acceptable practices, and will be able to deliver the promised products or services." As this definition indicates, consumer trust is a kind of behavioral intention (Gefen, Rao, and Tractinsky, 2003), referred to as "trusting intentions" by McKnight, Cummings, and Chervany (1998). The trusting intentions can be elaborated upon by exploring activities that expose consumers to the possibility of loss during Internet shopping transactions. In Internet shopping, consumers are likely to expose themselves to the possibility of loss (1) if they provide their e-mail address (exposing themselves to the possibility of receiving Spam email and other annoyances), (2) if they provide shipping information such as their name, address, and phone number (raising the possibility of privacy invasion including unsolicited visits and mails), (3) if they provide their credit card numbers (leading to the possibility of credit card fraud), or (4) if they complete online purchase transactions (with the possibilities of late or no delivery of a product, poor product quality, and inadequate service afterwards). In the current study, trusting intentions in online shopping are taken to include the intentions to perform these activities, which are required in most online transactions. In some contexts, other activities are also identified as trusting intentions. For example, an intention to accept advice from an online law firm can be another example of a trusting intention that exposes consumers to the possibility of loss (McKnight, Choudhury, and Kacmar, 2002).
The multi-dimensional character of online trust makes it a complicated issue and despite considerable research attention several online trust issues are still very little explored. A study of Grabner-Krauter and Kaluscha (2003) underlines the complexity of this subject. Based on an extensive review of research work done in this field these researchers identified trust constructs reflecting "...both institutional phenomena (system trust) and personal and interpersonal forms of trust (dispositional trust, trusting beliefs, trusting intentions and trust-related behaviors..." (Grabner-Krauter and Kaluscha, 2003, p. 783).

Servet (1995) (in Gefen, 2000) highlights the importance of "belief in the other" and "transparency" (of information) as being essential components of a trusting relationship and in the online environment, in the absence of physical cues it may be that these two are correlated. Servet posits that if no information exists it is impossible to establish trust; conversely, if information is assumed to be flawless, then there is no need for trust. In relation to e-tailing, this highlights the importance of providing an appropriate level of information, appropriateness being determined by the nature of the product and the degree of associated risk. In a recent study, Gefen (2000) notes that in relation to business relations, "trust" comprises the expectation that actions (individuals or businesses) will behave "ethically, dependably and will fulfill expected commitments under conditions of vulnerability and interdependence". These observations highlight that online, in the absence of physical cues, information flows (two-way communications) play a critical role in engendering psychological responses (from both parties) which promote expectations about the reliability of future behavior and actions. According to Mayer et al. (1995), trust becomes even more critical when the trustor (in this case the online shopper) does not have direct control over the actions of the trustee (online
Thus it may be argued that trust plays a fundamental and crucial role in online relationships.

The extent to which online businesses can build trust significantly influences the willingness of consumers to make online purchases (MacInnes, 2005; Mercuri, 2005; Saini and Johnson, 2005). The findings of a recent study indicate that a well-written and prominently displayed assurance of security encryption increases consumer trust (Grewal et al., 2003). Other research found evidence that consumer beliefs about privacy and internet trustworthiness helped to determine attitudes toward the internet. These attitudes, in turn, affect intent to make internet purchases (George, 2002). Another study found that consumer-perceived information security and trust in electronic commerce transactions had a significant impact (Chellappa and Pavlou, 2002), while others established similar relationships between the perceived risks attending online purchasing and the likelihood of making online purchases (Miyazaki and Fernandez, 2001; Udo, 2001).

Lack of trust is one of the most frequently cited reasons for consumers not shopping on the Internet (Lee and Turban, 2001). Since this shopping medium is relatively new and most of them have only little experience with it, shopping on the Internet provides a challenge to many consumers. Rotter (1971) has found that in novel situations, people rely on their general disposition to trust. The most salient source of trust in a retail setting is the salesperson, where consumer trust is dependent on the salesperson's expertise, likeability, and similarity to the customer (Doney and Cannon, 1997). However, with online shopping this physical salesperson is replaced by help buttons and search features, thus removing the basis of consumer trust in the shopping experience (Lohse and Spiller, 1998). Furthermore, online shopping also contains a level of risk. Consumers
cannot physically check the quality of a product or monitor the safety and security of sending sensitive personal and financial information while shopping on the Internet (Lee and Turban, 2001). This condition creates a sense of powerlessness among online shoppers. Therefore trust has an important moderating effect on the relationship between consumers' attitude toward Internet shopping and intention to shop online.

The complexity of examining consumer trust in Internet shopping and its determinants lies in the fact that online shopping involves trust not simply between the Web shop and the consumer (interpersonal trust), but also between the consumer and the computer system, i.e. the Internet (institutional trust) (McKnight and Chervany, 2001-2002). Next to this, contextual factors like security and privacy have an impact on consumer trust in shopping on the Internet (Lee and Turban, 2001). A high level of security and privacy in the online shopping experience has a positive effect on consumer trust, owing to the lowered risk involved with exchanging information. In general, the level of trust, interpersonal as well as institutional, is positively related to consumers' attitude and intention to shop on the Internet. Violation of consumers' trust in online shopping, in terms of privacy invasion or misuse of personal information, negatively influences attitude toward online shopping and leads to reluctant behavior among consumers to shop on the Internet in future occasions.

McKnight and Chervany (2001) have proposed an interdisciplinary conceptual typology, with five constructs affecting trust in e-commerce: (1) the disposition to trust, (2) institution-based trust, (3) trusting beliefs, (4) trusting intentions, and (5) web vendor interventions. Disposition to trust is "the extent to which a person displays a tendency to be willing to depend on others across a broad spectrum of situations and persons," and institution-based trust is an individual's "perception of the Internet environment." In
B2C e-commerce, web vendor intervention is “actions a vendor may take to provide assurances about the vendor’s sites,” including practices related to privacy policy, third party seals, interacting with customers, developing a reputation, links to other sites, and guarantees (McKnight et al., 2002). According to this model, trusting beliefs and intentions are influenced by disposition to trust, institution-based trust, and web vendor interventions, and trusting beliefs may further affect trusting intentions.

Consumers' trust in Internet shopping has also been modeled by Lee and Turban (2001) using four groups of factors as antecedents: (1) trustworthiness of an Internet merchant, which includes perceptions of the merchant's ability, integrity, and benevolence; (2) trustworthiness of the Internet shopping medium, based on perceptions of an Internet merchant's technical competence and performance level (e.g. reliability, speed, and availability), and their understanding of the Internet shopping medium; (3) contextual factors such as perceptions of the effectiveness of third party certification bodies and public key security infrastructure systems; and (4) other factors, such as size and demographic variables. Individual propensity to trust was proposed as a moderator.

In broad terms, the two models are considered to be compatible. Individual trust propensity, trustworthiness of an Internet merchant, and trust in Internet shopping in Lee and Turban (2001) are equivalent or very close to disposition to trust, trusting beliefs, and trusting intentions in McKnight et al. (2002) respectively. Trustworthiness of the Internet shopping medium and perceived effectiveness of third party certification and public key infrastructure in Lee and Turban (2001) can be considered as web vendor interventions or institution-based trust in McKnight and Chervany (2001) depending on whether these perceptions are specific to a store, or more generally to the broader web environment. A key difference
can be noted between McKnight et al. (2002) on the one hand, who posit that the effects of disposition to trust, institution-based trust, and web vendor interventions on trusting intention are mediated partially by trusting beliefs, and Lee and Turban (2001) on the other hand, who have asserted that trustworthiness in Internet shopping medium and perceived effectiveness of third party seals and public key infrastructure systems can affect trusting intentions directly, without mediation of trusting beliefs.

TRUST-BUILDING STRATEGIES AND FEATURES IN INFORMATION SYSTEM LITERATURE

Four groups of strategies or features to improve trusting beliefs have been identified in Information Systems (IS) literature: (1) providing assuring information reported by others, (2) providing assuring information about the store’s policies and practices, (3) utilizing trust transfer, and (4) providing opportunities for interaction and cues for simple examinations.

Providing Assuring Information Reported by Others

Consumers often base their judgments regarding Internet stores on opinions reported by others, particularly third party certification authorities (e.g. third party certificates), other consumers (e.g. consumer feedback comments), friends, news reports, and magazines; in other words, trust towards Internet stores are shaped by reputation.

Third Party Certificates

McKnight and Chervany (2001) have asserted that third party seals, for example TRUSTe, BBB, and WebTrust, can increase trusting beliefs though the influence on specific trusting beliefs depends on the nature of the seal. Kovar, Burke, and Kovar (2000a) have tested conditions under which the WebTrust assurance seal is effective in influencing online transaction expectations and consumers’ intentions to complete purchases online. In the course of this study, consumers who attended to the seal (e.g.
who saw or clicked the seal to access more information), consumers who were exposed to the advertisement about the seal, and consumers who were knowledgeable about the CPA designation (Certified Public Accountants) tended to show higher online transaction expectations (Kovar, Burke, and Kovar, 2000b). Cheskin Research and Studio Archetype/Sapient (1999) and Cheskin Research (2000) also reported that third party certification symbols like TRUSTe, BBBonline, and VeriSign increase trust, but the effects are large only for respondents who are familiar with the meaning of the symbols. In summary, third party certifications can influence trusting beliefs and intentions, but the effects vary depending on consumers' familiarity with the seals and the attention they devote to the seals.

**Consumer Feedback**

Lim et al. (2001) has examined displays of satisfied customers' endorsements, as a trust-building feature. Four customer testimonials used in the experiment remarked upon: (1) cheap prices and timesaving processes, (2) excellent customer service and fast delivery, (3) store security, and (4) convenience. The authors report that the practice of displaying satisfied customers' endorsements positively influences perceptions of the ability and integrity of the store (i.e. trusting beliefs) and the positive perceptions in turn affect trusting intentions in relation to the store. Ba and Pavlou (2002) have also investigated the effects of consumer feedback on trusting beliefs in an auction setting.

**Advertising Reputation**

Reputation has been defined as "the extent to which buyers believe a selling organization is honest and concerned about its customer" (Jarvenpaa et al., 2000). Several studies have predicted positive relationships between reputation and trusting beliefs. For example, McKnight and Chervany (2001) have noted that advertising stores' good reputations increase trusting
beliefs. Cheskin Research and Studio Archetype/Sapient (1999) have also proposed brand recognition as one of six primary components that can convey e-commerce trust. Perceptions of reputation have been tested empirically by Jarvenpaa et al. (2000) and Wetsch and Cunningham (1999), and both studies have reported that the perception of reputation relates positively to consumers' trusting beliefs in a store.

**Providing Assuring Information about Store’s Policies and Practices**

McKnight and Chervany (2001) and Hoffman, Novak, and Peralta (1999) state that a company can improve consumers’ trusting beliefs by posting its privacy policy. Their predictions are supported by two empirical studies: Wetsch and Cunningham (1999), who have reported that strong security and privacy policies are related to consumer trusting beliefs, and Fogg et al. (2001) survey, which indicates that the display of a store’s policies increases the credibility of its website.

**Utilizing Trust Transfer**

Stewart (1999) and Stewart (2003) have examined how evidence of a tie between parties affects trust. These studies test whether consumer trust in an unknown Internet store is positively influenced when consumers arrive at the store by selecting a hyper-link provided at a trusted site (e.g. a reputable magazine site). According to Stewart (2003), if the tie between two websites (e.g. consumers' "expectation on unity and consistency" of two sites) is high, then consumers form an initial impression from the first site they visit. This impression operates as a filter, causing consumers to interpret information from the second site consistently with the impressions they have already formed (Stewart, 2003). Stewart’s (2003) experimental survey results confirm these predictions: (1) participants who arrived at an unknown store by clicking a hyper-link from a trusted site perceived a high level of interaction and similarity between the unknown site and the trusted
site; and (2) both higher interaction and similarity positively influenced the participants' trusting beliefs in the unknown Internet store. Similarly, Kim and Prabhakar (2000) have predicted, "if one gets positive WOM [(word-of-mouth)] referrals on e-commerce from a person with strong personal ties, the consumer may establish higher levels of initial trust in e-commerce."

Providing Opportunities for Interaction and Cues for Simple Examination

According to Fogg and Tseng (1999), people judge the credibility of other people and businesses based on their first-hand experience (e.g. personal interactions) and simple examinations of surface qualities (e.g. presentation design).

Customers' Interaction with Web Stores

According to McKnight et al. (2002), consumers' interactions with Internet stores affect trusting beliefs, inasmuch as interactions provide evidence of a store's positive attributes. Similarly, Cheskin Research and Studio Archetype/Sapient (1999) have proposed that e-commerce trust is communicated by six primary components, three of which are related to smooth interactions: navigation (e.g. "the ease of finding what the visitor seeks"), fulfillment (e.g. the process works from the time a purchase process is initiated until the product is received), and technology (e.g. "functionality and speed"). In fact, an empirical study by Gefen and Straub (1999) has demonstrated that customers gain increased faith in the integrity and benevolence of a vendor after they receive an "e-mail responding favorably to [the customers' previous] comments and suggestions." Furthermore, a survey by Fogg et al. (2001) has also demonstrated that quick responses to customer service questions and e-mail confirmation of transactions increase the credibility of a website.
Cues for a Simple Examination

People sometimes judge the credibility of a website based on simple inspection of surface elements, for example the visual design of the site (Fogg and Tseng, 1999). Presentation (Cheskin Research and Studio Archetype/Sapient, 1999) and professional design (Fogg et al., 2001) are considered important elements in developing trust. An experimental study by Gefen and Straub (1999) indicated that displaying a "1-800 number in a large bold font for customer questions and suggestions" in an experimental website increased trusting beliefs in the associated Internet store. Similarly, a survey conducted by Fogg et al. (2001) reported that posting the store’s physical address, phone number, e-mail address, and company photos increased the credibility of a website.

THE RELATIONSHIP BETWEEN TRUST AND RISK

Internet shopping involves a higher degree of uncertainty and risk when compared with conventional shopping. Prior studies of trust in traditional buyer-seller relationship (Doney et al. 1997) have already found that there exists a very strong relation between risk and trust. Perceived risk theory has been playing an important role in consumer behavior research and relationship marketing literature (Dion, Easterling & Miller 1995, Morgan & Hunt 1994). Mitchell (1999) contended that perceived risk is powerful at explaining consumer behavior since consumers tend to avoid mistakes than to maximize utility in purchasing. Perceived risk appears to be a condition for trust to arise.

A common thread in the trust-risk literature is that trust is only meaningful in a risky situation. This is based on the original work by Deutsch (1958) who laid the ground about trust. Yet, literature reviews by both Mayer et al. (1995) and Rousseau et al. (1998) found different approaches with regard to the relations between risk and trust. For example, the
literature is unclear whether risk is an antecedent to trust, is trust, or is an outcome of trust (Mayer et al., 1995).

There are three primary models that are observable in the ecommerce literature: a model that suggests risk and trust act independently on behavior, the mediating relationship, and the moderating relationship. None of the ecommerce research suggests a threshold model.

Trust and risk act independently on behavior

Several studies focus primarily on the effect of trust on behavior, without attention to risk (e.g., Gefen, 2000; Chricu, Davis and Kauffman, 2000). Both studies show that trust has a direct positive effect on the adoption intention. For the present, we do not wish to examine this further, because we feel that while the effect of trust on behavior is an important area of study, the absence of a discussion of the role for risk is not appropriate.

Among the studies that include both risk and trust, there are some that hypothesize an effect of trust and risk on behavior without hypothesizing a relationship between risk and trust, i.e. trust and risk are not related in a specific cause-effect relation (although they can co-vary), but that both simultaneously affect behavior. This conceptualization is similar to that of Kim and Prabhakar (2000). Kim and Prabhakar (2000) suggest that perceived risk and trust affect trusting behavior in the Internet banking context, without specifying what relations exist between risk and trust. In the context of B2B e-commerce (level of EDI use), Son et al. (1999) suggest that trust affects electronic cooperation directly. They do not include risk in their model, although they do consider uncertainty, which is hypothesized to affect the level of electronic cooperation directly.
**Mediating relationships**

The mediating relationship suggests that trust affects perceived risk, which affects behavior. This is posited by Jarvenpaa et al. (1999, 2000), who suggest trust affects the perceived risk of the situation, which, in turn, affects behavior. For example, the perceived risk of lending money to a trusted friend will be lower than that of lending money to a stranger. This conceptualization of the trust-risk relationships corresponds to Sztompka (1999) view that trust "suspends" the risk (p. 31) as if it were not existence. However, Sztompka's view is that trust affects perceptions of risk in a dichotomous way (i.e., risky or not risky), whereas Jarvenpaa et al. suggest that the degree of trust affects the degree of risk perception. It should be noted that whereas the previous model suggests that risk perception and trust are formed independently, this model suggests that they are connected by an explicit causal relationship. Similar relationships are put forth by Stewart (1999) and Ratnasingham and Kumar (2000). Stewart (1999) suggests that trust affects risk perceptions of an Internet store, but not the systemic risk of Internet shopping. Ratnasingham and Kumar (2000) indicate that trust affects both perceived benefits and perceived risks of ecommerce. Cheung and Lee (2000) and Einwiller et al. (2000) also subscribe to the belief that trust reduces consumers' perceived risk. Pavlou (2001) states that perceived risk is shown to be a direct negative antecedent of intention to transact, while trust is an indirect antecedent acting through risk perception, "...trust ...is hypothesized to reduce perceived risk and indirectly influence intentions to transact". (Pavlou, 2001). Thus, among ecommerce researchers, there appears to be an overwhelming subscription to the mediating role of risk in the relationship between trust and behavior.

**Moderating relationships**

There is one test of the moderating relationship (Grazioli and Wang, 2001). They hypothesized that when trust is high, risk considerations have
less of an impact on the formation of attitudes about the site. However, this hypothesis was rejected. This is curious in view of the work of Kollock (1994), and warrants further investigation.

Gefen (2002) reports a test of competing models of trust-risk behavior relationships. Gefen (2002) showed that in the context of low touch low risk items it is trust and not perceived risk that determines purchase intentions. Having said that, Gefen questions whether in the case of higher risk items the same relationship holds. Gefen speculates that it does not. Rather, as the inherent risk in the product increases, risk becomes more important and trust takes a more secondary role as a reducer of risk instead of directly affecting purchase intentions. Additional research is needed there.

At a practical level, the need for clarifying these relationships could be termed unnecessary. The ultimate goal for an organization is to understand what leads individuals to engage in a transaction, e.g., in the case of B2C ecommerce, what leads a consumer to buy. It cannot be challenged that reduced risk and increased trust are both likely to increase the likelihood of engaging in a transaction. Many of the stimuli that increase trust are the same stimuli that reduce perceived risk. Thus, at a practical level since the levers or mechanisms to increase engagements in transactions are known, the mechanism by which the engagement is achieved is not of great relevance.

However, as scholars, we are compelled to examine the relationships further, partly driven by intellectual curiosity, partly driven by the belief that only if we look will we find the unexpected. It can very well be believed that perceived risk and perceived trust affect behavior to different extents in different stages of the relationships. Perceived risk is the dominant factor in the early stages of a relationship and in onetime relationships. Perceived trust is the dominant factor in long-term relationships, in which the parties
have multiple transactions over a period of time (Fukuyama, 1995). Theoretical assertions of this nature require clear conceptualizations of the constructs involved and reliable, robust operationalization of the same. Further, while some antecedents of trust and risk may be the same, there are others, which are not. For instance, a legal contract between two parties enables a transaction by reducing risk, but does not affect trust any. Thus, both from a practical and a theoretical perspective, there is a need to continue to strive to clarify the concepts and the relationships between the concepts. And this effort on the part of scholars will be fruitful only if the discipline is able to converge on common conceptualization and operationalization.

SERVICE QUALITY AND SATISFACTION

Quality

There is reason to believe that the summation of all the service encounters during the transaction is evaluated by the customer. Marketers, however, have tended not to conceptualize satisfaction as a cognitively based evaluation of attributes found in other literatures (e.g. Parasuraman et al., 1985, 1988) but as an emotional response to product or service use (Oliver, 1981). Competition today essentially takes place at the product-augmentation level. Product augmentation leads the marketer to look at the user’s total consumption system: the way the user performs the tasks of getting and using products and related services (Boyd and Levy, 1963; Blois, 1991). Thus, new competition is not between what companies produce in their factories, but between what they add to their factory output in the form of packaging, services, advertising, customer advice, financing, delivery arrangements, warehousing, and other things that people value (Levitt, 1969; Band, 1986).
Customer perceived service quality can be defined as a global judgment or attitude relating to the superiority of a service relative to competing offerings (Parasuraman et al., 1988). Over the past three decades, numerous researchers have sought to uncover the global services attributes that contribute most significantly to relevant quality assessments (Sasser et al., 1978; Gronroos, 1983; Parasuraman et al., 1985; Pitt et al., 1999). Among them, the Parasuraman et al. (1985) work has been regarded as most prominent, which revealed ten dimensions: tangibles; reliability; responsiveness; communication; credibility; security; competence; courtesy; understanding the customer; and access. These ten dimensions were further purified and distilled to five: tangibles; reliability; responsibility; assurance; and empathy (Parasuraman et al., 1988). In turn, these five attributes constitute the base of a global measurement devise for service quality, namely, SERVQUAL.

It is apparent that SERVQUAL may not be sufficient for measuring service quality across industries and situations, not to mention online service quality. The instrument does not consider unique facets of online service quality, since the five dimensions primarily address customer-to-employee, but not customer-to-Web-site interactions. Accordingly, some researchers have attempted to identify key attributes that best fit the online business environment. Zeithaml et al. (2001) uncovered 11 dimensions of online service quality in a series of focus group interviews. These were access, ease of navigation, efficiency, flexibility, reliability, personalization, security, responsiveness, assurance/trust, site aesthetics, and price knowledge. Cox and Dale (2001) propose that traditional service quality dimensions, such as competence, courtesy, cleanliness, comfort, and friendliness, are not relevant in the context of online retailing, whereas other factors, such as accessibility, communication, credibility, and appearance, are critical to the success of online businesses. Based on 54
student evaluations of three UK-based Internet bookshops, Barnes and Vidgen (2001) have extended the SERVQUAL scale and established a WebQual Index with 24 measurement items. The index addresses the following seven customer service quality aspects: reliability, competence, responsiveness, access, credibility, communication, and understanding the individual.

Similarly, Madu and Madu (2002) have proposed the following 15 dimensions of online service quality based on their literature review: performance; features; structure; aesthetics; reliability; storage capacity; serviceability; security and system integrity; trust; responsiveness; product differentiation and customization; Web store policies; reputation; assurance; and empathy.

Wolfinbarger and Gilly (2003), through focus group interviews, a content analysis, and an online survey, have uncovered four factors of online retailing experience: Web site design; reliability; security and customer service (this factor is primarily related to the customer-to-employee interactions). Further, Zeithaml et al. (2002) have discovered the following seven service quality dimensions: efficiency; reliability; fulfillment; privacy; responsiveness; compensation; and contact.

While online retailing shares much common ground with traditional retailing, some unique natures of the Internet such as means of impersonal communication and the Web site as an information system make it necessary to reexamine whether traditional service quality dimensions and their contents are still applicable to Internet-based services (Cox and Dale, 2001). Some conceptual and empirical studies have attempted to address key attributes of service quality specially related to Internet commerce. Hoffman and Novak (1997) have pointed out that personalization is required for Internet firms to conceptualize the Internet as a unique consumer
marketplace. In the process of investigating the Web sites of the top 100 US retailers, Griffith and Krampf (1998) have discovered that the lack of prompt responsiveness, especially to e-mail inquiries, was the most common negatively perceived phenomenon in cyberspace. In their conceptual examination of service quality in e-commerce, Cox and Dale (2001) proposed that certain traditional dimensions such as competence, courtesy, cleanliness, comfort and friendliness, helpfulness, care, commitment and flexibility might not be applicable to the Internet commerce setting. However, service quality attributes such as accessibility, communication, credibility, understanding, appearance and availability should still be relevant to e-commerce.

Furthermore, the infrastructure of online stores is composed of Internet-based technology, encompassing browsers, search engines, encryption and other kinds of e-commerce software technology. In turn, the Web site can be viewed as an information system with the online customer as the end user. The term "end-user" refers to one who "interacts directly with the application software to enter information or prepare output reports" (Doll and Torkzadeh, 1988, p. 260). As an end user, consumers often seek desired product and service information through Web sites. To measure end-user computing satisfaction, Doll and Torkzadeh (1988) have developed 12 scale items that gauge five quality dimensions influencing end-user satisfaction. These are: content, accuracy, format, ease of use and timeliness. The reliability and validity of this scale have been confirmed in other studies (Doll et al., 1994). Some of the five attributes employed in the measurement scale are closely related to service attributes which are applicable to traditional commerce. For instance, "accuracy" of online transaction can be considered as one aspect of "reliability". "Content" and "timeliness" of information are viewed as parts of "communication". In
other words, these attributes add more content to traditional service quality dimensions.

It has been suggested that there may be distinct “objects” in the service system that may be evaluated along unique attribute dimensions (Singh, 1992). However, studies of the service delivery process in the whole transaction itself have been lacking. The critical issue of how satisfaction judgments evolve during the process has also received very little attention (Mattsson, 1994). Armstrong (1992) modeled the delivery process as a system and analyzed underlying service quality perceptions but used aggregate case data in retrospect. Boulding et al. (1993) studied customers’ overall satisfaction. Their findings show that overall satisfaction is an aggregation of all previous transaction-specific evaluations and is updated after each specific transaction, much like expectations of overall service quality are updated after each transaction. Investigating the service process in a laboratory experiment, they did not, however, obtain objective measures of the actual dimensions of the service encounter for each individual. Furthermore, measures were collected only at one point in time.

In a study six dimensions of consumer perceptions of service quality were identified and examined: ease of use, content of the website, accuracy of the content, timeliness of responses, attractiveness of the site, and privacy or security (Yang et al., 2001). Other researchers also echo concerns over similar issues that have a significant impact on online consumer behavior. For example, security and privacy of internet transactions have been cited as important concerns (Rust et al., 2002; Zeithaml et al., 2002).

Liu and Arnett (1998) proposed a framework for designing quality B2C websites. Hoffman et al. (1996) analyzed case studies to recommend several measures for improving B2C Websites. All of these aforementioned studies
have taken the organization’s perspective and offered guidelines for conducting B2C e-commerce. Jarvenpaa and Todd (1997) suggested that Internet merchants focus on factors affecting human behavior: product perceptions, shopping experience, and customer service. Szymanski and Hise (2000) examined e-satisfaction from the consumer’s perspective and found that convenience, site design, and financial security displayed the greatest effect on e-satisfaction. Ranganathan and Ganapathy (2002) took the consumers’ perspective and offered guidelines for online merchants to have an effective site based on four dimensions: information content, design, security, and privacy. Exhibit 2.3 below summarizes selected service quality literature relevant to online services.

**Satisfaction**

While considerable research has investigated the drivers of service quality and satisfaction in the offline environment (Zeithaml, 2000), a small, but growing body of research has examined the drivers in the online environment (Szymanski and Hise, 2000; Francis and White, 2002; Donthu, 2001; Loiacono et al., 2002; Srinivasan et al., 2002; see Zeithaml et al., 2002 for a review). This is not surprising considering both the newness and importance of the field. One of the consequences of "newness" is that research on the basic questions - what drives online satisfaction and retention - is still in the exploratory stage as both theory and empirical investigations are emerging.

Several conceptualizations of customer satisfaction have evolved over the past decade (Johnson, 2001). Transaction-specific satisfaction is conceptualized as a customer’s evaluation of his or her experience with, and reactions to, a particular product transaction episode or service encounter. This approach dominated the marketing and consumer behavior literature through the early 1990s (Oliver, 1997; Yi, 1991). Cumulative satisfaction is
defined as a customer’s overall evaluation of a product or service provider to date (Johnson et al., 1995; Johnson and Fornell, 1991). Bitner and Hubbert (1994) reveal that consumers view these two conceptualizations of satisfaction differently. According to them, when asked about transaction-specific satisfaction, consumers are likely to comment on particular events of a service transaction (e.g. specific employee actions). Conversely, consumers are likely to comment on global impressions and general experiences with the firm (e.g. honesty of the firm) when asked about overall satisfaction. Transaction satisfaction captures the complex psychological reactions that customers have to a product’s or service provider’s performance for a given time period (Oliver, 1997).

**Exhibit 2.3 Selected service quality literature relevant to online service**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Methods</th>
<th>Key dimensions uncovered/discussed</th>
<th>Main focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parasuraman et al. (1985)</td>
<td>Personal interviews with executives and 12 customer focus group interviews</td>
<td>Reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibles</td>
<td>Traditional service quality</td>
</tr>
<tr>
<td>Johnston (1995)</td>
<td>Based on feedback of 431 bank customers and using critical incident technique</td>
<td>Access, aesthetics, attentiveness, availability, care, cleanliness/tidiness, comfort, commitment, communication, competence, courtesy, flexibility, friendliness, functionality, integrity, reliability, responsiveness, and security</td>
<td>Traditional service dimensions and their definitions</td>
</tr>
<tr>
<td>Davis (1999)</td>
<td>A total of 152 users and four application programs</td>
<td>Ease of use and usefulness</td>
<td>User acceptance of information technology</td>
</tr>
<tr>
<td>Doll et al. (1994)</td>
<td>409 end-users from 18 organizations</td>
<td>Content, accuracy, format, ease of use, and timeliness</td>
<td>End-user satisfaction with information and network system</td>
</tr>
<tr>
<td>Liu and Arnett (2000)</td>
<td>Survey of 122 Webmasters of Fortune 1,000 companies</td>
<td>Quality of Information and service, system use, playfulness, and system design quality</td>
<td>Web site design quality</td>
</tr>
<tr>
<td>Yoo and Donthu (2002)</td>
<td>Survey 141 students to evaluate four online retailers’ Web sites</td>
<td>Ease of use, aesthetic design, processing speed, security</td>
<td>Evaluation of online retailers’ Web site usability</td>
</tr>
</tbody>
</table>

Contd...
### Exhibit 2.3 Selected service quality literature relevant to online service (contd...)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Methods</th>
<th>Key dimensions uncovered/discussed</th>
<th>Main focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loiacono et al. (2002)</td>
<td>Survey 847 undergraduate students</td>
<td>Information fit to task, interaction, trust, response time, design, intuitiveness, visual appeal, innovativeness, flow, integrated communication, business process, and substitutability</td>
<td>WEBQUAL (Web quality)</td>
</tr>
<tr>
<td>Zeithaml et al. (2002)</td>
<td>Literature review</td>
<td>Efficiency, reliability, fulfillment, privacy, responsiveness, compensation, and contact</td>
<td>Service quality in general</td>
</tr>
<tr>
<td>Wolfinbarger and Gilly (2002)</td>
<td>Focus group studies and survey of 1013 panel members</td>
<td>Web site design, reliability, privacy/security, customer service</td>
<td>Online retailing service quality</td>
</tr>
<tr>
<td>Zeithaml et al. (2001)</td>
<td>Six focus group interviews</td>
<td>Access, ease of navigation, efficiency, flexibility, reliability, personalization, security/privacy, responsiveness, assurance/trust, site aesthetics, price knowledge</td>
<td>Online retailing service quality</td>
</tr>
<tr>
<td>Cox and Dale (2001)</td>
<td>Literature review</td>
<td>Accessibility, communication, credibility, understanding, appearance, availability</td>
<td>Online retailing service quality</td>
</tr>
<tr>
<td>Yang and Jun (2002)</td>
<td>Survey 271 ISP subscribers</td>
<td>Reliability, access, ease of use, personalization, security, credibility</td>
<td>Online retailing service quality</td>
</tr>
<tr>
<td>Madu and Madu (2002)</td>
<td>Literature review</td>
<td>Performance, features, structure, aesthetics, reliability, storage capacity, serviceability, security and system integrity, trust, responsiveness, product/service differentiation and customization</td>
<td>Online retailing service quality</td>
</tr>
<tr>
<td>Kaynama and Black (2000)</td>
<td>Criteria established for evaluation sites and literature review</td>
<td>Content and purpose, accessibility, navigation, design and presentation, responsiveness, background, personalization and customization</td>
<td>Online travel agencies services</td>
</tr>
<tr>
<td>Van Riel et al. (2001)</td>
<td>Interviews and survey of 52 users of a portal site</td>
<td>Core service, supporting service, user interface</td>
<td>Portal site service</td>
</tr>
</tbody>
</table>

Source: Yang and Fang, 2004

According to the prevailing paradigm in the satisfaction literature (Mano and Oliver, 1993; Oliver, 1993; Richins, 1997), consumption emotions are the affective responses to one’s perception of the series of attributes that comprise a product or service performance. The consumer satisfaction literature assumes implicitly that people can remember the numerous and varied experiences encountered through the entire duration of a product or service consumption and somehow combine these to form retrospective reports of the emotions (Oliver, 1993). Judgments of overall hedonic value of extended experiences are strongly influenced by peak and final moments...

From a broad perspective, the Internet is a new technology and Web site satisfaction will be driven by ease of use and usefulness (Davis, 1989). Davis (1989) argued that these two concepts are predominant in predicting how much consumers will be using computer technologies. The ability to easily navigate a Web site and its perceived value (e.g. entertainment, convenience, community) will influence both usage level and satisfaction. By extension, satisfaction in the online environment may also be driven by consumer benefits in using self-service technologies. As noted by van Kiel et al. (2001), these benefits include convenience (Meuter et al., 2000; Reichheld and Schechter, 2000; Szymanski and Hise, 2000; Zeithaml et al., 2000), saving time and money (Meuter et al., 2000), avoiding interpersonal interaction (Dabholkar, 1996; Meuter et al., 2000), and being in control (Dabholkar, 1996; Zeithaml et al., 2000). This implies that the drivers of Web satisfaction may include Web site characteristics (e.g. ease of use), the specific Web site's value (e.g. useful information), and its relative value (e.g. more convenient than offline shopping).

A variety of independent and dependent constructs and measures have been employed to identify the drivers of e-satisfaction (Exhibit 2.4). In summary, there is no consensus on what drives online service quality and e-satisfaction (Zeithaml et al., 2002). However, the research does suggest that Web site characteristics, in particular ease of use and Web site content, will play key roles. While ease of use has various labels (e.g. site design, Web store functionality, ease of understanding, ease of navigation) and different measures (e.g. easy to use, easy to locate information, user friendly site) the underlying construct reflects the ease with which an individual can navigate the Web site. Similarly, Web site content has various labels (e.g.
product information, product attribute description, product selection, product uniqueness, informational fit-to-task) and different measures (e.g. product information meets my needs, extensive product selection, clearly describes products), and the underlying construct reflects the depth of and information on the products offered. A majority of the studies suggest a third driver, customer security (e.g. financial security, security/privacy) which reflects the Web site's information regarding its security policies.

Exhibit 2.4 Previous research on drivers of online satisfaction

<table>
<thead>
<tr>
<th>Authors</th>
<th>Dependent variable</th>
<th>Drivers</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeithami et al. (2000)</td>
<td>e-service quality</td>
<td>Perceived convenience, ease of navigation, efficiency, flexibility,</td>
<td>Navigation, efficiency and access are new to the online environment and capture aspects of ease of use and usefulness which underlie acceptance of Information technologies (Davis, 1989) Paper was conceptual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived control, reliability, personalization, security/privacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Compares e-tail to retailing satisfaction, based on Web site characteristics and did not include potential drivers such as customer service</td>
</tr>
<tr>
<td>Francis and White (2002)</td>
<td>PIRQUAL (Perceived</td>
<td>Web store functionality, Product attribute description, Ownership</td>
<td>Except for product attribution description, the factors were significantly related to future visit and purchase intentions: Results confirmed proposition that online satisfaction was a function of the purchase experience, the delivery experience and the customer service (e.g. responsiveness, fix problems)/security experience</td>
</tr>
<tr>
<td></td>
<td>Internet Retail</td>
<td>conditions, Delivered products, Customer service, Security</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality Model)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SITEQUAL (Internet</td>
<td>Site-related factors, aesthetic design, processing speed, security</td>
<td>A validation study indicated that SITEQUAL was directly correlated to shopping likelihood, attitude and loyalty</td>
</tr>
<tr>
<td></td>
<td>Shopping Quality)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vendor-related factors, competitive value, clarity of ordering, corporate and brand equity, product uniqueness, product quality assurance</td>
<td></td>
</tr>
</tbody>
</table>

(Contd...)
### Exhibit 2.4 Previous research on drivers of online satisfaction (contd...)

<table>
<thead>
<tr>
<th>Authors</th>
<th>Dependent variable</th>
<th>Drivers</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loiacono et al. (2002)</td>
<td>WebQual™ (Web site quality predicts Web site reuse)</td>
<td>Ease of use: - ease of understanding - intuitive operations Usefulness - informational fit-to-task - interactivity - trust - response time Entertainment - visual appeal - innovativeness - flow emotional appeal Complementary relationship - consistent image - online completeness - better than other channels</td>
<td>The model exhibited both reliability and validity, and correlations between the composite WebQual measure and intention to purchase and intention to revisit were significant.</td>
</tr>
<tr>
<td>Srinivasan et al. (2002)</td>
<td>e-loyalty</td>
<td>Customization - Contact interaction - Cultivation - Care - Community - Choice - Character</td>
<td>A key feature of the study was that it relied on data collected from a survey of online consumers. All data collected were from the same instrument. Surprisingly, convenience (i.e. ease of use) was not a driver. E-loyalty was significantly related to word of mouth and willingness to pay more. <strong>Source: Bansal et al. (2004)</strong></td>
</tr>
</tbody>
</table>