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Creating brands online: third party opinions and their effect on consumers' trust in brands and purchase intentions

Pavel Mrazek
Louisiana State University and Agricultural and Mechanical College, pavel.mrazek@gmail.com

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CREATING BRANDS ONLINE: THIRD PARTY OPINIONS AND THEIR EFFECT ON CONSUMERS’ TRUST IN BRANDS AND PURCHASE INTENTIONS

A Thesis

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Master of Mass Communication

in

The Manship School of Mass Communication

by
Pavel Mrazek
B.S., Masaryk University, 2008
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To my granddad Ladislav Sladky who always wanted to be a journalist, and to those others who could not fulfill their dreams because of the communist regime in Czechoslovakia.

To my family that not always understood what I was doing, however, always supported me.
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I would not have been able to finish this thesis without help of Dr. Lance Porter and without my honorary thesis chair Jay Yu who went with me through the hurdles of the beginning of the whole process. I will always keep in my memories other members of the Manship School staff who helped me throughout the two years of my studies at LSU, namely Lyn LeJeune, Dr. Peggy DeFleur, Angela Fleming and Elizabeth Cadarette.

I am very proud to be a member of the Manship School Family.
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ABSTRACT

Consumer lack of trust in online vendors and brands is identified as one of the biggest obstacles in the growth of e-commerce. This study examined how third-party product reviews help in building consumers’ trust, in consumers’ perception of product quality, their brand attitudes and consumers’ purchase intention. The six cell experimental design tested the effect of consumer and expert online product reviews on fictitious web sites for high-involvement and low-involvement products. The findings indicate that online consumer product reviews perform better than online expert product reviews and no product reviews. Online product reviews affected visitors to a web site with a high-involvement product the most. The study implies that online consumer product reviews significantly affect consumers in a high-involvement condition and are more effective than online expert product reviews.
INTRODUCTION

Almost all Internet users (93%) have at one time or another shopped or researched products online (Pew Research Center, 2008). E-commerce, however, composed just 3.6% of overall retail sales in the second quarter of 2009 (U.S. Department of Commerce, 2009). Researchers argue a lack of trust is one of the greatest barriers inhibiting Internet transactions (e.g., Angriawan & Thakur, 2008; Kim, Xu & Koh, 2004). Companies with an Internet presence try to deal with the concerns of consumers and tailor their web sites to consumers’ needs. Gaining consumers’ trust is especially difficult for new companies with unknown brands who advertise online. Shankar, Smith and Rangaswamy (2003) suggest brand names and brand equity could have a higher impact online than offline. Chu, Choi and Song (2005) support this argument and point out it is often not easy to assess products and vendors in an online environment. Consumers can decrease their uncertainty by turning to well-known brands and retailers.

This study addresses the problem of lack of trust online and investigates how third-party endorsements, more specifically online consumer and expert product reviews, can increase consumers’ trust in an unknown brand, their attitude toward the brand, perceived product quality and eventually increase consumers’ intention to purchase the advertised product. The difference between high-involvement and low-involvement products is a primary concern of this study because consumer involvement in a product category affects what information consumers search and process. Findings of this experiment contribute to the current marketing research and are innovative in the comparison between consumer and expert reviews that have not been widely studied and in the use of product involvement perspective. Practical implications of this study are especially beneficial for small and unknown brands and online vendors with limited marketing budgets. The results can help them more effectively plan their Internet promotion.
Shopping on the Internet is different from the offline shopping experience. If companies want to succeed in this environment they need to tailor their offers around consumers’ needs. Consumers nowadays do not have to depend fully on companies’ information. The Internet enables people to obtain views and opinions of many other involved players and consumers actively search for opinions of others. Ind and Riondion (2001) describe the Internet not just as a social network but as a guide to decision making and an anxiety reducer. Kim and Benbasat (2003) argue that consumers often base their judgments regarding Internet stores on opinions reported by others, particularly third-party certification authorities, other consumers, friends, news reports and magazines. This study investigates whether consumers value more consumer opinions or endorsements of experts when making a purchase decision and evaluating products and brands.

Consumers are differently involved in their product search and choices and therefore process information differently. The elaboration likelihood model explains this process. When people interact with a high-involvement product they process data through the central route and are persuaded by means of a strong message that appeared in an advertisement (Petty & Cacioppo, 1986). On the contrary, when consumers deal with a low-involvement product they process the data through the peripheral route and use heuristics, like the attractiveness of the advertisement character, to make decisions (Te’Eni-Harari, Lampert & Lehman-Wilzig, 2007). Consumer involvement affects consumers’ decision processes, the type of information they seek out, and the time they spend looking for information about the product. Thus, product involvement is central to this research, which examines how third-party endorsements affect consumers’ choices of a high-involvement product and a low-involvement product.

This study, using a six cell experimental design and fictitious web site of an unfamiliar brand, seeks to provide practical suggestions to online vendors and brands that want to build
effective online presence with limited available resources. The following sections will summarize relevant literature about the studied topic and will give readers a better understanding of the elaboration likelihood model, consumer attitudes, behavior, trust and purchase intention online. Further, source credibility and third-party endorsements are discussed.
LITERATURE REVIEW

Consumer Involvement With Products and The Elaboration Likelihood Model

Consumer involvement in a product category is widely recognized as one of the major variables relevant to an advertising strategy (Dahlen, Rasch & Rosengren, 2003). Consumers spend different amounts of time and effort when shopping or thinking about products. The elaboration likelihood model (ELM) explains why this is. The model is based on the assumption that what determines people’s involvement with a product is the personal significance that the individual ascribes to the object (Te’Eni-Harari et al., 2007). According to the elaboration likelihood model, the elaboration process of advertising data can take two separate routes, depending on the level of involvement. With the central route (high-elaboration level), when arguments arise, they cause people to generate both positive and negative thoughts. If an argument leads to predominantly favorable thoughts, the argument is relatively successful in eliciting changes in beliefs and attitudes (Kim & Benbasat, 2003). The opposite happens when an argument leads to predominantly unfavorable thoughts; the argument is then relatively unsuccessful in stimulating changes in beliefs and attitudes. With the peripheral route (low-elaboration level), on the other hand, people judge information according to simple heuristic cues such as the reputation of the source, the number of arguments presented, and the length of an argument, without careful consideration of argument content (Kim & Benbasat, 2003).

Scholars have been interested in persuasion and attitude change ever since the beginnings of communication research. Authors in social psychology and consumer research have systematically studied attitudes and persuasion since the 1930s (Petty & Cacioppo, 1986). The attitude change and persuasion is one of the main goals of advertising and scholars in advertising research have been developing theories to describe, understand and predict consumers’ attitudinal responses to advertising since the 1950s (Lien, 2001). Among all the models, the
The elaboration likelihood model from American psychologists John Cacioppo and Richard Petty is the most popular and most cited model in cognitive psychology and consumer research (Lien, 2001). Since its introduction in 1980 the elaboration likelihood model has been modified many times and used in different contexts. In this section, the application of the elaboration likelihood model to Internet advertising and marketing research will be primarily analyzed.

The elaboration likelihood model emphasizes the importance of consumers’ motivation and ability to process a message in successful persuasion. Te’Eni-Harari et al. (2007) argue that the use of the central route increases when motivation and the ability to think about the message are high. When motivation and/or the ability to think are low, however, consumers do not spend a lot of time evaluating the message and persuasion will occur along the peripheral route. Lee, Park and Han (2008) agree that there is a strong relationship between involvement and information processing. When involvement increases, people have greater motivation to comprehend the salient information. Also when personal relevance increases, people are more motivated to process the issue-relevant arguments. When the personal consequences of an advocacy or a choice increase it becomes more important for people to make a right choice because the consequences of being incorrect are greater. Because of the greater personal implications people should be more motivated to engage in the cognitive work necessary to truly justify their choice (Petty & Cacioppo, 1986).

Scholars have invoked somewhat divergent images of the involvement construct. Mittal (1995) in his comparative analysis of consumer involvement scales identified one theme for all: that involvement is the perceived importance of the stimulus (either the product itself or the purchase-decision task). Park, Lee and Han (2007) mention two different variations of involvement, product-class involvement and situational involvement. They argue that some products are inherently involving because of the nature of the purchase, but various situations
can elicit individuals concern for their behavior in a situation; “The situational importance of a purchasing decision is likely to be most representative of the variance in the consumer’s involvement, even more than product-class involvement” (Park et al. 2007, p. 130). Consumers care about different things in different involvement conditions: issue-relevant arguments and product-relevant attributes are more influential under high-involvement conditions, while peripheral cues, such as the characteristics of information sources, number of arguments, famous endorsers, high expertise of the source of the message, or professional third-party assurance seals are more influential under low-involvement conditions (Yang, Hung, Sung & Farn, 2006). In general, the importance of argument quality increases with consumer involvement.

Park and Kim (2008) in their experiment of 222 college students used the elaboration likelihood model to investigate the effect of the type of reviews and the number of reviews on expert and novice consumers. The subjects were exposed to an advertisement for a portable multimedia player and to a different number of online consumer reviews. The reviews were either attribute-centric or benefit-centric. Park and Kim studied how the level of expertise affects the processing of different types of messages. The authors found that consumers with different levels of expertise prefer different types and numbers of reviews: the effect of the review type on purchase intention is stronger for experts than for novices while the effect of the number of product reviews on intention to purchase is stronger for novices than experts.

Sher and Lee (2009) conducted a similar experiment and investigated the effects of consumer skepticism on online consumers using the elaboration likelihood model. They hypothesized that online consumers vary in their tendency to believe or disbelieve online consumer reviews based on their skepticism. Sher and Lee recruited for their online experiment 278 undergraduates and created a fictitious shopping mall web site selling a cell phone. Their results revealed that highly skeptical consumers tend to base their attitudes on intrinsic beliefs
instead of situational factors. The results suggest that it may be impossible to persuade highly skeptical consumers via argument quality as they would not believe claims stated in online consumer reviews. The skeptical consumers while evaluating consumer reviews consider source credibility, argument quality and number of arguments presented as most important. Less skeptical consumers tend to adopt the peripheral route in forming their attitude and they are more persuaded by review quantity which they associate with greater product popularity. Sher and Lee compare low skepticism consumers to those with low need for cognition.

Dahlen, Rasch and Rosengren (2003) used the elaboration likelihood model when examining how web sites for different products differ in their ability to increase brand attitudes. They hypothesized that web sites for different products work differently over time and with repeat visits. Dahlen et al. observed Internet users’ behavior when visiting web sites for high- and low-involvement products and collected 13,129 responses. The selected high-involvement products included paint, optics, cars, fashion, design and spa; the low-involvement products used in this study were dairy products, diapers, fast food, grocery products, beer, chocolate candy and mineral water. The researchers found that a visit to a high-involvement product web site increases brand attitude and web sites are therefore an important advertising tool for high-involvement products. As visitors are active and stay longer, it is important that the web site is filled with information and offers visitors opportunities to interact with the brand and the web site content. Correspondingly, a visit to a low-involvement product web site does not increase brand attitude. It is likely that visitors to the low-involvement-product web site are more engaged with games, competitions, and other peripheral cues rather than with the brand. Dahlen et al. suggest that sponsors of the low-involvement product web site should not make visitors actively process the brand communication; web site creators may rather expose consumers to the brand by, for example, “placing the logo strategically in various contexts” (Dahlen et al., 2003, p. 31).
The authors, however, point out that repeat visitors behave differently from first-time visitors: stay longer and are more active. Dahlen et al. (p.32) also emphasize that functional product web sites should be designed as “one-shot advertisements” that communicate their message quickly while having the visitors’ attention.

McMillan, Hwang and Lee (2003) found in their experiment of four hotel web sites conducted on a convenient sample of 311 participants that when a web site is examined, peripheral cues seem to make little difference. Users engage in relatively high level of activity when viewing a web site, which generates “situation involvement,” even when they may not have general involvement with the subject. According to the authors, “this is consistent with earlier studies that regard the web as a medium well-suited for highly involved products appealing to rationally oriented consumers who seek to fulfill information needs” (McMillan et al. 2003, p. 406). The authors only studied web sites of one product category sponsors. Their results are therefore hardly generalizable.

The elaboration likelihood model seeks to predict consumers’ attitude change and help creators of persuasive messages tailor effective communication. This study aims to build on previous research about the elaboration likelihood model and apply it to the Internet reality that empowers consumers and give them new communication and information channels. The following sections examine previous research about consumer attitudes, intentions, and behaviors and focus on consumers’ interactions with the environment of the Internet.

**Consumer Attitude to Web Sites and Brands**

Scholars regard the Internet as a very suitable advertising medium (e.g. Karson, McCloy & Bonner, 2006; Macias, 2003; Silk, Klein & Berndt, 2001). Silk et al. (2001) describe the Internet as an adaptive, hybrid medium with respect to audience addressability, audience control, and contractual flexibility. Karson et al. (2006) see the Internet as the best medium to present
information, which is one of advertising’s primary functions. Web sites are an important form of interactive advertising and a part of the marketing mix of companies. Web sites often provide consumers with a first impression of an organization, and for many organizations, web sites are crucial to ensure sales or procure services (Robins & Holmes, 2008). The relatively low cost of Internet advertising, compared to traditional media, enables even smaller companies to promote their products and compete with big brands. A survey of 500 small business executives across the United States revealed that 42% of the small businesses made greater use of their company's web site to generate business sales in 2008. Among companies with 20 to 99 employees, the percentage rose to 57% (PR Newswire, 2009).

The Internet has changed the way companies communicate with consumers whose feedback and opinions companies value. Aladwani and Palvia (2001) mentioned that “in this era of intense competition and customer responsiveness, the users are major stakeholders and should not be ignored” (p. 475). In the electronic environment, knowing how to create customer-centered web sites is of great importance (Zhang & Dran, 2001). Rezabakhsh, Bornemann, Hansen and Schrader (2006) analyzed the shift from supplier power in traditional markets to consumer power on the Internet. The authors identified that the Internet “enables consumers (1) to overcome most information asymmetries that characterize traditional consumer markets and thus obtain high levels of market transparency, (2) to easily band together against companies and possibly impose sanctions via exit and voice and (3) to take on a more active role in the value chain and influence products and prices according to individual preferences” (Rezabakhsh et al. 2006, p.1).

Shopping online has become a rapidly growing business. Two-thirds (66%) of Americans have purchased a product online (Pew Research Center, 2008). Not all consumers, however, hold positive attitudes toward e-commerce because of security and privacy issues. The meta-analysis
of Li and Zhang (2002) of 35 empirical articles about online shopping attitudes and behavior between 1998 and 2002 revealed that online purchasing is reported to be strongly associated with the factors of personal characteristics, vendor characteristics, web site quality, attitudes toward online shopping, intention to shop online, and decision making.

There are many products and vendors on the internet. Consumers tend to look for cues to help them to justify their purchase choices and lower their insecurity about transactions. A brand is one of the cues. Buyers often use brand names as signals of quality and value and gravitate to products with brand names that consumers associate with quality and value (Dean & Biswas 2001; Herbig & Milewicz 1995). One can visualize a brand as a repository of reputation. Herbig and Milewicz (1995) say that the primary purpose of brands and brand names is provide for the user a symbolic meaning which assists the user in the recognition and decision-making process: “Brands often develop a ‘personality’ of their own that has an effect on whether users decide the product’s image is consistent with their needs” (p. 8).

Chu, Choi and Song (2005) studied the role of online retailer brand and third-party endorsements in increasing consumer purchase intention using an experiment with 102 South Korean undergraduates. Chu et al. argued that the advent of the Internet has changed the way consumers use external cues, which are important in the offline world. Consumers on the Internet have other tools to evaluate products other than the brand, such as third-party endorsements, security guarantees, or quality seals. The researchers found that third-party product evaluation had a more significant effect on consumer purchase intention than no third-party evaluation. The increase in purchase intention was even more robust when a reputable third-party subject evaluated the product. Chu et al. mention, however, that brands are still important in the online environment since they “differentiate companies from their competitors and can increase trust between seller and buyer” (p. 115).
The following section will examine academic literature about online trust that is often mentioned as an important antecedent in the growth of business on the Internet.

**Consumer Trust Online**

Lee and Turban (2001) argue that “e-commerce success is determined by whether consumers trust sellers and products they cannot see or touch, and electronic systems with which they have no previous experience” (p. 75). Users are more likely to participate in web transactions and relationships if they receive strong assurances that they are engaging in a trusting relationship (Shneiderman, 2000). Recent research has indicated that online trust, or the absence of online trust, is a key inhibitor of an individual consumer’s acceptance of e-commerce. The Cheskin Research group (1999) conducted a large scale study of consumer trust on 463 web users and experts. Ninety percent of respondents (web users) in the study mentioned issues of trust, particularly about security of personal information, as an important concern when purchasing on the Internet.

It is rather hard to define trust and measure it. Trust only exists in an uncertain and risky environment (Everard & Galleta, 2005). In the context of online environments, researchers define trust as a willingness to be vulnerable. Kim and Benbasat (2003) mention that online trust is the willingness of consumers to expose themselves 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. Similarly, Angriawan and Thakur (2008) define trust as consumer’s confidence in an e-merchant’s reliability and integrity to perform online transactions successfully. Online trust is recognized as an important mechanism for consumers to reduce uncertainty (Angriawan & Thakur, 2008). Perhaps the greatest difference between trust online and in all other contexts is that when online,
consumers have more difficulty assessing the potential harm or good-will of others (Friedman, Kahn & Howe, 2000).

It may be hard for small and new online retailers to gain consumers’ initial trust. Wang, Beatty and Foxx (2004) identified it as one of the major challenges that these companies need to face. The authors conceptualized trust as either experience-based trust or cue-based trust. The cue-based trust based on an individual’s initial encounter with a stimulus is a primary focus of this experiment. Wang et al. (2004) define cue-based trust as “the trust consumers form based on cues received from an initial encounter with a stimulus. It involves consumers’ beliefs that his or her vulnerabilities will not be exploited” (p. 54). In their experiment of 402 college students Wang et al. investigated the effect of seals of approval, return policy, awards from neutral sources, security disclosures and privacy disclosures on consumer initial trust. The researchers found that providing seals of approval and detailed privacy disclosures in a web site increased consumers’ willingness to provide personal information. Awards from neutral sources had a significant effect on cue-based trust compared to seals of approval that lacked a main effect in building cue-based trust. Wang et al. summarized that their findings “imply that a small online retailer can develop a certain level of trust by providing online trustworthiness cues even if it lacks a national reputation and impressive size” (p. 65).

Many scholars have explored online trust. The most commonly used antecedents of online trust are privacy and security features, web site usability and design, and the perceived reputation of a web site sponsor. Angriawan and Thakur (2008) developed a model of online trust that addressed the major sources of e-commerce uncertainty. The authors tested the model on 759 subjects and found that web site usability, expected product performance, security, and privacy collectively explained 70% of the variance in online trust. The strongest predictors were security, web site usability, expected product performance, and privacy. Similar to the previous
study, Lee and Turban (2001) studied consumer trust with Internet shopping and developed a model of online trust using four groups of factors as antecedents: trustworthiness of the Internet merchant, trustworthiness of the Internet as a shopping medium and contextual factors such as third party and security certification and other factors, such as company size and demographic variables. The authors also proposed individual propensity to trust as a moderator. Lee and Turban tested their model on 405 college students and their findings suggest that a merchant’s integrity is a major positive determinant of consumer trust in Internet shopping. They also found an individual consumer trust propensity moderates its effect. Corritore, Kracher and Wiedenbeck (2003) came up with another theoretical model of online trust based on previous literature. The researchers focused on people’s trust in transactional and informational web sites and identified three perceptual factors that impact online trust: perception of credibility, ease of use, and risk.

Relevant information can help consumers to reduce their uncertainty. In the context of e-commerce, a company’s web site is often the major method of interaction with consumers. Angriawan and Thakur (2008) point out that an effective web site can generate trust by reducing consumer uncertainties and providing necessary information to consumers. Everard and Galletta (2006) confirmed that the perceived quality of a web site is directly related to consumer trust in the web site and consumer intention to purchase from that site. In their experiment, 272 college students evaluated a fictitious online store. The results revealed that errors, poor style and incompleteness of web sites negatively affected perceived quality of the online vendor that directly related to consumers’ trust in the store and their intention to purchase.

The Cheskin Research group published its 1999 e-commerce trust study that suggests that lesser-known and new brands must build their web sites with excellent navigation and fulfillment in order to be trusted. As navigation or fulfillment improves, so does trust. The study argues that familiarity with a brand does not always communicate trust. According to the study, people
believe that commercial relationships require far less knowledge of trustworthiness than loving relationships. Because less valuable assets are at stake in a commercial relationship, consumers generally do not expect to ever know if a firm possesses the “character” that might make it worthy of deeper levels of trust. However, experience over time in a commercial relationship is still vitally important in making transactions smoother, simpler and more likely to become habitual.

Scholars mention a difference between initial trust and trust of repeated visitors to a web site (Hampton-Sosa & Koufaris, 2002; Koufaris & Hampton-Sosa, 2004; McKnight, Choudhury & Kacmar, 2002). Web site appeal affects initial trust, which in turn has a significant effect on intent to use the web site in the future (Hampton-Sosa & Koufaris, 2002). McKnight, Choudhury and Kacmar (2002) in their experimental study of a fictitious legal advice web site found that a company’s perceived reputation and site quality both had a positive effect on initial trust with the company. Another study about consumer initial trust is from Koufaris and Hampton-Sosa (2004). In their online experiment 212 subjects visited an unknown web site selling either laptops or airline tickets. Their findings confirmed findings of McKnight et al. (2002) that observed company reputation could significantly affect initial trust, along with willingness to customize products and services. Perceived web site usefulness, ease of use, and security control were also significant factors of initial trust in the study. These findings are important for the current study since online trust in unknown brand is one of the studied dependant variables. Online trust is closely connected to source credibility that is examined in the next section.

**Source Credibility**

Credibility is often mentioned when talking about online trust. Everard and Galleta (2005) argue that credibility and trust are related concepts. Trust refers to a “positive belief about the perceived reliability of, dependability of, and confidence in a person, object, or process;”
credibility is the perceived quality of a site or the information contained therein, often equated with believability (Everard & Galleta, 2005, p. 59). Wathen and Burkell (2002) also define credibility as believability, as well as Herbig and Milewicz (1995), who argue that credibility is “the believability of an entity’s intentions at a particular moment in time” (p. 6). Credible sources are trustworthy and have expertise. Sources are judged as credible based on perceived competence, character, composure, dynamism and sociability (Wathen & Burkell, 2002). The most obvious difference between trust and credibility is that trust is an attribute of an observer, whereas credibility is an attribute of another person or an object of interest. Trust is, in fact, a reflection of credibility, which could be also considered trustworthiness (Everard & Galleta, 2005).

Tseng and Fogg (1999) proposed four-type typology of source credibility for computing systems that can be applied to online credibility: presumed, reputed, surface and experienced credibility. Presumed credibility describes how a perceiver of a message believes someone or something, based on general assumptions in the perceiver’s mind. The authors give an example and refer to the difference between perceiver’s friends and a car salesperson: people assume their friends tell them truth and therefore view them as credible; in contrast, people assume car salespeople may not always tell them truth and therefore they lack credibility. People often base their credibility assessment on stereotypes and simplification. Reputed credibility refers to how much a perceiver believes someone or something because what respected third parties have reported. The third category of credibility is surface credibility, which describes how much a perceiver believes someone or something based on simple inspection. People are judging people’s credibility based on their look and behavior, they judge a book by its cover and web sites credibility based on their visual design. The last type, experienced credibility is based on people’s first-hand experience with a source over time.
The presentation and message content are not the only factors that matter. Also the source of a message is very important in persuasion. The audience of a persuasive message is more likely to accept message arguments when those arguments come from an expert source or a trustworthy source (Wilson & Sherrell, 1993). Wilson and Sherrell (1993) found in their meta-analysis of previous research that expertise tends to have the greatest effect on persuasion; sixteen percent of the explained variance is due to the expert versus non-expert manipulation. It confirms the findings of Sternthal, Dholakia and Leavitt (1978) who mention that “highly trustworthy and expert spokespeople induce a greater positive attitude toward the position they advocate than do communicators with less credibility” (p. 252).

Scholars have mostly studied source credibility of news sources. Settle and Golden (1974), however, investigated credibility of advertising claims and consumer expectancy of advertised product value. In their experiment conducted on 120 students who were exposed to a print advertisement, the researchers found that source credibility increases when product claims admitted the superiority of another brand in some areas instead of claiming that a product is superior in all features. Settle and Golden argue that a source appears more credible when it mentions some negative information and not just advocates its superiority in all aspects.

The Internet has made the assessment of source credibility somewhat harder. It is easy for anybody to publish content on the Internet and consumers need to employ multiple cues and available information to assess credibility online. The following section explores the specifics of online credibility.

**Online Credibility**

When consumers visit a web site they are not familiar with, the page’s aesthetics is one of the factors that may influence users to stay or leave. The design of the web page is positively correlated to the site’s credibility (Robins & Holmes, 2008). Similarly to previously mentioned
findings of Tseng and Fogg (1999), Wathen and Burkell (2002) name “surface credibility” when talking about people assessing information on the Internet. They argue that “information coupled with a well-designed interface and attractive graphics may result, in the absence of more substantive cues, in a tendency for users to make a positive credibility judgment” (Wathen & Burkell, 2002, p. 138). Metzger (2007) in her meta-analysis of online credibility research confirms that general Internet users are not willing to exert a great deal of effort in assessing credibility of information they find online. Users emphasize professional site design in their credibility appraisals. Metzger argues that motivation is a key element in users’ willingness to undertake extensive effort in order to verify the credibility of information they find online. This finding goes back to the literature concerning the elaboration likelihood model and levels of involvement analyzed in previous sections.

Similarly to previous authors, Flanagin and Metzger (2007) conducted an experiment with 574 participants to investigate antecedents of online perceived credibility. They found that credibility assessments appear to be primarily due to web site attributes such as design features, depth of content, or site complexity rather than to familiarity with a web site sponsor. In their experiment, fictitious sites were able to achieve credibility ratings that were largely equal to those of major organizations, presumably based on their sophisticated site attributes, including design and content. In another study of antecedents of online credibility, Fogg (2000) conducted an online survey of web users in the United States and Finland to examine what affects users’ judgments of web site credibility. In the survey of 1,410 participants Fogg identified seven factors that influence credibility. “Real-world feel,” ease of use, expertise, trustworthiness and message tailoring had positive effects on credibility ratings. Conversely, commercial implications and amateurism negatively affected credibility. In another large-scale study, 2,648 participants evaluated the credibility of two web sites on a similar topic (Fogg, Soohoo,
Danielson, Marable, Stanford & Tauber, 2002). The researchers found that 46.1% of subjects’ comments were about the design look of studied web sites: it was the number one web site feature that people noticed when evaluated sites’ credibility. The next most common comments were about the structure and focus of information. The data show that an average consumer pays significantly more attention to superficial aspects of a web site, such as visual cues, than to its content.

Looking at other features of web sites that affect credibility, the Cheskin Research study (1999) identifies six forms of formal characteristics of web sites that communicate trustworthiness to visitors: brand, navigation, fulfillment, presentation, up-to-date technology and the logos of security. The study suggests that for lesser-known brands, navigation and fulfillment play significant roles in establishing trust.

Building on the findings about attitude change, online trust and credibility, another studied variable important for this study is intention to purchase. Selling products is a primary reason of online presence for many brands. This study investigates how consumer and expert reviews affect consumers’ purchase intention. Relevant literature about intention to purchase is discussed in the following section.

**Consumer Intention to Purchase Online**

Consumers’ behaviors can usually be predicted by their intentions. Also purchase intention is correlated to actual behavior (Bai, Law & Wen, 2008). Intention of initial purchase studied in this paper is the likelihood that a potential customer will purchase from an e-commerce web site for the first time at a given point of time (Kuan, Bock & Vathanophas, 2008). The theory of reasoned action (TRA) helps to predict behavioral intentions of consumers. The theory acknowledges that there are certain external variables that limit consumers in their behavior and that cannot be changed in the process of persuasion (e.g. lack of money can prevent
consumers from shopping). It is therefore better to measure behavioral intentions than actual behavior. The theory uses two elements to predict behavioral intent: attitudes toward the behavior and norms (or the other people’s expectations) (Hansen, Jensen & Solgaard, 2004; Jarvenpaa, Tractinsky & Vitale, 2000). It means that whenever consumers’ attitudes lead them to do one thing, but the relevant norms suggest they should do something else, both factors influence consumers’ behavioral intent (Electronic Encyclopedia of Communication, 2009).

Jarvenpaa et al. (2000) argue that Internet shopping behavior shares the volitional nature of the phenomena that the theory of reasoned action tries to explain and predict. This theory is therefore suitable for evaluation of various Internet shopping sites. They assume that the degree to which people express their intentions to buy from a certain site as opposed to other sites is a reasonable predictor of actual purchase behavior from this site relative to others. The second component influencing behavioral intent is subjective norms, which has two components: normative beliefs (“what I think others would want or expect me to do”) and motivation to comply (“how important is to me to do what I think others expect”) (Electronic Encyclopedia of Communication, 2009). From a practical perspective: if one wants to persuade consumers to action, the message needs to be tailored to enforce consumers’ attitudes toward the desired behavior; and/or one needs to strengthen consumers’ normative belief that supports the persuasive goal; and/or one needs to increase consumers’ motivation to comply with a norm that supports the persuasive goal.

In academic literature, online trust and purchase intention are often interconnected and studied together. Various academic studies have suggested that trust has a positive influence on purchase intentions and actual buying decisions (Kim & Benbasat, 2003). Consumers who trust a company are more likely to buy from its web site (Koufars & Hampton-Sosa, 2003). Angriawan and Thakur (2008) pointed out that intention to purchase along with customer loyalty is
consequence of trust. Differently from these findings, the Cheskin Research group (1999) found in their consumer survey that there are four main reasons why people purchase products online: convenience, ease of use, good prices, and wide product selection. They argue that any of these items may be more important to a purchase decision than trustworthiness of a web site.

Ranganathan and Ganapathy (2002) concluded from their survey of 214 online shoppers that information content, design, security, and privacy seem to have an impact on the online purchase intent of consumers, but security and privacy were found to have a greater effect on the purchase intent of consumers. In contrast with these findings are Belanger, Hiller and Smith (2002) who found that privacy and security features are of lesser importance than pleasure features, such as convenience, ease of use, and cosmetics when considering consumer intention to purchase. Belanger et al. used a convenience sample of 140 students who visited one of the four web sites that reflected a combination of studied privacy and security features, seals and statements. Similarly, findings of Bai et al. (2007) who conducted an experiment with 180 participants who evaluated a travel web site indicate that web site quality has a direct and positive impact on consumer satisfaction, and consumer satisfaction has a direct and positive impact on purchase intentions.

Corritore et al. (2003) in previously discussed study found that perceived usefulness of a web site, along with online trust, contribute to consumer intention to buy online. Kuan, Bock and Vathanophas (2008) studied how a company can increase customer conversion and retention. They suggest that online companies focus on system quality to increase customer conversion and service quality for customer retention.

Chu et al. (2005) articulate an information-processing perspective on purchase intentions: a product can be defined as a set of information cues. Consumers purchasing products in uncertain situations typically search for product information until they feel comfortable about
making a decision. The researchers found that cues such as manufacturer brand, online retailer brand and infomediary reputation (third-party opinions), along with attribute levels and price affect consumers’ purchase intention. Park, Lee and Han (2007) confirm that the better and more extensive the information is, the greater the consumer satisfaction. Additionally, as consumer satisfaction increases so does consumer purchase intention. Information quality can therefore have a positive effect on purchasing intention.

One of the extrinsic cues, third-party product reviews that affect purchase intention is discussed in the following section in details. The difference between the effect of consumer and expert reviews is a primary concern of this study.

**Third-Party Opinions as Anxiety Reducers of Consumers**

In all purchase decisions, consumers are searching for the truth, “deconstructing organizational messages, seeking independent views, looking at fellow consumers, and sampling the product, if they can” (Ind & Riondino, 2001, p. 8). In the web environment, people can obtain the views of many, either experts or other consumers. Ind and Riondino (2001) described the web as a “social network and as a guide to decision making, an anxiety reducer” (p. 8)

The Internet has freed consumers from their traditionally passive role as receivers of marketing communications, giving them much greater control over the information search and acquisition process. This allows them to become active participants in both communication exchange and purchasing activity. Although companies are trying to push their messages, information circulated among online communities or independent sources is likely to be significantly more relevant to consumers compared to corporate messages, as they are perceived more credible (Ind & Riondino, 2001).

People have always talked about products and companies and shared their experience. The marketing literature qualifies these talks as word-of-mouth communication (WOM) that is
“oral, person-to-person communication between a receiver and a communicator who the receiver perceives as noncommercial, regarding a brand, a product, a service or a provider” (Arndt, 1967, p. 5). Internet communication has some unique features compared to communication offline; scholars therefore modified WOM into a new concept: electronic word-of-mouth (eWOM) (e.g. Chatterjee, 2001; Chen & Xie, 2008; Hu, Pavlou & Zhang, 2006; Sun, Youn, Wu & Kuntaraporn, 2006). Chatterjee (2001) talks about a need to adapt the old WOM definition to the online medium and refers to differences in online communication compared to offline communication such as online communication modes (e-mail and hypertext) and the existence of remote many-to-many communication. The non-commercial focus of eWOM may not be as unambiguous as in the offline environment (some companies pay for referrals online). Park et al. (2007) studied the effect of online consumer reviews on consumer purchase intention and mentioned the difference in credibility of WOM and eWOM. Authors of online consumer reviews (as a variation of eWOM) are unknown and therefore may have less credibility than direct messages from consumers’ family or friends. In order to overcome the lack of credibility in this case, the authors suggest focus on the content quality of an online consumer review.

Resnick and Zeckhauser (2001) point out that information about past transactions on the Internet may be limited and potentially unreliable but can be distributed far more systematically compared to the traditional word-of-mouth on conventional marketplaces. The authors investigated why buyers trust unknown sellers on auction sites, more specifically on eBay, and focused on the customer rating system. In their sample of customer feedback ratings of past transactions from February 1999 through June 1999 the researchers found just 0.6% was negative feedback on transactions. Resnick and Zeckhauser argue that even though these data are suspicious, the system appears to work because its participants think it is working. The researchers say: “If sellers believe poor behavior will elicit negative feedback, and that buyers
depend strongly on reputations, then sellers will behave well and bad sellers will be deterred. It is
the perception of how the system operates, not the facts, that matters” (p. 23).

The social aspect of shopping has been shown to be a major contributor toward positive
emotions about shopping. Online vendors face a significant challenge in making their virtual
storefront socially rich (Hassanein & Head, 2004). People trust people, not technology. The focal
point of all relationships, no matter whether they are virtual or real, is trust. Although
organizations may seek to nurture trust by building secure and easy-to-use web sites and
promoting certain values and messages, consumers are now willing and able to look beyond the
technical features to question both messages and values. Consumers do not respect companies
who are reluctant to engage in a dialogue or who refuse to share information or accept criticism
(Ind & Riondino, 2001).

Online product reviews - expert and consumer - are popular and consumers often read
them before buying products on the internet. Half of the consumers who visit online shopping
malls consider consumer reviews important in their buying decisions (Park et al., 2007). In a
survey reported by *The Los Angeles Times*, 44% of online consumers said that they consulted
expert review web sites before making a purchase (Chen & Xie, 2005). Chen and Xie (2005)
explain the emergence and popularity of third-party product reviews as a market phenomenon
related to “information asymmetry between sellers and buyers – sellers have product information
that buyers may not share” (p. 219). Third parties conveying product information to potential
buyers can resolve or at least mitigate the problem of information asymmetry.

Scholars agree that online product reviews are important in making purchase decisions
and product sales (e.g. Duan, Gu & Whinston, 2008; Park, Lee & Han, 2007). Third-party status
lends credibility to product reviews. Consumers are likely to seek others’ opinions to reduce their
cognitive effort or uncertainty as the perceived risk associated with a purchase increases. Third-
party endorsements are especially important for experimental products because they offer “indirect experience on sensory aspects not conveyed by tangible attributes” (Wang, 2005, p. 110). Chen and Xie (2008) suggest that companies use online product reviews as free “sales assistants” in their marketing communications mix. They found that if the information in the review is sufficiently informative then the seller-created product attribute information and third-party-created review information will interact with each other.

People tend to believe what most of other people believe, even though these beliefs may not be true. Huang and Chen (2006) point to the herding behavior that occurs on the Internet to explain that consumers monitor the comments of others regarding specific topics and use them as a basis for their own choices and behavior. In their experiment involving 180 Taiwanese students Huang and Chen found that product sales volume positively influences consumer online choices regarding a product. These findings support the popular view that actual sales of a product increase when consumers learn that the product is already selling strongly. Consistently with previous research, Huang and Chen found that people place more weight on negative rather than positive information when evaluating a product. When consumers are faced with both positive and negative comments, the quantity of positive comments needs to be significantly larger to cover the negative feelings regarding the product in order to influence purchase intentions of consumers.

Two third-party endorsements are investigated in this research: online consumer product reviews and expert product reviews. The differences between these two types of reviews are described in the following section. Starting with online consumer reviews, these product reviews include consumers’ experiences, evaluations, and opinions. Park et al. (2007) argue that online consumer reviews have a dual role: they function both as an informant and as a recommender. “As informant, it provides user-oriented product information, while as recommender it provides
recommendations by previous consumers in the form of electronic word-of-mouth” (Park et al. 2007, p. 127). The authors further mention three main differences between consumer reviews and seller information: consumer-created information is more credible than seller-created information, consumer-created information tends to be more consumer oriented than seller-created information (more understandable and familiar) and consumer-created information is not presented in a standard form – it can be either subjective or objective. Park et al. studied how quantity and quality of consumer product reviews affect consumer purchase intention. In their 2 × 2 × 2 factorial design experiment they used a sample of 152 college students who visited a shopping web site selling a portable multimedia player. Park et al. manipulated three independent variables in their experiment: review quality (high vs. low), review quantity (few vs. moderate) and involvement (high vs. low). They found that the quality of online reviews had a positive effect on consumer purchase intention. In their examination of the involvement levels of consumers they found that low-involvement scenario consumers were affected by the quantity rather than the quality of reviews, but high-involvement scenario consumers were affected rather by the review quantity mainly when the review quality is high.

The second type of endorsement examined in this study is a third-party expert review. Expert reviews provide product information usually based on laboratory testing or expert evaluations, and they tend to focus on product attribute information such as performance, features or reliability, because such information is easier to quantify and measure (Chen & Xie, 2008). Consumer reviews, on the other hand, are more likely to focus on a specific individual’s preferences and usage condition. Expert reviews, contrary to consumer reviews, are backed by an institution that grants a certain level of credibility to the review and consequently to the reviewed product.
Market observations suggest that third-party expert product reviews have a significant effect on the success or failure of products (Chen & Xie, 2008). Reinstein and Snyder (2000) argue that publication of expert product reviews is an effective way how to transmit information about product quality to consumers. It is especially important for experience products. When consumers are uncertain about the quality of a product, expert product reviews can help them in their purchase decisions and make their choice easier.

Dean and Biswas (2001) argue that the fact that marketers use third-party endorsements in their advertising suggests that such endorsements have an effect on consumer beliefs and attitudes. When consumers are choosing products among competing brands, they face uncertainty about product performance and quality. In this situation, consumers are likely to rely on “heuristics to gauge quality across competitive products” (Dawar & Parker, 1994, p. 83). Dawar and Parker (1994) propose that third-party endorsements function as a quality cue in advertising and help consumers with their choice. Third-party endorsements may function as signals of unobservable product quality such as performance, reliability, and durability of the product (Dean & Biswas, 2001). Third-party endorsements, both expert and consumer product reviews, may have a positive effect on perceived product quality and therefore I propose the following hypotheses:

**H1(a): Online consumer product reviews will have a greater positive effect on perceived product quality than no product reviews.**

**H1(b): Online expert product reviews will have a greater positive effect on perceived product quality than no product reviews.**

Consumers seek to reduce the risk associated with their purchase by looking for information from credible sources. These sources, such as friends or experts can provide them with specific attribute information but also with general attitudes about available brands (Collins
& Stevens, 2002). When consumers are not familiar with a brand they interact with, they look for cues that might help them to create an attitude toward an unknown company. I argue that third-party product reviews positively influence an attitude toward a brand, thus:

**H2(a):** Online consumer product reviews will have a greater positive effect on attitude toward a brand than no product reviews.

**H2(b):** Online expert product reviews will have a greater positive effect on attitude toward a brand than no product reviews.

Wang (2005) argues that if consumers believe third-party endorsements are honest and reliable then those endorsements foster consumer trust and reduce the perceived risk. Increased trust and decreased perceived risk then also increase consumer purchase intention. Consumers trust opinions of other consumers more than seller-created information (Park et al., 2007). Positive references about a company provided by third parties may therefore increase the trust of consumers in a brand they are not familiar with, therefore:

**H3(a):** Online consumer product reviews will have a greater positive effect on trust in a brand than no product reviews.

**H3(b):** Online expert product reviews will have a greater positive effect on trust in a brand than no product reviews.

Park et al. (2007) found that quality of online reviews has a positive effect on consumer purchase intention; if the reviews are logical and persuasive, with sufficient reasons based on specific facts about the product, then the positive effect is strong. They also argue that the better and more extensive information available to consumers increases consumer satisfaction and consequently increases consumer purchase intentions. Chu at al. (2005) found that a product evaluation of a third party has significantly greater effect on consumer purchase intention than no
evaluation by a third party. Purchase intention increases even more when a reputable third party evaluates the product. I therefore hypothesize the following:

**H4(a):** Online consumer product reviews will have a greater positive effect on purchase intention than no product reviews.

**H4(b):** Online expert product reviews will have a greater positive effect on purchase intention than no product reviews.

Scholars agree that not only is a message important but also who says the message is important. Sternthal, Dholakia and Leavitt (1978) studied the persuasive effect of source credibility and said that “it has been frequently demonstrated that highly trustworthy and expert spokespeople induce a greater positive attitude toward the position they advocate than do communicators with less credibility” (p. 252). Wilson and Sherrell (1993) confirm that the audience of a persuasive message is more likely to accept message arguments coming from an expert source or a trustworthy message source; “High credible sources produce more attitude shift with high message discrepancy, low incongruity, and when the speaker is identified before the message appeal” (p. 103). Thus I hypothesize the following:

**H5:** Participants will evaluate review quality of online expert product reviews higher than of online consumer product reviews.

Previous studies of third-party product reviews examined consumer and expert reviews separately. In this paper, I study the difference in the effect of a third-party source while the message remains the same for both consumer and product review. Scholars consider consumer involvement in a product category as one of major variables in companies’ marketing strategy (e.g. Dahlen et al., 2003). Therefore, I included this variable in my experiment; I study high-involvement and low-involvement products and how consumer and expert reviews affect the examined four dependent variables. I present the following research questions:
RQ1(a): What are the differences in perceived product quality between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?

RQ1(b): What are the differences in perceived product quality between online consumer reviews, online expert product reviews and no reviews for a low-involvement product?

RQ2(a): What are the differences in attitude toward a brand between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?

RQ2(b): What are the differences in attitude toward a brand between online consumer reviews, online expert product reviews and no product reviews for a low-involvement product?

RQ3(a): What are the differences in trust in a brand between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?

RQ3(b): What are the differences in trust in a brand between online consumer reviews, expert product reviews and no product reviews for a low-involvement product?

RQ4(a): What are the differences in purchase intention between online consumer reviews, expert product reviews and no product reviews for a high-involvement product?
RQ4(b): What are the differences in purchase intention between online consumer reviews, expert product reviews and no product reviews for a low-involvement product?
METHODOLOGY

I employed an online experiment with a $3 \times 2$ factorial design followed by a post-test. I used a convenient sample of college students. This section describes the experimental design, the sample, the pre-test, the experimental stimulus, and manipulations used to measure and test the hypotheses and research questions.

I administered an experiment because previous research shows that it is an effective method to investigate the causal relationship of variables (e.g. Lafferty & Goldsmith, 2004; Newell & Goldsmith, 2001). In the $3 \times 2$ factorial design, my two independent variables were product review sponsor (consumer vs. expert; no product review control group was used to identify if product reviews affect dependent variables) and product involvement (high vs. low). Based on a small scale survey among college students and based on academic literature, I identified computer accessories as a suitable product category for the experiment and I picked a flash drive as a low-involvement product and a portable external hard drive as a high-involvement product. For the purpose of the experiment I used a name and a logo of the dataOne company, an existing firm from Hong Kong selling computer storage devices that is not familiar in the United States market.

**Table 1**
Experimental Stimulus Conditions

<table>
<thead>
<tr>
<th>Review Type</th>
<th>Low-Involvement Product</th>
<th>High-Involvement Product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer Review</strong></td>
<td>Flash Drive/Consumer Review</td>
<td>Hard Drive/Consumer Review</td>
</tr>
<tr>
<td><strong>Expert Review</strong></td>
<td>Flash Drive/Expert Review</td>
<td>Hard Drive/Expert Review</td>
</tr>
<tr>
<td><strong>No Review</strong></td>
<td>Flash Drive/No Review</td>
<td>Hard Drive/No Review</td>
</tr>
</tbody>
</table>


I created six versions of an experimental web site of the unfamiliar dataOne Corporation: low-involvement product/consumer review, low-involvement product/expert review, low-involvement product/no review, high-involvement product/consumer review, high-involvement product/expert review and high-involvement product/no review (the experimental groups are presented in Table 1).

The design of all versions was simple giving space to the pictures of products, their specifications, price, logo of the company and a web site menu (links on the web sites were not working); the only difference was in a product (either a flash drive or an external hard drive) and in a product review (consumer, expert, or no review). The consumer and expert reviews were exactly the same and there were only minor differences between the reviews for the different products. I created high-quality reviews, defined by Park et al. (2007) as logical and persuasive, supporting their evaluation with reasons based on the facets about a product. These authors found that the quality of online reviews has a positive effect on consumer purchase intention.

Expert and consumer product reviews for the flash drive were:

“The dataOne flash drive is well designed and fast. This jump drive with good performance and a solid construction offers a great value for the price.”

Expert and consumer product reviews for the hard drive were:

“The dataOne pocket-sized external USB hard drive is well designed and fast. This external hard drive with good performance and a solid construction offers a great value for the price.”

All reviews were assigned to fictitious Justin Delaney who was labeled “dataOne user” for the consumer review and “PC World Magazine” for the expert review. PC World Magazine was identified as an expert source familiar to college students and whose name is suggesting expertness to people who have not heard about it. The reviews were also labeled with graphically outstanding “USER REVIEW” or “EXPERT REVIEW” (see screenshots of the experimental web sites in Appendix A).
Pre-Test

I conducted a two-phase pre-test to ensure the suitability of the used products and reliable results. I used a convenience college student sample different from the sample used for the actual experiment. First, I surveyed a small sample of college students to identify a product category that is of interest to college students and which products students buy or are likely to buy on the internet. I compared the results with existing research. The Cheskin Research group (1999) in their e-commerce study found that consumers are planning to increase their purchases from the Internet especially in product categories currently doing best in e-commerce: music, books, computer software and hardware. I decided to use a category of computer accessories for my study with a flash drive as a low-involvement product and a portable external hard drive as a high-involvement product. In the second phase of the pre-test, I tested my choice on 53 college students (30.2% male and 69.8% female) ranging in age from 18 to 23.

All of the participants used the Internet every day, had a positive attitude toward using the Internet (62.3% very positive, 34.0% positive and 3.8% somewhat positive) and used the Internet to find information about products they intend to buy. Majority (64.2%) had also purchased electronics or computer accessories online. All participants at least occasionally read or viewed product reviews, while 52.8% were very interested in opinions of other users and 45.3% were somewhat interested in others’ opinions. When we look specifically at the two products selected for this study the results of the survey reveal that 84.9% of respondents had purchased a flash drive at some point, 30.2% of them would consider buying a flash drive online and 88.7% of participants did not care about the brand of a flash drive they would buy. In the case of the hard drive, 35.8% of participants had previously purchased it, 54.7% of them would consider buying a hard drive online and 52.8% of students would not care about the brand of a hard drive.
This study investigates an effect of product reviews on unfamiliar brands and it is therefore crucial to select products whose brand is of no great importance for consumers. The result of the pre-test revealed that participants did not greatly care about a brand neither of a flash drive nor of a hard drive. Participants in the survey had more experience with a flash drive but would more likely consider buying a hard drive online. This can be explained by the fact that a flash drive is a less expensive product that college students use frequently. Because it is cost effective and portable they might prefer to buy it in a store. I also asked about the minimum and maximum amount of money they would spend on a flash drive and a hard drive. On the basis of these results I set the price for a flash drive in the experiment for $9.99 and $99 for a hard drive.

Procedure

Before I launched the experiment I tested the experimental designs and the survey that followed the experiment on a small number of college students to make sure that everything was clear and understandable, especially the instructions and the survey. This student sample was different from the sample used for the experiment.

I recruited participants for this study at the Louisiana State University using a participant recruitment system of the School of Mass Communication. One hundred and six participants completed the survey and obtained extra credit for it. Even though using a student sample for traditional consumer research is disputable, typical online consumers tend to be younger in age and well educated (Wang et al., 2004). The student sample may therefore adequately reflect the online consumer population. Of the 106 participants 67.9 per cent were female (N = 72) and 32.1 per cent were male (N = 34). The age ranged from 18 to 28 and of all participants, 28 (26.4%) were 18, 35 (33.0%) were 19, 20 (18.9%) were 20, 13 (12.3%) were 21 and 10 (9.4%) of subjects were 22 and up. When looking at racial stratification of the sample, 88 subjects (83.0%) reported they were “White/Caucasian,” 8 participants (7.5%) said they were “African
American,” 4 (3.8%) “Hispanic,” 2 (1.9%) “Asian” and 4 (3.8%) subjects reported they belong to the “other” category.

The experiment was self-administrated, and participants took it on the Internet. After they clicked on the provided link and agreed with the informed consent form, they were instructed to visit a web site for the dataOne Corporation. They were randomly assigned to one of the six experimental web sites. The participants were asked to evaluate the web site and a product presented there and keep the window with the web site open so they could come back to it at any time while taking the survey. They could spend as much time as they wanted on the web site. After they evaluated the experimental stimulus the participants took a survey. They were instructed to base their answers just on the information provided on the web site.

**Measures**

I created two versions of questionnaires closely based on prior research. The first version was used for participants who were exposed to a web site with either consumer or expert review and the second one was used for students who saw a web site without any product review. The only difference was in ten extra questions that evaluated the quality of the product review for the group that saw the reviews (see the post-test questionnaire screenshots in Appendix B).

**Product Involvement Measure**

Mittal (1995) suggests that if researchers need to assess both product and purchase-decision involvements within the same research setting and minimize common method variance, then they might use Mittal’s purchase-decision involvement (PDI) scale. I adapted this scale for the purpose of this study. I simplified the wording of the scale and made it clear for participants based on my manipulation check. I added one more item question: “How important is it for you to research this product before you buy it?” with a seven-point semantic differential scale ranging from “not at all” to “a great deal.” The PDI portion of questions asked “In selecting from
the many types and brands of this product available on the market, how much do you care about the product you decide to purchase?” ranging from “not at all” to “a great deal;” “How important would it be for you to make a right choice of this product?” ranging from “not at all important to extremely important;” “In making your selection of this product, how concerned would you be about the outcome of your choice?” ranging from “not at all concerned” to “very much concerned” and “Do you think that the various types and brands of this product available in the market are” ranging from “all very similar” to “all very different.” Participants could answer all these questions on seven-point semantic differential scales.

**Product Quality Measure**

Perceived product quality is defined as “superiority of the product, relative to alternatives for its intended use” (Dean & Biswas, 2001). I adapted a four-item questionnaire portion from Dean and Biswas (2001) that asked whether the shown product was “superior,” was “the best in its class,” will “perform better than similar products,” and is “definitely a quality product” (Cronbach’s alpha=.87). The participants answered the items on seven-point Likert scale from “strongly disagree” to “strongly agree.”

**Attitude Toward a Brand**

I used a three-item portion based on Lafferty and Goldsmith (1999) to measure participants’ attitude toward the studied brand. The subjects answered on seven-point semantic differential scale whether their attitude toward the brand was “good-bad,” “favorable-unfavorable” and “pleasant-unpleasant” (Cronbach’s alpha=.96).

**Trust Toward a Brand**

I adapted a four-item trust questionnaire portion from the experimental study of Wang (2005). The subjects evaluated on a bipolar, seven-point semantic differential scales from “strongly disagree” to “strongly agree” whether “the brand is trustworthy,” the brand keeps its
promises,” “the brand keeps customer best interest in mind” and “the brand can be relied upon” (Cronbach’s alpha=.95).

**Purchase Intention**

Intention to purchase was measured on two six-point numeric scales that were adapted from Park et al. (2007). The measurements ranged from “extremely unlikely” to “extremely likely.” The subjects answered two questions “How likely is it that you would buy this product?” and “How likely is it that you would recommend this product to your friends?”

**Review Quality**

The participants who were exposed to the experimental web site with a product review answered an eight-question portion derived from Park et al. (2007) about the product review quality. The measurements ranged from “strongly disagree” to “strongly agree.” The subjects were asked: “When you think about the review of the product you have just read, you would say that” and the items were “the review has sufficient reasons supporting the opinions,” “the review is objective,” “the review is understandable,” “the review is credible,” “the review is clear,” “the quality of the review is high,” “the review positively evaluates the product,” “in general, the review recommends the product,” “the review provides useful information about the product,” and “the review is helpful for me to understand the product.”

**General Attitude Toward Reviews**

All the participants, whether they were exposed to the product reviews or not, answered a set of questions about their attitude toward product reviews based on the study of Park et al. (2007). The participants could range their answers on a six-point scale from “strongly disagree” to “strongly agree” and they reacted to these statements: “When I buy a product online, I always read reviews that are presented on the web site,” “When I buy a product online, the reviews presented on the web site are helpful for my decision making,” “When I buy a product online,
the reviews presented on the web site make me confident in purchasing the product.” “If I do not read the reviews presented on the web site when I buy a product online, I worry about my decision,” “When I buy a product online, reading the reviews presented on the web site impose a burden on me” and “When I buy a product online, reading the reviews presented on the web site irritates me.”

**Demographics and Web Use Measures**

In the survey I asked about participants’ experience with shopping on the Internet ranging on a six-point scale from “very positive” to “very negative,” and I added an option “I do not have experience with online shopping.” I also controlled for purchase experience with a similar type of product as participants were presented in their version of the web site with options “often,” “sometimes,” “rarely” and “never.” I used the same scale for a question “How often do you read/view reviews of products you are interested in buying (in any type of media outlet)?” In the demographics section of the survey, subjects responded to questions about their age, gender and race.
RESULTS

The 106 participants were randomly assigned to visit one of six variations of the dataOne Corporation web site. From those who visited a web site presenting a flash drive 22 (20.8%) saw the expert product review, 17 (16.0%) saw the user product review and 16 (15.1%) saw no product review. The rest of subjects visited a web site presenting an external hard drive, 18 (17.0%) saw the expert product review, 16 (15.1%) saw the user product review and 17 (16.0%) saw no product review.

Manipulation and Control Checks

I asked three questions about participants’ experience with e-commerce to control for possible effect on their scores. The first question was about subjects’ experience with online shopping. The vast majority of them had positive experience with shopping on the Internet, 11 (10.4%) reported very positive experience, 63 (59.4%) positive experience, 26 (24.5%) somewhat positive experience, four (3.8%) somewhat negative experience, one (0.9%) negative experience and one (0.9%) participant did not have any experience with online shopping (M = 2.29, SD = 0.862). Secondly, the participants answered how often they read or view reviews of products they are interested in buying. Most of them, 55 (51.9%) read or view product reviews often, 34 (32.1%) participants read or view reviews sometimes and 17 (16.0%) read or view reviews rarely (M = 1.64, SD = 0.746). Lastly, the participants reported how often they purchase a similar product as the one they saw on the web site. From 55 participants who were exposed to the web site with a flash drive, three (5.5%) people purchase the product often, 13 (23.6%) sometimes, 25 (45.5%) rarely and 14 (25.5%) never (n = 55, M = 2.91, SD = 0.845). Fifty-one subjects visited the web site with an external hard drive and from the sample four (7.8%) people purchase the product often, 12 (23.5%) sometimes, 15 (29.4%) rarely and 20 (39.2%) never (n =
51, \( M = 3.00, SD = 0.980 \)). Based on the Chi-Square test, there is no statistically significant difference between both products and participants’ frequency of purchase.

All the subjects answered six questions about their attitude toward online product reviews. The first question asked if participants always read product reviews presented on a web site when buying a product online: 27 (25.5%) participants strongly agreed, 44 (41.5%) agreed, 20 (18.9%) somewhat agreed, 10 (9.4%) somewhat disagreed, three (2.8%) disagreed and two (1.9%) strongly disagreed (\( M = 4.72, SD = 1.14 \)). When asked if reviews presented on a web site are important for participants’ decision making, 25 (23.6%) subjects strongly agreed, 44 (41.5%) agreed, 29 (27.4%) somewhat agreed, four (3.8%) somewhat disagreed, three (2.8%) disagreed and one (.9%) strongly disagreed (\( M = 4.76, SD = 1.01 \)). In the next question, the participants answered if product reviews presented on a web site make them confident in purchasing a product. From all, 20 (18.9%) strongly agreed, 38 (35.8%) agreed, 37 (34.9%) somewhat agreed, eight (7.5%) somewhat disagreed, two (1.9%) disagreed and one (.9%) participant strongly disagreed (\( M = 4.59, SD = 1.00 \)). When asked whether the participants would worry about their purchase decision if they did not read reviews presented on a web site, five (4.7%) strongly agreed, 28 (26.4%) agreed, 25 (23.6%) somewhat agreed, 24 (22.6%) somewhat disagreed, 21 (19.8%) disagreed and three (2.8%) strongly disagreed (\( M = 3.65, SD = 1.27 \)). The next question asked whether reading product reviews presented on a web site impose a burden on participants when buying a product online; one (.9%) strongly agreed, nine (8.5%) agreed, 17 (16.0%) somewhat agreed, 25 (23.6%) somewhat disagreed, 48 (45.3%) disagreed and six (5.7%) strongly disagreed (\( M = 2.79, SD = 1.11 \)). The last question about general attitudes toward online product reviews asked participants whether reading product reviews on a web site irritates them; three (2.8%) strongly agreed, seven (6.6%) agreed, 16 (15.1%) somewhat agreed, 19 (17.9%)
somewhat disagreed, 46 (43.4%) disagreed and 15 (14.2%) subjects strongly disagreed ($M = 2.65$, $SD = 1.25$).

This study seeks to investigate effect of product reviews on products requiring different level of consumer involvement. I ran two tests of one-way analysis of variance (ANOVA) to make sure my product choice of a flash drive as a low-involvement product and an external hard drive as a high-involvement product was correct. First I used scores of question “How important is it for you to research this product before you buy it?” ANOVA test compared means between low-involvement and high-involvement groups. The test found significant differences in product involvement. The external hard drive was significantly more involving ($M = 6.01$, $SD = 1.183$) than the flash drive ($M = 4.29$, $SD = 1.833$, $F(1, 104) = 33.478, p < .000$). The statistically significant difference was also found when running ANOVA test on scores from the purchase-decision involvement (PDI) scale of Mittal (1995). This four-item scale measure both product and purchase-decision involvement (Cronbach’s alpha = .83). The participants were significantly more involved in the hard drive group ($M = .478$, $SD = .736$) than in the flash drive group; $M = -.443$, $SD = 1.01$, $F(1, 104) = 28.29, p < .000$ (see Table 2).

Table 2
Analysis of Variance for Product Involvement

<table>
<thead>
<tr>
<th></th>
<th>High-Involvement Product Mode</th>
<th>Low-Involvement Product Mode</th>
<th>$df$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>“How important is it for you to research this product before you buy it?”</td>
<td>6.04</td>
<td>4.29</td>
<td>1, 104</td>
<td>33.478***</td>
<td>.000</td>
</tr>
<tr>
<td>PDI scale</td>
<td>.48</td>
<td>-.44</td>
<td>1, 104</td>
<td>28.289***</td>
<td>.000</td>
</tr>
</tbody>
</table>

* $p < .05$; ** $p < .01$; *** $p < .001$
Constructing the Measures

I ran a construct new variable operation in the statistical program that compressed used variable measures adapted from previous research into one variable and tested reliability of all scales. The product quality section of the survey included four-item questionnaire portion from Dean and Biswas (2001) (Cronbach’s alpha = .88). The next three items asked about the attitude toward the brand. The questionnaire section was based on Lafferty and Goldsmith (1999) (Cronbach’s alpha = .95). The next section asked about trust toward the studied brand. I adapted a four-item trust questionnaire portion from Wang (2005) (Cronbach’s alpha = .92). The purchase intention section included two questions based on Park et al. (2007) (Cronbach’s alpha = .94). For the review quality section I adapted a questionnaire of Park et al. (2007). The review quality portion included six questions (Cronbach’s alpha = .87; see Table 3).

Table 3
Scales Reliability

<table>
<thead>
<tr>
<th>Questionnaire Adapted From</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase-Decision Involvement (PDI)</td>
<td>.83</td>
</tr>
<tr>
<td>Product Quality</td>
<td>.88</td>
</tr>
<tr>
<td>Brand Attitudes</td>
<td>.95</td>
</tr>
<tr>
<td>Brand Trust</td>
<td>.92</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>.94</td>
</tr>
<tr>
<td>Review Quality</td>
<td>.87</td>
</tr>
</tbody>
</table>
Hypotheses Testing

H1(a): Online consumer product reviews will have a greater positive effect on perceived product quality than no online product reviews.

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on perceived product quality in consumer product reviews and no product reviews conditions. The results revealed that there was a statistically significant difference between the two conditions. Subjects who were exposed to the consumer review evaluated the product quality higher ($M = .22, SD = .87$) than subjects who saw no product review ($M = -.30, SD = .97, F (1, 64) = 5.25, p < .025$). The results support the hypotheses, confirming online consumer product reviews affect perceived product quality more than no online product reviews (see Table 4).

H1(b): Online expert product reviews will have a greater positive effect on perceived product quality than no online product reviews.

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on perceived product quality in expert product reviews and no product reviews conditions. The results revealed that there was no statistically significant difference between the two conditions. Therefore, the hypothesis was not supported.

H2(a): Online consumer product reviews will have a greater positive effect on attitude toward a brand than no online product reviews.

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on attitude toward a brand in consumer product reviews and no product reviews conditions. The results revealed that there was a statistically significant difference between the two conditions. Subjects who were exposed to the consumer review held higher brand attitudes ($M = -.30, SD = .91$) than subjects who saw no consumer review ($M = .16, SD = .97, F (1, 64) = $
3.89, \( p < .053 \); negative values in this case meant higher brand attitudes due to the construct of the measure scale that ranged from positive to negative values. The results support the hypotheses, confirming online consumer product reviews affect brand attitude more than no online product reviews (see Table 4).

**H2(b): Online expert product reviews will have a greater positive effect on attitude toward a brand than no online product reviews.**

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on attitude toward a brand in expert product reviews and no product reviews conditions. The results revealed that there was no statistically significant difference between the two conditions. Therefore, the hypothesis was not supported.

**H3(a): Online consumer product reviews will have a greater positive effect on trust in a brand than no online product reviews.**

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on trust in a brand in consumer product reviews and no product reviews conditions. The results revealed that there was a statistically significant difference between the two conditions. Subjects who were exposed to the consumer review scored in trust in the brand higher (\( M = .22, SD = .87 \)) than subjects who saw no consumer review (\( M = -.20, SD = .79, F (1, 64) = 4.22, p < .044 \)). The results support the hypotheses, confirming online consumer product reviews affect trust in a brand more than no online product reviews (see Table 4).

**H3(b): Online expert product reviews will have a greater positive effect on trust in a brand than no online product reviews.**

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on trust in a brand in expert product reviews and no product reviews conditions.
The results revealed that there was no statistically significant difference between the two conditions. Therefore, the hypothesis was not supported.

**H4(a): Online consumer product reviews will have a greater positive effect on purchase intention than no online product reviews.**

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on purchase intention in consumer product reviews and no product reviews conditions. The results revealed that there was a statistically significant difference between the two conditions. Subjects who were exposed to the consumer review scored in their intention to purchase higher \((M = .35, SD = .90)\) than subjects who saw no consumer review \((M = -.19, SD = .98, F (1, 64) = 5.37, p < .024)\). The results support the hypotheses, confirming online consumer product reviews affect purchase intention more than no online product reviews (see Table 4).

**H4(b): Online expert product reviews will have a greater positive effect on purchase intention than no online product reviews.**

A one-way analysis of variance between subjects was conducted to compare the effect of product reviews on purchase intention in expert product reviews and no product reviews conditions. The results revealed that there was no statistically significant difference between the two conditions. Therefore, the hypothesis was not supported.

**H5: Participants will evaluate review quality of online expert product reviews higher than of online consumer product reviews.**

A one-way analysis of variance between subjects was conducted to compare the effect of message source on perceived quality of reviews in consumer product reviews and expert product reviews conditions. The results revealed that there was no statistically significant difference between the two conditions. There was no statistically significant difference between consumer and expert reviews even when an analysis of variance was run for all questions of the
questionnaire portion separately. The subject did not evaluate the expert reviews higher than the consumer reviews. Therefore, the hypothesis was not supported.

Table 4
Analysis of Variance for High-Involvement Product Condition with Online Consumer Review or No Review

<table>
<thead>
<tr>
<th></th>
<th>Online Consumer Review Mean</th>
<th>No Review Mean</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Product Quality</td>
<td>.22</td>
<td>-.30</td>
<td>1, 64</td>
<td>5.25*</td>
<td>.025</td>
</tr>
<tr>
<td>Brand Attitude(a)</td>
<td>-.30</td>
<td>.16</td>
<td>1, 64</td>
<td>3.89</td>
<td>.053</td>
</tr>
<tr>
<td>Trust in Brand</td>
<td>.22</td>
<td>-.20</td>
<td>1, 64</td>
<td>4.22*</td>
<td>.044</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>.35</td>
<td>-.19</td>
<td>1, 64</td>
<td>5.37*</td>
<td>.024</td>
</tr>
</tbody>
</table>

* \(p < .05\); ** \(p < .01\); *** \(p < .001\)
\(a\) Different scale was used for this variable compared to the other scales, ranging from positive to negative.

Research Questions Testing

**RQ1(a):** What are the differences in perceived product quality between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?

A one-way analysis of variance showed a main effect of product reviews on perceived product quality in the high-involvement product group, \(F (2, 48) = 5.23, p < .009\). Post hoc comparison using the LSD test indicated that the subjects who were exposed to the online consumer product review had significantly higher purchase intentions (\(M = .42, SD = .74\)) than the subjects who saw no review (\(M = -.62, SD = 1.00, p < .002\)). The difference in means of the online expert review group (\(M = -.03, SD = 1.03\)) and the group that saw no reviews (\(M = -.62, SD = 1.00\)) was approaching the generally acceptable level of statistical significance (\(p < .065\)).
Perceived product quality of the group exposed to the online consumer product review was not statistically different than the group that saw the online expert product review (see Table 5).

Table 5
LSD Comparison for Perceived Product Quality (High-Involvement Product)

<table>
<thead>
<tr>
<th>Comparisons Between Reviews</th>
<th>Mean Diff (I-J)</th>
<th>Std. Error</th>
<th>95% CI Lower Bound</th>
<th>95% CI Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>User vs. Expert</td>
<td>.45</td>
<td>.32</td>
<td>-.19</td>
<td>1.10</td>
</tr>
<tr>
<td>User vs. No</td>
<td>1.05**</td>
<td>.33</td>
<td>.39</td>
<td>1.71</td>
</tr>
<tr>
<td>Expert vs. No</td>
<td>.60</td>
<td>.32</td>
<td>-.04</td>
<td>1.23</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001

RQ1(b): What are the differences in perceived product quality between online consumer reviews, online expert product reviews and no reviews for a low-involvement product?

A one-way analysis of variance showed there was no statistically significant difference between the consumer product review, the expert product review and no product review conditions for the low-involvement product group.

RQ2(a): What are the differences in attitude toward a brand between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?

A one-way analysis of variance showed a main effect of product reviews on attitude toward a brand in the high-involvement product group, $F(2, 48) = 3.64, p < .034$. Post hoc comparison using the LSD test indicated that the subjects who were exposed to the online consumer product review had significantly higher purchase intentions ($M = -.34, SD = 1.06$) than the subjects who saw no review ($M = .59, SD = 1.02, p < .010$); negative values in this case meant higher brand attitudes due to the construct of the measure scale that ranged from positive
to negative values. The difference between the subjects who saw the online consumer product review and the subjects who saw the online expert review ($M = .26, SD = .92$) approached the generally acceptable level of statistical significance ($p < .088$). Brand attitudes of the group exposed to the online expert product review were not statistically different than attitudes of the group that saw no product review (see Table 6).

### Table 6
LSD Comparison for Attitude toward Brand (High-Involvement Product)$^a$

<table>
<thead>
<tr>
<th>Comparisons Between Reviews</th>
<th>Mean Diff (I-J)</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>User vs. Expert</td>
<td>-.60</td>
<td>.34</td>
<td>-.129</td>
<td>.09</td>
</tr>
<tr>
<td>User vs. No</td>
<td>-.93**</td>
<td>.35</td>
<td>-.163</td>
<td>-.23</td>
</tr>
<tr>
<td>Expert vs. No</td>
<td>-.33</td>
<td>.34</td>
<td>-.101</td>
<td>.35</td>
</tr>
</tbody>
</table>

* $p < .05$; ** $p < .01$; *** $p < .001$

$^a$ Different scale was used for this variable compared to the other scales, ranging from positive to negative.

**RQ2(b): What are the differences in attitude toward a brand between online consumer reviews, online expert product reviews and no product reviews for a low-involvement product?**

A one-way analysis of variance showed there was no statistically significant difference between the consumer product review, the expert product review and no product review conditions for the low-involvement product group.

**RQ3(a): What are the differences in trust in a brand between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?**

Even though a one-way analysis of variance did not reveal a main effect of product reviews on trust in a brand in the high-involvement product group, the post hoc comparison
using the LSD test indicated that the subjects who were exposed to the online consumer product review had significantly higher trust in the brand ($M = .20, SD = 1.01$) than the subjects who saw no review; $M = -.48, SD = .97, p < .055$ (see Table 7).

**RQ3(b):** What are the differences in trust in a brand between online consumer reviews, expert product reviews and no product reviews for a low-involvement product?

A one-way analysis of variance showed there was no statistically significant difference between the consumer product review, the expert product review and no product review conditions for the low-involvement product group.

**RQ4(a):** What are the differences in purchase intention between online consumer reviews, online expert product reviews and no product reviews for a high-involvement product?

A one-way analysis of variance showed a main effect of product reviews on purchase intention in the high-involvement product group, $F (2, 48) = 4.12, p < .022$. Post hoc comparison using the LSD test indicated that the subjects who were exposed to the online consumer product review had significantly higher purchase intentions ($M = .46, SD = .84$) than the subjects who saw the online expert review ($M = -.25, SD = 1.10, p < .046$) and the subjects who saw no review.

**Table 7**

LSD Comparison for Trust in Brand (High-Involvement Product)

<table>
<thead>
<tr>
<th>Comparisons Between Reviews</th>
<th>Mean Diff (I-J)</th>
<th>Std. Error</th>
<th>95% CI Lower Bound</th>
<th>95% CI Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>User vs. Expert</td>
<td>.51</td>
<td>.34</td>
<td>-.18</td>
<td>1.20</td>
</tr>
<tr>
<td>User vs. No</td>
<td>.68</td>
<td>.35</td>
<td>-.02</td>
<td>1.38</td>
</tr>
<tr>
<td>Expert vs. No</td>
<td>.17</td>
<td>.34</td>
<td>-.51</td>
<td>.85</td>
</tr>
</tbody>
</table>

* $p < .05$; ** $p < .01$; *** $p < .001$
Purchase intention of the group exposed to the online expert product review was not statistically different than purchase intention of the group that saw no product review (see Table 8).

**Table 8**
LSD Comparison for Intention to Purchase (High-Involvement Product)

<table>
<thead>
<tr>
<th>Comparisons Between Reviews</th>
<th>Mean Diff (I-J)</th>
<th>Std. Error</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>User vs. Expert</td>
<td>.70*</td>
<td>.34</td>
<td>.01</td>
</tr>
<tr>
<td>User vs. No</td>
<td>.97**</td>
<td>.35</td>
<td>.27</td>
</tr>
<tr>
<td>Expert vs. No</td>
<td>.27</td>
<td>.34</td>
<td>-.41</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001

**RQ4(b):** What are the differences in purchase intention between online consumer reviews, expert product reviews and no product reviews for a low-involvement product?

A one-way analysis of variance showed there was no statistically significant difference between the consumer product review, the expert product review and no product review conditions for the low-involvement product group.
DISCUSSION

This study investigated the effect of consumer and expert online product reviews versus no product reviews in a high-involvement and a low-involvement product category on consumers’ perceived product quality, brand attitudes, brand trust and purchase intentions. Two strong findings came from the study. First, online consumer product reviews were significantly more effective on all studied variables than no product reviews; online consumer reviews also performed better than online expert reviews. Second, online product reviews worked the best for the high-involvement product (external hard drive). Combined together, online consumer product reviews were the most effective in the high-involvement condition and affected all brand metrics more than the other types of reviews. There was no statistically significant difference between the review types in the low-involvement condition (flash drive). The findings imply that consumers more involved in a product and brand evaluation process search for opinions of other consumers and partly base their attitudes and intentions on other consumers’ opinions.

Scholars and market specialists agree on the importance of product reviews in current e-commerce. Reviews help consumers in their product choices. For companies, online reviews represent a very cheap way to gain credibility in their products and services. Companies can also implement consumers’ feedback and use reviews to improve the quality of their offer. According to the survey study of eVOC Insights (2006), 63% of users indicated that they are more likely to purchase from a web site if it has ratings or reviews. These findings imply that reviews and ratings can boost the confidence in purchase behavior as well as foster a trusted relationship with web site visitors. In this experiment, 92.5% of participants expressed that reviews on a web site are important for their purchase decision making. The findings also clearly show that consumers prefer opinions of other consumers to expert endorsements. The same message was evaluated differently depending if it originated from another consumer or from an expert.
Online product reviews are important in consumer decisions and can be a strong competitive advantage for companies. If companies do not allow posting of product reviews on their web sites, they may be losing out on important customers. A good example of how product reviews can drive sales is a baby goods retailer that introduced a new navigation feature to its web site showing product reviews - the company reported an increase in sales by 55% with around 80% of the business coming from new customers (Silicon.com, 2009). This indicates how important it is for companies to display product reviews on their web sites. The findings of the current study also confirm that product reviews positively affect consumer attitudes and intentions compared to no product reviews.

Before I discuss the differences between studied product reviews, it is important to talk about the effect of the product involvement condition used in this study. It was aim of the experiment to analyze differences between products so companies can use the findings for various goods. The elaboration likelihood model explains why consumers spend different amounts of time and effort when shopping or thinking about products. The model mentions two routes of elaboration process. Consumers use either central route (high-involvement elaboration) or peripheral route (low-involvement elaboration), depending on the level of involvement either with the product or with the shopping situation (e.g. Kim & Benbasat, 2003; Te’Eni-Harari et al., 2007). The model hypothesizes that consumers care about different things in different levels of involvement. Consumers who are exposed to persuasive messages under the high-involvement condition tend to thoroughly evaluate arguments (Kim & Benbasat, 2003). Therefore, consumers care about issue-relevant arguments and product-relevant attributes (Yang, Hung, Sung & Farn, 2006). In this condition, consumers carefully process the information, weigh the provided arguments and place a premium on the message quality and argument strength.
On the contrary, consumers in the low-involvement condition judge information according to simple heuristic cues such as the reputation of the source, number of arguments presented, length of an argument and without careful consideration of the argument content (Kim & Benbasat, 2003). In the low-involvement condition, consumers are not willing to spend a lot of time evaluating persuasive messages. Scholars who evaluated effect of product reviews in low-involvement conditions often mentioned the number of reviews as an important cue for consumers (Park & Kim, 2008; Sher & Lee, 2009). Lien (2001) points out to the expertness as to another peripheral cue. Sher & Lee (2009) argue that individuals with low need for cognition do not enjoy cognitive efforts and prefer to rely on opinions of others, preferable experts, when dealing with complicated issues. The results of this study did not find the expertness as an effective cue for low-involvement condition. The consumer reviews worked better for the low-involvement product as well as for the high-involvement product.

In the alignment with the previous findings, investigated product reviews significantly affected just participants exposed to the high-involvement product. The subjects who evaluated the more expensive and more sophisticated product ascribed to the product a higher level of significance, as the data has shown, and participants may have made higher cognitive effort to evaluate the product. They were exposed to one product review that was designed as a high-quality review and the quality review may have helped them in their information processing. On the contrary, subjects exposed to the low-involvement product were affected much less by the product review. Based on the theory, these participants did not ascribe a large significance to their product evaluation and depended on peripheral cues. They may have not paid much attention to the one product review they were exposed to. In order to persuade consumers evaluating the low-involvement product, it would be wise to employ more peripheral cues, e.g. display a number of reviews that consumers can associate with the popularity of the product. In
summary, the results suggest that using one quality product review is reasonable for the high-involvement product and opinions of other consumers may positively affect consumers’ attitudes toward a brand, trust in a brand, their evaluation of the product and consumers’ purchase intentions.

The participants did not score the review quality of expert product reviews higher than the quality of consumer product reviews. It seems that participants evaluated the quality of the review based on the message and not on the source. When evaluating the quality of the review, participants might have focused on the message on its own, and they may not have considered the message sponsor. However, when participants were asked to evaluate the brand, the sponsor of the product review message significantly affected participants in their evaluation of all four studied brand metrics. Although the review message was the same, the online consumer reviews performed much better than the online expert reviews. When comparing the groups that saw the product review with the control group that saw no review, the online consumer reviews affected studied variables significantly more than no reviews. Although the expert reviews performed better than no reviews, no significant difference was found. Wang (2008) argues that even though consumers perceive expert reviews as more credible they perceive consumer reviews as more useful than expert recommendations. Consumers are perhaps more interested in what real people think about products and how useful they find them. Expert reviews are based on laboratory testing in somewhat artificial conditions but other consumers can better describe product’s characteristics important for other consumers. The survey of Nielsen Media Research confirmed that consumer’s preference of peer reviews, 85% consumers in their sample preferred consumer reviews over expert reviews (Comcorp.com, 2007).

When analyzing the data in more detail, the online consumer reviews affected purchase intention and perceived product quality the most. The findings are similar to the results of Park et
al. (2007) who found that quality online reviews with strong reasoning based on specific facts about the product have a strong positive effect on consumer purchase intention. Chu et al. (2005) also found that third-party product evaluations had a more positive effect on purchase intention than no evaluations. Contrary to the findings of this study, Chu et al. found a robust effect when a reputable third-party subject evaluated the product. While more factors could affect the subjects in their preference of consumer reviews over expert endorsements, the student sample may have played an important role. Young people tend not to trust authorities and follow their advice and therefore the subjects in the sample might have preferred to trust other consumers rather than to experts. Many consumers are also aware of the fact that some companies pay third-party sources when they review their products. When consumers evaluate products that require a high level of knowledge and expertise, such as a hard drive, they might turn to other consumers rather than to experts since the other users’ experience can indicate how they can use the somehow sophisticated product. Product reviews also signalize unobservable product quality such as performance, reliability, and durability of the product and therefore increase the perception of product quality (Dean & Biswas, 2001). The online product reviews indeed positively affected the subject in their ratings of product quality.

The subjects who saw online consumer reviews had higher brand attitudes and trust in the brand. Building on the study of Beatty and Foxx (2004), this study confirmed that online consumer product reviews function as effective cues in the cue-based trust based on an individual’s initial encounter of a stimulus. Consumer product reviews had the weakest effect on brand attitudes. Scholars argue that it is difficult to change people’s attitudes. Opinions of other consumers, however, still significantly affected participants’ attitudes. Most of consumers trust consumer reviews (Readwriteweb.com, 2008). If other consumers had a good experience with the company and its product that they signalized in the consumer review, the experiment
participants may have hold positive attitudes toward the company and believed that it will satisfy their needs, too.

The online consumer reviews were most effective when used for the high-involvement product. The consumer reviews performed the best on the scores of participants’ purchase intentions. Those who saw the consumer review had significantly higher purchase intentions than both other groups (expert reviews and no reviews). The consumer review affected the perceived product quality the most but also the online expert product review affected the variable significantly more than no review. Online consumer reviews performed the worst on consumers’ trust in the brand. The group exposed to the consumer review still had higher trust in the brand than the other two groups, but the difference was not that significant. Online consumer reviews affected participants’ brand attitudes significantly more than no reviews when subjects evaluated the hard drive.

**Implications for Industry Professionals**

This study was intended as a practical manual for industry professionals to address an issue of the usage of online product reviews in firms’ online marketing strategies. It is especially difficult for new and unfamiliar brands to successfully advertise online. The findings of this study provide important information for start-up companies that often have low budgets and cannot afford extensive paid advertising but also for established online brands and vendors. These results can help in firms’ decision if displaying product reviews on their web sites is beneficial for them and what type of reviews to use. Barton (2002) mentions a survey of 137 retailers where 26% of them offered customer ratings and reviews on their web sites and 96% of those indicated its effectiveness at increasing online conversion rates. Consumers trust consumer reviews. According to the report of Forrester Research (Readwriteweb.com, 2008), consumer
reviews with 60% people trusting them, were the second most trusted online source after an email from people consumers know.

This study’s findings reveal how important is it for brands selling high-involvement experience products to display product reviews on their web sites. Online expert reviews performed well and definitely helped consumers in their evaluations of the product and their attitudes toward brand and purchase decisions. However, it is clear that opinions from other consumers were more useful for consumers. Even when the message was the same the participants were affected much more when the source of the message was another consumer. Expert reviews are definitely important for consumers. Consumers often use them to narrow down their product choice but then consumers want to know what other people think about the products and they turn to consumer reviews. It is not always the quality of the product or its innovativeness emphasized in expert reviews what matters to consumers, but how difficult is it to use the product. This message can be effectively conveyed via consumer reviews.

It is important for online companies that they allow their customers to leave comments about their products and that the firms display these opinions on their web sites. It is especially affective for experience products. The brands should also push for their products to be reviewed by reputable expert subjects and display these endorsements on their sites. However, it is the consumer review that will probably persuade visitors that the presented product is potentially valuable for them and that they should consider purchasing it.

**Limitations and Future Research**

This experimental study employed the use of college students from Louisiana State University. Although college students tend to resemble the general Internet user as mentioned above, there are some differences in processing information online and online behavior between students and nonstudents. Lackaff and Cheong (2010) in their study of evaluative process that
students use in their search for online information found that students’ credibility assessments are highly pragmatic and authority of source is not a major determinant in students’ informational evaluations. When students do not know the source of information, they often corroborate found information with additional sources. Metzger et al. (2003), however, found that students verify online information significantly less than nonstudents. The authors found that students did not significantly vary from non-students with respect to how credible they found the internet. Metzger et al. implied that perhaps students because of their extensive experience with the web feel that they can trust online information.

This study used two products from one product category to test the hypotheses. The results showed that the involvement in these two products is significantly different. However, it would be advisable to test the study assumptions on different products. Online product reviews might affect consumers differently when evaluating different product categories, especially with less experience products.

Future studies should also test the study’s assumptions on larger and more diverse sample using different products. Researchers should also test the effects of both consumer and expert reviews displayed on one web site, with a different number of both types. Another important question is what review format is the most persuasive, so companies can display the most effective reviews on their sites. There are many questions to be answered about the effectiveness of product reviews. The answers to many of them can have practical implications for industry professionals, increase consumers’ trust in e-commerce and raise profits in this growing business segment.
REFERENCES


Friedman, B., Kahn, P. H., & Howe D. C. (2000). Trust online. Trust can be cultivated to enhance our personal and social lives and increase our social capital. *Communications of the ACM, 43*(12), 34-40.


APPENDIX A

WEB SITE SCREENSHOTS

Picture 1. Screenshot of low-involvement condition with online consumer review

Picture 2. Screenshot of low-involvement condition with online expert review
Picture 3. Screenshot of low-involvement condition with no review

Picture 4. Screenshot of high-involvement condition with no review
Picture 5. Screenshot of high-involvement condition with online consumer review

Picture 6. Screenshot of high-involvement condition with online expert review
APPENDIX B

POST-TEST SCREENSHOTS

Q67 □ Base your answers ON THE INFORMATION PROVIDED. You can go back to the experimental web site at any time.

Q35 □ How important is it for you to research this product before you buy it?

Not at all | | | | | | | | | | A great deal

Q36 □ In selecting from the many types and brands of this product available on the market, how much do you care about the product you decide to purchase?

Not at all | | | | | | | | | | A great deal

Q37 □ How important would it be for you to make a right choice of this product?

Not at all important | | | | | | | | | | Extremely important

Q38 □ In making your selection of this product, how concerned would you be about the outcome of your choice?

Not at all concerned | | | | | | | | | | Very much concerned

Q39 □ Do you think that the various types and brands of this product available in the market are

All very similar | | | | | | | | All very different
### Product quality

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The product is superior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The product is the best in its class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The product will perform better than similar products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The product is definitely a quality product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### My attitude toward the brand is

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Good</th>
<th>Favorable</th>
<th>Pleasant</th>
<th>Bad</th>
<th>Unfavorable</th>
<th>Unpleasant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
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<td>●</td>
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<td></td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>
### Trust toward the brand

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The brand is trustworthy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The brand keeps its promises</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The brand keeps customer best interest in mind</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The brand can be relied upon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Purchase intention

<table>
<thead>
<tr>
<th></th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Somewhat Unlikely</th>
<th>Somewhat Likely</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>How likely is it that you would buy this product?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How likely is it that you would recommend this product to your friends?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### List the most important reasons why would you consider buying this product

[Blank space for input]
### Q40

When you think about the review of the product you have just read, you would say that

|                                 | Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree |
|---------------------------------|-------------------|----------|-------------------|               |       |                |
| The review has sufficient reasons supporting the opinions | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The review is objective         | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The review is understandable    | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The review is credible          | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The review is clear             | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The quality of the review is high | ○                  | ○        | ○                 | ○             | ○     | ○               |

### Q41

When you think about the review of the product you have just read, you would say that

|                                 | Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree |
|---------------------------------|-------------------|----------|-------------------|               |       |                |
| The review positively evaluates the product | ○                  | ○        | ○                 | ○             | ○     | ○               |
| In general, the review recommends the product | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The review provides useful information about the product | ○                  | ○        | ○                 | ○             | ○     | ○               |
| The review information is helpful for me to understand the product | ○                  | ○        | ○                 | ○             | ○     | ○               |
### General attitude toward online product reviews

<table>
<thead>
<tr>
<th>Q42</th>
<th>When I buy a product online, I always read reviews that are presented on the Web site.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q67</th>
<th>When I buy a product online, the reviews presented on the Web site are helpful for my decision making.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

|       | When I buy a product online, the reviews presented on the Web site make me confident in purchasing the product. |
|       | Strongly Disagree | Disagree | Somewhat Disagree | Somewhat Agree | Agree | Strongly Agree |
|       | ○ | ○ | ○ | ○ | ○ | ○ |

<table>
<thead>
<tr>
<th></th>
<th>If I do not read the reviews presented on the Web site when I buy a product online, I worry about my decision.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>When I buy a product online, reading the reviews presented on the Web site impose a burden on me.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>When I buy a product online, reading the reviews presented on the Web site irritates me.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>
Q46
What is your age?

Q47
What is your sex?
- Female
- Male

Q48
What is your race?
- White/Caucasian
- African American
- Hispanic
- Asian
- Native American
- Pacific Islander
- Other
VITA

Pavel Mrazek was born in the Czech Republic in a small town Prostejov. He completed his undergraduate studies at Masaryk University in Brno and majored in media studies and journalism and also in European studies. Pavel studied a year at University of Nebraska-Lincoln and majored there in advertising. The stay in Nebraska motivated Pavel to pursue his master’s in the United States. Pavel began his studies at Louisiana State University in August of 2008. While studying at Louisiana State University, he combined his passion and interest in advertising with his experience in Internet advertising, new media and non-profit sector. This thesis is a result of his endeavor for practical implications of his research.