When Kiosk Retailing Intimidates Shoppers
How Gender-Focused Advertising Can Mitigate the Perceived Risks of the Unfamiliar

This study addresses kiosk-based shopping behavior among female consumers. The authors sought to build upon existing promotional retail research that showed and explained gender differences in experiential shopping environments. Upon confirming extant literature findings of gender differences as they apply to perceptions of shopping risk in kiosk environments, the current study manipulates levels of anticipated regret for males and females when shopping in kiosks versus traditional department stores in a between-subjects experimental design incorporating a diverse non-student sample. The robust gender difference indicates that targeted promotions for kiosks are critical to the reduction of possible regret and risk perceptions, especially for females.

INTRODUCTION
Movement toward a better understanding of the multi-faceted nature of novel retailing environments is important for retailers who strive to stay at the forefront of the innovative consumers (Baker, Parasuraman, Grewal, and Voss, 2002; Cronin, Brady, and Hult, 2000).

Although much effort has been devoted to understanding brick-and-mortar retailers, a deeper understanding of the consumer decision-making process with respect to shopping in mobile environments is lacking. Further, the in-store kiosk opportunities continue to grow. In North America, the world’s largest kiosk market, the number of units has increased from 1.82 million in 2008 to 1.85 million in 2009 to a projected 1.9 million by the end of 2010 (Cooper, 2009).

Although the presence of kiosks has expanded, research regarding both consumer shopping behavior and appropriate promotion decisions in kiosk-related environments is scant. The authors, therefore, propose to address promotions for kiosk environments (Moerloose et al., 2005; Kim and Runyan, 2010).

The current paper examines kiosk-based shopping behavior as influenced by risk perceptions, satisfaction, anticipated regret, and advertisement credibility, with particular focus on the female consumer. The authors’ objective is to build upon existing promotional retail research that has explained gender differences in experiential shopping. More specifically, the current paper seeks to clarify the reluctance of females to shop at kiosk retailers due to risk perceptions (Krishen, Bui, and Peter, 2010) and to identify a key promotional tool (i.e. advertisements) that retail managers can use to reduce such negative predispositions.

Through an empirical framework entailing a diverse “snowball” sample of “non-students,” the authors also seek to disentangle the negative perceptions that females have toward kiosks. More specifically, via a preliminary study that used a convenience sample of students, the research framework confirmed previous findings regarding females and their perceived risk of certain shopping environments such as kiosks. The main snowball study shows that, in an anticipated-regret condition, advertising credibility is a key concern for females with respect to kiosk shopping environments.

This paper contributes to existing research regarding gender differences in shopping, first, by underscoring these differences for kiosk
environments (as opposed to department stores), and then, by showing how advertisements must be created differently for these two environments to mitigate risk perceptions (particularly for females).

The paper begins with a review of pertinent existing literature on gender-based promotion and shopping difference, moves on to a review of regret theory as it pertains to the current study, and then offers a conceptual framework for the research. The authors briefly discuss their preliminary study—confirming females’ reactions to kiosk retail environments—followed by a more detailed discussion of the snowball-sample main study. Finally, the paper suggests managerially actionable implications, consequences for theory, and future research directions.

**LITERATURE REVIEW**

**Gender-Based Promotion**

Research in advertising, retailing, and consumer behavior have all confirmed the finding that gender differences exist across many consumption environments and by way of several constructs and dimensions. Although there is considerable debate regarding the theoretical basis of gender-based differences in shopping orientations and in motivations for risk, scores of academic researchers have used both quantitative and qualitative methods to find similar results.

The debate centers on whether such differences may be due to biological or evolutionary characteristics of the genders (Saad, 2008) or may result from socially constructed, sociological, or situational differences (Meyers-Levy and Sterntthal, 1991).

The authors of the current paper approached the subject of gender differences in shopping motivations and retail orientations with a focus on the notion of culturally and socially constructed shopping behaviors as opposed to biological and evolutionary differences.

In fact, recent research has shown that, as more women have entered workforces all over the world, more men are fulfilling traditional female shopping roles (Ottes and McGrath, 2001; Kuruvilla, Joshi, and Shah, 2009). Also consistent with this view, the authors maintain that shopping experience and product knowledge are at the root of the “perceived-risk-of-retailer” differences between males and females and that such differences can be mitigated over time as more males begin shopping in tandem with their female counterparts.

Based on gender schema and self-construal theories, existing research has shown that women shoppers tended to be more loyal to merchants, enjoyed higher levels of uniqueness and assortment seeking, browsed more, and socially interacted more than males (Noble, Griffith, and Adjei, 2006). Studies also have shown that females valued the quality of service interactions more than males and that this value had a stronger, more direct influence on the resulting share of wallet for the retailers (Iacobucci and Ostrom, 1993; Babakus and Yavas, 2008).

Males, conversely, tended to be more negative than females toward retail shopping, and found retailers to be appealing only if the store allowed them to “get in and out” as efficiently as possible (Campbell, 1997; Alreck and Settle, 2002).

Thus, having a pleasurable shopping event and experiencing decision ease are more critical factors for females than males, a finding that has been confirmed in regard to e-commerce (Hansen and Jensen, 2009). As a consequence of the development of a better understanding of gender differences, the authors have identified a shift in in-store shopping environments as retailers have moved away from a utilitarian focus to a more hedonic and experiential perspective in the setup and display within the past decade (Jones and Reynolds, 2006).

Additionally, the need to manage time before, during, and after a shopping occurrence also is an important factor for most female shoppers (Reilly, 1982). Polychronic-tendency analysis supports the finding that time is a key variable of consideration in the study of women’s shopping behaviors, specifically in the tendency to carry out “multiple simultaneous activities” (Lindquist and Kaufman-Scarborough, 2004, p. 333).

These findings suggest that women have a predisposition to either polychronic or monochronic shopping behavior but that retailers can tailor their interaction with women situationally to create a suitable shopping encounter. For example, female shoppers who are more monochronic in nature may need to accomplish more shopping in less time. For such individuals, the need to balance multiple events can be met by kiosk retailers that offer large assortments of very specific products (Krishen et al., 2010).

**CONSUMERS’ PERCEIVED RISK IN NOVEL RETAIL ENVIRONMENTS**

The likelihood of females shopping at kiosks can be enhanced if the perceptions of risk for purchasing products from this unfamiliar retailing outlet are minimized. Perceived risk is characterized by uncertainty and consequences and defined as “an expectation of a loss” (Murray and Schlachter, 1990; Sweeney, Soutar, and Johnson, 1999). Consumers’ perceived risk often is associated with a negative relationship with their purchase intentions (Holak and Lehman, 1990).

Further, research findings suggest that perceived risk also has an effect on product evaluations (Campbell and Goodstein, 2001). For example, when perceived risk is high, consumers would rather choose a product characterized as the norm over one characterized as novel. Not only is the perception of risk central to product
evaluations but it is a key determinant to consumption choices and behaviors (Dowling and Staelin, 1994). A consumer’s desire and choice of retailer are both contingent upon maximizing benefits. In fact, according to one study, one of the primary components of maximizing shopping benefits is offering of an engaging store environment and personal leisure experience (Kim and Kim, 2008).

Research findings suggest that women have a preference for conventional retailers because of the availability of more informational cues (Eroglu, Machleit, and Davis, 2001). This idea is grounded in the “selectivity model,” whereby females focus more on the message content, whereas males focus more on the source (Meyers-Levy and Maheswaran, 1991).

For example, in less traditional purchasing environments such as online shopping, Rodgers and Harris (2003) maintain that females may be less satisfied with their shopping experience due to the lack of perceived emotional benefits. Affective informational cues play a role in the shopping experience for females more than for males. In line with this notion, research has suggested that females evaluate promotional e-mails more favorably than males when they provide additional links, build social communication, address privacy concerns, and provide visual cues (Phillip and Suri, 2004). Given the hesitation females have demonstrated toward shopping in less traditional retail environments such as online, the authors would expect them to have a similar response to even less traditional retailers such as kiosks.

In addition to the preference difference between the genders for retail over ecommerce, findings from previous research have shown that females perceived kiosks to be higher-risk retailers (Krishen et al., 2010), thus suggesting that satisfaction for kiosks also would be lower for females.

The authors, therefore, performed a preliminary test to confirm that females would have greater risk perceptions for products sold at kiosk retailers than for those sold at department stores and that their satisfaction levels would be higher for shopping at department stores. Thus, they offered the following hypotheses.

H1: Females have greater risk perceptions for products sold at kiosk retailers than department stores.

H2: Females have a higher satisfaction level for products sold at department stores than kiosk retailers.

CONCEPTUAL FRAMEWORK

The authors conceptualized that decision making in kiosk environments would be greatly influenced by a consumer’s gender, retailer perceptions, and anticipated regret. Once researchers develop a greater understanding of gender influences in experiential shopping environments, they also can clarify risk perceptions, levels of satisfaction toward the retailer, and ways to increase advertisement credibility and, thereby, increase purchase intentions.

Understanding female consumers’ unwillingness to engage in more-novel retailing shopping experiences, the authors proposed a conceptual framework that identifies constructs to explain the antecedents to kiosk retail shopping.

Given the apparent gender differences in shopping enjoyment, perceived risk of retailers, and overall shopping preferences, the aim of the current study aim is to evaluate experimentally these differences and suggest possible ways by which retailers can mitigate negative consumer responses.

To that end, the current paper provides an empirical model and framework (See Figure 1). The empirical inquiry begins first by confirming the gender differences in shopping outlets [Preliminary study]. Specifically, the authors examined differences in retailing environments and gender to determine kiosk risk perceptions.

![Figure 1 Empirical framework](image)
and levels of satisfaction toward the retailer.

After showing differences in gender preferences, the authors increased the perceived risk of kiosks by manipulating anticipated regret [Main study]. In particular, advertisements for both kiosks and department stores—along with induced levels of anticipated regret—served to influence advertisement credibility for kiosks. The authors expected that anticipated regret would magnify the risk difference between department stores and kiosks and, thus, facilitate a determination of whether advertising credibility was a differentiating factor.

**PRELIMINARY STUDY METHODOLOGY**

**Overview of Study and Independent Measures**

A 2 (retailer type: kiosk versus department store) × 2 (gender: males versus females) between-subjects design was used to test the initial hypotheses. Retailer type was manipulated within the scenario provided and randomly assigned (See Appendix 1). Gender serves as a dichotomous variable indicated by the participants.

This study tests the predictions concerning the effects of retailer type and gender on consumers’ perceptions of risk for products sold at kiosk retailers and satisfaction level with choice of retailer.

**Sample, Procedure, and Dependent Measures**

A sample of 104 students from a southern university in the United States participated in this study for extra credit. The mean age was 21 and ranged from 19 to 25 years. All participants were instructed to read the survey questions carefully and to fill out the entire survey. Outcome variables for this study include (H1) perception of risk for products sold at kiosks and (H2) satisfaction level of retailer choice.

Perception of risk for products sold at kiosks consisted of a multi-item, seven-point scale with endpoints of “strongly disagree”/“strongly agree” for the following items (Burton, Garretson, and Velliquette, 1998):

- “Consumers perceive products sold at kiosks to be higher in risk.”
- “When buying a product from a kiosk, the consumer is taking his other chances.”
- “When buying a product from a kiosk, the consumer is making a gamble.”

Reliabilities for this measure were appropriate (Cronbach’s alpha = 0.83).

Additionally, subjects also reported their satisfaction level with choice of retailer, which was adapted from a multi-item, seven-point scale with endpoints of “strongly disagree”/“strongly agree,” for the following items (Jones, Mothersbaugh, and Beatty, 2006):

- “Mary is satisfied with her choice of retailer.”
- “Mary is content with her choice of retailer.”
- “Mary is pleased with her choice of retailer.”

Cronbach’s alpha for satisfaction level was appropriate at 0.94.

Further, in determining construct validity, both discriminant validity and convergent validity analyses were conducted. Based on the low and non-significant correlation (r = –0.06, p > 0.05) between the kiosk risk perception and satisfaction construct, discriminant validity was determined. Additionally, inter-item correlations for both constructs proved that items relating to each specific construct were highly correlated, suggesting convergent validity for each construct.

**TABLE 1**

<table>
<thead>
<tr>
<th>Preliminary Study: Convergent Validity for Kiosk Risk Perception</th>
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</thead>
<tbody>
<tr>
<td><strong>Inter-Item Correlation Matrix</strong></td>
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<tr>
<td><strong>KioskRisk1</strong></td>
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<tr>
<td>KioskRisk1</td>
</tr>
<tr>
<td>KioskRisk2</td>
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<tr>
<td>KioskRisk3</td>
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</table>

**TABLE 2**

<table>
<thead>
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<tbody>
<tr>
<td><strong>Inter-Item Correlation Matrix</strong></td>
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<tr>
<td><strong>Satisfied</strong></td>
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<td>Satisfied</td>
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<tr>
<td>Content</td>
</tr>
<tr>
<td>Pleased</td>
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</tbody>
</table>

All inter-item correlations for each of the individual constructs were higher than the discriminant correlation, further supporting construct validity (See Tables 1 and 2).

**PRELIMINARY STUDY RESULTS**

Analysis of variance was conducted to assess the effects of retailer type and gender on the perception of risk and satisfaction level for products sold at kiosks (See Tables 3 and 4).

**Kiosk Risk Perception**

Supporting the authors’ H1 expectations, findings revealed a retailer type by gender interaction (F (1, 98) = 4.40, p < 0.05) on kiosk risk perception, with follow-up contrasts indicating that females had greater perceptions of risk for products.
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Sold at kiosk retailers than department stores (M = 5.38 versus M = 4.76; See Figure 2).

No overall main effects were found for retailer type and gender (F's < 1) on shopping risk perception.

TABLE 3
Preliminary Study: Effect of Gender and Retailer Type on Kiosk Risk Perception and Satisfaction Level

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Kiosk Risk Perception</th>
<th>Satisfaction Level</th>
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<tr>
<td>Main Effects</td>
<td>F-Values</td>
<td></td>
</tr>
<tr>
<td>Gender (G)</td>
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</tr>
<tr>
<td>Retailer Type (R)</td>
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<td>0.04</td>
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<tr>
<td>Interaction Effects</td>
<td>G x R</td>
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<tr>
<td></td>
<td>4.40a</td>
<td>4.24a</td>
</tr>
</tbody>
</table>

* p < 0.05

TABLE 4
Preliminary Study: Dependent Variable Means for Kiosk Risk Perception and Satisfaction Level

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Kiosk Risk Perception</th>
<th>Satisfaction Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4.80</td>
<td>3.75</td>
</tr>
<tr>
<td>Female</td>
<td>5.03</td>
<td>4.12</td>
</tr>
<tr>
<td>Retailer Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department Store</td>
<td>4.83</td>
<td>3.95</td>
</tr>
<tr>
<td>Kiosk</td>
<td>5.05</td>
<td>3.93</td>
</tr>
</tbody>
</table>

Satisfaction Level

Results indicated a retailer type by gender interaction (F (1, 98) = 4.24, p < 0.05) on satisfaction level (See Figure 3). Follow-up contrasts revealed that females reported a higher satisfaction level for products sold at department stores than kiosk retailers (M = 6.04 versus M = 5.59), supporting H2.

No main effects were found for retailer type (F < 1) and gender (F (1, 98) = 2.28, p > 0.05) on satisfaction level.

DISCUSSION

Results from the preliminary study and literature review confirmed that females had higher risk perceptions and lower satisfaction levels for kiosk retailers than for department stores.

These findings were consistent with existing research that showed that previous knowledge of shopping in department stores made them a more viable and trustworthy outlet for products. Additionally, given the gender differences regarding informational cues in retailing choice decisions (i.e., females are inclined to focus more on the message content whereas males focus more on the source of information), the authors contended that a department-store retailer would be preferred by females more than by males due to risk perceptions and satisfactions levels for kiosk retailers.

To address this risk issue further, the authors manipulated anticipated regret levels by providing a retail advertisement for either a kiosk or a department store. The anticipation of regret should have magnified the differences between kiosks and department stores for males and females (see preliminary study).

In particular, this next round of research focused on showing the importance of advertisements for kiosks versus department stores. By doing so, the current study tested the authors’ hypotheses with an actual sample of consumers through

Figure 2 Risk Perception [Preliminary Study]
a snowball sample in an experimental setting.

The key dependent measures were expectations of department stores and advertisement credibility.

**ANTICIPATED REGRET THEORY**

In recent years, behavioral decision theorists have given some much-needed attention to the influences of regret on consumption decisions.

Regret is evoked when consumers envision or recognize that their present situation would be much better if they had chosen a different alternative (Inman, Dyer, and Jia, 1997). Regret theory suggests that consumers feel regret when they evaluate the difference between their actual action taken versus their forgone action in relation to the present unfavorable outcome (Bell, 1982; Loomes and Sugden, 1982; Bui, Krishen, and Bates, 2011).

For example, a consumer who buys a laptop from one manufacturer can experience regret, especially if she or he learns soon after the purchase that a laptop by another manufacturer that also had been under consideration outperformed the chosen hardware.

Much of the regret research undertaken in marketing pertains to customer satisfaction and repurchase intentions (Inman et al., 1997; Inman and Zeelenberg, 2002; Tsiros and Mittal, 2000; Zeelenberg and Pieters, 1999). Lately, however, regret research has expanded into supplementary areas, among them the examination of the influences of anticipated regret on consumption-based decision making.

Regret and anticipated regret research literatures indicate that both forms of regret influence consumer behavior (Bui et al., 2011; Hetts, Boninger, Armor, Gleich, and Nathanson, 2000; Simonson, 1992; Syam, Krishnamurthy, and Hess, 2008; Tsiros and Mittal, 2000). In the current research, anticipated regret was viewed as supplementary to the emotion of regret. As such, post-behavioral affective response of a decision is considered during the present situation of a purchase scenario, as opposed to after the purchase.

Drawing on the anticipated regret literature, expectation of retail price increases is associated with an increase in purchase likelihood (Tsiros and Hardesty, 2010). For example, if consumers see that prices continue to rise for a particular retail product, they expect this trend to continue into the near future. Due to the anticipation of regret for having to potentially buy this retail product at a higher price tomorrow, she or he is more likely to buy the product today to avoid affective behavioral responses containing negative valence: future regret.

More specifically, research studies have posited that anticipated regret has an impact on brand preferences and the timing of purchases (Simonson, 1992). Recent research findings showed that anticipated regret of an inaction is the reason for consuming (Sevdalis, Harvey, and Yip, 2006; Tsiros, 2009); that is, the thought of not purchasing a product can produce such discomfort (i.e., anticipated regret) that the reluctance of not buying the product at the present situation is overcome by the action to purchase. To mitigate such discomfort, taking the action to purchase the product during the present situation is deemed to be a better option than potentially regretting the choice of inaction in the future.

In general, recent findings regarding the influence of anticipated regret on consumption have been consistent on this point.

When examining risk perceptions among females, specifically within multiple shopping environments, it is important to consider the ways in which emotions such as anticipated regret may influence retailing choice. For one, customers’ emotions may have an impact on evaluation of a service provider (Forgas, 1995; Morse, 2006). As suggested in previous research, females seek emotional benefits provided through affective emotional cues (Rodgers and Ostrom, 1993) and conventional retailers thereby are more appealing because of such cue availabilities.

Superior service quality provided through social interaction (Iacobucci and Ostrom, 1993) and assortment variety availability (Noble et al., 2006) also contribute to favorable overall attitudes.
toward department store retailers among female shoppers. Notably, recent research has shown that the lower risk perception that comes from shopping with conventional retailers is a key factor attributing to female shoppers’ preference for more traditional retailing formats (Krishen et al., 2010).

Risk perceptions can be influenced by a multitude of shopping experiences. For example, if one were to purchase a product from a traditional retailer that did not fully satisfy the consumers’ post-purchase experience (e.g., product expectation), she or he is able to simply return the product and get a refund for the purchased price as traditional retailers are more likely to be there in the near future. Conversely, more novel retailers that have yet to establish this sense of security in the mind of consumers may be a less attractive shopping option.

Additionally, due to the lack of experience female shoppers (comparative to male shoppers) have had with more novel retailers regarding product expectations—coupled with the wealth of experience female shoppers have with traditional retailers—it is reasonable to expect that females would have greater product expectations when buying from a department store than males.

Furthermore, removing potential negative consequences derived from purchasing a product from a department store thus contributes to greater product expectations among females. As such, in determining the influence of product expectations among gender-differences on retailing preferences, emotions of anticipated regret must be considered—particularly for female shoppers. Thus, the authors offer the following hypotheses.

H2a: Females have greater product expectations from department stores than males.

H2b: With minimal anticipated regret, females have greater product expectations from department stores.

Beyond retailing preferences, processing of advertisements for retailers varies depending upon gender differences.

Research has shown that processing advertisement information is subjective among audiences (Kenyon, Wood, Parsons, 2008). One study, in particular, maintained that in processing advertisements, the effectiveness of an advertisement was attributed to how well the advertisement captured the sense of “self” for the individual viewing the advertising message (Tsai, 2005). Further, research has even demonstrated that the congruence between an advertisement and a product can cause an audience to become more positive toward the advertising message and even the advertised product (Chang, 2005; Tsai, 2005).

An audience has preferences as to what and how it interprets advertising information. For example, research shows that female audiences tend to focus more on informational content whereas male audiences tend to pay more attention to the source of the information (Meyers-Levy and Maheswaran, 1991).

Retailing platforms available for the degree of cue availability are contingent upon retailing alternatives—such that females prefer the availability of more cues available in traditional retailing formats than males. Thus, in viewing advertising information among genders, preferences for retailing choice may play a role in expectation levels of both the retailer type and product when decoding the advertised message.

Based on previous findings regarding gender differences in processing of retailer-related information, female risk perceptions and retailer preference attributions to retailer and product expectations, the authors expected to find that females would have greater expectations for advertisements promoting products sold at the traditional (i.e., department stores) than novel (i.e., kiosks) retailers as they were more likely to focus on the message. Thus, the authors formally hypothesize:

H2c: Females have greater product expectations when viewing department store over kiosk retailer advertisements.

According to many gender theorists, a female’s brain functioning is more influenced by emotions in comparison to males (Cahill, 2005).

Thus, hypothetically, reducing the perceptions of risk for more novel retail shopping environments—especially among potential female consumers—is much more important than it is for potential male consumers.

As previous research findings have shown, female consumers perceive kiosk retailers to be higher-risk retailers compared to male consumers (Krishen et al., 2010). With female shoppers’ favorable predispositions toward traditional retailing outlets, such responses influence the processing of advertisement messages for the retailer.

Research also has indicated that although the credibility of an advertisement is contingent upon many factors, such credence predominately is based upon the perceived intention of the advertiser (Schiffman and Kanuk, 2004). Other studies have demonstrated that the mere value of the advertising information being presented depends upon the source of the message (Phelps et al., 2004). This is an instrumental finding, as the retailer is the source of the message, and the perceived intention of the retailer impacts advertisement’s credibility.
In the case of gender differences and retailing preferences, females are likely to determine the credibility of a retailer’s advertisement based upon the source (i.e., the actual retailer). Thus, preferences among female shoppers for traditional retailers are likely to positively influence advertisement credibility for the preferred source.

Additionally, in the presence of anticipated negative emotional responses, not only did the authors expect such emotional responses to negatively influence advertisement credibility among both genders but they expected that differences among genders, particularly in the evaluation of advertisement credibility for a retailer.

More specifically, due to female’s preference for the department store retailers and the source-to-advertisement credibility relationship—even in the face of the anticipation of negative emotional consequences—females will find a department store retailer’s advertisement more credible than a kiosk retailer advertisement.

Thus, the authors predict:

H3a: When anticipated regret is present, subjects report lower advertisement credibility.

H3b: When anticipated regret is present, females report higher advertisement credibility for a department store over kiosk retailer.

MAIN STUDY METHODOLOGY
Overview of Study and Independent Measures

A 2 (Anticipated Regret: Anticipated Regret versus Minimized Anticipated Regret) × 2 (Retailer Advertisement: Kiosks versus Department Stores) × 2 (Gender: Male versus Female) between-subjects experimental design was used to test the predicted hypotheses.

Participants were exposed either to an anticipated regret or a minimized anticipated regret condition. Anticipated regret partially was adapted and measured using a seven-point, multi-item scale with “strongly agree”/“strongly disagree” as endpoints consisting of the following four questions (Heitmann, Lehmann, and Herrmann, 2007).

- “The scenario presented to me caused me to anticipate the regret of where I chose to buy my sunglasses.”
- “The scenario presented to me did not cause me to anticipate the regret of where I chose to buy my sunglasses” (reverse coded).
- “I was worried to find out the outcome of my retailer purchase decision for my sunglasses.”
- “I was concerned to find out the outcome of my retailer purchase decision for my sunglasses.”

Cronbach’s alpha for the anticipated regret measure was appropriate at 0.86.

For the advertisement manipulation in this study, advertisements were created to specifically market different retailers. Gender served as a categorical variable. This study tested the hypotheses regarding the influence of anticipated regret, retailer advertisement, and gender on department store product expectations and advertisement credibility.

Sample, Procedure, and Dependent Measures

Upper-level marketing research undergraduate students who were trained in data collection procedures served as data collectors for the snowball sample of non-students.

This method has been utilized in previous marketing research (Bitner, Booms, and Tetreault, 1990; Jones et al., 2006). At local retailing outlets, data collectors randomly asked customers to voluntarily participate in a survey. Similar approaches have also been used in previous Journal of Advertising Research articles (see Close, Krishen and LaTour, 2009; LaTour, Snipes and Bliss, 1996).

A total of 278 surveys were collected from a non-student sample residing in the southwestern part of the United States. The sample population consisted of 51 percent males and 49 percent females, with the mean age of 38, ranging from 22 to 81 years. Of this population, 79 percent indicated some form of employment.

To induce anticipated regret, all participants were exposed to hypothetical purchase-decision scenario manipulations of regret moderately (Kahneman and Tversky, 1982; Simonson, 1992). Participants were asked to imagine that they were placed in the hypothetical scenario presented to them. Based on the scenario presented, participants were instructed to complete the remainder of the survey. (See Appendix 1). Advertisements were manipulated for the kiosk and department store retailers (See Appendix 2). Further, the conditions were counterbalanced to eliminate any potential demand effects.

Dependent variables for the study include (H2a–H2c) department store product expectations and (H3a–H3b) advertisement credibility. Subjects reported the department store product expectations using a multi-item, seven-point scale including endpoints of “strongly
disagree”/“strongly agree” for the following items” (Krishen et al., 2010):

- “Consumers have high expectations for products sold at department stores.”
- “Consumers have low expectations for products sold at department stores.”
- “Consumers have high hopes for products sold at department stores.”

The second item for the measure was reverse-coded. Appropriate reliabilities were found for department store product expectations (Cronbach’s alpha = 0.72). Additionally, subjects reported their responses to advertisement credibility using a multi-item, seven-point scale consisting of endpoints “strongly disagree”/“strongly agree” for the following items:

- “The claims in the advertisement are true.”
- “I believe the claims in the advertisement.”
- “The advertisement is sincere.”

Reliabilities for the measure were appropriate at 0.93 and validated (Andrews, Burton, and Netemeyer, 2001; Till and Busler, 2001).

To test for construct validity, both discriminant validity and convergent validity analyses were conducted. Discriminant validity was determined based on the low and non-significant correlation ($r = -0.04$, $p > 0.05$) between expectations of products sold at department stores and advertisement credibility.

Further, inter-item correlations for both constructs indicate that items relating to each specific construct were correlated, suggesting convergent validity for each construct. (See Tables 5 and 6).

All inter-item correlations for each of the individual constructs were higher than the discriminant correlation, thus supporting construct validity.

**MAIN STUDY RESULTS**

Analysis of variance was conducted to assess the effects of anticipated regret, retailer advertisement and gender on department store product evaluations and advertisement credibility. Results are presented in Tables 7 and 8.

**TABLE 5**

Main Study: Convergent Validity for Department Store Product Expectations

<table>
<thead>
<tr>
<th>Inter-Item Correlation Matrix</th>
<th>DeptProdExp1</th>
<th>DeptProdExp2</th>
<th>DeptProdExp3</th>
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<tr>
<td>DeptProdExp1</td>
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<td>0.768</td>
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<td>DeptProdExp3</td>
<td>0.768</td>
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**TABLE 6**

Main Study: Convergent Validity for Advertisement Credibility

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<th>Inter-Item Correlation Matrix</th>
<th>AdvCred1</th>
<th>AdvCred2</th>
<th>AdvCred3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvCred1</td>
<td>1.000</td>
<td>0.866</td>
<td>0.765</td>
</tr>
<tr>
<td>AdvCred2</td>
<td>0.866</td>
<td>1.000</td>
<td>0.805</td>
</tr>
<tr>
<td>AdvCred3</td>
<td>0.765</td>
<td>0.805</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**TABLE 7**

Main Study: Effect of Anticipated Regret, Retailer Advertisement, and Gender on Department Store Product Expectation and Advertisement Credibility

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Department Store Product Expectation</th>
<th>Advertisement Credibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated Regret (A)</td>
<td>0.99</td>
<td>63.33*</td>
</tr>
<tr>
<td>Retailer Advertisement (R)</td>
<td>0.79</td>
<td>3.78*</td>
</tr>
<tr>
<td>Gender (G)</td>
<td>6.36*</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>Interaction Effects:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A × R</td>
<td>0.13</td>
<td>3.41*</td>
</tr>
<tr>
<td>A × G</td>
<td>3.83*</td>
<td>1.74</td>
</tr>
<tr>
<td>R × G</td>
<td>5.32*</td>
<td>0.04</td>
</tr>
<tr>
<td>A × R × G</td>
<td>2.12</td>
<td>4.98*</td>
</tr>
</tbody>
</table>

* $p < 0.001$, $p < 0.05$, $p < 0.10$
TABLE 8
Main Study: Dependent Variable Means for Department Store Product Expectation and Advertisement Credibility

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Department Store Product Expectation</th>
<th>Advertisement Credibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anticipated Regret</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated Regret</td>
<td>5.63</td>
<td>3.64</td>
</tr>
<tr>
<td>Minimized Anticipated Regret</td>
<td>5.73</td>
<td>4.80</td>
</tr>
<tr>
<td><strong>Retailer Advertisement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiosk</td>
<td>5.67</td>
<td>4.14</td>
</tr>
<tr>
<td>Department Store</td>
<td>5.68</td>
<td>4.34</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5.53</td>
<td>4.28</td>
</tr>
<tr>
<td>Female</td>
<td>5.68</td>
<td>4.20</td>
</tr>
</tbody>
</table>

**Manipulation Check for Anticipated Regret**

Analysis of variance was performed to ensure that the manipulation of anticipated regret was successful. There was a significant difference between the anticipated regret condition and the minimized anticipated regret condition ($F(1, 276) = 61.43, p < 0.001$), with means in the appropriate directions ($M = 4.82$ versus $M = 3.42$), respectively (See Figure 4).

**Department Store Product Expectations**

Supporting H2a, an overall main effect was found for gender on the dependent variable ($F(1, 268) = 6.36, p < 0.05$) with means verifying that females reported greater department store product expectations than males ($M = 5.84$ versus $M = 5.53$).

There were no main effects found for anticipated regret or retailer advertisement on department store product expectations ($F's < 1$). Results did not reveal a three-way interaction ($F(1, 268) = 2.12, p > 0.05$) on department store product expectations. However, findings indicated a marginally significant anticipated regret by gender interaction ($F(1, 268) = 3.83, p < 0.06$) on the dependent variable, partially supporting H2b.

Follow-up contrasts showed that under minimized anticipated regret conditions, females indicated significantly ($p < 0.05$) greater department store product expectations than males ($M = 6.00$ versus $M = 5.48$).

Also supporting H2c, there was a two-way interaction for retailer advertisement by gender ($F(1, 268) = 5.32, p < 0.05$), with follow-up contrasts showing that when viewing the department store retailer advertisements, females had significantly greater department store product expectations than males ($M = 5.97$ versus $M = 5.40$).

**Figure 4** Department Store Product Expectations [Main Study]
No two-way interaction was found for anticipated regret by retailer advertisement on the dependent variable ($F < 1$; See Figure 5).

**Advertisement Credibility**

Supporting H3a, an overall main effect was found for anticipated regret on the advertisement credibility ($F (1, 268) = 63.33, p < 0.001$), with means indicating that subjects report higher advertisement credibility when anticipated regret was minimized compared to when it was induced ($M = 4.80$ versus $M = 3.64$).

There were no main effects found for retailer advertisement ($F (1, 268) = 3.78, p > 0.05$) or gender ($F < 1$) on advertisement credibility. No two-way interactions were found on the dependent variable ($p > 0.05$). A three-way interaction was found ($F (1, 268) = 2.12, p > 0.05$) on advertisement credibility.

Supporting H3b, follow-up contrasts showed that when anticipated regret was induced, females reported significantly ($p < 0.05$) higher advertisement credibility for the department retailer advertisement than for the kiosk retailer advertisement ($M = 3.90$ versus $M = 2.95$).

**DISCUSSION**

The combination of the preliminary study results with those of the authors’ main study highlights a number of important points:

- In the preliminary study, females reported a higher level of satisfaction with department stores than males, whereas this difference was not found for kiosks.
- To further clarify gender differences, department store expectations were measured in the main study and, again, females indicate higher department store expectations than males.
- This difference was attenuated when they were presented with a department store advertisement.

These findings, therefore, show a connection between satisfaction and expectations for department stores, and this connection is critical for future purchase intention (Ha, Janda, and Muthaly, 2010).

Consistent with this finding, Y. Yi and S. La, writing in 2004 in the pages of *Psychology & Marketing*, presented an adaptive expectations/satisfaction model that showed that expectations continually adjusted with each satisfaction experience—a slightly different result than the one offered by the expectation-disconfirmation model, which posits expectations to be simply an antecedent to satisfaction.

In fact, this adaptive expectations-satisfaction relationship holds that when consumers experience satisfaction with a purchase, their expectations adjust upward for the next experience (Ganesh, Arnold, and Reynolds, 2000). The current
research is consistent with this idea as the authors found higher satisfaction coupled with higher expectations for department stores, in particular for females.

In the main study of the current paper, the introduction of anticipated regret emphasized the gender difference for advertisement credibility for retailer types, showing that females found department store advertisements to be more credible than kiosk advertisements. Males did not show the same preference, even under high anticipated regret conditions.

Further, as expected, high-anticipated regret led to lower advertisement credibility for all subjects regardless of what type of retailer advertisement they viewed. Seen as an antecedent to attitude toward the advertisement, advertising credibility is an important measure of whether consumers find an advertisement to be sincere, honest, and believable (MacKenzie and Lutz, 1989).

In broader terms, more-recent advertising research indicates that consumers’ beliefs regarding the integrity of an advertisement are captured by the advertisement’s credibility construct (Soh, Reid, and King, 2009). In the case of kiosk advertisements, advertising credibility is extremely important as consumers already are less experienced and less comfortable in that environment. Consequently, female consumers are likely to have higher risk concerns for shopping at kiosk retailers, as the preliminary study of the current report indicates.

A credible advertising campaign for kiosks is critically important to secure the trust of unfamiliar, yet experienced female shoppers.

CONCLUSIONS

Much research has been conducted to understand consumer decision making and advertising within the context of traditional retailing environments. Research regarding these decision processes and promotions within kiosk shopping environments, however, has been sparse due to their novelty.

As the retailing industry evolves and mobile retailers become more prevalent, a further understanding of advertising effects is pertinent, especially given that the current research has identified a gender effect. Further, newer regret research finds that as the availability of nontraditional or standard products/services rises, regret aversion may be reduced (Syam et al., 2008).

Across two empirical studies, the current findings indicated that gender impacts perceptions of retailers and their advertisements. The initial findings showed that females had lower risk perceptions for department stores and higher satisfaction levels for products sold at department stores versus kiosk retailers.

Gender and anticipated regret, moreover, also are shown to influence department store expectations and advertisement credibility. Thus, risk-reducing options such as service contracts may provide an important benefit that kiosk managers can offer customers in an attempt to decrease risk perceptions, especially when anticipated regret is an issue in the buying process.

As risk may be defined by social, cultural, financial, and/or psychological factors, kiosk retailers may require various promotional options to facilitate the reduction of such negative perceptions toward shopping at kiosk retailers. By understanding the conceptualization of risk in the decision-making process for females—particularly for kiosk retailers—promotional strategies can be further tailored.

As a result of inducing anticipated regret in an advertising context, the analyses in the current paper showed that such the anticipation of negative emotions (along with gender effects) may trigger a consumer’s desire for risk-reducing options.

One recent study conceptualizes risk in a decision-making context and suggests that perceived risk results from the combination of three key parameters (Conchar, Zinkhan, Peters, and Olavarrieta, 2004):

- context-dependent importance weights,
- inherent risk, which is situation-specific, and
- individual factors.

As such, gender is an individual factor that can affect psychosocial processing, and a kiosk is a situation- and context-specific queue.

One way to look at the results of the current study—as suggested by the selectivity model—implies an information-processing perspective whereby females may have processed the advertisements more carefully. Therefore, females might have taken note of the fact that the retail location in the advertisement we presented in our experiment is depicted toward the bottom of the ad (See Appendix 2); whereas males might have been less cognizant of the retail location of the product (Brunel and Nelson, 2003).

Therefore, findings from both of the current studies suggest the importance of the role that gender plays in both retailing choices and risk perceptions. Furthermore, the work highlights remedies for anticipated regret associated with kiosk retailing environments.

Risk perceptions for kiosk retailers may be reduced through actual advertisements for such retailers. Given that the results show that risk perceptions also can alleviate post-purchase tension, not only do marketers have an even better opportunity to promote the benefits of purchasing from a kiosk retailer, but they have the ability to effectively engage female shoppers to
consider post-purchase warranties and service contracts.

Thus, the promotion of engagement in a kiosk retailing environment—in combination with the advertisement of post-purchase service options—provide significant benefits to the female shopper.

**MANAGERIAL AND THEORETICAL IMPLICATIONS**

The current study presents managerial insights into two important areas: <bull>

- how gender and retailer type can influence risk perception and satisfaction levels and
- how gender and anticipated regret impact expectations and advertising credibility.

These insights, in fact, may provide kiosk retailers with a better understanding of how to use promotions and advertising to effectively encourage shoppers to participate in mobile shopping, particularly at kiosk retailers. Depending upon the gender, our research suggests that promotions/advertising messages along with online sales techniques should be adapted accordingly to build satisfaction levels and reduce risk perceptions toward kiosk retailers for the dynamic consumer.

The results also suggest that satisfaction levels need to be improved and that risk perceptions need to be reduced for kiosk retailers, particularly for female shoppers. By understanding the role that females play in decision making, kiosk retailers may be able to improve female satisfaction levels for purchasing at such mobile retailers. Extant research finds that women are multi-taskers because of the gender roles they play (Lindquist and Kaufman-Scarborough, 2004); they seek the benefits of convenience through purchasing from retailers that help reduce the amount of time needed to purchase a product and prefer the assortment of variety of a product/service deemed suitable to make an informed decision.

Thus, kiosk retailers should choose interception times and locations where consumers who are in a rush (e.g., during peak travel hours between work and play) can complete their purchasing in a timely fashion. Further, by providing information on the actual product along with product evaluations of competitor products, marketers can highlight consumer benefits as product evaluation serves as a primary factor to increase purchase intentions.

Kiosk retailers also may perceptually reduce risk through accessibility (for example, by investing in multiple kiosk retailing stations where consumers feel they can easily approach a familiar kiosk at various convenient locations). These retailers may improve consumer perceptions of accessibility—a change that, over time, might alleviate consumers’ fear of kiosk retailers’ instability.

Using the results of the current research, kiosk retailers may be able to increase satisfaction and patronage among female shoppers over time by developing promotions and advertisements that not only emphasize the benefits and unique customer services provided but reduce any perceptions of risk.

For example, the failure of a product—whether it is a purchase from a department store or a kiosk retailer—is a common risk and fear among consumers. Post-purchase customer support often is more important in making a purchase decision than the actual product. Thus, the provision of promotions and advertisements that provide the promise of strong customer support and repair/replacement options is pivotal in promoting kiosk retailers.

Advertising the availability of customer service support hotlines to help consumers deal with any post-purchase questions also can increase the perception of long-term customer support and thereby increase brand loyalty. In an effort to build their image, kiosks can promote their abilities to support customers with their after-sale needs. Additionally, they can enhance the customer-oriented retailing experience by promoting their offerings through social media (e.g., Facebook, MySpace, Twitter, and YouTube) that will allow them to respond to customer questions and help further reduce risk perceptions.

From a theoretic perspective, with regard to promotions, the findings from the current study that are relevant to kiosk retailers pertain to the relation of gender and the processing of information. Given that the perception of female's product risk decreased after they had processed the information presented in the retailer’s advertisement, the current study demonstrated that risk perceptions may be lowered by developing promotions that emphasize gender-focused processing motives.

Advertising campaigns specifically tailored for different genders may be more effective in reducing risk perceptions for kiosk retailers. According to two studies, females favor more elaborative processing styles (i.e., verbally and emotionally descriptive), whereas males favor more holistic processing styles (i.e., charts, graphs and illustrations; Meyers-Levy, 1994; Cahill, 2005). Thus, advertising messages should be adapted to communicate product information effectively for the targeted gender.

In essence, as female information processing is geared toward verbal and emotional descriptions, advertising media such as magazines would be more consistent with those preferences. For males, their propensities could be further explored in the context of animated illustrations contained with appropriate media (e.g., Web-based options).
Further, in light of the gender differences in processing product information, kiosk retailers may benefit from employee sales-training seminars that further develop sales techniques geared toward different genders. Specifically, to engage male clients, sales representatives should provide illustrative promotions in their presentation materials that will generate interest in products.

Conversely, to attract potential female clients, kiosk representatives could use a more descriptive approach to selling their products—using both verbal and emotional-based cues (i.e., emphasizing the options and benefits of risk-reducing options such as service contracts, guarantees, and warranties) that are more likely to engage the female shopper. By providing these risk-reducing benefits in fact, kiosk retailers should be able to increase their business and potential patronage.

**FUTURE RESEARCH AND LIMITATIONS**

Gender differences have been studied in all areas of social science. The current study sought not only to confirm gender differences in shopping in unique and less trusted environments, but to expand on this finding by showing that retailers can minimize such differences by offering service guarantees and reducing buyer risk, in particular for females.

Future research can extend these findings to the cross-cultural context, such as in Asia or Europe. For instance, Okazaki (2007) found in contrast with research on gender differences on ecommerce trust in the United States, Japanese females actually trusted mobile advertising more than did their male counterparts (Okazaki, 2007).

Another interesting research stream could explore the “affection effect,” the impact of affection (or feelings) toward risk processing in shopping environment or with product offering; existing research finds that the effect can lead to varied risk perceptions (Hsee and Kunreuther, 2000).

Perceived risk in the current study was not directly manipulated; instead, the authors manipulated the regret-and-shopping environment, which served as a proxy for perceived risk. Existing research in the health care domain indicates that, when perceived risk is high, negatively framed messages tend to be more effective (Chang, 2007). Hence, future research could validate the effect of negative-versus-positive framing effects on kiosk-versus-department store advertisements to see whether negatively framed kiosk advertisements are more effective.

Past research has shown that products can be classified as “gendered products” (Debevec and Iyer, 1986), such as beer (male) and dishwashing soap (female). As the current study used sunglasses as its product type, future research could examine whether this particular product has gender perceptions in and of itself.

Further, the current study used a female spokesperson in its advertisement. Future research could manipulate the spokesperson gender to determine whether differences in processing occur between the genders (for a review of gender issues in advertising, see Wolin, 2003).

In short, the central contribution of this paper is that, as the growth of nontraditional retailing outlets continues in modern society, the current study provides a broader understanding of gender effects and risk-reducing alternatives in more novel retailing promotional environments.

**REFERENCES**


Iacobucci, D., and A. Ostrom. “Gender Differences in the Impact of Core and Relational


### APPENDIX 1

**Preliminary Study Manipulations**

**SCENARIO: KIOSK RETAILER**

Imagine that Mary is on the market for a new pair of sunglasses. She was just going to buy a new pair of sunglasses at her local department store. However, as she was strolling through the mall that day, she decided to buy a pair at a kiosk instead. At the time, she was quite happy and satisfied with her purchase decision.

**SCENARIO: DEPARTMENT STORE**

Imagine that Mary is on the market for a new pair of sunglasses. She was just going to buy a new pair of sunglasses when she goes to the mall. As she was strolling through the mall that day, she came across a sunglasses kiosk and considered buying a pair from a kiosk. Instead, she changes her mind, and buys a pair of sunglasses from a department store instead. At the time, she was quite happy and satisfied with her purchase decision.
APPENDIX 2
Anticipated Regret Manipulations

SCENARIO 1: ANTICIPATED REGRET
Imagine that you and your best friend Sam are on the market for a new pair of ProOptic brand sunglasses. You and Sam were just going to buy a new pair of ProOptic sunglasses at your local department store. However, as you and Sam were strolling through the mall that day, you decided to buy a pair of ProOptic sunglasses at a mall kiosk instead of the department store. Sam, conversely, decided that he would just buy the ProOptic sunglasses at the department store—as he has already had a regretful experience with a product bought in the past at a mall kiosk. You are now concerned with the pair of ProOptic sunglasses you bought considering your choice of retailer bearing in mind Sam’s experience and all sales are final. Assume today is November 15, 2008.

(Find out what happens to your sunglasses opposite.)

By November 30, 2008, your new pair of ProOptic sunglasses is already broken.

SCENARIO 2: MINIMIZED ANTICIPATED REGRET
Imagine that you and your best friend Sam are on the market for a new pair of ProOptic brand sunglasses. You and Sam were just going to buy a new pair of ProOptic sunglasses at your local department store. However, as you and Sam were strolling through the mall that day, you decided to buy a pair of ProOptic sunglasses at a mall kiosk instead of the department store. Sam, conversely, decided that he would just buy the ProOptic sunglasses at the department store—since he has already had a regretful experience with a product bought in the past at a mall kiosk. You are now concerned with the pair of sunglasses you bought considering your choice of retailer bearing in mind Sam’s experience and all sales are final. Assume today is November 15, 2008.

(Find out what happens to your sunglasses opposite.)

By November 30, 2008, you’ve realized that you’ve made the right choice in purchasing your sunglasses from a mall kiosk retailer as the ProOptic sunglasses you bought exceeded your expectations and you expect to hold on to this pair of sunglasses for some time.