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# Consumer response to exterior atmospherics at a university-branded merchandise store

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## Abstract

This study examined the influence of exterior store atmospherics upon college students' responses to a university-branded merchandise store. The research was informed by Mehrabian and Russell's (1974) Stimulus–Organism–Response (S–O–R) model, which proposes that consumers' emotional responses to a physical store environment mediate how the environment shapes their patronage behaviors. An online survey with a  $2 \times 2 \times 2$  experimental design component was implemented to explore the influence of three aspects of exterior store atmospherics (i.e., landscaping, store greeter, and electronic kiosk) upon three dependent variables: consumer emotional state (pleasure/arousal), consumer liking of the store exterior, and patronage intentions. The sample included 336 college students. Analyses provide support for the S–O–R model and related research; collectively, findings are consistent with the premise that pleasure and liking of the storefront exterior shape patronage intentions at a university-branded merchandise store. The exterior store atmospherics manipulated in the present study, however, did not positively influence consumers' emotional states or liking. This study examined the influence of understudied aspects of exterior store atmospherics on consumers' emotional states and liking as well as their patronage intentions toward a university-branded merchandise store. Contrary to prior work, findings provide evidence that, in some retail contexts, store greeters may generate negative responses from consumers.

**Keywords:** Atmospherics, Retail, Landscaping, Store greeter, Electronic kiosk

## Introduction

Store atmospherics impact consumers' perceptions of value and store image as well as their retail choice and patronage intentions (Baker et al. 2002; Cornelius et al. 2010; Pan and Zinkhan 2006). Much of the research in the area of store atmospherics has focused upon consumer response to store interiors (see Mari and Poggesi 2013; Milliman and Turley 2000; Spence et al. 2014). An emerging body of work, however, has considered consumer response to exterior store atmospherics, which might be characterized as a store's "curb appeal" (e.g., Cornelius et al. 2010; Mower et al. 2012; Oh and Petrie 2012). Exterior store atmospherics comprise such elements as a store's signage, entryway, display windows, architectural features, landscaping, parking, and greeters (Arnold 2002; Otterbring et al. 2013; Turley and Milliman 2000). The purposeful manipulation of

exterior atmospherics may represent a viable differentiation strategy in a competitive retail environment (Cornelius et al. 2010), especially for independent retailers operating in downtown shopping districts (Grewal et al. 2003; Mower et al. 2012), who may lack the visual brand recognition of national retailers.

The present study, guided by Mehrabian and Russell's S–O–R model (1974), explored how three exterior store atmospherics—landscaping, a store greeter, and an electronic kiosk—influenced college students' emotional states and patronage intentions toward a university-branded (and owned) merchandise store (i.e., a retailer that sells collegiate-licensed merchandise). The S–O–R model is based upon the Stimulus–Organism–Response paradigm, which suggests that an individual's responses (R) to the physical environment (S) are mediated by his/her emotional states (O). To date, researchers have not examined the role that exterior store atmospherics may play in shaping consumer behavior within the context of a University-branded merchandise store, even though purchases in these retail environments tend to be emotionally-driven (Greenberg 2013). Landscaping, a store greeter, and an electronic kiosk were selected for study because they represent under-studied variables in the store atmospherics literature. Further, all three represent exterior store elements that could readily be implemented by an independent retailer selling university-branded merchandise. As such, this study was informed by the S–O–R model as well as research exploring the specific store atmospheric variables considered in this study and the university-branded merchandise store. This literature provided a context for the examination of college students' responses to the exterior retail environment of a store that sells university team-licensed merchandise.

### Literature review

In varied contexts, landscaping, and flowers, in particular, has been found to elicit positive emotional responses in both men and women (Haviland–Jones et al. 2005). Much of the empirical research exploring the impact of landscaping upon consumer attitudes and behavior has focused upon the presence of trees in urban (i.e., main street) business districts. Findings from this literature reveal that the integration of trees into retail environments has the potential to provide pleasurable and restorative experiences for consumers as well as to increase consumer perceptions of retailers, store traffic, and product sales for merchants (see Joye et al. 2010 for a review of this work). In particular, the presence of trees has been associated with positive inferences about product value and quality as well as customer service and a greater willingness to pay more for products (Wolf 2005). Further, it has been suggested that flowers, plants, and other forms of landscaping may be used to enhance consumers' perceptions of retail environments as well as to influence patronage intentions and/or behaviors (Bengman et al. 2012; Mower et al. 2012; Spence et al. 2014). For example, Bengman et al. (2012) discovered that the inclusion of greenery in the interior of a clothing store positively influenced consumers' feeling of pleasure and subsequently their approach intentions in complex store environments, but not in simple store environments. Mower et al. (2012) found that exterior landscaping (i.e., "oversized glazed terra cotta planters with tiny purple and yellow flowers with ivy draping over the edge of the pot") at a clothing store positively influenced consumers' liking of the store as well as their patronage intentions (p. 447).

### Landscaping

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### Store greeters

The general responsibility of store greeters is to say hello or to welcome customers as they approach or enter a retail store (or access an online retail site). Although store greeters also may point consumers in the direction of merchandise or a salesperson and watch for shoplifting as customers exit a store, their responsibility is distinct from that of retail salespeople (or "hailers"), who attempt to continue interactions with customers throughout the store and to influence customers into making a purchase (Musgrove 2011).

It has been suggested that store greeters may augment retailers' efforts to attract consumer attention, build customer relationships, establish feelings of comfort among shoppers, and communicate brand image (Arnold 2002; Murray 2006). However, only one empirical study has examined the influence of store greeters upon consumer behavior. Findings from this experimental study (Otterbring et al. 2013) revealed that a store greeter (compared to an empty store entrance) positively impacted consumers' spending, satisfaction, and perceptions of employees. Findings further revealed gender differences in consumers' responses to store greeter conditions (i.e., store greeter alone at the store entrance vs. store greeter in combination with products at the store entrance). The store greeter in combination with products at the store entrance negatively influenced male consumers' purchase behaviors, whereas the purchase behaviors of female consumers were unaffected by the store greeter conditions. The researchers suggested two possibilities for this difference in male consumers' response to store greeter condition. First, the store greeter in combination with products at the store entrance condition may have resulted in an overly cluttered store environment/heightened stimulation, which may

have encouraged avoidance behaviors. Second, the store greeter condition may have led male consumers to infer a persuasion motive on the part of the greeter, which may have increased their suspiciousness and decreased their willingness to purchase (Otterbring et al. 2013).

### **Electronic kiosks**

Electronic, or interactive, kiosks (a.k.a., self-service technologies, or SSTs) provide consumers increased access to products and services by allowing them to conduct product information searches, register for promotions, obtain loyalty and gift cards, create gift registries, pay bills, and make purchases without assistance from sales personnel (Castro et al. 2010). As such, electronic kiosks offer consumers and retailers, alike, the potential to save time and money in product and service transactions (Bitner et al. 2002; Castro et al. 2010; Koller and Königsecker 2012).

The use of SSTs within a retail context has increased in recent years, particularly among younger consumers (Castro et al. 2010; Dean 2008). Compared to their older counterparts, younger adults (aged 18–28) have experience with more types of SSTs, have more confidence in using SSTs, and are less likely to miss interpersonal interaction when using SSTs. Further, younger adults are more likely to use self-service check-out, to pay a premium for express check-out in a retail setting, and to make online retail purchases than are older consumers (Dean 2008).

Research suggests that consumers' evaluations of electronic kiosks in consumer goods stores are influenced by a number of features. In particular, consumers prefer kiosks that provide information about product assortment, that allow them to place merchandise orders, and that offer multiple options for merchandise delivery (Koller and Königsecker 2012). Although consumer goods retailers have traditionally used electronic kiosks in in-store settings, recently, some retailers have incorporated kiosks into their store exteriors, providing consumers with after-hours access to a variety of retail goods and services. For instance, in 2013 the Kate Spade Saturday concept store in New York City integrated electronic kiosks into its storefronts, allowing consumers to make product purchases and to schedule local deliveries within a one-hour timeframe (Brooke 2013). How consumers respond to "street-side" electronic kiosks at consumer goods retailers—or those that are part of a store's exterior—is unknown; to date, research examining consumers' evaluations of electronic kiosks for consumer goods retailers have focused upon in-store applications.

### **Retail environment: university-branded merchandise stores**

In the present study, a university-branded merchandise store served as the context for the manipulation of the exterior store atmospheric variables (i.e., landscaping, store greeter, electronic kiosk). University-branded merchandise retailers represent a form of niche specialty store that offer a selection of collegiate-licensed apparel products, décor, and a gift/novelty items featuring the school's logo and team mascot ("Licensed sports merchandise market 2014). Sales of collegiate-licensed/sports merchandise are estimated to reach \$4.9 billion by 2018 (PwC Sports Outlook 2014). It is estimated that 190 million US consumers purchase collegiate-licensed merchandise, half of whom are female (Dosh 2013). That women represent half of the consumer base for collegiate-licensed

merchandise represents a growth in (sports-themed) apparel and housewares that better reflect the needs and tastes of women (Greenberg 2013). The core market for collegiate-licensed merchandise tends to be college-aged individuals as well as older adults who have an affiliation with the institution (Dosh 2013; PwC Sports Outlook 2014).

A variety of factors may influence the purchase of university-branded merchandise. According to market research, the purchase of collegiate-licensed/sports merchandise may be influenced by the design of the store in which the merchandise is presented ("Licensed sports merchandise market—global industry analysis et al. 2014). Further, findings from scholarly research indicate that consumers' emotional responses, including pleasure and arousal responses toward a team, are related to intentions to purchase sports apparel (Taute et al. 2010). Taken together, this research suggests that university-branded merchandise store environments that evoke certain emotional responses among consumers may support the sale of goods. At the collegiate level, consumers' involvement or identification with the university and/or its sports teams also has been linked to their consumption of team-licensed merchandise (Kwak and Kang 2009; Kwon and Armstrong 2002, 2006; Kwon and Kwak 2014). More specifically, a consumer's psychological attachment to a university team—conceptualized as his/her involvement or identification with that team as well as his/her image congruence with the team—has been identified as a key predictor of his/her consumption of team-licensed products (Kwak and Kang 2009; Kwon and Armstrong 2002, 2006). Identification with a team is directly associated with brand loyalty and repeat purchases of team-licensed merchandise (i.e., past purchase behavior), but also represents a deeper level of psychological affiliation or a sense of belonging that supports consumers' self-esteem and self-identity (Apostolopoulo et al. 2012; Wakefield 2015).

### **Justification and hypotheses**

Collectively, empirical and theoretical literature provide evidence to suggest that various aspects of the store exterior may influence consumers' emotional responses and patronage intentions toward retailers. Much of the research in this area is limited in that it has focused upon how a singular element of exterior store atmospherics may shape consumer behavior. And, the only study identified that did consider the impact of multiple aspects of exterior store atmospherics upon consumers' attitudes and behaviors exhibited methodological limitations. In particular, although Mower et al. (2012) examined the influence of landscaping and window displays upon consumers' shopping behaviors, they employed written scenarios rather than visual images as experimental stimuli. As such, it is possible that interpretations of the stimuli varied across participants. The present study employed visual images as stimuli in the experiment to ensure more consistent interpretations among participants and to control for other variables relevant to the exterior storefront (e.g., store signage and window displays).

Drawing upon the S–O–R model, three hypotheses were developed to explore the impact of specific exterior store atmospherics upon college students' emotional states (i.e., pleasure and arousal) and their evaluative judgments (i.e., liking). Research provides evidence that landscaping in retail environments may influence pleasure and liking of the environment; it is less clear how landscaping may impact arousal (e.g., Bengman et al. 2012; Joye et al. 2010; Mower et al. 2012). Thus, Hypothesis 1 was proposed:

H1: Landscaping will have a positive effect on college students' pleasure (H1a), arousal (H1b), and liking (H1c) within the context of a university-branded merchandise store.

Although there is limited empirical research examining the efficacy of store greeters in influencing consumers' emotional states, findings do indicate that the presence of a store greeter can have a positive effect on consumers' spending, satisfaction, and perceptions of employees (Otterbring et al. 2013), suggesting that store greeters may positively impact consumers' emotions:

H2: The store greeter will have a positive effect on college students' pleasure (H2a), arousal (H2b), and liking (H2c) within the context of a university-branded merchandise store.

Consumers' responses to electronic kiosks in in-store settings suggest that consumers may experience positive emotional states when exposed to electronic kiosks in exterior retail settings, as well:

H3: The electronic kiosk will have a positive effect on college students' pleasure (H3a), arousal (H3b), and liking (H3c) within the context of a university-branded merchandise store.

A fourth hypothesis was developed to examine if pleasure, arousal, and liking predict college students' patronage intentions at a university-branded merchandise store. Implicit here is the assumption that these emotional responses were elicited by the exterior store atmospherics examined in this study:

H4: Pleasure, arousal, and liking will predict college students' patronage intentions within the context of a university-branded merchandise store.

Prior studies have considered how variables external to the S–O–R model (e.g., atmospheric responsiveness, attitude toward store/website, feelings, and involvement) may shape consumer response to store and retail website atmospherics (Eroglu et al. 2003; Jain et al. 2014; Kim et al. 2009). As such, the fifth hypothesis explored whether additional variables, external to the original S–O–R model, may improve the model's utility to predict patronage intentions at a university-branded merchandise store. In a regression analysis, comparing the original S–O–R model with an extended version affords insight into the additional factors that may improve the explanatory power of the model (Tsai 2006). The additional variables were selected for inclusion based upon research suggesting that patronage behaviors at university-licensed merchandise stores may be influenced by factors such as university involvement, past university-branded merchandise consumption behavior, and gender (Greenberg 2013; Kwak and Kang 2009; Kwon and Armstrong 2002, 2006; Kwon and Kwak 2014; Wakefield 2015). In particular, there is evidence that a consumer's identification with a university team (i.e., his/her team involvement) as well as his/her past purchase of team-licensed merchandise predict consumption of team-licensed merchandise (Apostolopoulo et al. 2012; Kwak and Kang 2009; Kwon and Armstrong 2002, 2006; Wakefield 2015). Additionally, based upon the premise that preferences for specific store atmospherics may shape consumer behaviors (e.g., Caldwell and Hibbert 2002), it was proposed that preferences for the external store atmospherics manipulated in the present study may influence patronage intentions.

H5: Pleasure, arousal, liking, preferences for store atmospherics, university involvement, past university-branded merchandise consumption behavior, and gender will predict college students' patronage intentions.

## Methods

To examine the influence of exterior store atmospherics upon consumer response to a university-branded merchandise store, an online survey with an experimental design component was administered to a convenience sample of college students. An online survey approach to data collection was selected because it afforded the capacity to efficiently sample a large number of individuals while controlling for extraneous variables that may influence responses to the physical environment (cf., Horton et al. 2010). US college students were identified as an appropriate sample for this study because they represent a core target market for university-branded merchandise. In order to ensure a diverse sample with respect to student major and gender, a dual approach was used to recruit participants. First, students enrolled in four university courses (upper and lower division, representing students of varied majors) were invited to complete the questionnaire. Second, students who completed the questionnaire were asked to invite another university student of the opposite gender to participate in the study.

The questionnaire included demographic items, such as gender, age, ethnicity, major of study, and year in school, as well as seven multi-item measures, which are described below. The experimental design component of the study required participants to evaluate a computer-generated image of a storefront for a university-branded merchandise store. Specifically, the  $2 \times 2 \times 2$  experimental design involved the manipulation of the three exterior store atmospheric (i.e., independent) variables of interest in this study: landscaping (i.e., potted yellow flowers versus no flowers), store greeter (i.e., university mascot versus no mascot), and electronic kiosk (versus no kiosk). These manipulations yielded eight stimuli, which are described below.

### Preferences for store atmospherics

Participants' preferences for specific store atmospherics were assessed using a five-item scale developed for the present study. All items were measured on seven-point Likert scales (1 = strongly disagree, 7 = strongly agree). The lead-in phrase for this scale was, "I enjoy shopping in retail environments that..." and individual items addressed aspects of store atmospherics such as electronic self-service technologies, landscaping and beautification, interaction with store greeters, multiple sources of information about stores and products (e.g., store personnel, in-store online service), and natural design elements. Cronbach's alpha for this scale was 0.66. Reliability coefficient values of 0.60 and above are generally regarded as acceptable (Bitta et al. 1981; Nunnally 1978).

### University involvement

Participants' involvement with the university at which they were enrolled (and whose brand was depicted in the stimuli used for the experimental design component of the study) was measured using Kwon and Armstrong (2006) school and team identification scales. Taken together, these scales provide a comprehensive assessment of individuals' engagement with their academic institution and its athletic teams. The school identification scale included six items measured on seven-point Likert scales (1 = strongly disagree, 7 = strongly agree). Example items included, "I am very interested in [name of university]" and "I feel a sense of 'ownership' for [name of university]." The team identification scale included six items assessed on seven-point Likert scales (1 = strongly

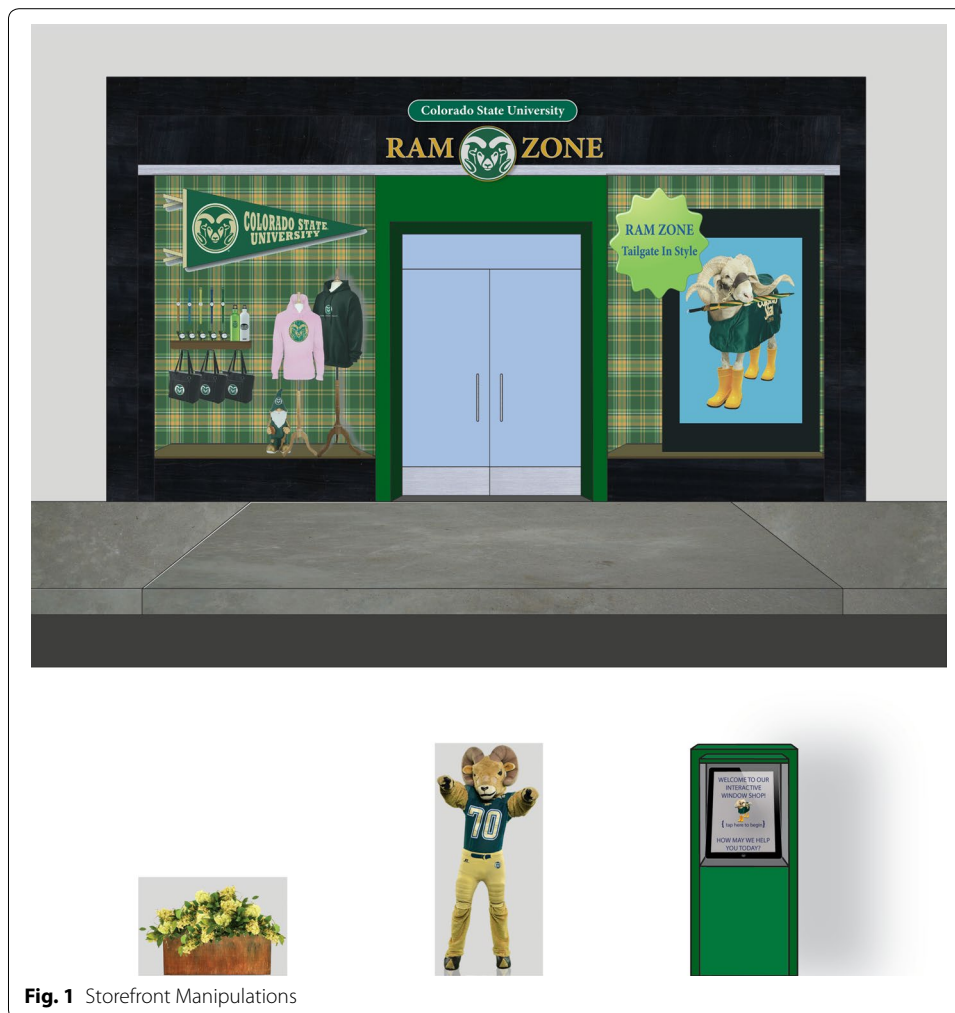
disagree, 7 = strongly agree). Example items included, “I am very interested in [name of university sports team]” and “I feel a sense of ‘ownership’ for [name of university sports team].” Cronbach’s alpha for this scale was 0.95.

Prior to responding to the remaining multi-item measures, participants were exposed to the experimental design component of the survey. Each participant was randomly assigned to one of eight treatment groups. Participants in each treatment group viewed and evaluated a different computer-generated image of a storefront for “Ram Zone,” a university-branded (and owned) merchandise store located in a downtown business district. The eight images (i.e., stimuli) were created by manipulating the three independent variables—landscaping, store greeter, and electronic kiosk (see Fig. 1)

1. university-branded merchandise in the product-display windows—no landscaping, store greeter, or electronic kiosk (control)
2. university-branded merchandise in the product-display windows with landscaping
3. university-branded merchandise in the product-display windows with a store greeter
4. university-branded merchandise in the product-display windows with an electronic kiosk
5. university-branded merchandise in the product-display windows with landscaping and a store greeter
6. university-branded merchandise in the product-display windows with landscaping and an electronic kiosk
7. university-branded merchandise in the product-display windows with a store greeter and an electronic kiosk
8. university-branded merchandise in the product-display windows with landscaping, a store greeter, and an electronic kiosk

The development of stimuli for the present study was guided by the literature in the area of exterior store atmospherics as well as consideration for the types of exterior store atmospherics that might be appropriate for adoption by independent retailers operating in downtown shopping districts. More specifically, the development of stimuli for this study reflected feasible options for a university-branded merchandise store situated within the context of a downtown business district in a college town. Potted yellow flowers with green foliage were selected as the form of landscaping because yellow and green represent the university’s colors. Additionally, potted flowers represent a feasible and affordable landscaping option for locally-owned downtown businesses. The store greeter took the form of a person wearing a university mascot costume to complement the store’s university-branded merchandise focus. Mascots have the ability to effectively communicate the “ethos of a brand” (Malik and Guptha 2014), which is important for a university-branded merchandise store, and also represent a dynamic and flexible design element. The electronic kiosk was situated to the right of the storefront door and was described to participants as follows: “The electronic kiosk positioned in front of the store allows consumers to engage in a self-service shopping experience. Consumers can use the kiosk to browse and purchase items from the Ram Zone (store name) merchandise assortment as well as to purchase tickets for Ram athletic events at their convenience, 24 h/day. Merchandise purchases are delivered to local addresses within





**Fig. 1** Storefront Manipulations

48 h and to other addresses using standard UPS delivery services.” Prior to administering the survey, a pre-test of the stimuli was conducted with nine college students to assess their observations about and emotional responses to the storefronts including the following manipulations: (a) control, (b) landscaping, only, (c) store greeter, only, and (d) electronic kiosk, only. Findings from the pre-test revealed that participants regarded the storefront with the landscaping as “inviting,” “pretty/feminine,” “spring-like,” and “welcoming.” Participants described the storefront with the store greeter (i.e., school mascot) as “fun,” “exciting,” eliciting “school pride,” and “youthful.” However, participants also indicated that the presence of the school mascot as store greeter was “not appropriate for all ages” and as possibly “too much.” Participants viewed the storefront featuring the electronic kiosk as “advanced/smart,” “modern,” “interactive,” “accessible,” “convenient,” “functional,” “high tech.” At the same time, some participants described the storefront (across the varied conditions) as being “busy” or “crowded.” As such, participants’ pre-test responses included references to the manipulated stimuli as well as culturally-accepted, affective associations with these objects, suggesting that the stimuli were valid for use in the study.

### **Emotional states elicited by storefront**

After viewing the image of the storefront, participants' emotional states were measured using a modified version of Mehrabian and Russell's (1974) scales for pleasure and arousal. Twelve items were measured on seven-point semantic differential scales, and the lead-in phrase for the individual items was, "The Ram Zone storefront makes me feel..." Principle component analysis with Varimax rotation was used to reduce the data. A minimum eigenvalue of 1.0 determined the number of factors extracted. Items loading equal to or greater than 0.60 on a given factor and less than 0.30 on other factors were retained to ensure unidimensionality (Bagozzi and Yi 1988). Analyses revealed two factors, pleasure and arousal, which are consistent with prior research (Mehrabian and Russell 1974). The pleasure factor ( $\alpha = 0.91$ ) comprised seven items (happy/sad, comfortable/uncomfortable, pleased/annoyed, satisfied/dissatisfied, contented/discontented, hopeful/unhopeful, and engaged/disengaged). The arousal factor ( $\alpha = 0.61$ ) included three items (calm/excited, relaxed/stimulated, and controlled/frenzied).

### **Liking of storefront**

The degree to which participants liked the storefronts they viewed was assessed using a single-item measured on a seven-point Likert scale (1 = I disliked it very much, 7 = I liked it very much). The question for this measure was, "What is your overall impression of the Ram Zone storefront?"

### **Patronage intentions**

To assess patronage intentions toward the Ram Zone, participants were asked to evaluate how likely they would be to engage in five specific patronage behaviors relative to the Ram Zone, including visiting the store, browsing the selection of merchandise, purchasing something for themselves, purchasing a gift, and recommending the store to family members or friends. This scale was developed for the present study and included some items used in prior research (e.g., Hyllegard et al. 2010; Yan et al. 2010). Items were measured on seven-point Likert scales (1 = very unlikely, 7 = very likely). Cronbach's alpha for this scale was 0.94.

### **Past university-branded merchandise consumption behavior**

Three items measured on seven-point Likert scales (1 = very infrequently, 7 = very frequently) were used to assess participants' past behaviors relative to the consumption of university-branded merchandise. The items included "wear Ram-branded apparel," "purchase Ram-branded merchandise," "shop at Ram Zone." This scale was developed for the present study, but comprised items similar to those used in prior research (e.g., Park and Park 2007). Cronbach's alpha for this scale was 0.86.

## **Results and Discussion**

### **Sample**

The sample for the study included 336 college students from the southwest region of the United States. Nine participants were removed from the sample prior to data analyses: four who indicated that they were not enrolled at the university whose brand (i.e., Ram Zone) was depicted in the storefront images, two who did not provide responses

to any of the demographic items on the questionnaire, and three who did not respond to one or more of the multi-item measures on the questionnaire. Participants ranged in age from 18 to 33 years ( $M = 20.5$  years). The gender (53.7 % female, 46 % male, and 0.3 % transgendered) and ethnic mix of the sample mirrored the university population from which it was drawn, with the majority of students reporting Caucasian (77.5 %) ethnicity, followed by Hispanic (7.5 %), Asian (5.1 %), mixed ethnicity (4.8 %), African American/Black (4.2 %), and other (0.9 %). The sample was fairly equally distributed by participants' year in school; approximately 24 % of the participants were freshman, 29 % were sophomores, 27 % were juniors, and 20 % were seniors. Forty-two academic majors were represented in the sample.

### Manipulation check

Following the approach taken by Mower et al. (2012), a manipulation check was conducted to assess participants' enjoyment of the manipulated exterior store atmospherics (i.e., the appeal of these atmospherics to participants). The mean score for enjoyment of landscaping features (among participants who were exposed to stimuli featuring landscaping) was 5.57 ( $SD = 1.14$ ), the mean score for enjoyment of store greeters (among participants who were exposed to stimuli featuring the store greeter) was 4.95 ( $SD = 1.21$ ), and the mean score for enjoyment of electronic kiosk (among participants who were exposed to stimuli featuring the electronic kiosk) was 5.47 ( $SD = 0.94$ ) (on a seven-point Likert scale). Thus, findings indicated that the presence of these exterior store atmospherics were appealing to the participants.

### Analyses

MANCOVA was conducted to examine the effects of three manipulated variables (i.e., landscaping, store greeter, and electronic kiosk) on consumers' emotional states elicited by the storefront and consumers' liking of the storefront. Gender, preferences for retail atmospherics, and university involvement were included as covariates in this analysis. These variables were included because research suggests that female consumers may evaluate store design differently from male consumers (Borges et al. 2013) and that consumers' level of involvement and preferences may affect information processing in the store environment (Sirgy et al. 2000).

Results revealed that landscaping did not impact college students' pleasure, arousal, or liking related to the storefront (Wilks' Lambda = 0.99,  $F = 1.48$ ,  $p > 0.05$ ). Thus, H1a, H1b, and H1c were not supported (see Table 1). That landscaping did not influence college students' emotional states is contrary to much of the literature (e.g., Haviland-Jones et al. 2005; Joye et al. 2010). However, findings are consistent with the work of Mower et al. (2012). The findings from the Mower et al. (2012) study and the present work may reflect, in part, the selection of landscaping stimuli. In both studies, landscaping took the form of potted flowers rather than planted trees or shrubbery (although, as noted, in the present work, visual images of the experimental stimuli were used, which was not the case in the Mower et al. study).

Findings also are inconsistent with the work of Bengman et al. (2012), who found that the inclusion of greenery positively influenced feelings of pleasure in complex, but not simple, store interiors. One explanation for this difference in findings may be the focus

**Table 1 Effects of landscaping, store greeter, and electronic kiosk on consumers' emotional states and liking**

Variables	Pleasure		Arousal		Liking	
	Mean	Multivariate F	Mean	Multivariate F	Mean	Multivariate F
		1.48		3.09		0.52
Landscaping						
Absent	5.10		4.51		4.63	
Present	4.96		4.41		4.66	
F-value	1.47		0.60		0.02	
Store greeter						
Absent	5.12		4.37		4.88	
Present	4.94		4.56		4.41	
F-value	2.79		2.19		7.15**	
Electronic kiosk						
Absent	5.03		4.54		4.62	
Present	5.03		4.39		4.67	
F-value	0.00		1.47		0.07	
Landscaping × greeter						
Absent × absent	5.22		4.55		5.02	
Absent × present	4.98		4.48		4.24	
Present × absent	5.03		4.19		4.74	
Present × present	4.89		4.64		4.57	
F-value	0.21		4.20*		2.92	
Landscaping × kiosk						
Absent × absent	5.04		4.52		4.53	
Absent × present	5.16		4.5		4.73	
Present × absent	5.01		4.56		4.71	
Present × present	4.91		4.27		4.6	
F-value	0.93		1.2		0.76	
Greeter × kiosk						
Absent × absent	5.04		4.56		4.67	
Absent × present	5.21		4.18		5.08	
Present × absent	5.01		4.52		4.57	
Present × present	4.86		4.59		4.25	
F-value	1.95		2.94		4.26*	
Landscaping × greeter × kiosk						
Absent × absent × absent	5.15		4.64		4.69	
Absent × absent × present	5.29		4.46		5.34	
Absent × present × absent	4.94		4.40		4.37	
Absent × present × present	5.02		4.55		4.12	
Present × absent × absent	4.94		4.47		4.66	
Present × absent × present	5.12		3.91		4.82	
Present × present × absent	5.09		4.65		4.76	
Present × present × present	4.7		4.63		4.38	
Control variables						
Gender		1.60		5.84*		0.22
Preferences for retail atmospherics		7.32**		2.07		3.63*
University involvement		30.57***		0.83		9.35**

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

on interior versus exterior store environments. Seemingly, in the present work, the inclusion of landscaping in a complex storefront did not elicit an emotional response. Participants may have noticed the flowers, but did not give the landscaping consideration in their assessments of the storefronts, perhaps because they were focused upon other atmospheric elements, such as the products displayed in the store windows. One implication of this finding is that the use of exterior landscaping may provide “diminishing returns” in some retail contexts, including university-branded merchandise stores. For example, retailers whose storefronts are “visually rich” may not derive additional benefit from incorporating landscaping into their store exteriors.

The store greeter had a significant effect on college students’ responses to the storefront (Wilks’ Lambda = 0.97,  $F = 3.08$ ,  $p < 0.05$ ). Univariate analyses indicated that store greeter did not impact consumers’ pleasure or arousal. Thus, H2a and H2b were not supported. However, findings did indicate that store greeter negatively influenced participants’ liking of the storefront. Participants liked the storefront less when a store greeter was present ( $M_{\text{none}} = 4.88$  vs.  $M_{\text{greeter}} = 4.41$ ,  $F = 7.15$ ,  $p < 0.01$ ). Because the direction of the relationship between store greeter and liking was opposite of that which was predicted, H2c was not supported. These findings run contrary to the assumption that mascots can be employed to effectively communicate the ethos of the brand (Malik and Guptha, 2014), particularly within the context of a university-branded merchandise store. However, these findings may be understood within the context of existing research suggesting that, in marketplace settings, consumers respond less positively to anthropomorphic portrayals of animal mascots with lower physical similarity to humans (Connell, 2013). Thus, in the present study, participants may have perceived the store greeter, who took the form of a ram (e.g., lower physical similarity to humans) dressed in a football uniform, unfavorably. Given that there is limited research in this area, an implication of the present findings is a need for additional research to further explore the potential role that animal mascots may play in a retail setting.

The electronic kiosk did not affect pleasure, arousal, or liking (Wilks’ Lambda = 1.00,  $F = 0.52$ ,  $p > 0.05$ ). Thus, H3a, H3b, and H3c were not supported. All three covariates were significant in the overall model, and thus, were retained in the model for control purposes (Wilks’ Lambda = 0.97,  $F = 2.64$ ,  $p < 0.05$  for gender; Wilks’ Lambda = 0.97,  $F = 3.08$ ,  $p < 0.05$  for preferences for store atmospheric; Wilks’ Lambda = 0.90,  $F = 11.25$ ,  $p < 0.001$  for university involvement).

The results related to the electronic kiosk were unexpected, given college students’ proclivity to use SSTs such as self check-outs in retail settings (Dean, 2008). A managerial implication of this finding is that electronic kiosks in the exterior store environment may provide limited, if any, return on investment in the context of the university-branded merchandise store. Additional research may confirm this initial conclusion, as limited work has explored this topic.

MANCOVA also revealed an interaction effect between landscaping and store greeter (Wilks’ Lambda = 0.97,  $F = 2.92$ ,  $p < 0.05$ ). Specifically, there was a significant interaction effect between landscaping and store greeter on arousal ( $F = 4.20$ ,  $p < 0.05$ ). The combination of landscaping and store greeter produced a higher level of arousal among participants ( $M = 4.64$ ) than did the single effect of store greeter ( $M = 4.48$ ) or the single effect of landscaping ( $M = 4.19$ ). Although MANCOVA did not reveal an interaction

effect between store greeter and electronic kiosk (Wilks' Lambda = 0.98,  $F = 2.33$ ,  $p > 0.05$ ), univariate analyses revealed an interaction effect between these variables on liking of the store ( $F = 4.26$ ,  $p < 0.05$ ). That is, the combination of store greeter and electronic kiosk produced a lower level of liking ( $M = 4.25$ ) than the single effect of store greeter ( $M = 4.57$ ) or the single effect of electronic kiosk ( $M = 5.08$ ).

Multiple regression analysis was conducted to examine the effects of emotional states (i.e., pleasure and arousal) elicited by the storefront and liking of the storefront on participants' patronage intentions (H4). Results indicated that the overall regression model was significant ( $R^2 = 0.51$ ,  $F = 109.60$ ,  $p < 0.001$ ). Pleasure ( $\beta = 0.36$ ,  $t = 6.00$ ,  $p < 0.001$ ) and liking of storefront ( $\beta = 0.40$ ,  $t = 6.67$ ,  $p < 0.001$ ) positively predicted college students' patronage intentions toward the store. Arousal did not predict patronage intentions. Thus, H4 was partially supported.

Multiple regression analysis also was conducted to explore the effects of emotional states, liking of the storefront, preferences for store atmospherics, university involvement, past university-branded merchandise consumption behavior, and gender on patronage intentions (H5). The overall regression model was significant ( $R^2 = 0.58$ ,  $F = 59.77$ ,  $p < 0.001$ ). Pleasure ( $\beta = 0.24$ ,  $t = 4.05$ ,  $p < 0.001$ ), liking of the storefront ( $\beta = 0.40$ ,  $t = 7.00$ ,  $p < 0.001$ ), university involvement ( $\beta = 0.12$ ,  $t = 2.63$ ,  $p < 0.01$ ), and past university-branded merchandise consumption behavior ( $\beta = 0.19$ ,  $t = 4.39$ ,  $p < 0.001$ ) positively predicted participant's patronage intentions. Arousal, preferences for store atmospherics, and gender did not predict patronage intentions. As such, H5 was partially supported (see Table 2).

Findings from the regression analyses revealed that pleasure and liking of the storefront (H4), as well as variables external to the S–O–R model (H5), predicted college students' patronage intentions at the university-branded merchandise store. Thus, findings provide support for one component of the S–O–R model—pleasure in shaping patronage intentions based upon exterior store atmospherics. Additionally, findings provide further evidence for prior research (Bell, 1999; Mower et al. 2012) suggesting that liking,

**Table 2 Regression analyses: predicting patronage intentions (N = 336)**

Variables	B	SE	$\beta$	$t$	adj $R^2$	$R^2$
Model 1					0.5	0.51***
Pleasure	0.86	0.07	0.36	6.00***		
Arousal	0.53	0.05	0.05	1.15		
Liking	0.33	0.05	0.40	6.67***		
Model 2					0.57	0.58***
Pleasure	0.30	0.07	0.24	4.05***		
Arousal	0.04	0.04	0.04	0.94		
Liking	0.33	0.05	0.40	7.00***		
Preferences for store atmospherics	0.05	0.06	0.03	0.81		
University involvement	0.13	0.05	0.12	2.63**		
Past university-branded merchandise consumption behavior	0.17	0.04	0.19	4.39***		
Gender	0.18	0.10	0.07	1.70		

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

an evaluative judgment, is positively associated with consumers' patronage intentions. Consumers' connectedness to the university—operationalized as university involvement and past university-branded merchandise consumption behavior—also influenced college students' patronage intentions.

An F ratio was calculated to examine the utility of the two regression models in predicting college students' patronage intentions. Findings indicated differences in the  $R^2$  values of the two models and suggest that the inclusion of additional variables in the second model better predicted college students' patronage intentions ( $F_{(4328)} = 13.66$ ,  $p < 0.01$ ).

## Conclusions

Findings from this research extend understanding of the influence of exterior store atmospherics upon consumer behavior, an area that has received relatively little attention. Although results revealed that individual elements of exterior store atmospherics—landscaping, store greeter, electronic kiosk—had relatively minimal impact on college students' emotional states and liking of the storefront, analyses provided partial support for Mehrabian and Russell's (1974) S–O–R model; in particular, findings demonstrated the O–R relationship. That is, pleasure and liking were found to influence purchase intentions at a university-branded merchandise store.

Findings provide implications for research by extending understanding of the role that variables associated with the S–O–R tradition may play in shaping consumer responses to exterior store atmospherics. Collectively, findings support the premise that pleasure and liking of the storefront exterior shape patronage intentions at a university-branded merchandise store. Arousal, however, did not predict consumers' patronage intentions at a university-branded merchandise store. Although this finding runs contrary to the (positive) relationships proposed in the S–O–R model and the hypotheses developed for the present study, not all prior studies have confirmed these relationships (cf., Donovan et al. 1994). Further, although pleasure and liking of the storefront shaped purchase intentions, the exterior store atmospherics manipulated in the present study did not positively influence consumers' emotional states or liking. It may be that participants' pleasure derived from viewing the storefront and liking of the storefront were shaped by aspects of the store exterior (e.g., window displays, store signage) that were not manipulated in this study, which in turn, shaped their patronage intentions. Of course, because these aspects of exterior store atmospherics were not examined in the present study, this conclusion remains speculative and poses an opportunity for future research.

The present study is limited in that it focused upon consumers' attitudes and behaviors toward a specialty retailer, university-branded merchandise store. As such, findings may not be generalizable to other types of retailers. Similarly, the sample used in the study—college students—limits the generalizability of the findings to other populations. In the future, researchers may wish to examine the influence exterior store atmospherics upon consumer behavior in other retail settings (e.g., food stores, mass merchandisers) and/or among varied consumer groups (e.g., children, older consumers). Further, this research raises questions about the potential impact of store greeters upon consumers' attitudes and behaviors. Our findings, which revealed an aversive reaction to the featured store greeter, conflict with prior research suggesting that store greeters may positively impact

consumers' spending, satisfaction, and perceptions (Otterbring et al. 2013). This disparity in findings may be attributed to the fact that in our study, the store greeter did not appear as a "person," per se, but rather, took the form of a person wearing a university mascot costume that took the form of animal (i.e., a ram) bearing low physical similarity to humans (cf., Connell, 2013). Thus, it would be valuable for researchers to explore the influence of various types of store greeters (e.g., people vs. animal mascots) in differing retail settings.

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