Psychology & Marketing

Store Atmospherics: A Multisensory Perspective

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ABSTRACT

Store atmospherics affect consumer behavior. This message has created a revolution in sensory marketing techniques, such that across virtually every product category, retailers and manufacturers seek to influence the consumer's "sensory experience." The key question is how should a company design its multisensory atmospherics in store to ensure that the return on its investment is worthwhile? This paper reviews the scientific evidence related to visual, auditory, tactile, olfactory, and gustatory aspects of the store environment and their influence on the consumer's shopping behavior. The findings emphasize the need for further research to address how the multisensory retail environment shapes customer experience and shopping behavior. © 2014 Wiley Periodicals, Inc.

As competition in retail has intensified, managers have had to move beyond a product focus to a focus on the customer experience (Puccinelli et al., 2009). With the proliferation of product offerings as well as retail outlets, there has been a revolution in retail with a view to looking beyond the augmented product (Kotler, 1974). That is, in addition to looking for ways to add value by adding product features (e.g., a customer service number on the packaging), retailers and manufacturers alike are increasingly crafting value-added retail experiences. The retail sector is one that has historically been dominated by manufacturers such as Procter & Gamble. It has come into its own by identifying ways to cultivate a distinctive customer experience. In recent years, many firms have achieved substantial competitive advantage (e.g., Starbucks) via the creation of a more sensory, and increasingly multisensory, customer experience (Pine & Gilmore, 1999).

Extending Kotler's (1974) early work, Donovan and Rossiter (1982) applied the pleasure, arousal, and dominance model of Mehrabian and Russell (1974) to retail settings, in the belief that analyzing retail space according to these dimensions could effectively predict customer behavior (see Crowley, 1993). Perhaps unsurprisingly, customers have been shown to spend more time in those environments that they find pleasant (Donovan, Rossiter, Marcoolyn, & Nesdale, 1994). What is more, the background music in store may affect a shopper's level of stimulation (Smith & Curnow, 1966; Yalch & Spangenberg, 2000), especially when music with a higher tempo is played (Garlin & Owen, 2006). Taking a more managerial approach to retail atmospherics, Baker, Grewal and Levy (1992) emphasize three key dimensions of retail atmosphere: the ambience of the store, the design elements, and the social elements.

As the focus on customer experience has advanced, a greater realization of the richness and complexity of this experience has become apparent. In particular, the emergence of the sensory marketing approach to enhancing the customer experience has occurred (Ganda, 2012; Hultén, 2011; Hultén, Broweus, & van Dijk, 2009; Krishna, 2010, 2012, 2013; Lindstrom, 2005a, 2005b; Soars, 2009; Spence, 2002). Products and settings are increasingly being designed to appeal to consumers on both rational and emotional levels, as well as across multiple senses (Neff, 2000; Spinney, 2013). This approach has been further enriched by recent findings emerging from the field of cognitive neuroscience (Yoon et al., 2012). The general approach of developing more sensory touch points with the customer is an excellent idea in principle, especially as a means to creating differentiation in the marketplace. However, store atmospherics cannot really be understood on a sense-by-sense basis; environments, and our perception of them are, by nature, multisensory.

The opportunity offered by sensory marketing is further enhanced by any appreciation of how the senses operate in concert. Sensory marketing research tends to focus separately on vision, audition, or olfaction, for example. Furthermore, parallel work by Grewal

Psychology and Marketing, Vol. 31(7): 472–488 (July 2014)
View this article online at wileyonlinelibrary.com/journal/mar
 DOI: 10.1002/mar.20709

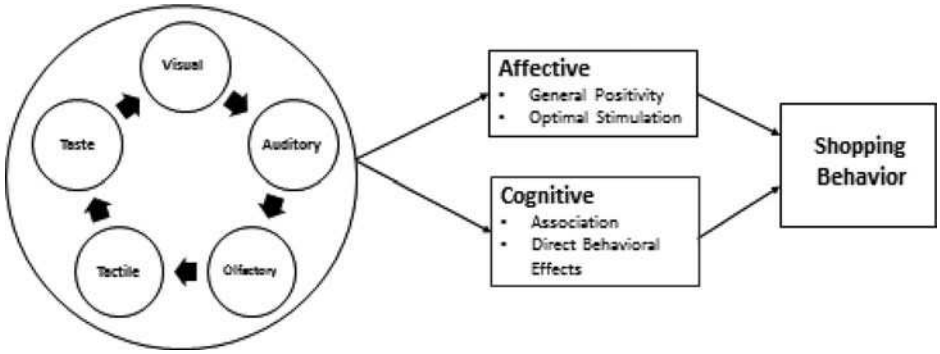

Figure 1. Framework for multisensory shopping behavior.

and his colleagues (Grewal & Baker, 1994; Baker, Grewal, & Parasuraman, 1994) has provided evidence of significant interactive effects of ambience and design factors on consumers' perceptions of retailer image and price acceptability. Perception is fundamentally multisensory, and insights from cognitive neuroscience and marketing regarding how multisensory perception functions are ultimately going to be critical to understanding, and explaining, the customer experience (Krishna, 2012).

Customers perceive servicescapes holistically (Bitner, 1990; Mattila & Wirtz, 2001), so multiple store environment cues likely influence their perceptions of value and their subsequent behaviors (Baker, Parasuraman, Grewal, & Voss, 2002). Retailers need to do the same if they are to effectively manage their store environments. Store atmospherics seek to make retail environments more enjoyable for shoppers (Brand, 1963), thus encouraging them to stay longer, and, ultimately, to spend more, and/or return more frequently. Sensation transference (cf. Dubé & Morin, 2001) is also important here. Specifically, the feelings that the customer develops within the atmosphere transfer to the products that they happen to evaluate in store (Vida, Obadia, & Kunz, 2007; cf. Gorn, 1982).

This article develops an organizing framework for research on sensory marketing considering how sensory cues influence cognitive affect and behavior (see Figure 1). It should be noted that while this research touches on some of the more general findings in sensory marketing, its primary focus is on the evidence directly related to retail practice. Within the affect domain, research is identified that shows general positivity of sensory cues; customers feel better, are more satisfied, and/or show more favorable behavior as a result of a given sensory cue. For example, it has been reported that Web sites featuring a blue background lead customers to feel more relaxed and perceive faster download speeds for the site (Gorn et al., 2004). This framework considers optimal stimulation that also shapes customer affect and includes findings that identify how optimal levels of stimulation can be achieved through an appropriate balance (or matching) of sensory cues. Importantly, within the field of sensory marketing, there are rarely simple main effects on customer perception. Instead, the complexity of sensations is revealed and managers must consider how more optimal stimulation can be achieved to realize a greater return on investment (ROI). For example, lower lighting in the glassware section of IKEA led to increased sales (Hultén, 2012). Ostensibly, the stimulating property of the reflective glass was balanced by the lower level of illumination.

Separately, many of the effects of sensory cues on customers appear to be mediated by cognition. These effects appear to benefit from their associations between specific products and particular atmospheric cues. So, for example, in one study, playing French music in a wine store led to French wine outselling German wine while German music led German wine to outsell French wine (North, Hargreaves, & McKendrick, 1997, 1999). Within the cognitive domain, there are also effects that appear to result from nonconscious associations that directly affect behavior. So, for example, fast tempo music makes people eat and drink more rapidly (McElrea & Standing, 1992; see Spence, 2012b, for a review). Thus, the mechanism by which sensory cues influence behavior is multifaceted. This article reviews the existing multisensory approaches to store atmospherics, highlighting relevant atmospheric and neuroscience principles. The challenges for this line of research and the most important new research opportunities are then reviewed.

VISUAL ATMOSPHERICS

Kotler (1974) regarded visual atmospherics in terms of the color, brightness, size, and shape of a retail space. Psychological research confirms that the color (or hue) and brightness of a space can affect the level of stimulation of those in that space (Lehrl et al., 2007). The lighting and color scheme can also influence mood and a person's emotional state (Evans, 2002). Accordingly, visual aspects of store design, including lighting often attract the most attention and resources from retailers and brands. Within cognitive neuroscience,

it was long thought that visual cues dominated over the other sensory cues in terms of perception, though recent research has begun to suggest that this is not always the case (Calvert, Spence, & Stein, 2004). Some companies readily spend millions of dollars to renovate the lighting in their flagship stores, with architectural lighting companies catering specifically to this market, even though investing in nonvisual atmospherics might offer a greater ROI.

Affective

General Positivity. Visual cues often have direct positive effects on shopping behavior. For instance, Summers and Hebert (2001) investigated the effects of installing additional 500 W lighting in the ceiling, or over a particular display, and found that shoppers touched more items and spent more time inspecting a display with brighter lighting. More specifically, in a retail environment, Bellizzi and Hite (1992) reported that customers prefer blue over red because they find it more relaxing; in turn, relaxing blue atmospheres would appear to encourage longer browsing and promote purchase intentions. Oberfeld, Hecht, Allendorf, and Wickelmaier (2009) even found that switching among red, blue, green, or traditional white lighting exerted a significant effect on customers' estimates of the value of the wines tasted in a winery. Meanwhile, Puccinelli and her colleagues (Puccinelli, Chandrashekaran, Grewal, & Suri, 2013) found that prices that appeared in red (as compared to black) were used by male shoppers to perceive higher perception of value. One of the visual cues customers experience is the behavior of sales personnel in a retail outlet. Research finds that facial expressions and behavior that matches with that of the consumer is experienced more positively (Chartrand & Bargh, 1999; Puccinelli et al., 2013). These visual cues may act in concert with any other cues given off by the salesperson, such as auditory (e.g., tone of voice), olfactory (e.g., perfume), and tactile cues (e.g., a touch of the arm). Indeed, those salespeople who express positive affect when a customer is feeling somber leads to a reduced willingness to pay (Puccinelli, 2006).

Optimal Stimulation

Retailers use lighting to try and achieve optimal levels of stimulation that will lead to more favorable consumer behavior. For example, depending on the kind of atmosphere the retailer is seeking to create, the question whether they should add more lighting or reduce the ambient illumination to enhance a shopper's experience would appear to be determined by the consumer's optimal level of stimulation.

More extreme variations in the ambient lighting, namely removing it altogether, have certainly constituted a very successful niche in the context of dining, with an increase in the number of diners frequenting dark restaurants (Spence & Piqueras-Fiszman, 2012a). In a food and beverage consumption environment, Gal, Wheeler, and Shiv (2007) report a laboratory study in which increasing the brightness of ambient illumination influenced the amount of coffee that people drank. Those respondents who reported liking strong coffee drank more when the lighting was bright, while those who reported liking weaker coffee consumed more when the lighting was dim. These kinds of individual differences may help retailers predict the effect of visual cues more broadly. Retailers catering to strong coffee drinkers (e.g., Starbuck's) might consider brighter lighting while retailers catering to weaker coffee drinkers (e.g., Dunkin' Donuts) might consider dimmer lighting.

Early work on aesthetic preference finds a bell-shaped curve in preference as a function of the complexity of the visual display with moderately complex displays being liked most (Berlyne, 1971). Interestingly, as very complex displays become more familiar (such as among ardent museum goers), they become liked more. For example, anecdotally, the first time one sees an impressionist painting he or she may not like it much but after seeing 25, an appreciation for the style may start to develop. The bell curve is thought to shift toward complexity—what, then, might this mean for managers? In developing the décor in store, managers obviously need to consider the level of sophistication of their target market. For instance, the Museum Company would be better off using complex displays as their customer is more likely to have gone to museums than say a Hollister customer. To this end, optimal stimulation is created in a variety of ways and may be idiosyncratic.

Cognitive

Association. Visual cues may trigger specific associations in consumers that can facilitate decision making. Studies suggest that changing the visual atmospherics, whether in terms of the overall brightness and hue of the lighting or the in-store color scheme (e.g., changing the color of the walls), influences purchase intentions and sales. Color (and color schemes) is/are likely to play an important role in influencing consumer perceptions within a given store. As an example, Samsung apparently uses the same green color in all of its stores (Trivedi, 2006). General recommendations suggest that functional products should adopt a particular color (e.g., blue), whereas more sensory or social products should feature different coloring (e.g., red), to convey meaning about the brand through the use of color (Bottomley & Doyle, 2006). Those colors that are associated with brands (and stores) are likely to evoke associations and increase the ease with which the customer can identify a brand as sharing category membership (Labrecque & Milne, 2012, 2013). Meanwhile, those international brands hoping to establish a consistent global color scheme face additional

challenges as different meanings are often attached to different colors in various parts of the world (e.g., Aslam, 2006; Jacobs, Keown, Worthley, & Ghymn, 1991; Madden, Hewett, & Roth, 2000; Wheatley, 1973), as well as in different eras, such that colors popular a decade ago might appear outdated today, as would (presumably) research based on these color schemes. Bright orange tends to be associated with inexpensive offerings; black continues to be associated with more exclusive products (Jacobs et al., 1991), and/or those products that are trying to distinguish themselves on the shelf (cf. Hutchings, 2003, p. 68; Wheatley, 1973).

Direct Behavioral Effects

In the visual domain, certain cues might elicit behaviors directly. In their store design efforts, many managers seek to create a cathedral effect, using visual layout and layered lighting to draw shoppers into their stores. Yet little published research confirms the effects of industry approaches to store design. Several early studies of store atmospherics demonstrated that changing the color of the environment influenced behaviors (e.g., Babin, Hardesty, & Suter, 2003; Bellizzi, Crowley, & Hasty, 1983; Bellizzi & Hite, 1992; Crowley, 1993). In general, these studies suggest that shoppers are drawn to store interiors that are more pleasant and stimulating.

Visual Summary

The idea that a more visually appealing environment encourages shoppers to stay longer, and, possibly purchase more, continues to have support. However, specifying an appropriate visual design solution for any given store environment is more challenging. Early research posited that shoppers would be drawn to pleasant and arousing visual environments. However, not all studies show as strong an effect on sales of visual changes (Areni & Kim, 1994).

Furthermore, beyond the physiological response that a particular visual design scheme might elicit, specific colors likely convey semantic meaning that must align with the ethos of the retailer but that can vary by region. Thus, global retailers may face a particular challenge as they seek to build their brand through consistency of customer interface at the point of purchase, but also remain vigilant to documented differences in color meaning across cultures (Schmitt, 1995).

AUDITORY ATMOSPHERICS

Research has distinguished physical properties (volume, pitch, rhythm, tempo), emotional tone (positive, negative), and customer liking of elements determining the influence of music and sound (Kotler, 1974). Music is easy to control (and modify) and as a consequence this element of the store environment has been studied more than any other (e.g., see Bruner, 1990; Garlin & Owen, 2006; Herrington & Capella, 1994; North & Hargreaves, 2008, 2010; Spence, 2012b; Turley & Milliman, 2000; Yalch & Spangenberg, 1990; Zaltman & Puccinelli, 2000, for reviews).

A growing number of store chains have started to invest in establishing a distinctive sound for their retail spaces (e.g., Bashford, 2010; Kellaris, 2008; Linsen, 1975; Meyers-Levy, Bublitz, & Peracchio, 2010; Reda, 1998). As Abercrombie & Fitch put it: "Music first! Merchandise second!" (Morrison & Beverland, 2003, p. 78; see also Hultén, 2011). The field of "audio branding" is also starting to mature. Stemming from the success of sonic branding (e.g., just think of the Intel Inside jingle) firms such as Citibank and American Express have developed complete audio profiles where a basic jingle or sonic brand is carried through to on-hold music but also forms the notes associated with ATM buttons. Indeed, functional sounds that signal successful completion of a task (e.g., the opening sound for Skype) are among the best at building a brand's auditory signature compared to ambient sound such as music playing while on hold (Aminoff, 2013; Lindstrom, 2010).

Affective

General Positivity. Within this domain we see some evidence that certain cues have a directly positive influence. Early research suggested that supermarket shoppers preferred background music to silence (Linsen, 1975). A meta-analysis of more than 30 studies (Garlin & Owen, 2006) revealed that the very presence of music had a positive effect on shopper patronage behavior—especially if it was familiar and liked. Grewal, Baker, Levy, and Voss (2003) demonstrated that the presence of classical music (relative to the absence of music) played in a jewelry store enhanced subjects' perceptions of the store atmosphere.

Optimal Stimulation. Auditory atmospherics appear most effective when an optimal level of stimulation is achieved. Knöferle, Herrmann, Landwehr, and Spangenberg (2012) propose that the effect of musical tempo on customer behavior may depend on the musical mode. That is, slow tempo music played in a minor mode appeared more effective (i.e., it led to increased sales), while no such effect of tempo emerged for music played in a major mode. Similar to visual displays, auditory cues that are moderately complex are preferred though again this depends on the customer (Berlyne, 1974; North & Hargreaves, 1995). Classical music aficionados will be drawn to more complex pieces than their pop-music counterparts. One of the earliest studies to have addressed the effects of background music on shopper behavior reported that increasing the volume of music playing in a supermarket resulted in shoppers spending less time in store (Smith & Curnow, 1966), but it did not affect overall customer satisfaction or sales. It may be that the louder music was more stimulating

which, in turn, led to more rapid behavior but which remained optimally stimulating and thus satisfying for the customer.

Store atmospherics might be expected to exert a different impact on shoppers in those cases where they are searching for products having certain attributes (e.g., cars, computers). The music playing in the background may influence social interactions between the customers and staff (Dubé, Chebat, & Morris, 1995) and affect perceptions of wait time. Music appears to facilitate low involvement decisions while interfering with high involvement decisions (Park & Young, 1986). Thus, multiple senses play into the realization of optimal multisensory stimulation and the absolute level that is optimal may be context dependent (e.g., when we are trying to concentrate a lower level may be preferred).

Cognitive

Association. Varying types of music might affect consumers' choices (Areni & Kim, 1993; North, Hargreaves, & McKendrick, 1997, 1999). In-store music can even create emotional bonds with the customer, so ensuring a musical fit with store/brand values is a central consideration (Morrison & Beverland, 2003). For example, music with more "upmarket" connotations (e.g., classical as opposed to Top-40 pop) resulted in shoppers spending significantly more in a wine store (Areni & Kim 1993). Meanwhile, travelers at Glasgow International Airport encounter the sounds of the tropical forest (Treasure, 2007); the BP chain of petrol stations has tried playing the sound of birdsong through its bathrooms at its U.K. petrol stations (Bashford, 2010); and London's famous Harrods department store recently installed a popular, reactive, multisensory sound installation in its toy department (Krishna, 2013; Moore, 2012). Ostensibly these are all attempts to elicit more positive associations among customers.

The kind of music a retailer chooses to play can powerfully signal its brand positioning. The "right" music may thus be crucial for creating and conveying an appropriate impression for customers. For example, playing classical music increased average spending in a restaurant setting (North, Shilcock, & Hargreaves, 2003; Spence & Piqueras-Fiszman, 2014; Wilson, 2003) and French music led to more purchases of French wine in a supermarket (North, Hargreaves, & McKendrick, 1997, 1999). Although the change in people's behavior was by no means subtle, North and his colleagues found that customers indicated that the music had not had any effect on their purchasing decisions. Furthermore, these findings may suggest a stronger effect of auditory cues in product categories that are more experiential in nature. Wine buyers shop for experiential products, usually without having enough information to evaluate the product in advance, so they must rely on product extrinsic cues when making their purchasing decisions. Considering the restricted opportunities for packaging innovations in the wine aisle (Piqueras-Fiszman & Spence, 2012a), it should be borne in mind that this setting might, then, represent a best case scenario when it comes to demonstrating the effect of the atmosphere on shopper behavior. Most of these studies predict that the auditory atmosphere will affect a consumer's level of stimulation, mood (e.g., Alpert & Alpert, 1990), and emotions (Konečni, 2008), such that shoppers spend more time in environments that they find pleasant or where time appears to pass more slowly. In most retail environments, retaining customers in the store is seen as a positive outcome as the numbers of items purchased generally increases.

Direct Behavioral Effects

Several researchers have argued that musical tempo can affect the perceived passage of time in retail and service spaces (Gulas & Schewe, 1994; Oakes, 2003; Yalch & Spangenberg, 1988, 1990, 1993), such that slow tempo, quiet, familiar music causes shoppers to linger a little longer (Garlin & Owen, 2006). Milliman (1982) reported that the speed at which shoppers move down the aisles of a supermarket depends on the tempo of the background music. That is, customers were found to move more rapidly through the aisles when the tempo of quiet background music increased from less than 72 beats to more than 94 beats per minute. Milliman's (1982) study also indicated that the turnover at a supermarket increased by almost 40% with a lowered tempo of music; that is, the customers in the store when slower music was played spent longer in the aisles, which led them to purchase more. In turn, further studies have investigated the consequences of various music volume levels (Smith & Curnow, 1966), tempos (Milliman, 1982), musical modes (Knöferle et al., 2012), and types of music (Areni & Kim, 1993; North, Hargreaves, & McKendrick, 1997, 1999; Yalch & Spangenberg, 1990) on sales. For example, music turned up too high could deter some groups from even entering a commercial space (Forsyth & Cloonan, 2008). Such results suggest that adjusting the volume might provide retailers with a means of controlling the movement of customers through their retail space and hence potentially allow them to adjust the number of shoppers in the store at any one time.

Auditory Summary

Growing interest centers on the use of soundscapes to create immersive experiences. Perhaps the most exciting recent development in this area is store atmospheres that react to shoppers. For example, the multisensory atmosphere of a changing room might shift to match the type of garment that a shopper happens to be trying on: tropical music and the smell of coconut for a bathing suit, or wind howling for people trying out a heavy woolen sweater. Hyperdirectional loudspeakers (speakers emitting targeted sound waves within a set space, e.g., a 2 m^2 in front of a TV screen; Spence,

2011b) also offer some interesting opportunities for delivering intriguing auditory experiences in store (albeit at a price). Retailers with the help of such audio devices can discreetly provide auditory experiences to those individuals standing in front of displays and promoted merchandise.

Research thus far has shown that auditory atmospherics encompass both physical effects (e.g., tempo) and semantic meanings associated with specific music and soundscapes. Because so many attributes of music affect shopper behavior, further research needs to assess the impact of varying more than just a single parameter in order to determine the relative importance of different cues (e.g., tempo, type, and loudness), and uncover any interactions that may exist among different musical parameters (cf. Knöferle et al., 2012).

OLFACTORY ATMOSPHERICS

Press stories frequently describe the introduction of fragrance into retail settings, though the body of empirical work remains in its infancy. The effect of ambient fragrance on shopper behaviors can occur outside conscious awareness but still alter their behaviors and perceptions (Mandler, 1975; Ward, Davies, & Kooijman, 2003). Under laboratory conditions, the smells that people are not aware of have sometimes been shown to exert a greater impact on their behavior than perceptible scents (Li, Moallem, Paller, & Gottfried, 2007). What can we say about a smell (or fragrance)? We can assess its intensity, its pleasantness, but not much else (e.g., Lawless & Engen, 1977; Yeshurun & Sobel, 2010). For example, people normally find it difficult to describe odors, even when they recognize them as familiar, and can confidently say whether they signify something that is edible or not. Introducing scent into a large retail space thus constitutes a greater challenge for retailers than manipulating other sensory cues.

Affective

General Positivity. More so than other sensory cues, a customer's response to olfactory cues is more likely to be hedonically charged (i.e., either positive or negative). Spangenberg, Crowley, and Henderson (1996) report that people's intentions to buy a backpack increased significantly as the result of the presence of an ambient scent. Perhaps ambient scent masks residual background odors in some cases (Schifferstein, Talke, & Oudshoorn, 2011; "Tube scent machine breaks down," 2001). The data from simulated shopping tasks suggest that purchase likelihood for sports shoes increases when the shoppers tried on the shoes in a mixed floral-scented room rather than in an unscented room (Hirsch, 1990; Miller, 1991); many of the participants in this study even indicated a higher willingness to pay in the scented room. Something as simple as placing fresh flowers by the cash registers might then be sufficient to facilitate sales, as exemplified in practice by many small luxury gift stores that feature fragrant bouquets (Parsons, 2009). Be warned, however, there have been reports that certain floral scents can end up reminding older clientele of funerals (Bone & Jantrania, 1992).

In actual retail environments, the results published to date similarly suggest a large effect. Knasko (1989) reported that the customers in a large metropolitan jewelry store spent more time at counters that had been sprayed with a floral/fruity or a spicy scent than if the counters remained unscented (Lipman, 1990). Thus, ambient scent can influence behavior by creating a more positive experience (e.g., Gulas & Bloch, 1995). An appealing scent may elicit approach behaviors (e.g., Knasko, 1995). Samsung have purportedly introduced a signature honeydew melon scent in to all of its stores to match the green color scheme mentioned earlier (Trivedi, 2006), and at the Sony Style store, "the subtle fragrance of vanilla and mandarin orange—designed exclusively for Sony—wafts down on shoppers, relaxing them and helping them believe that this is a very nice place to be" (Fetterman & O'Donell, 2006).

Optimal Stimulation. Overall, ambient scent can also influence consumer behavior by helping consumers achieve an optimal level of stimulation (Pacelle, 1992). Importantly, the optimal level may be moderated by individual differences in olfactory sensitivity (e.g., Corso, 1971; Doty et al., 1984). The level of stimulation for an individual customer may also depend on the retailer's ability to uniformly distribute a scent throughout the retail space, and one can imagine customers close to the source of the scent being more stimulated than those further ways.

Cognitive

Association. Olfactory cues may have their greatest impact through associative means. Indeed, scent memory is thought to be the strongest of all the senses showing significant memory for odors decades after first smelling the scent (Goldman & Seamon 1992; Laird 1935), with scented products and retail environments apparently being especially well recalled (Krishna, Lwin, & Morrin, 2010; Morrin & Ratneshwar, 2003). Many of the managerial approaches in this domain use scent to fuel specific consumer thoughts related to their products. While scent marketing at the point of sale may seem uniquely suited to stores that sell fragranced products, such as coffee, chocolate, or soap, this is, in fact, simply not in the case in practice (e.g., Orth & Bourrain, 2005; Parsons, 2009). For example, the smell of freshly starched cotton has been released as shoppers walk by certain display stands in the Thomas Pink shirt store (Ellison & White, 2000), and at least one chain of enterprising travel agents tried to boost sales by pumping in the smell of coconut to their stores. Other retailers reportedly have experimented with

releasing a scent linked to a given holiday (e.g., mulled wine at the end of the year, or chocolate near Valentine's Day) with the goal of tickling the consumers' olfactory sense ("Seat sniffers," 2000; see also Demetros, 1997; Hinds, 1988; Hultén, Broweus, & van Dijk, 2009; Jellinek, 1994; Miller, 1993; Terrling, Nixdor, & Köster, 1992).

Spangenberg, Sprott, Grohmann, and Tracy (2006) investigated the effect of adding a vanilla scent to a women's department and a sweet floral scent (Rose Maroc) to the men's section of a store (after pretesting to ensure those scents appealed to each gender). Sales almost doubled in both sections of the store following the introduction of the scents, whereas a negative impact on store sales was documented when the two scents were switched. Many published studies suggest that releasing the right scent can prompt customers to stay longer in store (Mitchell, Kahn, & Knasko, 1995; Spangenberg et al., 2006). It is, however, important to note that there are marked individual and cultural differences in the meanings that are associated with specific fragrances (Ayabe-Kanamura et al., 1998; Fost, 1991; Trivedi, 2006).

Certain scents may help retailers achieve specific objectives. Retailers looking to cut labor costs by inducing customers to tidy up before leaving might consider using Lysol (i.e., a U.S. cleaning product) as part of their cleaning regime. The scent of a recognizable cleaning product has been shown to lead individuals to be tidier when eating (Liljenquist, Zhong, & Galinsky, 2010). Some evidence suggests that the presence of certain scents causes people to perceive products differently such as items of clothing being rated as softer (Demattè, Sanabria, Sugarman, & Spence, 2006; Laird, 1932; see also Churchill, Meyners, Griffiths, & Bailey, 2009). To capitalize on scent marketing, marketers should identify a signature scent that is both pleasant and congruent with the store and brand identity (Bosmans, 2006; Parsons, 2009), such as the white tea fragrance popularized by the Westin Hotel chain (Hultén, Broweus, & van Dijk, 2009; Pacelle, 1992; Trivedi, 2006). The scent is distinctive in the hotel environment and can also be purchased by any guest wanting to recreate "the hotel experience" at home. Certainly, few shoppers are surprised nowadays when book stores smell of coffee (see Parsons, 2009), and growing numbers of retailers from various sectors have been experimenting with adding fragrance to their stores. Creating a signature scent for a store offers the retailer an obvious means to increase the number of sensory touch points with customers (Lindstrom, 2005a, 2005b; Neff, 2000) and, of course, to engage in scent marketing (Hultén, Broweus, & van Dijk, 2009; Morrin, 2010). At the high-end women's clothing store Anne Fontaine, for instance, the staff sprays the signature scent throughout the store, as well as on all purchases after they have been placed in a shopping bag. This retailer thus succeeds in delivering its signature scent without the need for any complex fragrance delivery system.

Olfactory Summary

While olfactory atmosphere offers tremendous opportunity for retailers, more research is needed in order to better articulate the effects anticipated in a retail setting. Scent marketing (in large retail spaces) will entail significant upfront investment given the need for diffusion equipment, not to mention the development costs for the signature scent. Understanding how and when specific scents enhance the customer experience will be key for commercial success in the years to come.

TACTILE ATMOSPHERICS

Tactile atmospherics can be described in terms of the sensory-discriminative qualities of softness, smoothness, and temperature (Kotler, 1974). The success of The Gap clothing store has been partially attributed to the fact that it has made it convenient for the shopper to touch their merchandise (Underhill, 1999). The various tables in the store are piled high with clothes, and customers happily touch the merchandise (Robinson, 1998; Underhill, 1999). The importance of touch, especially for clothing purchases (Citrin, Stem, Spangenberg, & Clark, 2003; McCabe & Nowlis, 2003), makes it difficult to understand why so many other retailers make the displayed merchandise so difficult to touch. Even incidental touch can be beneficial (Gallace & Spence, 2014; Martin, 2012).

Yet there is a flip side to tactile exploration by customers too, namely, the possibility of "tactile contamination." Have you ever noticed how those buying a newspaper often reach for a paper from somewhere other than the top of the pile (Argo, Dahl, & Morales, 2006).

Affective

General Positivity. Customers are more likely to purchase a product after they have touched or picked it up (Grohmann, Spangenberg, & Sprott, 2007; Hultén, 2012; Peck & Childers, 2006; Spence & Gallace, 2011; Underhill, 1999) and also may be willing to pay more for it (Martin, 2013). When Asda, a British supermarket chain, removed the wrapping from several brands, thus allowing customers to feel and compare the texture of the different brands, it caused sales of the store brand to soar (see Ellison & White, 2000). In sum, people like to touch certain products but do not like to purchase those products that may have been touched by others.

Touch can also be used as an effective marketing tool by the sales staff; within a few minutes of entering a Lush store, shoppers likely will have been approached by an employee who will have offered to rub lotion into the customer's hands. Another form of tactile

marketing is exemplified by stores such as The Sharper Image, where weary shoppers can readily try popular massage chairs, foot beds, and other tactile products. In fact, it has been estimated that as many as 30% of the products available at the chain's stores engage customers via their sense of touch (Field, 2001). To date, in-store temperature has prompted relatively little research. In one study, though, researchers measured the temperature in a cross-section of Manhattan stores (e.g., Bergdorf, Macy's, Old Navy; Fiore, 2008; Howes, 2005; Timmerman, 1981). Temperatures varied as a function of the price of the merchandise: the higher the price point, the colder the air conditioning in the store. This might be a sensible strategy given recent research showing that colder ambient temperatures tend to lead to more emotional decision making and greater preference for hedonic options while warmer stores lead to more cognitive decision making and greater preference for utilitarian options (Hadi, Block, & King, 2013). Moreover, this research finds that customers use these models of decision making to achieve an optimal temperature, or what we might think of as an optimal level of thermal stimulation.

Cognitive

Association. Recent research in cognitive neuroscience presents compelling evidence for universal cross-modality among cues presented in different sensory modalities (Spence, 2011a, 2012a), such that, for instance, people will tend to match certain tactile stimuli with particular colors (Ludwig & Simner, 2013). Specifically, it seems that smoothness, softness, and roundness is associated with greater luminance (or proportion of white compared to black mixed in) and chroma (or saturation of the color). Retailers trying to convey softness in their product (e.g., cashmere sweaters) might, then, consider use of light and/or highly saturated colors in their displays.

Tactile Summary

Touch thus constitutes an important but perhaps underutilized aspect of store atmospherics. Everything from the temperature in the store to the softness of the furniture (Ackerman, Nocera, & Bargh, 2010) may send a subtle message to consumers about the feel of the retailer's offering. Making sure that customers feel comfortable (just think of the comfortable lounge chairs one finds in Starbucks) and giving them the means to interact with merchandise is key to the success of many companies. Interpersonal touch between staff members and customers may also be a powerful marketing tool (Martin, 2012).

TASTE ATMOSPHERICS

Kotler (1974) considers taste unimportant in relation to store atmospherics, though his article arrived prior to the emergence of culinary artists such as Bompas & Parr (http://bompasandparr.com/) who have become famous, at least in part, for their breathable installations ("The bar that gets you tipsy on its air" 2009), many of which have appeared as pop-ups within department stores. A gin and tonic mist tent was a huge draw for shoppers at one London department store, generating substantial publicity for the store. The subjectivity of taste creates an inherent complexity for its use in atmospherics. These results highlight the complex processes underlying the role of taste. Certain food-related retailers also make tasting a key part of their product offering, such that shoppers may try as many of the available products as they like (think Neal's Yard Dairy cheese store). Duty-free stores often offer travelers complimentary in-store tastings as they rush to catch their planes.

Affective

General Positivity. The importance of taste atmospherics is underscored by the tremendously visceral reaction it can elicit in consumers. Taste aversion is one of the only examples of what psychologists call one-trial learning. A single negative reaction to something eaten leads to consistent long-term avoidance (Garcia, Kimeldorf, & Koelling, 1955). Anecdotally, one might have experienced this following food poisoning or consumption of an innocuous food during a stomach virus. On the flip side, one can also recall highly positive experiences of food consumption perhaps more rich and vivid than a single auditory, visual, olfactory, or tactile experience. Thus taste can elicit very strong positive but also negative reactions in customers.

Work in marketing has looked at taste empirically. Wilcox, Roggeveen, and Grewal (2011) examined the role of whether people received country of origin or price information prior to an in-store sampling experience. They found that when information is presented prior to tasting the product, the information was assimilated (i.e., the more positive the information, the more positive the assessment). However, when the information was provided after the tasting experience, the information was contrasted (i.e., the more positive information—Italian wine or Swiss chocolates) resulted in less positive assessment than the less positive information (i.e., Indian wine or Chinese chocolates).

Groceries stores, such as Whole Foods regularly have tasting stations throughout their stores—customers can taste a host of foods ranging from fruits, cheeses, crackers, and dips. The role of in-store tasting is a relatively under-researched area in the field of marketing. Another series of studies by Biswas, Grewal, and Roggeveen (2010) demonstrated

the role of sequential tasting and found that consumers prefer the last option when two desirable products are tasted (25% vs. 75%) but the first option when two less desirable products are tasted (80% vs. 20%). Thus, chocolate tasted better if customers learned it was Swiss, compared to Chinese. If they learned that before tasting it, tasting the product had the potential to enhance the experience if congruent product attributions were presented in advance (e.g., chocolate and Swiss) or if incongruent attributes were presented afterwards (e.g., chocolate and Chinese).

Taste Summary

Preliminary research suggests that there are some real opportunities in the domain of taste. Research suggests that certain foods can elicit chemically based euphoria—for example, endorphins in chocolate. We know that giving a gift of candy leads people to feel good ostensibly because they are anticipating the consumption of the candy. Thus, offering candy at the entrance of an apparel store may make customers more favorably disposed to the product. Offering sweets to customers has been successfully tried as part of a multisensory marketing strategy by Helm bank in Colombia (Wessler, 2011).

MULTISENSORY STORE ATMOSPHERICS

Most of the research on store atmospherics focuses on a single aspect of the environment, such as changing just the lighting, or the music, or the scent of the retail space. Yet assessing the impact of multisensory environmental interventions is critical (see Baker et al., 2002). Consider the following example, "The mist at the Rainforest Café appeals serially to all five senses. It is first apparent as a sound: Sss-sss-zzz. Then you see the mist rising from the rocks and feel it soft and cool against your skin. Finally, you smell its tropical essence, and you taste (or imagine that you do) its freshness" (Pine & Gilmore 1998, p. 104). Sester et al. (2013) demonstrate that such multisensory atmospherics can influence people's product choices even within a single category (i.e., beer). Clearly, congruent multisensory store environments ought to be rated as more pleasing and engaging to consumers than environments that stimulate fewer of the customer's senses or offer incongruent multisensory experiences.

However, the questions quickly grow more complex with the consideration of multiple senses all operating at once. Multisensory store atmospherics inherently creates concerns about congruency (or rather, it should do). Generally speaking, ensuring that various sensory cues are congruent is a good idea (e.g., Fiore, Yah, & Yoh, 2000; Mitchell, Kahn, & Knasko, 1995; Spence, 2002; though see also Bosmans, 2006; Schifferstein & Blok, 2002). Recent research suggests that there is considerable convergence in what is perceived as congruent by customers across sensory cues (Crisinel et al., 2012, 2013; Ludwig & Simner, 2013; Spence 2011a, 2012c; Spence et al., 2013) that retailers can draw on to craft a congruent and more positive customer experience. Some evidence suggests that the use of congruent multisensory cues may even help managers control perceived wait times (Chebat, Gelinas-Chebat, & Filiatrault, 1993).

Noting that "Past studies have examined the effects of individual pleasant stimuli such as music, color or scent on consumer behavior, but have failed to examine how these stimuli might interact," Mattila and Wirtz (2001, pp. 273–274) manipulated the presence of music (no music, low arousal music, or high arousal music) while simultaneously manipulating the olfactory environment (presenting no scent, a low arousal scent [lavender], or a high arousal scent [grapefruit]).[1] Their results indicated that when the scent and music were congruent in terms of their arousal potential, the customers rated the store environment more positively, exhibited higher levels of approach and impulse buying behavior, and expressed more satisfaction. Consistency across sensory cues may offer more optimal levels of stimulation for customers making them more pleasant.

Certain product categories or particular market segments may seek incongruent environments that would typically be more surprising and harder to process and hence more stimulating. Indeed, the places in which incongruent stimulation appears beneficial instead are specific and unique, such as merchandise in high-end design stores (Schifferstein & Spence, 2008) or food in modernist restaurants (Piqueras-Fiszman & Spence, 2012b; Spence & Piqueras-Fiszman, 2014; "'Anything' & 'Whatever' beverages promise a surprise, every time," 2007). However, the role of finding merchandise in unusual locations can introduce a surprise factor or allow the merchandise assessment to be influenced by the context (Grewal, Nordfält, & Roggeveen, 2014). It is possible that merchandise (e.g., cookies in the bread area) might be viewed as healthier than the same cookies viewed in the cookie/dessert area.

Recent research on the role of broader information cues has introduced the notion that cue congruity does not always lead to the highest evaluations (Roggeveen, Goodstein, & Grewal, 2014). Building on Mandler's (1982) work, Roggeveen and her colleagues highlighted the role of both meaning incongruity and valence incongruity. Meaning incongruity in the domain of atmospheric cues would be illustrated by a retailer known for offering great visual merchandising also offering tactile opportunities. Valence incongruity in the domain of atmospheric cues would be illustrated by a retailer not known for carrying expensive merchandise using atmospheric cues that connote high status (e.g., design elements associated with high status department stores).

[1] Many authors appear to assume that a given scent, such as lavender, has a fixed status as either arousing or relaxing. However, it is important to note that certain fragrances can change from being relaxing to arousing as their intensity increases (Gross-Isserhof & Lancet, 1988).

How do consumers address these incongruities in atmospheric strategies is a rich (and likely challenging) area for future research?

Morrison, Gan, Dubelaar, and Oppewal (2011) assessed the effects of varying multisensory atmospherics in a retail store in major city in Australia, including music played at a low versus high volumes and the presence or absence of a vanilla scent. Manipulating the multisensory atmospherics affected the emotions and satisfaction of the mostly young, female shoppers; specifically, loud music and the scent of vanilla enhanced the pleasure they reported. Meanwhile, Hultén's (2011) study in a Swedish IKEA store also shows that multisensory changes to the environment (i.e., softening the lighting and introducing a pleasant scent) increased physical interactions (50% longer) between shoppers and glassware displays. It also influenced shoppers' purchase intentions and actual sales. This study also highlights the challenges associated with manipulating several environmental aspects though as it is difficult to ascertain whether the change to the lighting, the introduction of the fragrance, or their combined effect was responsible for altering shoppers' behaviors.

Sensory Overload

As noted throughout, there is often an optimal level of stimulation for customers that leads to favorable attitudes and behaviors. Introducing more sensory cues into a store atmosphere increases the number of sensory touch points, but it also increases the risk of sensory overload. Homburg, Imschloss, and Kühnl (2012) asked 800 people to imagine browsing in a store and manipulated store sensory features in the description: fast versus slow music, the scent of lavender or grapefruit, and the use of red versus blue colors. The results suggested that a congruent combination of any two atmospheric stimuli induced positive outcomes, but the consequences of three congruent stimuli included some negative effects. These authors attributed this finding to the level of stimulation, which may have been too high; indeed, when they combined three moderately stimulating stimuli, respondents seemed satisfied.

Individual preferences likely determine the appropriate amount of sensory stimulation. Many shoppers clearly appreciate the multisensory experience delivered by the international Lush chain of body care stores; others may recoil at the notion of being touched by a salesperson whenever they enter. Abercrombie & Fitch's dominant multisensory experience is very popular among younger shoppers (Hultén, Broweus, & van Dijk, 2009; Morrison & Beverland, 2003), but for their parents, the sensory overload of loud music, and strong scent is often too much to bear (Morrin & Chebat, 2005; Soars, 2009).

It might be meaningful to segment markets according to those who seek out stimulating experiences (so-called "sensory junkies," Dunn, 2007) and those who tend to avoid such environments. Preference for a more stimulating versus a tranquil shopping environment likely is a factor of the shoppers' ages (Middleton, 2002).

Multisensory Atmospherics: A Cognitive Neuroscience Perspective

The conventional wisdom regarding multisensory integration derives mainly from studies of object or event perception, typically obtained in contrived laboratory conditions (e.g., Calvert, Spence, & Stein, 2004; Holmes & Spence, 2005; Stein & Meredith, 1993). These studies make no attempt to describe the behaviors of customers in retail spaces. However, some fundamental principles derived from the laboratory studies can perhaps help marketers make sense of confusing patterns of consumer behavior, such as explaining why changing the color of a food or drink, or even its packaging, can change perceived taste (e.g., Esterl, 2011; Spence, 2013; Spence & Piqueras-Fiszman, 2012b, 2014).

Such research might also help to shed more light on the notion of congruency and how congruent inputs give rise to superadditive or subadditive multisensory interactions (e.g., Calvert, Spence, & Stein, 2004; Spence, 2002; Stein & Meredith, 1993). As Stein and Meredith (1993) put it in their highly influential book, "Integrated sensory inputs produce far richer experiences than would be predicted from their simple coexistence or the linear sum of their individual products . . . . The integration of inputs from different sensory modalities not only transforms some of their individual characteristics, but does so in ways that can enhance the quality of life."

Superadditive multisensory interactions occur when presenting two or more sensory inputs simultaneously gives rise to a response (behavioral or neural) that is significantly greater than the impact of the individual signals. Such a response is more likely if individual stimuli are weak but congruent. By contrast, subadditive interactions instead are more likely to arise if the stimuli are incongruent (Holmes & Spence, 2005). In the neuroscience laboratory, incongruence is often elicited by presenting stimuli from different locations, at slightly different times, or else to present stimuli that refer to different semantic concepts (e.g., Chen & Spence, 2010, 2011, 2013).

An area of growing research interest pertains to the synesthetic (and surprising) correspondences that exist between the senses, in an area that is known as cross-modal correspondences (e.g., Crisinel et al., 2012, 2013; Deroy, Crisinel, & Spence, 2013; Spence, 2012a, 2012c; Spence et al., 2013; Velasco, Jones, King, & Spence, 2013). When sensory cues do not align with cross-modal correspondences, one can observe a subadditive interaction in which the combined cues lead to a less favorable customer experience and outcome. An everyday example of a subadditive interaction comes from the striking failure of a clear version of familiar colas in the marketplace (e.g., Triplett, 1994). Many consumers like clear

drinks, and many consumers like cola-flavored beverages. However, they did not appreciate the combination of those different sensory cues in a single product, apparently because the sensory incongruity between the flavor expectations established by the color and the actual flavor experience led to a negative disconfirmation of expectation (see Schifferstein, 2001; Spence & Piqueras-Fiszman, 2014).

An open question exists regarding the level at which multisensory congruency operates in the marketplace: in terms of the semantic meaning of the component stimuli, the pleasantness of the stimuli, their arousal potential, or some other factor. Ascertaining the appropriate level is potentially a difficult issue, and one that was, for example, seemingly ignored by Mattila and Wirtz (2001). It can undoubtedly be challenging to identify stimuli that are congruent at multiple levels (Spence, 2002); rather than thinking of different sensory cues as integrated or converging along some specific dimension, it might be more appropriate to frame the senses as carrying independent channels of information to customers.

It can be argued that studies of food and drink are leading the way in terms of multisensory experience design (e.g., Sester et al., 2013; Spence & Piqueras-Fisman, 2014; Velasco et al., 2013; Wansink & van Ittersum, 2012). Coordinating various sensory cues has a clear impact on people's behavior and experiences in such settings. In a similar fashion, different sensory cues in a multisensory atmosphere might be complementary rather than convergent. Morrin and Chebat (2005) also suggest that different sensory cues affect different types of shoppers, such that affectively charged atmospheric cues (e.g., music) exert greater effects on impulsive shoppers, whereas olfactory cues may exert more of an influence on contemplative shoppers instead. The general claim here is that it is impossible to predict multisensory perceptions from studying the senses individually holds true. Considering the difficulty associated with trying to study multisensory atmospherics and the relative paucity of research in this area, further research is clearly going to be needed.

A thought experiment might be helpful in suggesting a path for such research. Recall that bright orange colors that often signal inexpensive offerings. But if that color appears in a store that smells strongly of citrus, the scent might reframe the meaning of the color for shoppers, from signifying cheap to signaling fruity or fresh instead. That is, a customer's response to a stimulus presented in one sensory modality likely changes with stimuli presented in a different modality (Spence, 2009; Vickers & Spence, 2007). An ambient fragrance that seems pleasant in a quiet room with white lighting might smell significantly less pleasant in a red room with loud music. In this setting, the notion of sensory dominance implies that the customer's perception of certain stimuli depends on the other stimuli that happen to be presented at around the same time (Ernst & Banks, 2002). Sensory dominance may thus account for consumers' responses to multisensory store environments. What this means, in practice, is that lighting might sometimes dominate over the music, or vice versa.

Signature sensory experiences might apply to the level of the shopping mall rather than the individual store (Wakefield & Baker, 1998), though far less research pertains to this area. Designing such experiences would be even more difficult, considering the multiplicity of factors and interactions that come into play, though the modest research that exists suggests it could be effective (Chebat & Morrin, 2007). To give but one example, an upmarket shopping mall in Minneapolis tried releasing the scent of Minnesota wildflowers into common areas during the winter months, to make shopping more pleasant for winter-weary shoppers, while simultaneously playing nature sounds (Fost, 1991). Whether this multisensory intervention increased sales is not clear though.

One multisensory atmospheric study conducted in a mall setting also illustrates the problems for stores. Morrin and Chebat (2005) investigated unplanned purchases by nearly 800 shoppers in a North American mall and reported that the mall could increase such sales by as much as 50% simply by playing slow tempo music. Releasing a citrus fragrance led to a small (although nonsignificant) decline in these sales. However, when the music and fragrance spread throughout the mall simultaneously, sales through unplanned purchases dropped significantly. This result suggests a subadditive multisensory interaction; these disappointing results offer a cautionary note to retailers and marketers alike. It would be difficult to diagnose what went wrong in this mall case without additional data, but a plausible explanation is that the musical and olfactory stimuli were incongruent on some dimension (e.g., in terms of their arousal potential, such that slow tempo music is relaxing but a citrus scent may be perceived as stimulating).

Pine and Gilmore (1998, 1999) suggest that malls could charge an entrance fee if they were able to make the experience of shopping in the mall suitably exciting or entertaining. Many of the world's largest mall complexes have succeeded precisely because of the variety of entertainment options that they provide, alongside their core retail offerings (Levy, Weitz, & Grewal, 2014). In these cases, a critical consideration is how to prevent the multisensory atmosphere of the mall from influencing the experience in store, and vice versa. Music travels, and it is notoriously difficult to control the dispersion of ambient fragrance. Thus, the multisensory experience may combine cues from individual stores and mall that could easily give rise to a subadditive multisensory interaction.

Limitations. It is also important to highlight some of the limitations of the research that has tried to explore multisensory marketing in retail. Many of these studies rely on simulated shopping tasks (e.g., Baker, Levy, & Grewal, 1992) rather than assessing the consequences

of changing the actual retail space. Concerns about how well the results of simulated tasks map onto real-world outcomes makes these results suspect. Thus, research that focuses on these effects in field studies and/or data obtained from retailers is likely to shed additional light on the role of different color on actual shopping behavior.

Implementation must also be vigilant about adverse idiosyncratic reactions. For example, in the scent domain customers have sometimes complained about having an allergic reaction to certain fragrances (see Spence, 2002). The number is substantial enough that certain service contexts (e.g., gyms and hospitals) are trying to maintain scent-free areas (e.g., Healthworks in Boston). Even in the absence of any allergic reaction retailers may run the risk of seeming invasive—in the case of scent, customers are actually breathing in the atmospheric cue (Spence, 2002). While the other senses may be less likely to lead to such dramatic reactions, sensory atmospherics can be seen as more manipulative than traditional atmospheric cues. Overall, more research is needed to understand how these cues can enhance the experience.

Within some domains, sensory marketing entails significant investment. For example, despite potential benefits of scent marketing, selecting a store fragrance, and purchasing the technology to release the scent in their stores, some stores remain unwilling to take the risk that consumers would regard the scent marketing as overly manipulative or perhaps even unethical.

Finally, it is critical to recognize the danger of neglecting a core offering by focusing too much on the experience. Abercrombie & Fitch enjoys substantial traffic in stores and positive comments in social media, but it has not achieved massively increased sales as a result. Some shoppers seemingly visit the stores for the entertaining multisensory experience but have little motivation to buy any products. In this case, the suggestion that shoppers should pay to enter a store might come to seem more reasonable, namely, as a way to recoup the costs incurred by creating the appealing multisensory experience.

CONCLUSIONS

Store atmospherics have remarkable influences on shopper behavior. A growing body of evidence indicates that modern consumers engage with sensory marketing and an experience economy. Various visual, auditory, olfactory, tactile, and gustatory atmospherics independently affect shoppers' perceptions and behaviors, and their combined influence is likely even greater than the sum of their parts (or rather, it can be if managed appropriately). Different senses can play varying roles in influencing customer perceptions or behaviors, so retailers must carefully engage multiple senses while keeping the various atmospheric cues congruent. A retailer thinking of investing in a multisensory atmosphere would therefore be well advised to consider which aspects of its customers' behavior it seeks to influence.

Visual branding is a familiar topic; increasingly, marketers seek to distinguish their stores with signature sounds, signature fragrances, and perhaps even a signature feel. Making these various atmospheric cues congruent should thus offer functional benefits. In terms of sales, published studies to date demonstrate that investing in multisensory atmospherics at the point of purchase will increase sales. This research domain would benefit greatly from a meta-analytic assessment of the roles of various atmospheric cues. In particular, the wide variety of domains studied makes it hard to offer any meaningful generalizations about what works or is most appropriate in any given retail domain. Overall though, cognitive neuroscience and marketing research suggest that multisensory atmospherics are potentially stronger than focusing on a single sensory atmospheric cue.

Ultimately, brand managers need to know the likely ROIs in sensory marketing. Some of the best publicized multisensory store redesigns have been phenomenally expensive. When Harrods developed its multisensory toy department, millions of pounds were invested. We wait to see whether the investment paid off in this case.

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