Immersion and emotional reactions to the ambiance of a multiservice space: The role of perceived congruence between odor and brand image

Karim Errajaa, Patrick Legohérel, Bruno Daucé

1. Introduction

Brand managers increasingly use odors for marketing purposes. This interest derives from a desire to offer an appropriate ambiance to the consumers, strengthen the brand image, suggest product attributes, improve the consumer experience, and differentiate themselves from competing firms (Spangenberg et al., 1996). This strategy is inexpensive (Chebat and Michon, 2003), and it extends to various sectors, including different activities and services (Chebat and Michon, 2003; Krishna, 2010; Spangenberg et al., 2006). Practitioners are aware of cognitive effects (memory) and evocative powers (emotionally charged recall) deriving from odors. These justified emotional effects have resulted in an increasing interest in using odor for marketing (Herz and Cupchik, 1992; Herz and Schooler, 2002; Orth and Bourrain, 2008; Sugiyama et al., 2015). Examining the influence of odors on individual reactions is another topic of interest for researchers in this area (Bosmans, 2006; Chebat and Michon, 2003; Jacob et al., 2014; Krishna et al., 2014; Zemke and Shoemaker, 2007). This research investigates, focusing on the case of the AntiCafe brand (cf. the footnote on page 9 explaining this brand), the effects of odors on consumers’ reactions of consumers.

Marketing researchers have investigated this research question from different points of view, usually in relation to the characteristics of odor, such as its presence (vs. absence; Doucé et al., 2013), intensity (Spangenberg et al., 1996), pleasantness (Croy et al., 2013), simplicity (Herrmann et al., 2013), and congruence (Adams et al., 2014; Spangenberg et al., 2006). To date, the effects of the presence (vs. absence) of odors continue to be the most explored compared with the other characteristics. However, other factors also influence consumer reactions. Concerning the effects of olfactory congruence on consumers, despite the importance of the subject, there are many questions that remain unanswered. For instance, while the influence of olfactory congruence with products or atmospheric variables (music) has been studied since the 1990s (Mattila and Wirtz, 2001; Mitchell et al., 1995; Schifferstein and Howell, 2015; Spangenberg et al., 2006), the influence of olfactory congruence on brand image has not yet been sufficiently explored. This research project contributes to the literature by investigating olfactory congruence to understand why the perceived consistency between odors and brand image may induce consumers to approach (or avoid) spaces and products. The results of this study will be useful for managers, who strive to create an olfactory ambiance consistent with the brand image they want to convey to their target market.

This research problem is not only relevant to managerial practices, but addressing it will also supplement previous research (Douce et al., 2013; Krishna et al., 2010a, 2010b; Mattila and Wirtz, 2001; Schifferstein and Howell, 2015; Spangenberg et al., 2006). The major difference between our study and previous research on olfactory congruence is that we consider the association between the brand image and odor; to our knowledge, this has not been considered before in the marketing literature. The present research is also different from previous work in terms of the hypotheses tested here, which relate to the influence of olfactory congruence with the brand image on immersion and emotional states (pleasure and arousal).

Indeed, the consumer’s immersion during the visiting experience in an odorized space has not previously been examined. Our contribution in this context is to show that olfactory congruence with branding helps to improve the consumer immersion experience (i.e., the intense state of activity experienced by the consumer when fully accessing the experience (Fornerino et al., 2006)) in the sales space. Finally, the
originality of the experimental store (brand specializing in the provision of multiservice spaces) and the cultural context (French target consumers of the AntiCafé brand) studied here differentiate the present research from previous works. From this point of view, this research is complementary to previous studies. The remainder of the article is divided into three parts: part 1 discusses the theoretical framework and hypotheses, part 2 describes the methodology, and finally part considers the results and implications of the study.

2. Theoretical framework and hypotheses

2.1. Odors

The influence of odors on consumers was studied during the 20th century with the aim of understanding why and how these stimuli can cause consumers to approach or avoid products and spaces. Three aspects of individual reactions to odors have been studied, as follows: emotions; behaviors; and perceived quality of the environment, product, service, atmosphere, or people (Cann and Ross, 1989; Chebat and Michon, 2003; Doucè et al., 2013; Guéguen and Petr, 2006; Hirsch, 1995; Mattila and Wirtz, 2001; Morrison and Ratneshwar, 2000; Morrison et al., 2011). This body of research has provided some interesting results. For example, it has been established that the addition of an odor to a product that had not previously been perfumed produces the emotional state of surprise (Ludden and Schifferstein, 2009).

The diffusion of odors brings about positive emotional states associated with pleasure and stimulation (Bouzaâbia, 2014; Morrison et al., 2011), as well as a calming effect (Poon and Grohmann, 2014). Research suggests that the presence of odors can improve the perceived ambiance (Chebat and Michon, 2003), perceived quality of products (Bosmans, 2006; Chebat and Michon, 2003; Spangenberg et al., 1996), and brand retention (Morrison and Ratneshwar, 2000). Krishna et al. (2010a, 2010b) found that the odor added to a product increases the unaided memory information associated with the product. Moreover, Laird (1932) showed that adding floral odor to products with no initial scent (nylons) increases the preference for this product. The same effect was observed in a relatively recent study by Ludden and Schifferstein (2009), which showed a more positive evaluation for a perfumed product comparing to the identical unperfumed one. One experiment conducted by Bosmans (2006) showed that the presence of odor also improves product evaluation. Lwin and Morrín (2012) found that compared to visual stimuli alone, odor improves brand attitude and recall. Studies have also demonstrated the influence of odors on salivation (Krishna et al., 2014), plans to return (Doucè and Janssens, 2013), spending intentions (Chebat et al., 2009; Jacob et al., 2014), and social interactions (Zemke and Shoemaker, 2007). In sum, the effect of the presence or absence of odors on the consumer has been studied extensively compared with other attributes.

However, odor congruence effects represent an unexplored area. It is important to understand how and why consumers attach importance to the degree of consistency between odors and objects or other sensory stimuli, as well as how they react to this congruence or inconsistency (Doucè et al., 2013; Mattila and Wirtz, 2001; Mitchell et al., 1995). Since the 1990s, the congruence between odor and specific entities has attracted increasing attention, and researchers have aimed to understand the effect of olfactory congruence on consumers’ reactions to products and retail stores, as well as to contribute to the development of managerial practices. In research on olfactory congruence, the main subjects studied have been the congruence between odors and gender (Spangenberg et al., 2006), ambiance variables like music and decor (Babin et al., 2004; Mattila and Wirtz, 2001; Spangenberg et al., 2005), and products (Bosmans, 2006; Doucè et al., 2013; Krishna et al., 2010a, 2010b; Ludden and Schifferstein, 2009; Schifferstein and Blok, 2002).

For example, a study by Schifferstein and Blok (2002) found that the congruence between odor and product has no effect on sales. Moreover, according to Ludden and Schifferstein (2009), olfactory congruence with the product has no effect on the evaluation of some initially unscented products, such as alarm clocks and baby toys. Ludden and Schifferstein (2009) study did show that the addition of the incongruent odors to initially unscented products has a negative impact. Bosmans (2006) found a positive effect of the presence of an odor congruent with the products examined. In addition, Mitchell et al. (1995) found that odors have a positive effect on research and information processing, information search time, the use of more personal references, insertions and looking for variety, the probability selection of the least-known solution, and the least preferred option, when the odor is congruent with the product category. A high degree of consistency between the music, odor, and decor used in a store improves the customer perception of product quality, as well as the hedonic value of the shopping experience (Babin et al., 2004). Mattila and Wirtz (2001) have shown that when music and odor are perceived as being consistent in terms of arousal, impulse buying, evaluation of the ambiance, affect, and satisfaction all increased.

An odor consistent with the products can positively influence the evaluation of these objects (Krishna et al., 2010a, 2010b), as well as encouraging individual to approach the store (rather than to avoid it) and buy products (Doucè et al., 2013). This previous research and our study are based on the balance theory (Heider, 1958), cognitive dissonance theory (Festinger, 1957), and the perceptual fluency paradigm (Reber et al., 2002), which provide interesting analytical frameworks. As suggested by the perceptual fluency paradigm, the stimulus can be processed flexibly if it has such characteristics as simplicity, symmetry, clarity, and precision (Reber et al., 2002).

When the processing of the information is more fluid, the individual will typically show positive reactions in terms of affect or expressed preference (Reber et al., 2002; Winkielman and Cacioppo, 2001). Individuals generally prefer coherent situations in contrast to incongruent ones, because congruent situations do not require a significant effort to understand them. The theory of cognitive balance suggests that individuals organize gathered information from their environment in the simplified structures that they can interpret with the least possible contradiction or inconsistency, seeking order, symmetry, and congruence (Heider, 1958). Moreover, in a balanced situation, the associated entities share some common characteristics (Heider, 1958). When information is not consistent with other known information or previously held beliefs, cognitive imbalance and dissatisfaction will result (Salès-Wuillemin, 2005). This encourages individuals to restore internal balance by changing the relationships organizing their knowledge or changing their perceptions (Gosling and Ric, 1996). Similarly, cognitive dissonance theory emphasizes that information incongruent with our beliefs creates cognitive dissonance, a state of embarrassing discomfort that induces a desire to reduce this dissonance and return to a state of balance (Gosling and Ric, 1996).

To accomplish this, individuals’ options include defense mechanisms against dissonant situations or “perceptual distortion” (Sèles-Wuillemin, 2005) and rationalization, including denial, elaboration, the introduction of additional consonant beliefs, or minimizing the importance of the dissonance (Fiske, 2008). The theories related to congruence and the results of the previous research provide valuable context, highlighting research questions that need further consideration when examining the role of olfactory congruence with the brand image in the consumer’s reactions to the ambiance of a commercial space.

2.2. Model and hypothesis

According to these theoretical foundations, we formulate the general hypothesis that the presence of an odor congruent with the brand...