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Taking (Odor) Notes: When Are Consumers Increasing Their Risk-Taking Behavior?

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Abstract

Smell is not just a biological and psychological experience, it is also a social and cultural phenomenon. Cross-cultural studies also argue that there are significant cultural differences on perceptions of odor smells both on the intensity and on the fragrance type as well. So far existing literature has focused on the effects of odors on time spent in a store, on purchase intention and memory recall. However, there is tremendous need to investigate further the effects of sensory marketing on consumers under the umbrella of environmental psychology. As such, the current quansi experiment explores the effect of odors on risk behaviour in a cross-cultural setting. According to our findings, cultural differences are evident concerning the impact of fragrances on consumers. Greek participants were not influenced by the vanilla and eucalyptus fragrances in terms of their risk behavior. On the contrary, for the British consumers, vanilla and eucalyptus were statistically different one another in terms of risk behavior. Additionally, vanilla has stronger effect on British consumer risk behavior.

Literature Review

Smell is not just a biological and psychological experience, it is also a social and cultural phenomenon. As Fox describes in her book: “The smell report” (2009), in many non-Western cultures, smell has long been established as the emperor of the senses. She provides examples from all over the world in order to highlight the importance of fragrance within the society: for the Ongee of the Andaman Islands, when greeting someone they do not ask ‘How are you?’, but ‘Konyune onorange-tanka?’ meaning ‘How is your nose?’. Cross-cultural studies also argue that there are significant cultural differences on perceptions of odor smells both on the intensity and on the fragrance type as well. For example, significant differences were found

between Japanese and German female concerning pleasantness ratings and intensity ratings for some odorants (Ayabe-Kanamura et al., 1998).

Other studies also support the view of the cultural differences of perfume choice and the idiosyncratic effects on fragrance choice (Lenochova et al., 2012). Concerning fragrance choice, Asian women exhibit collectivist values in their consumer behaviour for fragrance, while European women exhibit significantly more individualistic values for fragrance brand loyalty (Granleese, 2014). Hofstede's theory proposes that different perceptions exist among citizens of different countries about collectivism/individuals and also, other five cultural dimensions exist among citizens of different countries (Hofstede, 2016; Hofstede, Neuijen, Ohayv, & Sanders, 1990). As such, marketers in the global marketplace have to take the important decision how their brand strategy will be affected under the influence of cultural and so, they are becoming increasingly more interested to know how consumers behave towards brands under the influence of their culture (Kanso, Okazaki, & Nelson, 2007).

Concerning consumer behavior towards brands and their engagement with them, sensory marketing is defined as "marketing that engages the consumers' senses and affects their perception, judgment, and behavior" (A. Krishna, 2011, p. 333). Scent marketing as part of the sensory marketing contributes to the atmospherics of a physical business and enhance the customer experience (Rimkute, Moraes, & Ferreira, 2016). The olfactory engagement with a product is very high (Aradhna Krishna, Morrin, & Sayin, 2014) and as such, sensory aspects of products, like the smell, shape the holistic customer experience and the interaction between companies and consumers (Aradhna Krishna, Cian, & Aydınoğlu, 2017).

Fragrances significantly modulate the activities of different brain waves and are responsible for various states of the brain (Sowndhararajan & Kim, 2016). For example, jasmine oil increases feelings of well-being, active, freshness and romantic (Sayowan, Siripornpanich, Hongratanaworakit, Kotchabhakdi, & Ruangrungsi, 2013). Other herbal notes

affect the human behaviour in different ways and so lavender increases drowsiness and rosemary increases alertness (Diego et al., 2009). Some certain scents are detectable by human due to their intensity, one of these is the vanilla scent which is detectable even by infants (Mennella & Beauchamp, 1998). Vanilla scent is also perceived as a pleasant smell which can increase the chances of human risk behavior and introvert emotions (de Wijk & Zijlstra, 2012; Gagarina & Pikturnienė, 2015; Saint-Bauzel & Fointiat, 2012). Another scent which is perceived as pleasant is the eucalyptus, which can also improve brand evaluations especially for unfamiliar brands (Morrin & Ratneshwar, 2000).

Overall, three dimensions of an odor are felt to be important: its presence (or absence), its pleasantness and its fit or congruity with the object studied. Odors are hypothesized to affect consumers by changing approach/avoidance behaviors, altering mood state and affecting elaboration (Fitzgerald Bone & Scholder Ellen, 1999). Scent (or smell) constitutes a wide-open and fertile ground of opportunities for marketers, and it is one of the key elements of the service's physical environment (Rimkute et al., 2016). Odors can alter perceptions; Spangerberg et al. (2006) proved that the presence of a pleasant ambient odor made consumers perceive that not only they had spent less time in a store but they had also perceived the prices to be lower. According to Parson's (2009) study, regarding the use of scent in a naturally odourless store, shopping behaviour can be strengthened by a suitable scent in the form of an associated scent. Furthermore, odor scents classifications have been established in the existing literature as either warm or cold (Aradhna Krishna, Elder, & Caldara, 2010; Madzharov, Block, & Morrin, 2015). Vanilla for instance is categorised as warm whereas, eucalyptus as cold (Madzharov et al., 2015). As such, in the current study we tested the effects of both warm and cold natural essential oils which are present in the room and pleasant as a smell.

Consumer behavior affected by odor scents: risk taking and variety seeking

Several studies addressed that the presence of an ambient scent within retail settings is able to attract and influence consumers' decisions. Kotler (1973) in his research about atmospherics introduced the idea that a retail environment can create atmospheres which can influence shopping behaviour. Doucé and Janssens (2011) proved that the presence of a pleasant fragrance led to a positive impact on pleasure, arousal, evaluation of the store environment, evaluation of the products and intention to revisit the store. Furthermore, Chebat et al. (2008) investigated the effect of pleasant ambient scent on consumer spending and so they argue that ambient scent emitted into a mall environment can increase the amount of money spent by young shoppers. A study conducted by Spangenberg, Grohmann, & Sprott (2006) proposes that the subjects in scented conditions did not actually spend significantly less or more time in the store than subjects in unscented conditions. However, a similar study proposes that an aromatised retail environment makes customers spend more time in the shops (Hirsch, 1995).

Risk taking

Consumers behave with uncertainty and risk since their choices can be judged only in the future and so, only after consumers' actions. In fact, any choice contains two aspects of risk: uncertainty concerning the outcome and also about the consequences (Taylor, 2018). Moreover, perceived risk theory argues that risk is a multidimensional construct which relies on the potential loss of benefits and also on risks of property, product and other risks (Fahimnia, Tang, Davarzani, & Sarkis, 2015; Zhang, Zhang, Mizgier, & Zhang, 2017). However, every consumer has different levels of risk acceptance (aversion) which depends on individual demographic factors (Roberts & Urban, 1988). The risk-sensitivity theory argues that individuals make risk sensitive decisions by taking into account their personal needs, e.g. they are more likely to take risks if they are unlikely to meet their needs through lower risk

decisions and so, people shift from risk aversion to risk-seeking, because risky choices offer the chance to meet the needs (Li, Lu, Lan, & Jiang, 2019). In the existing literature, risk behavior has been commonly defined when individuals are gambling and so when their property is under threat or when they are harming their health and in general when someone's life is under threat (Cornil, Chandon, & Krishna, 2017). A common method to measure general risk taking has been the Balloon Analogue Risk Task (BART), which has been applied in the current study as well (Cornil et al., 2017; Lejuez et al., 2002; Peacock, Bruno, & Martin, 2012).

So far existing literature has focused on the effects of odors on time spent in a store, on purchase intention and memory recall. However, there is tremendous need to investigate further the effects of sensory marketing on consumers (Aradhna Krishna, 2012). As such, the current study explores the effect of odors on risk behaviour in a cross-cultural setting.

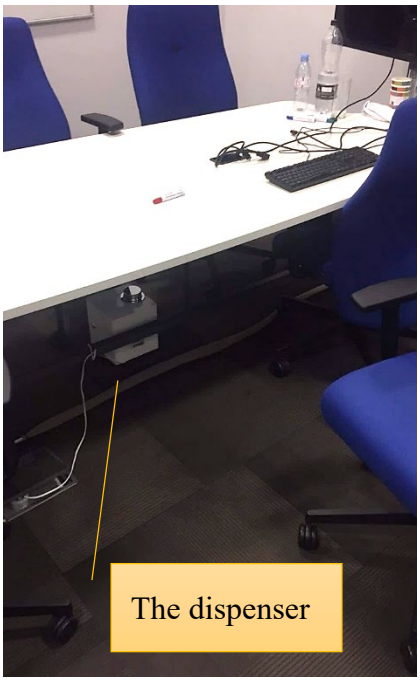
Methodology

In order to address the questions about the influence of scents on consumers' risk behavior and variety seeking, a cross-national study (UK and Greece) was conducted in a two phase data collection. Concerning the UK sample, phase one was conducted via an online experiment in which 125 participants took part. Phase two was a quansi experiment in a lab for which data were collected from 44 participants, equally male and female. Concerning the GR sample, phase one of the experiment was conducted online, where 83 participants took part. Phase two was a quansi experiment in a lab for which data were collected from 83 participants, equally male and female.

For phase one, we collected data by using Qualtrics and so, participants were asked about their risk behavior, variety seeking and they also did the BART task. Concerning the BART task, they played 32 rounds and for each round they could pump/click 1-32 times before the balloon pops. Participants were fully aware of the risk of balloon popping and knew in advance

the chances. Moreover, they were asked to buy as many as office products they wished by ignoring the price as the scenario proposes that these products were provided by their work as supplies for their office. These office products were exactly the same folders but in a variety of colors and also paper clips in a variety of colors.

For phase two, a quasi-experiment took place in a lab with a stable scent intensity of either vanilla (warm category) or eucalyptus (cold category). A hidden dispenser was placed in the lab which sprayed the fragrance of 12% w/w solution.



Picture 1: The lab setting

The same participants with phase one participated in the lab experiment which included the BART task under exactly the same BART task conditions of phase one (number of rounds and pumps). Then, they were asked four times to choose which advertisement would be the most persuasive for a potential audience and they were given each time two options from which they had to choose one. Moreover, their mood situation was tested and so participants expressed their current feelings, such as scared, excited, interested. Finally, similar office products were shown to the participants with a clear condition that they are freely supplied by

their work for office use. This time, a variety of highlighters was presented and also post-it products with a variety of color. All products were similar and the only difference had been the color.

Finally, according to Hofstede's theory (Hofstede, 2016; Hofstede et al., 1990), we expected that consumers of countries of much different cultural dimensions could have different risk behavior and variety seeking behavior under the influence of the same fragrances. As such, we conducted a cross-cultural study between UK and Greece.

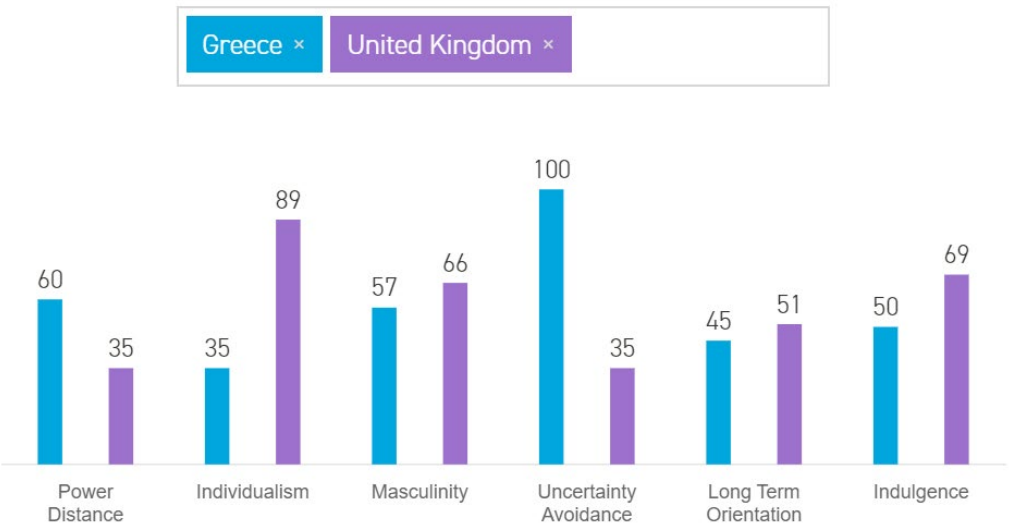


Table 1: Cultural dimensions of UK vs. Greece (Hofstede, 2016)

Findings

The one-way between-groups ANOVA with planned comparisons was done which indicated that significant differences exist among British and Greek consumers.

Risk taking behavior of British is higher under the influence of both vanilla and eucalyptus ($p<0,05$). However, vanilla fragrance had a higher impact on consumers' risk taking behavior rather than the eucalyptus (mean difference: 5.933). On the contrary, none of the fragrances had an impact on Greek participants' risk taking behavior.

Discussion

A dominant framework for understanding the behavioral response to the physical environment emerges from environmental psychology which employs the stimulus-organism-response (S-O-R) paradigm (Bradford & Desrochers, 2010). The S-O-R framework outlines the environmental variables (stimulus), their effect on consumers (organism reaction, perception and emotional state) and eventually organism's behaviour (Morrison, Gan, Dubelaar, & Oppewal, 2011). It posits that both the environment and its cues (S) affect consumers' internal evaluations (O). As such, the stimulus in our case is the fragrance, the organism is the consumers who then subsequently respond (R) with a risk taking or avoidance behaviour (Bradford & Desrochers, 2010; Vinitzky & Mazursky, 2011). However, consumers seems to react under the influence of their culture (Hofstede, 2016; Hofstede et al., 1990) and so, cultural differences were evident in our experiment. Greek participants were not influenced by the vanilla and eucalyptus fragrances in terms of their risk behavior. On the contrary, for the British consumers, vanilla and eucalyptus were statistically different one another in terms of risk behavior. Additionally, vanilla compared to eucalyptus has the highest mean score meaning, vanilla has stronger effect on British consumer risk behavior.

In explaining how odor scents influence approach-avoidance behaviours, Gulas and Bloch (1995) propose a model of ambient scent effects which fits the S-O-R paradigm (Doucé & Janssens, 2011). Acuity determines the ability to recognize a scent and in the end, an effective response derives the final response. Doucé and Janssens (2011) argue that the perceived odor scent in combination with scent preferences causes an effective response by the consumer. Moreover, people under the effect of their environment are judging a stimulus which can influence then their behavior (Huang, Zhang, Hui, & Wyer, 2014).

Sense-making theory suggests that a person acts according to the perceived reality and understanding of a situation rather than the situation's objectives properties (Hopkinson,

2001). Therefore, the perceived reality is structured upon external stimuli of the environment and they affect a person's experience and behavior (Woodside, 2001). As such, consumer behavior can be determined by the subconscious functions of the olfactory system and the perceived values about a brand (:marketing factors) rather than the actual reality, which is an aromatised area. For example, if a hotel is aromatised with flowery notes then guests will have the fallacy that the hotel is decorated with flowers and so positive emotions will bloom. Therefore, consumers construct a perception based on their experience by moving away from a realistic approach as their experience is a rather cognitivist perspective of a subjective reality (Weick, 1995). Moreover, we cannot understand human cognition without considering that humans interact with the world through their senses and do their thinking within a body. People experience the world through their senses and so sensory information accompanies subjective experiences which play a crucial role for human action and cognition. In fact, human cognition grounded in the sensory experience (resulting from goal directed interaction with the world-external environment) has to be reconsidered.

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