DESIGNING BRANDED ATMOSPHERES.

Nature-inspired, multisensory spatial brand experiences for consumer electronics retail stores

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Abstract: In today's saturated market, meaningful emotional appeal becomes the key differentiative factor for physical retailers. The path to human emotion is through the senses, but spatial design still faces a limited understanding of sensory compatibility. Nature, however, benefits human wellbeing especially because of its sensory fluency. This research, therefore, tried to address: How can nature-inspired design improve multisensory brand experiences for more meaningful emotional connections with customers? A combination of qualitative and quantitative research approach was applied in order to identify the patterns in people's perceptions and experiences of nature and of the brands. The findings showed that the brand personality concept can mediate the meaning and emotion from nature to brand experience, based on a surprisingly high agreement during the experiment of associating nature to brand personalities. This unexpected finding enabled identifying brand personalities' sensory patterns, and re-imagining the retail atmosphere design process with the nature-inspired experience theme.

Keywords: Multisensory design, Biophilic design, User experiences, Spatial design, Design strategy

1. Introduction

With the global shift in the way people shop, influenced predominantly by the delivery industry and e-commerce growth, physical retail has been expected to slowly disappear (Centre for Retail Research, 2018; Forbes, 2018). However, while traditional brick-and-mortar stores have been closing more often, surprising new openings from digital retailers have shown that the physical retail is actually evolving (Gobe, 2001). The consumer electronics industry, being some sort of facilitator of those changes by providing personal technology devices, keeps relying on the physical retail to enrich the brand experience (IBM, 2016). The challenges posed on the retail sector also changed consumers' needs and expectations, with their decision making shifting from rational to emotional and experiential (Kim, Koo & Chang, 2009), placing the emphasis on the meaningful emotional connection as a differentiative factor for the retailers.

Shopping environment has a strong potential of evoking an emotional response in visitors, having the possibility to address all human senses through a pleasant store atmosphere (Babin & Attaway, 2000), which has been proven to be a positive influential factor to consumers' as well as employees' behaviour (Gilboa & Rafaeli, 2004). By focusing on the human instead of customers' experiences, store atmosphere should address all senses in a balanced and non-obtrusive ways, but that still does not seem to be the approach accepted by many consumer electronics retailers, even though is proven to positively affect commercial objectives such as product/service evaluation, and sales (Bitner, 1992; Turley & Chebat, 2002).

Sensory marketing and branding theories recognize the importance of multisensory experiences, even by giving them a central role in successful branding (De Chernatony & Riley, 1998; Hulten, 2011). However, engaging as many senses as possible does not promise effective multisensory experience, because the human body perceives its environment as a synthesis of all sensory stimuli (Lin, 2004; Spence, 2011). Overview of approaches to individual senses can be found, however, there is no clear operational multisensory strategy available yet, and the need for it is emphasized by the leading authors in sensory brand experiences theory (Lindstrom, 2006; Hulten, 2011).

Some boundaries to strategic multisensory brand experiences can be found in supporting disciplines. Neuroscience still questions the ways in which our sensory apparatus functions (Spence 2011), and even the number of senses that humans use (Rivlin and Gravelle, 1984; Macpherson, 2011). Anthropology literature emphasizes the importance of cultural element in forming our sensory system (Hall, 1969), while architectural theorists still question the reasons for neglecting the senses beyond the sight, and highlight the importance of atmosphere (Zumthor, 2006; Pallasmaa, 2005). Environmental psychology approach to spatial perceptions is influenced by the evolutionary theory formed by Ulrich (1986), which focuses on humans' innate and shared affiliation towards nature, named 'biophilia' (Kaplan & Kaplan, 1989; Hagerhall, Purcell & Taylor., 2004). Even though its evolutionary background is being questioned recently (Joye & van der Berg, 2011), the fact that it offers a common thread in spatial experiences despite many cultural and personal differences from neuroscience and anthropology encouraged exploring the possibilities for learning from nature.

Proven benefits of natural principles employed in architecture make no surprise of seeing the rise of biophilia in retail, especially with the brands related to nature (Brengman, Willems & Joye, 2012). However, biophilic design theory still has limitations to making strategic connections to branding, as well as exploiting the opportunities to learn from sensory balance found in nature in achieving pleasant atmospheres. Considering the retail sector and consumers' perception changes previously presented, it would be timely to examine strategic potentials of using nature as a guide and a tool to successfully represent the brand through multisensory spatial design.

All things considered, this project was designed for addressing the key research question: How can nature-inspired design improve multisensory spatial brand experiences for more meaningful emotional connections with customers?

The idea is tested on a consumer electronics industry for the following reasons: firstly, because they are some sort of facilitator of today's shopping motivation shift, by providing the everyday technology tools that enable online shopping growth, but at the same time increasingly relying on the physical retail stores as a brand touchpoint and message communicator. Secondly, because of the evident increase in nature-inspired design in their retail stores' interiors. Thirdly, because of the specific character of that industry, that may seem challenging for associating with nature. Therefore, if proven applicable and beneficial to this industry, research outcome could be easily transferred to other, less nature-detached industries too. Since the research outcome should bring a holistic

overview of human sensory perceptions structured for branding purposes, other beneficiaries would include brand experience designers, biophilic design specialists, retailers from other industries apart from consumer electronics, and in the end, employees and consumers. Since the role of the store atmosphere is to establish a deeper emotional connection with the visitors, the idea of learning from nature has been tested by associating it to the brand personality types, as an emotional component of the overall brand identity (Aaker, 1997) and as an emotional image resulting from brand experience (Hulten, 2011).

Nature in this paper refers to any non-human living environmental features including plants, trees, water features (Gatersleben, 2008) and biophilic design refers to design principles developed from the relationship between nature, human biology and built environment (Terrapin Bright Green, 2014).

2. Methods

This research applied a triangulation research approach by combining a qualitative and quantitative research methods, including extensive literature review and case studies, a series of focus group meetings and expert interviews, in order to identify the patterns in people's perceptions, behaviours, and experiences of nature and of the brands, using the brand personality concept. The following section presents the details of each method.

2.1 Case studies

The case studies analysis was conducted in order to initially identify the problems that the consumer electronics industry faces in designing retail spaces, and to explore the success factors of nature-inspired design from the same and other industries. Consumer electronics case studies included analysis of global brands with multiple store presence, such as Apple, Samsung, HP, Dell, Huawei, Xiaomi, Microsoft, Sony. Retail spaces from other industries included case studies analysis of brands like Innisfree, Aesop, Tiffany, Warby Parker, Celine.

Spaces were primarily analysed from the sensory perspective, comparing the level of sensory engagement with the biophilic (nature-inspired) design level. Localization level, brand personality, and brand recognition characteristics were also explored and discussed within the focus group interviews.

2.2 Expert interviews

Five semi-structured expert interviews were conducted with the academics and experience design, multisensory design and consumer electronics retail professionals, in order to identify limitations and potentials for a strategic approach to a multisensory design of branded spaces.

All interviewees were asked about the current practices of translating brand values to a spatial form, their views on the current awareness of the multisensory potentials and possibilities for learning from nature, as well as the sensory analysis tools and practices.

2.3 Focus group meetings

The first focus group interview was conducted in order to question the possibility of connecting human experiences of nature with those of the brands. The first session consisted of six participants with the common characteristics of a good understanding of design and branding (Design Strategy or Branding students) and age (25-30 years old), while the main differentiative factor was cultural

background (Western Europe, Middle East, Far East). The first task was recalling their favourite nature experiences with the aim of identifying their environmental preferences. It was followed by the sensory stimuli description of that particular experience, and finished with the brand personality type allocation to each nature experience.

Clarity of nature-brand personality types association was further tested in a task of allocating brand personality to each of the ten nature photographs provided by the researcher, based on the biophilic design patterns overview and case studies analysis. The aim of the task was to further test the level of agreement on different feelings evoked by nature representations between the cultures, for which purposes previously provided visual material worked well. Photographs were organized into five visual categories. Low colour contrasts were represented by secluded beach and winter lake, dominant horizontality by a waterfall photograph, visual diversity and softness by a spring meadow, rough textures by a rocky desert, and stability by a savannah view and a mountain photograph.

The second focus group was organized for identifying sensory patterns of each brand personality type, relying on participants' sensory memory and imagination of nature experiences. The group consisted of five research participants, with the same sample criteria as in the first one. Students were again chosen because of their ability and academic habit of engaging in abstract tasks; in this case, the imaginary sensory stimuli analysis (Gilboa and Rafaeli, 2003). The analysis itself has combined the 'sensory slider' idea from Malnar and Vodvarka (2004) because of its ease of visual representation, with the Kotler's (1974) atmospheric sensory channels categorization, executed through 'sensory flow', as a practical tool for active sensing review from Mace (2014).

Sensory characteristics that were analysed within the visual sensory channel were colour balance and brightness, visual complexity and order, dominant lines and form characteristics. The auditory channel analysis included volume, dynamics, complexity, and order of the sounds. The haptic channel analysis was based around surface, temperature and airflow, while the olfactory one included the strength, presence and type of smell.

2.4 Questionnaire survey

The questionnaire survey was intended to be a quantitative evaluation of the qualitative research findings. It was designed as an online questionnaire, aiming for global reach and consumer electronics users from different cultural and demographic groups. It was distributed through social media channels, and reached 194 participants from 44 countries.

The questionnaire was organized into three sections. The first one followed the first focus group meeting approach, by recalling participants' favourite nature experience. Participants' memory was engaged by showing seven different nature photographs, as visual representations of the focus group meeting participants' most mentioned nature experiences (lake, beach, mountain, waterfall, forest). The aim of the task was to re-evaluate people's environmental preferences and the preferred feelings from nature.

The second task included associating nature to brand personality types, choosing from four photographs provided for each type in multiple-choice questions, influenced by the focus group interviews findings. Photographs of secluded beach, mountain lake, spring meadow, rocky desert, forest roads, waterfalls, cherry blossom and mountain views were mixed and offered for association with each brand personality type.

The third task was based on the consumer electronics retail stores perceptions. Participants were shown photographs of retail stores interiors with different level of nature incorporated (no nature, natural materials, moderate indoor vegetation, expressive indoor vegetation), and were asked to

choose the preferred one and elaborate their choice in an open-ended question. Participants chose from one of the Apple store interiors, followed by Xiaomi and Samsung spaces.

The questionnaire was finalized with the fourth section containing participant-oriented questions (cultural background, age, gender, lifestyle).

Extensive data obtained through the quantitative method was analysed manually, by comparing the responses from different participant categories on four questionnaire topics. Different cultural, age, gender and lifestyle categories' responses were compared in order to identify the differences and shared preferences, behaviours and opinions on nature and brand experiences.

3. Key findings

3.1 More nature - more senses

Case studies findings across different industries suggest that sensory engagement in the store significantly grows with biophilic principles applied, as explained in Figure 1. However, apart from Apple's meaningful application of nature principles for transmitting the brand message and subtly contextualize the stores across the world, its strategic implementation does not seem to be widely spread approach in general, but within the consumer electronics industry in particular.

Figure 1. High level of biophilic design directly increases the level of multisensory engagement. Left- Aesop store, Singapore, with coconut-husk string on the ceiling. Right- Apple store, Macau China, bamboo strings in the central area.
Image credits: Aesop store Singapore (2009). [Online image]. Retrieved September 10, 2018 from Marchstudio.com.au.
Young, N., Foster+Partners (2018). Apple store Macau [Online image]. Retrieved September 10, 2018 from Archinect.com.

3.2 Sensory congruity

Insights from the multisensory specialist's perspective show a very individualistic approach to creating sensory synergy. Inability to grasp the research findings across all disciplines that examine human senses and their interconnections makes it difficult to develop a strategy. Designers' intuition and empathy were suggested as a way of approaching it until the practical sensory design tools become available.

User research is the main source of insights for this part of the process as well, but again without comprehensive sensory research tools. The idea of using nature as a guide to spatial sensory balance is perceived as a promising one, but the cognitive consonance with the brand has to be assured.

Also, the suggestion of strategic design only for few senses with the others being a consequence of those, was made with the analogy of cooking. Food is prepared for the taste and vision, scents and texture follow them, and therefore, inevitably match and provide cognitive consonance.

Figure 2. Cognitive consonance on the left, black grapes are experienced, familiar and expected. Cognitive dissonance on the right, colour is artificially produced and changed, and therefore can result in confusion and mismatch.
Image credits: Nguyen, A. (2018). Black Grapes [Online image]. Retrieved September 10, 2018 from Unsplah.com.
Heftiba, T. (2017). Black Buko [Online image]. Retrieved September 10, 2018 from Unsplah.com.

3.3 Relevance and authenticity

When it comes to incorporating nature into interior design of consumer electronics, academics and professionals in experience design agree that it is possible for any brand from any industry to implement at least some of the natural principles, emphasizing that it has to be contextually right and authentic, especially with today's refined customers' tastes. When asked to share their opinions on why not more brands use it then, especially in the consumer electronics sector, they agree on lack of understanding of the benefits, lack of direct practical strategies, and the issues that could occur from the upkeep, in case of implementing indoor greenery.

3.4 Comfort and peace

This research illustrates that the overall feeling people prefer in nature is peace and relaxation (66% of the first focus group participants, and 65% of the questionnaire survey respondents), followed by excitement and joy. When analysing the influencing factors of such preferences, the common thread among most of choices is a water feature. Clear water, with low or light movement, seems to evoke relaxation with its visual complexity, soothing colours, horizontality and relaxing sounds. Questioning the preferences in consumer electronics retail stores interiors ended with the overall agreement on comfort and peace as the words most commonly used in open-ended questions in the questionnaire and in focus group interview.

3.5 Differentiation

Insights from retail strategy representatives from two consumer electronics brands and other case studies analysis, show that today's retail design approach follows the changing customers' motivation for visiting the stores in the first place, based around experiencing the brand and testing the product before making the final purchase. It is followed by an evident increase in interior comfort presented mostly through natural materials, because brands want to imitate the atmosphere of the actual environment where the product would be used if purchased, like home or café. However, widely-spread comfort results in growing similarities between different brands' stores, decreasing differentiation and brand recognizability.

3.6 Nature and brand personality

This research suggests that it is possible to use nature as a spatial strategic tool for clarification and reinforcement of the brand personality for consumer electronics brands. What turned out to be a surprisingly clear finding is that there is a general pattern in which natural representations and elements can be associated with each brand personality type. No significant disagreements were found across different cultural, professional, gender or age groups. Focus groups results showed complete agreement when participants were individually associating different landscape photos to five personality types. Since it suggested the further potential of nature-brand personality link, research methods that followed evaluated and confirmed it clearly. It is important to emphasize here that the association process was based on comparative method, and primary findings from individual methods showed that people could associate those particular photos to personality types, but not only those, just more than the others shown. That is the reason why the whole research was based on finding the sensory patterns, and not relying exclusively on visual material provided.

Each brand personality type has over 70% agreement on the most associated landscape in the quantitative research, except for the 'competence'. In the questionnaire survey, this personality type shows the smallest level of agreement on the most associative landscape, with only 56% of responses for the top one, compared to, for example, 73% for the choicest one in 'sophisticated' and 'rugged' personality types. The reason for that was shown to be a visible human influence and order as an association to competence and reliability.

3.7 Sensory patterns

As mentioned earlier, the experiment of associating nature with personality types was based on a comparative method, by the ability to associate some photographs more than the others. It has been observed that there is a possible direct link between two concepts, which led to a sensory analysis of identified combinations, to avoid relying on identified visual associations exclusively. By evoking participants' imagination and sensory memory in each of the personality types-nature combinations during the second focus group interview, the pattern was identified.

By examining the visual stimuli, it was shown that sophisticated, rugged and competent type are surprisingly similar in each element (Figure 3). Sincere and exciting type are contrasting to the previous ones, especially considering the more vivid colours, higher colour contrasts, higher complexity with a lower order, and much more dynamic lines than the previous three. Neutral colours are perceived as more peaceful than the brighter ones. Extremes that appeared in this analysis were the lowest visual order for the sincere type and the highest for sophisticated and competent.
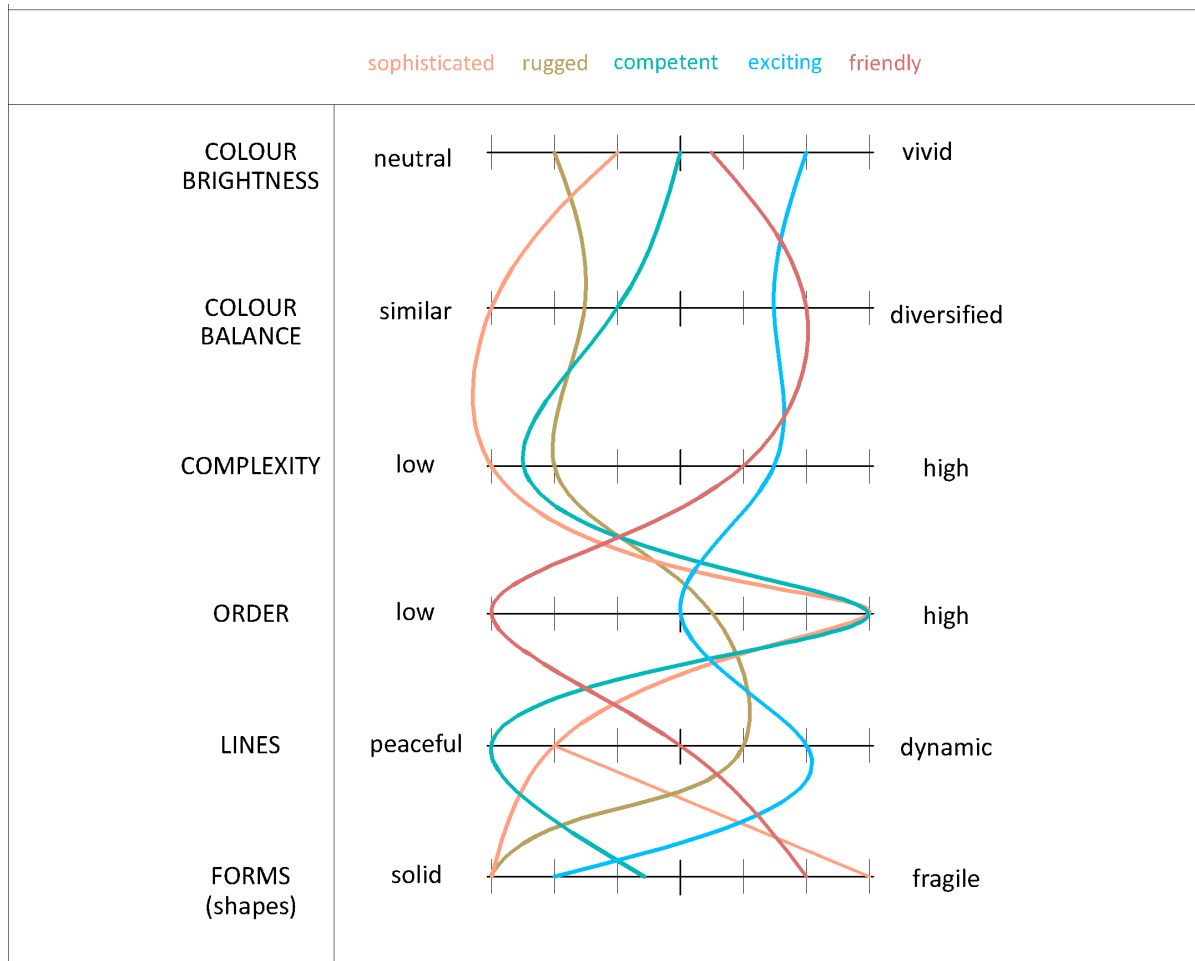
Figure 3. Visual sensory stimuli analysis and brand personality comparison.

Analysis of the auditory stimuli showed similarities between sophisticated and rugged type in this area as well, with low dynamics and complexity, and surprisingly even soothing qualities being possible of assigning to both, but with sophisticated being much more rhythmical than rugged; as shown in Figure 4. Exciting and sincere types are similar once again, in being perceived as much more energizing than other types, with low order that was described as spontaneity. Associations that were mentioned to describe these types were children's play, birds' song, or waterfall sounds.
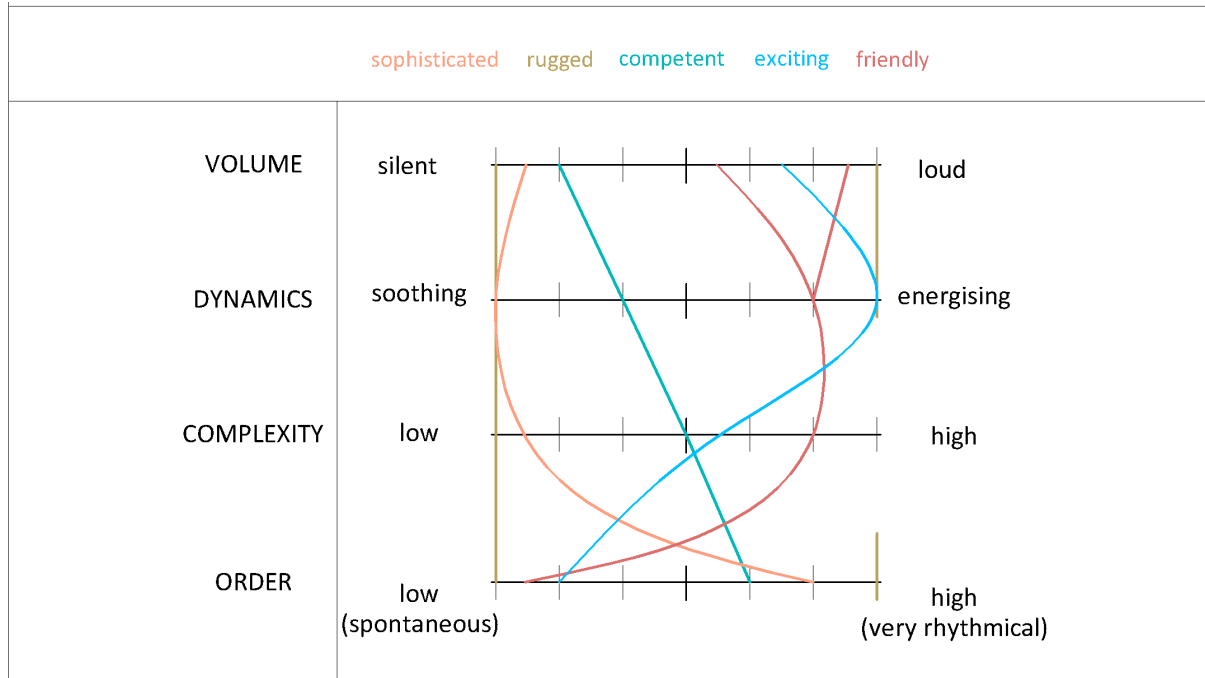
Figure 4. Auditory sensory stimuli analysis and brand personality comparison.

Haptic qualities of each type are the first ones to show significant differences between sophisticated and rugged types, which were most expressed in the textures, with sophisticated being the smoothest and rugged the roughest, as visible in Figure 5. Exciting and rugged types were the only ones to be expected with the significant temperature and airflow variability, all other types are placed around stable, pleasant temperature. Associations that were mentioned in the haptic analysis were fragile and smooth surface like sand or smooth stone for sophisticated, rocky stone or harsh metal for rugged, or soft grass or animal fur or feather for sincere.
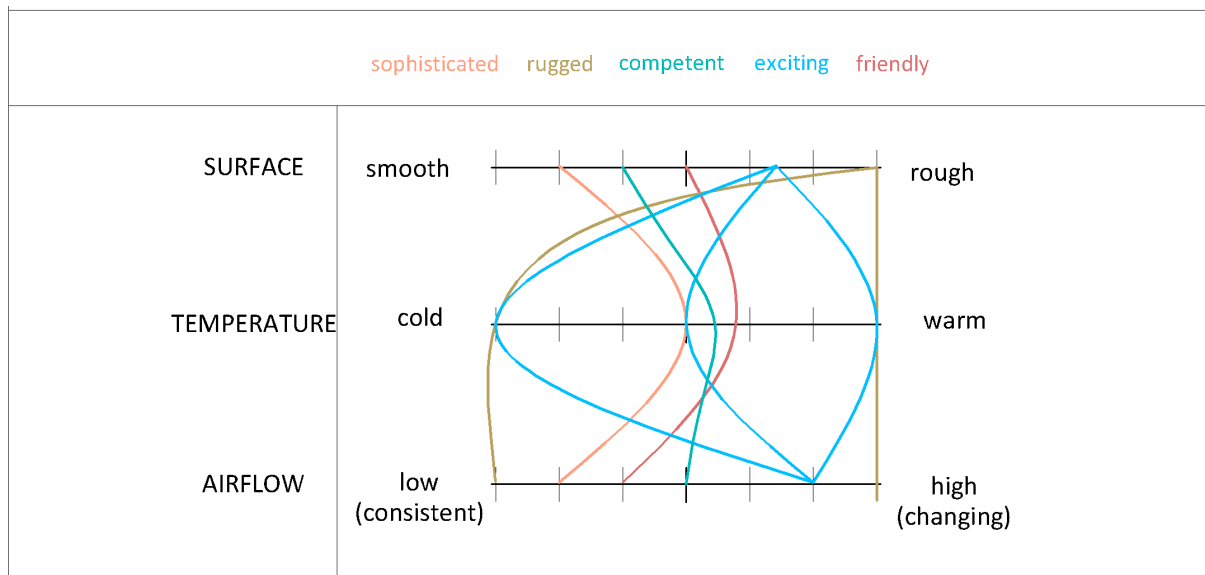

Figure 5. Haptic sensory stimuli analysis and brand personality comparison.

As Kotler mentioned when initiating the categorization of atmospheric channels in 1974, taste is not expected to be directly applicable as a relevant sense in retail, and it should be analysed and actually engaged through smell. That is how they were analysed in this focus group as well, showing many

differences among the types, as shown in Figure 6. For example, sophisticated and rugged types are expected to have a very low and ambient scent, while exciting and friendly can afford to have irregular and stronger scents around the space. Associations mentioned for this were, for example, a field of different wildflowers for sincerity, with a diversity of scents; or a sand beach for sophistication with an ever-present scent of freshness. Another interesting finding from this analysis was that the participants considered familiarity of scents in order to define the personality. Unfamiliar scents were perceived as exciting, while for the competent or sophisticated they should be familiar, without many surprises.
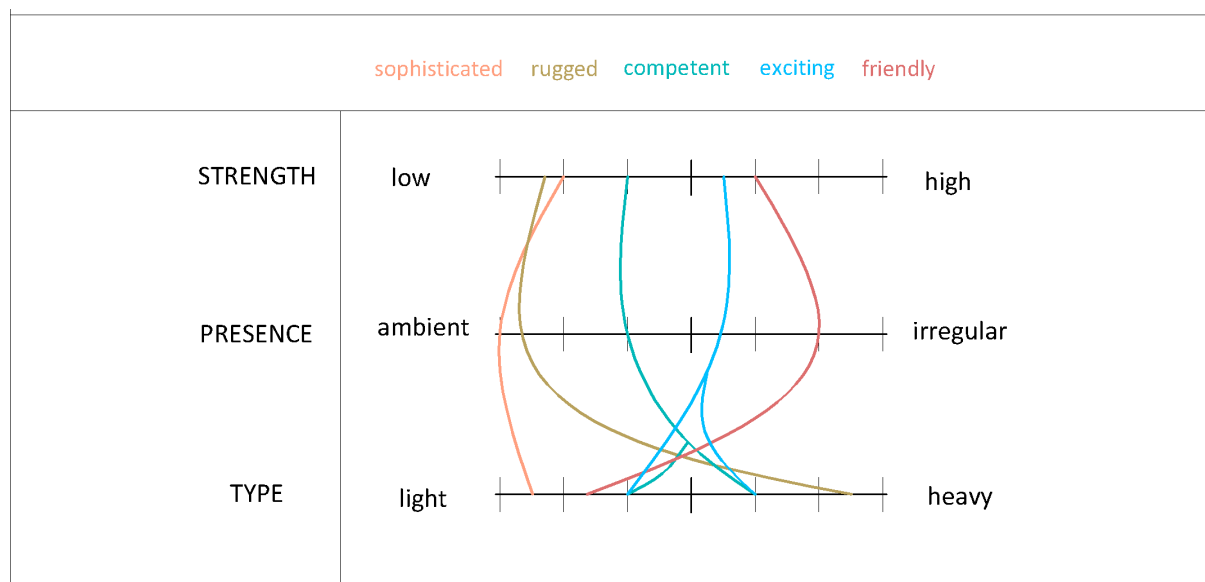

Figure 6. Olfactory sensory stimuli analysis and brand personality comparison.

4. Discussion

In answering the key research question of how can nature-inspired design improve multisensory spatial brand experiences for more meaningful emotional connections with customers; this research finding suggests that it could be done by using the brand personality typology to structure the resulting emotional appeal. The structure affords to identify a sensory pattern, and sensory pattern can lead to sensory strategy.

The findings of this research show that customers can categorize natural environments according to the brand personality typology, agreeing without cultural and demographic differences. Since natural environment is universally preferred over the built one (Kaplan & Kaplan, 1989; Hagerhall et al., 2004), and it is possible to clearly associate it to brand personality types, it brings the possibility of strategically designing with a clear emotion and ways to achieve it in mind. And not only that nature is preferred, but it brings multiple benefits for human wellbeing, of both visitors and employees (Terrapin Bright Green, 2014; Kaplan & Kaplan, 1989; Herzog & Flynn-Smith, 2001), which indirectly positively influence commercial objectives (sales and brand loyalty) (Bitner, 1992; Brengman et al., 2012; Terrapin Bright Green, 2014).

Apart from health benefits that were widely researched and applied, nature is known for its sensory stimuli impeccable coherence and compatibility, which is recently considered as the main reason for environmental preference (van der Berg, Koole & van der Wulp, 2003; Joye & van der Berg, 2011). However, this potential has not been researched nor exploited in brand experience theory, although

the main problem mentioned with the multisensory design is exactly the individual stimuli's mutual compatibility.

Considering all findings of the brand personality type as the emotional effect that brand makes in customers' mind, and natural environment as universally admired as a harmonious sensory unity, they can support the idea of applying the combination of two concepts in retail atmosphere design. It could especially work well for consumer electronics retailers, considering the sensory deprivation often present within this industry, so finding the compatible sensory experiential theme outside the brand has to take place.

4.1 Structuring the experience design result

The finding of an increasingly comfort-based retail interiors is showing that current retail strategy does revolve around consumers as a central point, as the theory suggests (Turley and Chebat, 2002). In their proposal of incorporating atmospheric design into the retail environment strategy, Turley and Chebat have explained that retail executives are implementing spatial strategies based on what they want for customers to perceive them as, and providing the inputs for experience design team accordingly, which was confirmed by findings of this research as well. It is followed by backward communication to the retail strategy level, by collecting customer feedback and adjusting the design, which insights from consumer electronics retail strategy teams have also confirmed.

However, it also shows that the process of identifying the desired customer feeling about the brand does not have a direct link with the experience design process, as visible in Figure 7. In other words, it does not provide a typology of possible results with the accompanying design strategy that would benefit and clarify the process for all stakeholders, and would be the one missing line to connect the dots in a two-way communication process.
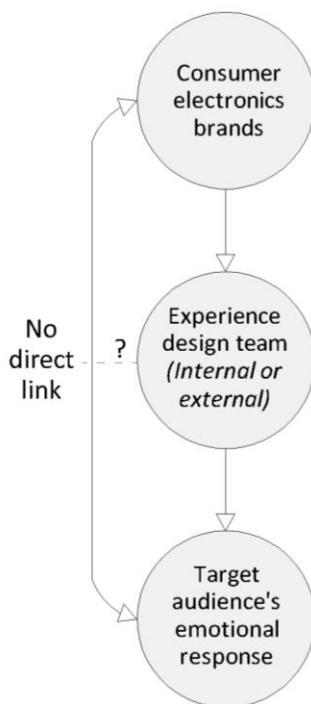

Figure 7. Retail atmosphere, experience design process (Turley & Chebat, 2012)

4.2 Structuring the experience design process

When examining the relationship of brand experience and brand personality, the literature shows that the personality is the result of brand experience (Hulten, 2011), but it is considered as a one-way cause-effect connection, without a direct strategy of the actual designing for the personality types, as shown in Figure 8. Since brands are experienced through senses, the missing sensory strategic link to the concept of brand personality types was a surprising finding. Discussions with experience designers and multisensory specialist suggest that reasons for its inexistence is based around scientific complexity and multiple influential factors confirmed by literature, which justifies the gap to a certain extent.

In a time when customer motivation is rapidly changing to recreational, no brand can afford to neglect the five senses (Gobe, 2001). Based on the insights from the experience designers, multisensory specialists and consumer electronics retail strategists, there is no available sensory design typology that would simplify the process and minimize the risks of final outcome's sensory synergy. Even the sensory compatibility research testing tools are complex, often self-developed by the multisensory specialist engaged in the process. As Gobe (2001) claims, the combination of sensory stimuli has to be experienced in order to be understood, so without the reliable sensory strategy, brands have to approach it with trial and error method, which can make them restrain from even trying. That exactly is the base for examining nature as a part of experience theme, because the preference for it is universally shared, and it is individually previously experienced and understood, so the design strategy based on nature experiences could minimize the risk of sensory incompatibility. By connecting it with the brand personality typology, it is possible to avoid the risk of irrelevance for the brand.
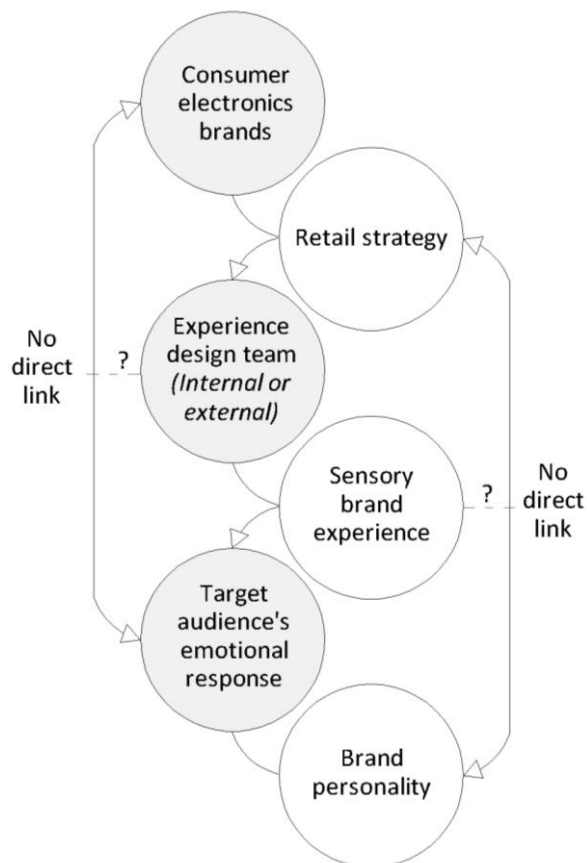

Figure 8. Retail atmosphere, experience design process with results (adapted form Turley & Chebat (2012) and Hulten (2011)).

4.3 Why should nature-inspired sensory patterns be developed?

Figure 9 presents the evolution of the nature-inspired strategy model, showing how it connects the missing links and benefits it provides for the process and stakeholders.
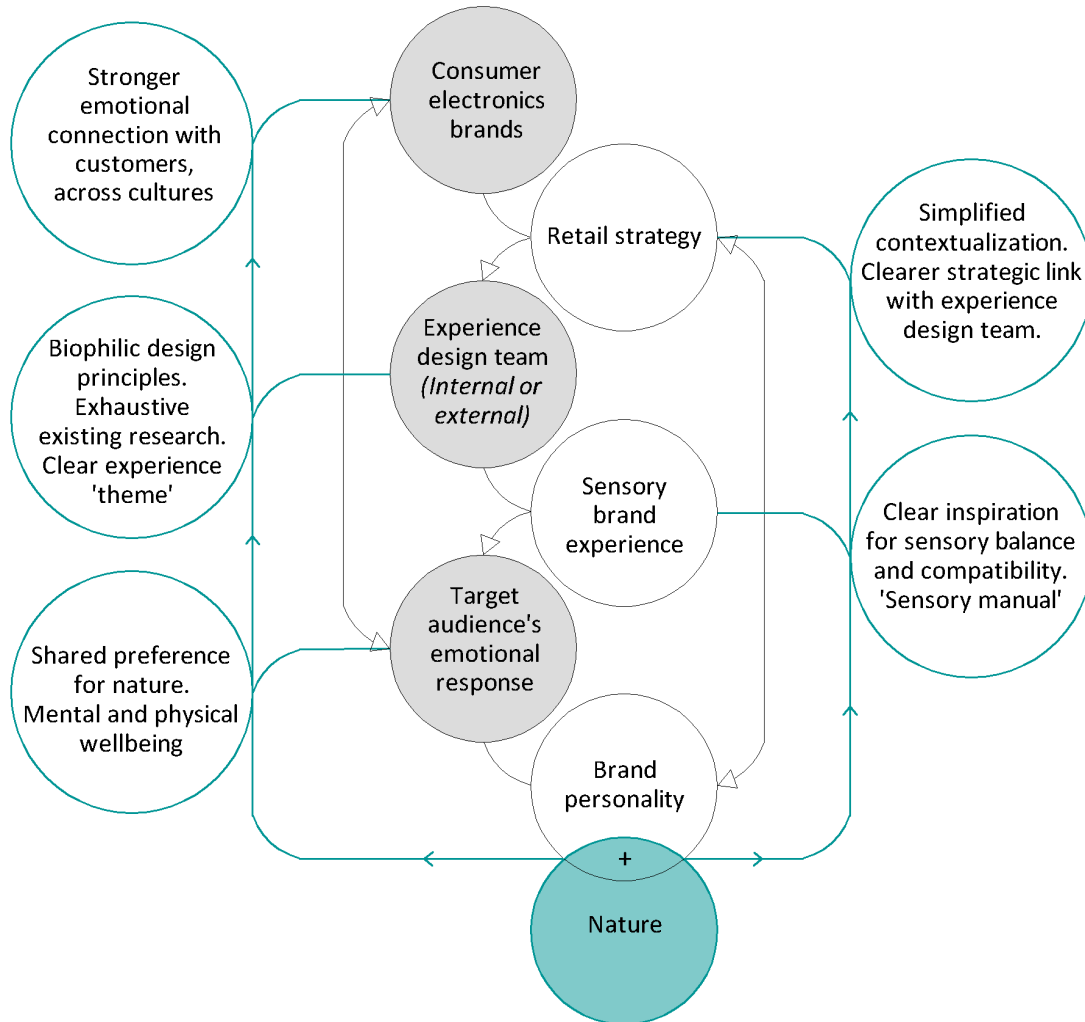

Figure 9. New suggested model that expands the model adapted from Turley & Chebat (2012) and Hulten (2011), with nature inspired brand personality theme.

This new, re-expanded model of experience design process in the consumer electronics industry that includes the proposed nature-inspired strategy as a part of the current experience design process, shows how new element makes the links needed in bottom-up communication. The confirmed hypothesis of possibility to associate nature to brand personality types and its resulting sensory patterns, are placed at the lower end of the model.

In terms of process, nature association is used as an experience theme and a spatial design tool, using the existing research and biophilic design principles, adjusted for the brand personality purposes. On the right, resulting side of the diagram, the nature-inspired theme is used as a guide towards sensory balance, based on the premise of nature's processing fluency evidences. The whole model is justified with consumer electronics brands already implementing nature principles in the retail interior design, but this model offers the possibility to cover the strategic gaps.

When it comes to stakeholders, the expanded model shows individual benefits that nature-inspired design could bring. For the customers, it brings the already examined and proven benefits of biophilia to human mental and physical wellbeing. Whatever the cause for the human preferences towards nature is (evolutionary or the processing fluency), the idea that it offers a universally shared preference among many other demographic and cultural differences, supports its incorporation within the model.

For the spatial designers, the new model would bring the existing biophilic design principles adapted for the branding purposes, as a direct link toward brand personality as a typology of brand experiences' emotional result. For the multisensory specialists in the experience design team, it offers a sort of 'sensory manual' drawn from the research findings, which with all its limitations considered, still offers a coherent perspective of branded sensory strategy.

For consumer electronics brands, the nature-inspired design offers the potential for stronger and clearer emotional connection with the customers, having the brand personality as a final result in mind, due to already mentioned and examined people's shared preferences towards nature. For its retail strategists, it brings a stronger link with other key players in the process (experience design team and the visitors), as well as a simplification of the global-local retail formatting process, due to an easier contextualization of a nature-inspired experience theme.

5. Conclusion

This research was designed in an attempt to identify and examine possibilities of applying learnings from sensory balance found in nature when designing for multisensory spatial brand experiences in consumer electronics retail stores, for more meaningful emotional connections with customers. The research methodology was organized around recognizing a usable sensory pattern, applicable for branding purposes. The pattern was identified and analysed by using brand personality typology as a mediator of meaning and emotion between nature and brand experiences. Research findings suggested that current level of multisensority and nature-inspiration in consumer electronics retail is relatively low due to lack of awareness of its benefits and potentials, high risk of perceived irrelevance or inauthenticity of multiple sensory stimuli, and lack of design strategy and tools to minimize the risk. Designing for comfort decreases the recognizability and differentiation between the brands and should be followed by a more meaningful emotional appeal. Customers do prefer comfort and pleasure, but accompanied by embodied brand values, and they prefer it being expressed through nature. Nature-inspired design principles also increase the multisensority, which directly strengthens the brand message if applied strategically.

This research has the potential to make contributions to relevant studies including (i)

Design- By suggesting a tool for decreasing the gap between complex research on human senses congruity, hardly applicable in design practice, and by bringing to light further opportunities for biophilic design. (ii)

Strategy- By finding a way to structure the emotional result of brand experiences, so they can be strategically addressed and designed for. (iii)

Branding- By identifying the ways in which nature can transmit branded messages. (iv)

Innovation- By experimenting with connecting the benefits of nature with brand personality typology, therefore supporting design experimentation for identifying new strategic possibilities.

This research, however, has some limitations relating to the primary research methods design and execution, due to relying exclusively on participants' sensory memory and visual material, although shown to provide reliable insights (Kaplan & Kaplan, 1997; Brengman & Joye, 2012). Future research may test the main idea in an appropriate spatial setting. Although conducted in a multicultural setting, sensory pattern analysis has only scratched the surface of demographic and lifestyle differences, which should also be further researched. Developing a practical design strategy from the sensory patterns identified through this research is also recommended.

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