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The urban sensescapes perception- The case study of Porto, Portugal

I. Imamović¹, A. J. A. Azevedo² & B. M. B. Sousa³

^{1,2} School of Economics and Management, University of Minho

³ Polytechnic Institute of Cávado and Ave, Department of Tourism and Management

Abstract

Sensory dimensions of tourist destinations have recently been recognized as a crucial component in encouraging positive tourist experience. The urban area is rich in multisensory stimuli that could assist in planning and promoting attractive tourist experiences, and engage in local sustainable development as well. Hence, this paper focuses on capturing a holistic approach of all five human senses and their role in forming meaningful sensory impressions in the context of urban tourism, the so-called urban sensescapes. Following the qualitative approach, the present study embraces eight in-depth interviews with relevant stakeholders in tourism field in order to answer to research gaps in the previous literature and help to understand the role of urban sensescapes and meaning of sensory features of the city. The case study approach enables mapping of multisensory routes where urban entertainment spots are presented in the light of their sensorial and emotional features. This will further facilitate tourist's experience of the city's best attractions which reflect all multisensory stimuli, ie., visual, aural, olfactory, gustatory and tactile.

Keywords: urban sensescapes, sensory tourist experience, emotions, city branding, Porto.

1. INTRODUCTION

Current literature on tourism research pinpoints the relevance of the sensory impressions of positive and interactive tourist experience which are important when planning and marketing destinations which further might attract tourists by other sensory aspects, besides visuals only (Agapito, Pinto & Mendes, 2017)

From the marketing perspective, the idea is oriented toward exploring sensory elements related with destinations, positively affecting customer loyalty and assuring destination's competitiveness (Kirillova, Fu, Lehto, & Cai, 2014; Agapito, Pinto & Mendes, 2017). In fact, other senses besides sight which are related to specific places or spatially determined are explained by the concept sensescapes, where literature makes a clear distinction between visualsapes, smellsapes, soundsapes, tastesapes and haptiscapes (Porteous, 1985; Dan & Jacobsen, 2003). These five senses receive sensory information from the environment and affect individual perception, memory, mood, and emotions, but in this context, the idea is oriented toward people-place interactions that involve multisensory experiences (Krishna, 2012; Kastenholz, Carneiro, Marques & Lima, 2012). Hence, senses can be studied separately in order to portray a destination's sensory characteristics, especially when it comes to managerial purposes (Agapito, Valle & Mendes, 2014; Pan & Ryan, 2009). For instance, touristic destinations may possess distinctive sensory features that may serve the purposes of market segmentation and place communication (Agapito, Valle & Mendes, 2014).

This calls for a need to better explore multisensory approach when marketing destinations, in this case, urban sensescapes as a crucial factor in customer (tourist) engagement and value co-creation (Gentile, Spiller, & Noci, 2007). In other words, this study aims to investigate people's perspective on contribution of sensory diversity to positive experience of urban tourism.

Hence, the study aims to answer the following research question: What are sensory aspects/ attributes of urban sites that contribute to positive experience within the urban tourism context? In methodological terms, the study adopts a qualitative and exploratory approach, which is necessary in order to better understand the phenomenon and which helps in mapping all urban sensescapes. Finally, the authors use a case-study approach in order to validate the proposed theoretical framework.

The paper's contributions are several; the main idea orientates toward mapping the urban sensescapes, which are chosen and studied based on the in-depth interviews with relevant stakeholders with expertise in tourism field. Focusing on managerial purposes as a study outcome, this interactive project may assist in creation of multisensory map where tourists could be able to experience the city's best attractions, feel the city and also apprehend the sounds, smells, tastes and sights. Furthermore, this study will extend the limited discussion on multisensory impressions in tourism field. It will as well highlight the relevance of five sensory cues i.e. visual, gustatory, olfactory, tactile and auditory. Moreover, the study will focus on identifying and analyzing the multisensory cues in urban tourism that lacks previous investigation, and finally, it will propose potential application of multisensory approach in urban competitive environment.

2. LITERATURE REVIEW

Exploring five human senses and their role in the creation of experience, knowledge, and perspective has been a trending subject of discussion in different research disciplines, especially in the philosophy field (Agapito, Pinto & Mendes, 2017). Although visual experience in previous literature received a lot of attention, recent research does not neglect the important role of multiple sensory experiences (Rodoway, 1994, Urry, 2002). Recent literature highlights the importance of multisensory experiences that shape overall tourists' experience, that is sensescapes (Porteous, 1985), i.e. landscapes, soundsapes, tastesapes, haptiscapes and smellsapes in understanding this construct (Agapito, Mendes & Valle, 2013, Dann & Jacobsen, 2003; Kastenholz, Carneiro, Marques & Lima, 2012; Pan & Ryan, 2009). Findings in neuroscience and consumer behavior assume that consumers are triggered more by sensorial and emotional dimensions than functional ones (Zaltman, 2003), hence engaging tourists through multisensory approach can have a significant effect on destination's long-term memory (Agapito, Pinto & Mendes, 2017, Larsen, 2007), destination loyalty (Santos, Caldeira, Santos, Oliveira, & Ramos, 2019), and overall positive destination

experience (Kastenholz, Carneiro, Marques & Lima, 2012; Agapito, Mendes & Valle, 2013; Agapito, Valle & Mendes, 2014; Pan & Ryan, 2009; Mateiro, Kastenhloz, & Breda, 2018).

Studies on sensory tourist experience start from 2010, and have resulted in interesting discoveries. Lv, Li and McGabe (2020) confirmed that multisensory impressions positively influence destination loyalty, which was also confirmed by Agapito, Pinto and Mendes (2017). Similar findings were reported by Mateiro, Kastenholz and Breda (2017) where vision plays the most important role in experiencing mountain destination of Serra da Estrela National Park in Portugal, followed by the hearing, smell and taste. Additionally, Carneiro, Lima and Silva (2015) argue that although a landscape plays crucial role in experiencing the historical villages in Portugal, other senses connect tourists' imagery of a destination such as taste of countryside food (maranhos- a sausage made from rice, mint and lamb, homemade bread, mountain cheese and curd of sweet pumpking, cheese and sausages), as well as countryside scents (flowers, vegetation, herbs, fresh air, wet earth and so forth). Finally, sounds of nature, animals, wind, clean air and pine trees are part of countryside's soundscape impression.

Despite the fact that literature on sensory marketing is expanding, most research focus on a single sense, while multisensory approach as an important part of customer experience has been greatly neglected, especially in the urban tourism.

2.1 URBAN TOURISM

Cities nowadays present sensory environments heavily concentrated with unique scents, sounds, landscapes, tastes, but tactile stimuli as well, and each of them can be distinctively discussed regarding their symbolic interpretation, since each human sense play a significant role when experiencing the city (Borer, 2013). Therefore, one can agree with Porteous (p.357, 1985) observation where he states that "urban environment is a multisensory experience". Even urban theorists are stressing the importance of sensory cues and their influence on individual's emotions and experience, which in turn creates a bond between people and places, and is crucial for designing quality urban areas (Xiao, Tait & Kang, 2018).

Because the city is usually a large urban setting, people develop specific representations or symbolic phrases, attached either to artificial or natural objects, such as trees, buildings, streets, parks, rivers or neighborhoods that can represent symbolic points, but used as a synonym of a city as well (Borer, 2013). In other words, it is not unusual to merge city's tangible (physical) and intangible (symbols) elements to attract tourists (Russo & Scarnato, 2017), but also for the purposes of city branding (Gilboa, Jaffe, Vianelli, Pastore & Herstein, 2015). However, urban environment is affected by globalization which makes cities more competitive and uniform in their architectonic style and image (Liu, 2012). Therefore, some stress the importance of sensory experience in order to preserve the sense and memory of the place (Ouf, 2001). Urban space is unique and eventful environment (Crang, 2001), where the urban experience is formed on interaction between city places and spaces (Wearing & Foley, 2017). Despite the fact that urban experiences are the result of our interpretations and senses, research on multisensory dimensions in urban studies is still scarce (Quercia, Schifanella, Aiello & McLean, 2015).

3. METHODOLOGY

This part of the study intends to contribute to a greater apprehension of the context of sensory experience in urban area. More specifically, eight interviews were conducted involving representatives of entities linked to tourism management, as well as entity representatives of the urban municipality. According to Paton (2005) size for the qualitative sample size does not follow specific rule as long as the selected sample answers the research questions competently. In this study, it was decided to conduct a semi-structured interview with a pre-defined form, which is able to guide the questions according to the specific research objectives, providing some degree of flexibility. The order of questions was therefore changing depending on the course of the interview.

Table 1 Interview questions

Number	Questions	Source
1	What is your definition of urban sensescapes?	Authors' elaboration
2	Please suggest example of locations in the city with the following sensory impressions: vision, taste, smell, sound and touch.	
3	What kind of emotions and feelings are elicited by those places?	
4	What is your overall perception of the city image? Does this perception influence the response and evaluation of one specific sensescapes?	
5	If you could design a 2h urban sensescape route in Porto, what spots would you include?	
6	From your (stakeholder) perspective what advantages or implications could we expect if Porto offers such a route?	

The purposive sampling (Etikan, 2016) was included, and is usually used when choosing specific cases based on your own reason and logic to be able to answer your research question and reach research objectives in the best manner (Saunders, Thornhill & Lewis, 2009). In this case, research orientates toward managers of tourism agencies, touristic guides, public organs and all relevant subjects with expertise in the tourism field and familiarity with Porto's tourism specifically, discussing a sensory element of the city branding. The interviews took place between December 2019 and March 2020.

For measuring our data, we have started with the basic steps such as organizing data, coding, and finally, displaying the result and interpreting them (Braun & Clarke, 2006; Broman & Woo, 2017). Furthermore, content analysis is used to analyze text and the patterns that occur in that text, hence inducing the most important ideas coming from collected data (Trochim & Donnelly, 2008). This phase of the study seemed to be one of the most insightful parts of the investigation. Rich human contact and the way the interviews were formed and conducted, provided us with different viewpoints and complementary knowledge, resulting in new discoveries and ideas. After all, it contributed to experience sharing and enriching the study itself.

4. EMPIRICAL COMPONENT

This chapter presents the results of the empirical research with respect to qualitative phase of the study. The intention was to carry out the fieldwork on the present investigation in this destination, not only for local convenience but, above all, for the contribution that will be given to it. The interviews made it possible to address the conceptualization of urban sensescapes and the importance of studying urban tourism in the light of five sensory impressions. Tourists experience the place via sensory inputs, hence focusing on the most evident sensory impressions of a destination, we are able to map the sensory routes of Porto city. Moreover, we delve deeper into understanding what kind of emotions city brings up in people and what benefits are sought from the urban/sensorial touristic route.

The first question aimed to find out more about urban sensescapes, which are multisensory cues of Porto's urban area in the perspective of subjects who are familiar or work in the tourism area of the city. The second question asked the respondents to provide five sensory impressions of Porto's urban area, i.e. the most evident landscapes, smellscapes, soundscapes, haptiscapes and tastes. Immediately after these questions, interviewees were asked to explain their emotional state toward the city and their perception of the city image. We then focused on mapping the urban multisensory touristic route. They were asked to imagine themselves as tourist guides who have two hours to take tourists to the most important tourist spots in the city that will reflect the most meaningful and evident sensescapes i.e. visual, auditory, olfactory,

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tactile and gustatory. Moreover, some comments were given regarding the potential benefits of this multisensory urban map. Finally, additional questions were provided to access general participant's data.

Four males and four females participated in the study. Regarding the education level, four participants hold Master's degree, while three hold Bachelor's degree. Two of them are self-employed, one is unemployed and four participants are working full-time. Moreover, five participants are residents of Porto for more than 10 years. However, Porto's Municipal Department of Tourism and Commerce represents an entity, so we did not present socio-demographic results. Generally, interviews lasted between 30 minutes to two hours, but the length of the conversation depended on the respondents' time and willingness to share information on the topic. Finally, the interviews were transcribed and two out of eight interviews needed to be translated from Portuguese to English language immediately after the meeting was finished. After this part, each interview was analyzed.

Table 2 Information about interviewees

Interview	Legal entity	Interviewee
1	Gbliss - Follow Your Bliss tourism agency	Tourist guide/Storyteller
2	Instituto Universitário da Maia - ISMAI	Former Erasmus student
3	BOOST- Urban Thrills tourism agency	Manager
4	"O Porto encanta" tourism blog	Tourist guide and author
5	Taste Porto Food Tours tourism agency	Manager
6	Viking Cruises company	Tour escort
7	Intercontinental Hotel Porto	Head concierge
8	Municipal Department of Tourism and Commerce of Porto	Members

5. DISCUSSION

The idea of sensescape i.e. other senses besides the sight that are spatially determined or place-related (Porteous, 1985) is closely related to the concept of tourist gaze that focuses on a bodily experience (Urry, 2002). Urban environment is also subjected to different sensory impressions with each of them representing individual symbolic interpretation of a city (Borer, 2013). One observation we stumbled upon during the interview was that defining the term *urban sensescape* seemed abstract and interviewees tried to give the best possible answer even though some admitted they never heard about the concept of sensescape before.

"... Urban sensescape is everything what we feel, hear and similar. This is our reception in the body... What we feel about the city, the positive or negative sensory information..." or

"... Urban sensescape would be places in which people can have sensory experience."

However, in the later stage of the interview, most of them had a clear understanding of a concept and its application in urban tourism. Nevertheless, this highlighted the need to investigate this term more and recognize its role in the tourism industry.

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In the present study, Porto's typical tastescapes are evident in local/traditional food such as Francesinha, Tripas, Bacalhão (codfish), Arroz de Pato (duck rice), but also Port wine. Similarly, Mateiro, Kastenholz and Breda (2017) also report that tourists visiting the mountain destination of Serra da Estrela National Park in Portugal associate its tastescapes with traditional food. Wine and coffee are beverages usually consumed in daily lives. After all, Porto is a famous wine destination. Moreover, Santos, Ramos and Almeida (2017) reported that visitors' personal and wine involvement significantly affect their emotions toward the destination and place attachment in the Porto wine cellars which also predicts their future behavioral intentions. In this study, respondents did not refer to specific Port Wine brand, and it is important to note that they connect the wine experience with dozens of wine cellars located across the Douro River from the old city center of Porto, in the town of Vila Nova de Gaia.

Smell is closely related to taste, so preparation of food and cooking is important in this context with Bolhão market being a center of city's smellscape. As the literature suggests, people sometimes associate smells with the food and meals (Brochado, Stoleriu & Lupu, 2019; Trang & Lee, 2018; Mateiro, Kastenholz and Breda, 2017). The food however is an important element in wine tourism experience, as well as wine tasting (Brochado, Stoleriu & Lupu, 2019), and the wine cellar smell (Santos, Caldeira, Santos, Oliveira & Ramos, 2019). In this study, wine cellar smell and wine tasting are also strongly associated to Porto's olfactory experience. Other typical urban smells are associated to the smell of nature i.e. smell of the river, ocean, trees, plants, and flowers that are clustered in the Parque da Cidade do Porto (City Park of Porto), the urban gardens, Ribeira and Foz areas as well.

Finally, we learned from the interviews that stone, granite and azulejos tiles are the top-of-mind tactile impressions of Porto. Similar findings were provided by Phillips (2015) where one of the subjects tried to experience the city of New York by his hands and feet: climbing. In doing so, he pointed out the intimate bond between the body and the rocks, and he related himself with groups and individuals who touch the city in active and skillful ways i.e. urban traveller exploring forbidden places or children who are in the playground, touching different textures and exploring the urban environment. Similar findings were reported by Mateiro, Kastenholz and Breda (2017) where tourists associate haptiscapes of Serra da Estrela National Park in Portugal to the touch of rocks and water.

Local people are also essential part of Porto's urban tactile experience. Similarly, Hoven (2011) suggests that the bodily experience among the travel group is important in shaping their perception of haptiscapes. The travel group becomes the part of the overall experience by sharing intimacy and proximity in the moments of helping each other or while sharing hugs upon successful sightseeing and walking (Hoven, 2011). Consequently, Dann and Dann (2012) suggest that sense of touch is involved in different types of transportation a person assumes during the travel, as well as during the dining experience, especially for blind people who rely on the tactile stimuli. However, the touch also relates to hugging experience, not only between humans, but hugging different objects or animals during the travel. This kind of sense is typically associated to hands as means of receiving information from surrounding environment, such as handshake or even kiss on a cheek. Authors also note that tactile stimuli can be received via our feet, and sometimes it can be related to a negative experience, such as the pain of walking the cobblestone streets in the city of Porto.

It was also interesting to discover that tactile experience of the city is as well associated with the food or more specifically, touching the food. This discovery was in the line with Santos, Caldeira, Santos, Oliveira & Ramos (2019) study on multisensory wine experience where the sense of touch is associated to touching the food (bread), touching or holding the glass and feeling the heat or coolness that is related to the temperature.

The historical parts of the city follows the assembly of heritage sites and their important role in designing urban landscape (García-Hernández, Calle-Vaquero, & Yubero, 2017). Porto's main attractions are concentrated in the historical part of the city i.e. landscapes such as the ones from Clérigos Tower, Dom Luis I Bridge, Monestary Serra da Pilar, and Virtudes garden, Ribeira, Miradouro da Vitória and Porto Cathedral (Sé). Furthermore, urban environment is typically subjected to noisy sounds of traffic and people which are also evident in this study, but Porto's unique soundscapes are reflected in many ways and in different parts of the city such as seller and buyer interactions at Bolhão market, Portuguese Fado music, bells ringing from

the tower and churches, or musicians performing on the streets. Area around historical part of Ribeira and Foz (blend of riverside and oceanside) reflect sounds of seagulls and sounds of waves. Similarly, Dias, Correia and Cascais (2017) reported that natural sounds of seagulls and storks characterize famous destination of Algarve in Portugal. Finally, urban parks are inevitable parts of busy urban environment where people usually come to relax and enjoy the natural soundscapes such as in the Parque da Cidade do Porto.

Another important outcome of the qualitative study is that interviewees have positive emotions about Porto city. Respondents who live in the city their entire lives and those who live for shorter period feel strong sense of belonging and pride to be a member of Port's society. Multisensory experience indeed is a strong predictor of individuals' emotions (Chen & Lin, 2018), and we believe that sensory experience of a destination can trigger positive tourists' emotions as well. We have also learned from the interviews that the sense of taste can be strongly connected to memories and nostalgia. Chen and Lin (2018) as well confirmed the relationship between the sensory experiences and positive emotions and found that the sense of taste has the strongest effect on emotions, followed by sight, sound, and touch.

Additionally, the overall city image respondents hold in their minds influences their perception on sensory aspects of urban experience, which is important conclusion for the (future) quantitative part of the study. We also believe that perceived city image and its authentic offer may influence the evaluation of city's sensescapes. Porto is rich urban environment, in terms of tourist offer, that appeals to all five senses, thus enabling multisensory tourist experience. Porto's unique combination of smellscapes and tastescapes i.e. wine, local authentic food, blend of riverside and oceanside; authentic urban medieval heritage sites and monuments covered in painted ceramic tiles i.e. azulejos, granite, stone and marble that provide unique tactile experience, can altogether serve the purposes of destination's sensory branding. Finally, the interviews produced rich insights into different tourists' routes in the city, which also reflect sensory experiences. Therefore, the most famous tourist locations in the city are São Bento metro station, Bolhão market, Vitória, Dom Luis I Bridge, Ribeira, Avenida dos Aliados, Clérigos Tower, Sé (Cathedral of Porto), Monestary Serra da Pilar, Ribeira and Cais de Gaia (wine cellars on the opposite side of Ribeira), which is similar to Silva's (2017) study results where the author found out frequent patterns and tourist movements in the city of Porto. With that in mind, it was established that areas of Aliados square, São Bento metro station, Ribeira, Clérigos Tower, Dom Luis I Bridge, Douro River and Cais de Gaia receive the most visits.

Finally, potential benefits of the sensory urban route are numerous, such as establishing emotional connection between a visitor and a place.

"... Well it definitely goes in favor of experiential tourism that is engaging customers more into the services that are purchased or provided to them. I would say that having such an experience would create long-lasting memories for the customers."

Destinations, as well as products can be branded, and there is a growing interest in a sensory dimension of such branding. Comparing the research outcomes to other studies that share similar results on landscape impressions (architecture and scenery) or sound impressions (traffic sounds, people talking, natural sounds and so forth), Porto has unique smells such as wine, local authentic food, riverside and oceanside that are connected to sense of taste as well. Moreover, Porto's haptiscapes are authentic in terms of unique heritage this urban area offers in comparison to other tourism destinations such as medieval heritage sites and monuments covered in painted ceramic tiles i.e. azulejos, granite, stone and marble. The findings can be useful for purposes of sensory destination branding.

6. CONCLUSIONS

Indeed, academia has recognized the role sense play in human knowledge and apprehension of the external world by receiving information from the environment and mediating everyday experiences (Krishna, 2010; Rodaway, 1994). Holistic approach to five human senses with respect to tourists' experiences, emotions and behavior could assist in design and marketing of appealing tourist experiences and lead to destination competitiveness. Cities nowadays are attractive tourist destinations, and major urban locations contribute to

tourism system and join both resident and tourists as end users of city's attractions and infrastructure developed for other purposes (Edwards, Griffin & Hayllar, 2008).

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