

Managers, by overlooking the sensory experiences, are missing great opportunities to develop new and strong emotional associations with their customers. Emotional new service development is about creation of sensorial experiences and designs that make the consumer experience the services, and most of all designs that make the consumer buy the services. Conceptual in nature, this paper presents a review of theoretically relevant work from marketing, branding, interior design and consumer psychology, demonstrating how consumers perceive, as opposed to actually experiencing a service, as image through the human senses. The article discusses how to connect with customers mind through differentiating and expressing a service in multi-modal manner. The authors then propose a conceptual framework for the future research, and the management of a service and a service space, and how the concepts like haptic feedback and involvement-immersion should be absorbed in the future management.

Key Words (*multisensory, service, experience, future, immersion*)

Theme 6 - Futures Topics

Introduction

Some of the future trends already visible at the airports include biometric identification of people, virtual shops, advanced mobile applications, automated security and luggage systems, robotics, and the convergence of the functionally separate technologies into convergent devices, products, services and service spaces. The major future opportunities will focus on the digitalisation of services, and concepts that provide unique experiences to variety of travellers. (Inkinen, 2014). Therefore, a new breed of service personnel in the service and lounge environments are needed, including, for example, design manager, ambient manager and space manager. For instance, building multi-sensory perception of objects, sound and lighting atmosphere, as well as customer facilities, and in improving the overall customer comfort at the airport, the role of an ambient manager (or a vibe manager) would be to support service providers, especially the restaurateurs at the airport by analysing the sights, sounds and buzz of the airport. The ambient manager's job actually dates back to the 1970s when people were hired (and music was composed) to reduce the anxiety and fear of flying amongst the airline passengers. (Prendergast, 2001). Naturally, these new essential skills set new goals for the future education and training of the professionals.

Nearly all the brand communication we experience encompasses just two senses – sight and hearing. According to Lindstrom (2005a), 99 percent of present brand communication today is focused on two senses: what we hear and see. In sharp contrast, 75 percent of emotions are generated by what the consumer in fact smell. Emotional brand associations require the presence of all sensory perceptions, hence the emotional branding is based on the creation of sensorial experiences and designs that make the consumer feel and taste the product, and above, all designs that make the consumer buy the services (Lindstrom 2005b).

Feelings of being connected to a certain brand and emotions toward a brand, affects our loyalty to it. In general, consumers like brands that express their identities more than other brands, and such perceptions influence the emotional responses to brands. These insights are important to brand relationship management, and to new service development, because human beings tend to feel more loyal to what they feel connected with, attached to, and love. (Hwang & Kandampully, 2012). However, '*mood complexity*' is part of the future traveller's behaviour and a postmodern customer reacts quickly to the signals from the surrounding shops, cafés, restaurants, and the responses, hence the purchase choices, are unstable and unpredictable. (Heikkinen, 2014). Global airport service provider SSP studied the traveller '*mindscapes*' in 2008 and found that the mood of the

customer is fluctuating regularly from being energetic, happy to set off for a journey, tired, nervous, jetlagged and so forth. (Select Service Partner, 2008)

Essential elements of ambient, like interior design, sound and lighting, provide the basic tools to modify the state of atmosphere within the consumer mind (Heikkinen, 2014; Koskinen, 2013). These elements have been used widely in commercial spaces to support or activate the location's inner dynamism. Like in the Airports, or in culture houses and shopping malls, the atmosphere can be more vibrant in restaurants, cafés and shop areas, unblemished in high-ceiling passageways, and more tranquil in lounge facilities. (Frey, 2014). Think about your last airport experience, the lightning, sounds, the coffee aroma, and the smell from the passing travellers – a mass of experiences guided by our senses. Academics (e.g. Lindström 2005a) know numerous reports on how car makers and leather goods producers exploit aromas to give buyers the complete experience. Therefore, the customer experience in Hospitality and Tourism should be seen as immersions of seeing, hearing, smelling, tasting, touching, in a form of complete sensorial experience. Hence, the visual image should enrich the soundscape, the physical elements of the service should be aligned with the impression given before the experience and the location should construct a scene for all this experiences. Marketing academics (e.g. Zarantonello & Smith, 2010) and practitioners alike have recognized that consumers look for brands that deliver exclusive and unforgettable experiences. Therefore, the marketers are interested in the concepts of emotional attachment and service experience, and the conceptual framework of customer experience with three elements: (1) communication, (2) service delivery and (3) usage, has become the guiding research framework. (Lemke et al., 2010)

Using the future airport context, the following present a review of relevant work from marketing, branding, interior design and consumer psychology, discussing the variable routes to customers' emotions and experiences, and finally considering how services and the service spaces should be researched, developed and managed in the future. (Rodrigues et al., 2011.)

Literature

As with every piece of new service development, one must begin with an understanding of what the product or service means to the people who use it or experience it. It is easy to see how some products can benefit from using a wider range of senses in communicating the brand – food products start with a taste and smell, for example, and motor manufacturers are learning to use leather or greener fragrances on their eco-friendly vehicles. (Kita & Nakatani, 2011). But what about more prosaic, everyday products and services? How do we widen the sensory experience in hotel, restaurant, shopping centre or airport? The aim should be the avoidance of sensory deprivation – and the creation of spaces and services that offer real emotion and stimulate the desired response from the consumer.

Atmospherics, a term for physical construct, containing the influence of experienced sensory stimuli, such as vision, sounds, scents, and touch, on consumer behavioural intent, was introduced already in 1973 by Kotler. Also, more than 30 years ago, Bitner (1992: in Nelson, 2009) presented the concept of '*servicescape*' to study the consequences of '*physical surroundings*' on behaviour of customer and, specifically, employees. This model has been further tested, and confirmed, in various service spaces such as hotels, restaurants, sports stadiums, and events (Nelson, 2009).

An emotional environmental element such as enjoyable music, fresh scent, ambient light, or soft fabrics arouse desire leading to patronage intents (Baker, et al., 2002), willingness to buy (Kotler, 1973/74), revisit (Wakefield & Brodgett, 1996), and recommendation (Sherman et al., 1997). Babin and Attaway (2000) have researched *Atmospherics* as a tool for value creation and increasing share of customer mind, especially in retail environments. (See also Bailey & Areni, 2006). Car manufacturers did not arrive at the new car smell by accident, but invested time and money into making sure the customer experience was complete and fully embracing the total experience of the consumer. Lindstrom's (2005, 85) description of Singapore Airlines total branding sums it up – '*visual, olfactory, auditory and tactile considerations are brought together in a comprehensive and rigorous brand*'. The result is internationally prominent, consistent position among the world's favourite airlines and a profitable, growing business. Moreover, customer experience can be seen as a multi-sensory, affirmative and wide-ranging emotional experience that facilitate profound personal change. By

activating personality, authenticity, compelling storytelling, multi-sensorial perceptions, interaction and deep contrasts, service provider is able to construct memorable and unique experiences to customers. (Karjalainen, Koskinen, & Repokari, 2005; Tarssanen & Kylänen, 2006).

Multisensory representation comprises how sound, moving images and the projection surfaces enhance user experience and emotion in interior design. However, building an emotional connection with the interior design and the customer experience has been challenging. Traditional design approaches have not been able to conjoin people with the milieu and experience. Traditional floor plans, perspectives, colour and material boards still lack the desirable experiential image which could ascertain and critique a consumer journey in a suggested milieu. (Haase, 2013).

Soundscape

Conjointly with atmosphere and ambience, the audible sounds, namely noise and background music, influence consumer's purchase intentions, moods, perceptions of service, and consumer decision, (Alpert & Alpert, 1990; Areni & Kim, 1993; Areni; Sparks & Dunne, 1996; Han & Ryu, 2009; Milliman, 1986; North & Hargreaves 1996; Räisänen 2012). '*Soundscape*' illuminates the auditory milieu and the parallel perception of the people present in the milieu. According to Botteldooren (2011), sound field, or '*soundscape*' combines both the sound sources (physical equipment) and the milieu (the location, room etc.), and is subject to the other sensory stimuli, e.g. the functionalities of the milieu, the motivations and expectations of people present and the individual aural and cultural background of each participant. The findings of the '*World Soundscape Project*', (Schafer, 1977) form the basis of the way that acoustics and noise are assessed today. Their model conglomerates objective physical measurements (e.g. sound levels) with psychoacoustic factors (e.g. loudness, roughness, sharpness, etc.) and subjective experiences (verbal descriptions, interviews, questionnaires) in a more holistic way. Another research by (Wilson, 2003) suggested, in a more commercial based setting that patrons are spending more money in a wine store when classical, rather than Top-Forty music was played in the background. Rather than influencing patrons to purchase greater quantities of wine, the classical music induced them to purchase more expensive wines. These result offer support for suggestion that classical music evokes perceptions of higher priced store merchandise.

'*Psychoacoustic*' additionally try to join the physical dimensions of a sound field to perceived elements of this sound field (Genuit & Fiebig, 2006.) Conjoining psychoacoustic methods provides a comprehensive vision and enables more reflective design of environments. Instead of quantitative criteria concerning the design of the milieu, the soundscape approach attempts to describe qualitative criteria, i.e., concentrating on the style and content of the sound rather than on loudness or technical qualities of the sound. (Brown, 2004.) Further, an aspect is to direct attention towards sounds that are perceived to be more pleasant than other. This does not reduce the overall sound level, but it can reduce annoyance (Botteldooren, 2011). Soundscape design can also regulate when a sound should be heard and through analysis, and the management of the elements in the soundscape, new and innovative components can be created to augment the existing ones (Siebein, 2010).

Immersion and Emotion

This paper embraces the emotion-focused literature description proposed by Dede (2009; p. 66) that immersion is the '*the subjective impression that one is participating in a comprehensive, realistic experience*', regardless of how the immersive experience is generated. This is similar to Witmer and Singer's (1998) perspective, where they described immersion as a psychological state where individuals perceive themselves to be enveloped in and interacting with virtual environments that provide a stream of stimuli and experiences and referred to as psychological immersion (Schubert et al., 2009). In marketing literature, the concept of neuromarketing correspondingly touches the topic of multi-sensory emotions and immersion. In an example, Microsoft equipped test players with EEG devices and game advertisements were shown to them during the play. Microsoft's aim was to find out the level of immersion amongst the players when using Xbox game consol. Research, similar to Xbox experience have suggested that advertisement that simultaneously stimulate several parts of the brain is more powerful and may lead to a proliferation of shopping need. (Moilanen, 2014)

According to Kalawsky (1996) and later Mel et al. (2000, 414), Ermi & Mäyrä (2005) and Slater (2009, 4), immersion can be classified in three ways. 1) *Technical immersion* (e.g., ‘technology that gives rise to presence’), and 2) *the sensory contingency immersion* (e.g. sensory, challenge-based, and imaginative); and 3) *involvement-immersion* involving three steps (engagement, engrossment, and psychological immersion) critically involving the losing track of time. On the other side, a simulation can take the expectations into account and create a highly immersive space using advanced means to stimulate the sensory system and react accordingly on the input of the user; ‘*the greater the immersion, the greater the participant’s suspension of disbelief that she or he is ‘inside’ a [...] setting*’ (Dede, 2009, p. 66). People can also be captivated in movies, books, or games and not realise that they have not moved for some time or maybe even eaten. Accordingly, immersion can be achieved, to a degree, by skilful writing in a novel or a film (Blascovich & Bailenson, 2011).

The limitations of haptic feedback (e.g., vibrations and shocks) and input (e.g., keyboard or mouse for motion) have been lately challenged by wearable technology. These emerging technologies are capable of transferring the observed motions of the user into the virtual environment and allow a perceived solidification of virtual objects. Technology can detach the user from reality, matching the virtual movement with the input device; e.g., eschewing the use of keyboard and mouse and recognising the corresponding hand movements using haptic gloves or camera systems like Xbox Kinect or Samsung’s SMART TV. Emotion is essentially intertwined with experience whether affective or cognitive (Bagozzi; Gopinath & Nyer, 1999). Virtual environments have also been shown to be an effective medium (Cruz-Neira et al., 1992), whilst other aspects such as narrative may also induce emotion within virtual environments (Gorini et al., 2011). Relatively low cost Head-Mounted Displays (HMD) such as the Oculus Rift (<http://www.oculusvr.com/>) may make many of the advantages of the more expensive and immersive environments more widely available and more able to be used within the wider context. This is valuable as variables that are difficult to control or duplicate in real-world settings are responsive to control in virtual realities due to the unique affordances of the digital world. Authenticity, immersion, and emotion are interesting by themselves; the challenging part is to merge them in commercial space. (Reiners, et al., 2014).

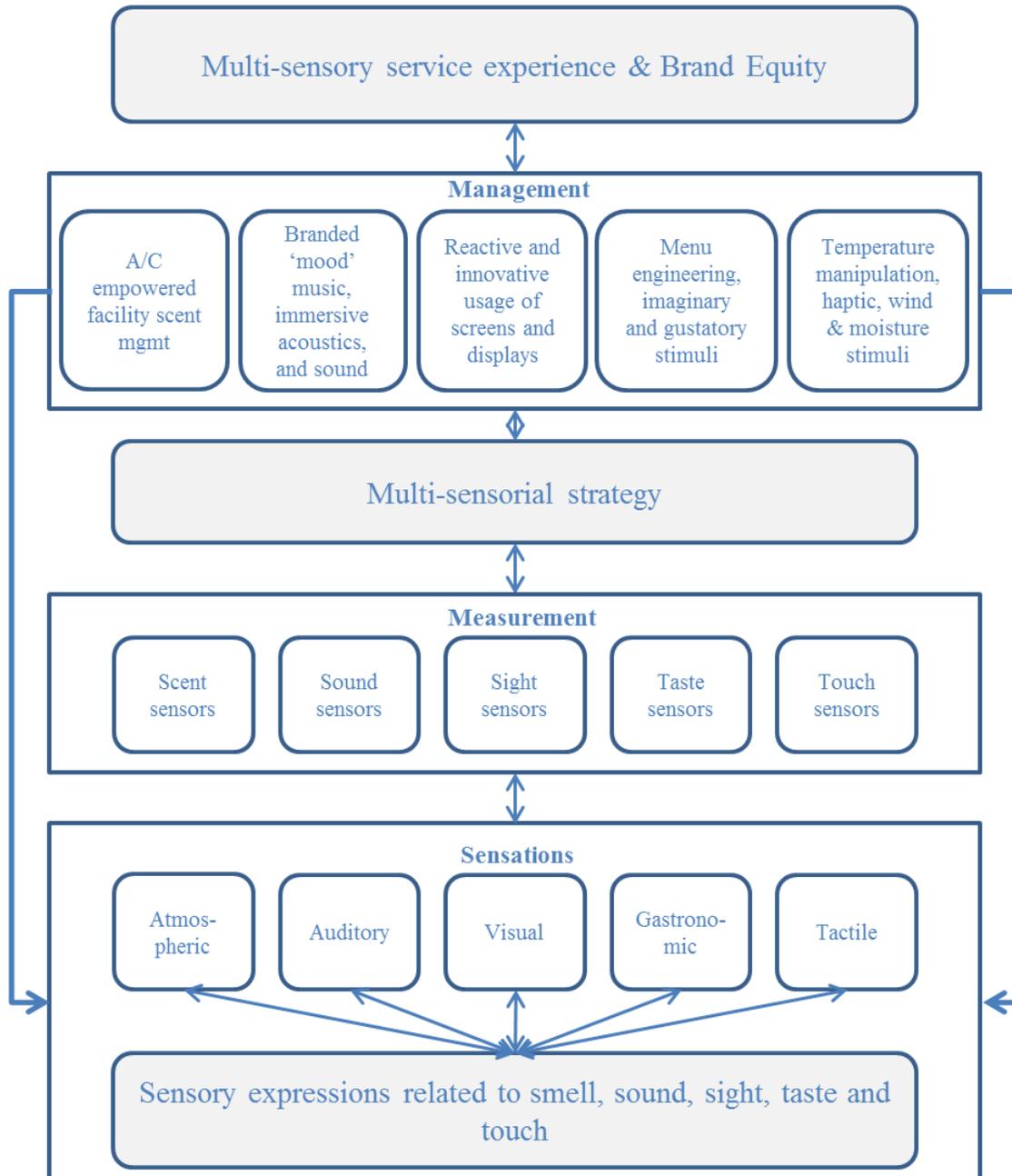
Conclusions and a Framework for Future Research

With the advancements of convergence between technology and physical elements, and with the changing consumer needs, the requirements for management are changing, necessitating an immediate modification in hospitality curricula. For example, in contrast with traditional panel discussions, or the use of mood boards in concept development, the customer journey of a planned new restaurant concept’s customer can be modelled into a 3D video, as well as into a landscape with sounds and scents. The potential customers would be exposed to the multi-sensory landscape via HMD and their conscious and subconscious reactions to different alternatives can be measured. In a commercial space, like the future airport, the augmented reality, or an immersion of technology and physical space and senses could mean, for instance, that a consumer using Google glasses would get more information about the services at different locations at the airport (shops, lounge facilities, gates, etc.) and the wearable technology would physically respond to traveller’s movements, providing tailored and personalized entertainment and information in variety of surfaces. Simultaneously, the airport could listen to and watch the people passing through the spaces, and provide, accordingly, atmospheric, auditory, visual and tactile stimuli. The airport does not need to just react to the existing ambience. It could also effectively manipulate the ambiances in different spaces. On the other end of the emotional spectrum, the experience can be built around original, low-tech, and authentic five senses spectacle like Santamus restaurant in Finnish Lapland. The interior design, physical environment such as lights, colour, and signs, layout, and wall décor should be controlled by the management to intensify customers’ emotional reactions.

This all requires a change in the management approaches towards more holistic and all-inclusive ‘*mood & ambient*’ management, and most of all this change entails multi-talented and conscious employees to provide future consumers unique and personalized multisensory experiences in the airports or any other tourism, hospitality or experience space. Correspondingly, as displayed in figure 1, new tools for researching the customer and the multi-sensory service spaces are required. Amongst others, the latest introductions to consumer research, emphasizing on the detection of latent needs, physical reactions, emotion categorization, patterns of

movement, and choices have been Iris analysis, Camera assisted research, Heart Beat Monitoring, Geofencing, Automated and semantic customer feedback analysis. Adding to the existing, these will form the managerial toolbox for the management of the multisensory service spaces and the emotional brand association and finally the emotion infrastructure of the Hospitality, Tourism and Experience economies.

Figure I Conceptual Framework for Future Management and Research of Multisensory Hospitality, Tourism and Experience Spaces



References

- Alpert, J., & Alpert, M. I. (1990). Music influences on mood and purchase intentions. *Psychology and Marketing*, 7, 109-133.
- Areni, C. S. (2003a). Examining managers' theories of how atmospheric music affects perception, behavior and financial performance. *Journal of Retailing in Consumer Services*, 10(5), 263–275.
- Areni, C. S., & Sparks, J. &. (1996). Assessing Consumers' Affective responses to retail environments: A tale of Simulation Techniques. *Advances in Consumer Research, Advances in Consumer Research* , 504-509.
- Areni, C. S. & Kim, D. (1993). The influence of background music on shopping behaviour: classical versus top-40 music in a wine store. *Advances in Consumer Research*, 20, 336-340.
- Babin, B. J., & Attaway, J. S. (2000). Atmospheric Affect as a Tool for Creating Value and Gaining Share of Customer. *Journal of Business Research*, 49(2), 91-99.
- Bagozzi, R., Gopinath, M., & Nyer, P. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science*, 27(2), 184-207.
- Bailey, N., & Areni, C. S. (2006). When a few minutes sound like a lifetime: Does atmospheric music expand or contract perceived time? *Journal of Retailing*, 82(3), 189–202.
- Baker, J., Parasurman, A., Grewal, D., & Voss, G. B. (2002). The influence of multiple store environment cues on perceived merchandise value and patronage intentions. *Journal of Marketing*, 66(2), 120-141.
- Blascovich, J., & Bailenson, J. (2011). *Infinite reality: Avatars, eternal life, new worlds, and the dawn of the virtual revolution*. William Morrow & Co.
- Botteldooren, D. (2011). Understanding urban and natural soundscapes. *Proceedings of Forum Acusticum*, (pp. 2047-2052).
- Brown, L. (2004). An Approach to the Acoustic Design of Outdoor Space. *Journal of Environmental Planning and Management*, 47, 827-842.
- Cruz-Neira, C. S., DeFanti, T. A., Kenyon, R. V., & Hart, J. C. (1992). The CAVE: audio visual experience automatic virtual environment. *Communications of the ACM*, 35(6), 64-72.
- Dede, C. (2009). Immersive interfaces for engagement and learning. *Science*, 323(5910), 66-69.
- Ermi, L., & Mäyrä, F. (2005). Fundamental components of the gameplay experience: Analysing immersion. *Worlds in play: International perspectives on digital games research*, 37.
- Frey, J. (2014). 2014. Listening Airport Manipulates the Ambiance. In V. Heikkinen, & S. Inkinen, *Future Airport II: Visions and Futures of Service Landscape and Innovations at Tomorrow's Airport* (pp. 203-206). Helsinki: HAAGA-HELIA University of Applied Sciences.
- Genuit, K., & A. Fiebig, A. (2006). Psychoacoustics and its Benefit for the Sounscape Approach . *Acta Acustica united with Acustica*, 92, 952-958.
- Gorini, A., Capideville, C. S., De Leo, G., Mantovani, F., & Riva, G. (2011). The role of immersion and narrative in mediated presence: The virtual hospital experience. *Cyberpsychology, Behavior, and Social Networking*, 14(3), 99-105.
- Haase, J. (2013 (02 May)). Multisensory representation – how sound and moving images enhance user experience and emotion in interior design. *II. International Conference on Communication, Media, Technology and Design*. Famagusta - North Cyprus.
- Heikkinen, V. (2014). Observations of the Customer and Consumer Behaviour at the Airport. In V. Heikkinen, & S. Inkinen, *FUTUAeroport II: Visions and Futures of Service Landscape and Innovations at Tomorrow's Airport* (pp. 59-75). Helsinki: HAAGA-HELIA University of Applied Sciences.

- Hwang, J., & Kandampully, J. (2012). The role of emotional aspects in younger consumer-brand relationships. *Journal of Product & Brand Management*, 21(2), 98-108.
- Inkinen, S. (2014). In 2025 – Trends and Developments of Service. In V. Heikkinen, & S. Inkinen, *FUTUAeroport II: Visions and Futures of Service Landscape and Innovations at Tomorrow's Airport* (pp. 215-233). Helsinki: HAAGA-HELIA University of Applied Sciences.
- Kalawsky, R. S. (1999). VRUSE—a computerised diagnostic tool: for usability evaluation of virtual/synthetic environment systems. *Applied Ergonomics*, 30(1), 11-25.
- Kang, E., Boger, C. A., Back, K. J., & Madera, J. (2011). The impact of sensory environments on Spagoer's emotion and behavioural intention.
- Kita, Y., & Nakatani, Y. (2011). Smell-based memory recollection and communication support. *Haptic and Audio Interaction Design*, 128-134.
- Kotler, P. (1973/74). Atmospherics as a marketing tool. *Journal of Retailing*, 49(4), 48-64.
- Lemke, F. C. (2010). Customer Experience Quality: An Exploration in Business and Consumer Contexts Using Repetory Grid Technique. *Journal of the Academy of Marketing Science*, 39(6), 846-869.
- Levenson, R. W. (2014). The Autonomic Nervous System and Emotion. *Emotion Review*, 6(2), 100-112.
- Lindstrom, M. (2005a). Broad sensory branding. *Journal of Product & Brand Management*, 14(2), 84-87.
- Lindstrom, M. (2005b). *Brand Sense. Build Powerful Brands through Touch, Taste, Smell, Sight, and Sound*. New York: Free Press.
- Milliman, R. E. (1986). The influence of background music on the behavior of restaurant patrons. *Journal of Consumer Research*, 13(September), 286-290.
- Moilanen, T. (2014). What is Neuromarketing? In V. Heikkinen, & S. Inkinen, *FUTUAeroport II: Visions and Futures of Service Landscape and Innovations at Tomorrow's Airport* (pp. 212-215). Helsinki: HAAGA-HELIA University of Applied Sciences.
- North, A. C., & Hargreaves, D. J. (1996). The effects of music on responses to a dining area. *Journal of Environmental Psychology*, 16, 55-64.
- Partner, S. S. (2008). *Customer Analysis*. London: Select Service Partners.
- Prendergast, M. (2001). *The Ambient Century. From Mahler to Trance - the Evolution of Sound in the Electronic Age*. London: Bloomsbury Publishing.
- Reiners, T., Teräs, H., Chang, V., Wood, L., Gibson, D., Petter, N., et al. (2014). Authentic, immersive, and emotional experience in virtual learning environments: the fear of dying as an important learning experience in a simulation. *Teaching and Learning Forum 2014*. Perth WA: The University of Western Australia.
- Rodrigues, C. H. (2011). Sensorial brand strategies for value co-creation. *Innovative Marketing*, 7(2), 40-47.
- Räisänen, A. (2012). *The influences of music to consumer emotions, shopping intentions and behavior in H&M retail store. Master's Thesis*. Helsinki: Aalto University.
- Schafer, R. (1977). *The tuning of the world*. Philadelphia: University of Pennsylvania Press.
- Schubert, M., Arras, M., Mayer, G., & Henkel, T. (2009, July). Optofluidic chip system with integrated fluidically controllable optics. *Proceedings of SPIE 7371, Novel Optical Instrumentation for Biomedical Applications IV*, 737113, 7371.
- Sherman, E., Mathur, A., & Smith, R. B. (1997). Store environment and consumer purchase behavior: Meditating role of consumer emotions. *Psychology & Marketing*, 14(4), 361-378.

- Siebein, G. (2010). Architectural and acoustical elements of soundscapes. *Proceedings of the 1st EAA – EuroRegio 2010*. Ljubijana.
- Slater, M. (2009). Place illusion and plausibility can lead to realistic behaviour in immersive virtual environments. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1535), 3549-3557.
- Soundscape. (n.d.). *The World Soundscape Project*.
- Tarssanen, S., & Kylänen, M. (2006). A Theoretical Model for Producing Experiences – A Touristic Perspective. In S. Tarssanen, & M. Kylänen, *Articles on Experiences* (pp. 134-154). Rovaniemi: University of Lapland Press. 3rd edition.
- Wakefield, K. L. (1996). The effect of the servicescape on customers' behavioral intentions in leisure service settings. *The Journal of Services Marketing*, 10(6), 45-61.
- Wilson, S. (2003). The effect of music on perceived atmosphere and purchase intentions in a restaurant. *Psychology of Music*, 31(1), 93-112.
- Zarantonello, L., & Schmitt, B. H. (2010). Using the brand experience scale to profile consumers and predict consumer behaviour. *Journal of Brand Management*, 17(7), 532-540.