

# OUT WITH THE OLD -PERCEPTION AND IN WITH THE NEW - FIVE SENSES RESEARCH IN TOURISM AND HOSPITALITY STUDIES

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**Abstract:** *The word perception commonly appears in the titles of tourism academic journals, master's theses and doctoral dissertations title when In fact, what is often measured is opinion, attitude, preference or impact. I suggest that this mis-representation should cease. Others may agree, because the term five senses research has begun to replace the word perception in the titles of some academic journal papers. This is especially so in the broader marketing context, but less so among tourism and hospitality titles. This outline study suggests application of five senses, which it is argued, should be considered, measured and applied where appropriate in place of perception.*

**Keywords:** *Experiential marketing, Five senses research, Sensorial marketing strategy, Perception studies.*

## **Introduction:**

Forty years ago, as a much younger retail customer, I identified that my favorite department store in Bangkok, Thailand, was influencing (some would say manipulating) my purchasing decisions, by using a combination of colour, texture, temperature, music and smell the latter through automatic injection of perfumed aerosol into the retail shopping space. In those days, I was not an academic, so I just accepted the practice.

Now, forty-nine years later, as an examiner of Master's theses and Doctoral dissertations and referee of journal papers, I became perturbed that many of those perception studies, in-fact, measured one or more of the following:

**Attitude:** (Haralambopoulos, and Pizam, (1996); Husband, (1989); King, Pizam and Milman, (1993); Lankford (1994); Turker and Ozturk, 2013); Madrigal, (1995); Pearce, (1982); Pizam, (1978); Weaver and Lawton, (2001); Brayley, Var and Sheldon, (1990); Johnson, Snepenger and Akis, (1994); King, Pizam and Milman, (1993); Kukreja & Batra, (2005); Kunasekaran, Ramachandran, Yacob Shuib, (2001); Murphy, (1983); Eros, (2013); Soutar and McLeod, (1993); Milfelner Snoj, Korda, (2001); Mohammadi, Khalifa & Hosseini, (2010); AYDIN, Baltaci & Oku, (2012); Leung, Tong, (2008); Abbas Badaruddin, (2013); Gholamhossein & Sharifzadeh, (2012).

**Preference:** Gholamhossein & Sharifzadeh, (2012).

**Opinion:** Andereck & Nyaupane, (2001); Ap, (1990); Harambopoulos & Pizam, 1996; Husband, (1989), Kim, Y-H, Kim, M., Reutzler & Taylor (2010); Woloshin, Byram

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& Welch, (2000); Lawton, (2005); PAVANESWARAN, Ramachandran Yacob & Shuth, (2011); Pearce, (1982); Brunt & Courte, (1990); Weaver and Lawton, (2001); Arafia & Leon, (2013); Brayley, Var and Sheldon, (1990); Johnson, Snepenger & Akis, (1994); Kuriya & Batra, (2005); Milfelner, Snoj & Korda, (2001); Murphy, (1983); Eroze, (2013); Soutar & McLeod, (1993); O'Neil & Palmer, (2003); Ching-Fu & Tsai, (2008); Mohammadi, Khalifa & Hosseini, (2010); Chen, & Funk, (2010); Cruz, Riberiro, Remoaldo & Marques, (2010); Dolnicar & Huybers, (2007). or

**Impact:** Ap, (1990); Lankford, (1994); Tatoglu, Erdel, OZGUR & Azaki, (2000); Pizam & Pokela, (1985); Brunt & Courtney, (1990); King, Pizam & Milman, (1993); Liu, Sheldon & Var, (1987); Ross, 1992; Soutar & McLeod, (1993); Viviers, P., Viviers, A. & Slabbert, (2012).

Each of the above instead of *perception* as promised in the titles of all those research papers.

I choose to use the word *perturbed*, because respected authors in the tourism and hospitality community claim that tourism and hospitality researchers and their publications should be treated seriously.

In practice, many authors (as listed above) have erroneously titled their work as *perception*, but measured something else.

The more work I read with the word *perception* in the title, the more I realized the need to review the literature to identify just what was being measured in lieu of *perception*? The result was my earlier academic paper *Perception in the title of a selection of the Tourism and Hospitality Literature: An Analytical Literature Review*.

(Barnes, 2016) which summarized the situation.

Fortuitously, no sooner had that research paper gone to the publisher, when one of my student's research portfolio came to me for review and in that portfolio was a paper on *five senses research* within a hospitality context, relating to tourist experiences in Japanese Onsen (Murakami, Oyobu, & Shomomura, 2011).

I then searched under the term *Five Senses research* and found more academic articles, admittedly most were from the broader marketing context, rather than to tourism or hospitality applications.

Several of those five-senses sources, stated that hospitality and tourism had been slow to adopt five senses research, compared with the wider marketing applications. (Meacci & Libertore, 2015)

Five senses research seeks to measure the traditional five senses of sight, smell, taste, touch and hearing (which is also associated with balance) and to relate that to the tourist or guest experience and ultimately their response to a variety of stimuli. (Williams, 2006)

Alternatively, research which seeks to understand the tourist or guest sensorial response, attempts to infuse these five sensorial factors into the design and atmospherics of the environment, the tourist or guest package and service delivery (Najarjuna & Suhakar, 2015)

Some of the studies identified here, focused on all five senses, (Kotler, 1973, Najarjuna & Sudhakar, 2015, Kim & Fesenmaier, 2015, Murakami, Oyobu, & Shimamura, 2011, Pan and Ryan, 2009; whilst some other studies focused on just one of the five senses (Kahn & Deng (2010), Henderson, Cote, Leong, & Schmitt, (2003); Hoegg and Alba, 2007) **taste**,

Yorkston and Menon, (2004) **sound**, Dann and Jacobsen (2003), **Smell**.

Yet other studies selected more than one sense but less than all five: Krishna, Elder and Caldera, (2010), Krishna and Morrin (2008) **smell and touch**. Spangenberg, Grohmann and Sprott, (2005) and Mattila and Wirtz (2001) **smell and sound**; Russell, 2002, **Sound and vision**. Yorkston & Menon, (2004); **Sound and taste**, Hoegg & Alba. (2007), **vision and taste**.

### Measuring the Five Human Senses:

In all five senses research discussed and cited here, never were the senses measured directly with electronic instrumentation. Instead, respondents were asked to rank the magnitude of the stimuli on each of those five senses. So, what was in-fact being measured, was either opinion or impact.

An early demonstration of such five senses studies appeared in the book *Fast Food Nation* (Schlosser, 2001 which was later developed into a fictional movie of the same name (Thomas & McLaren, 2006). In that book and movie, the lead character visited suppliers to the leading US fast food processors and found that minute amounts of

chemical additives such as aromatics, flavor-enhancers, texture modifiers, were being added to the oil used for cooking the food and to the ingredients such as beef patties, French fries and buns. The décor of fast-food retail outlets, also featured enlarged high-quality, graphic displays of the meals. Sensitive use of interior decor and furniture color, encouraged consumption of food, level of lighting and music were all optimized to stimulate purchase of fast food offerings. (Schlosser, 2001; Thomas & McLaren; Linklater, 2006). Today, technology exists to measure each of the five senses and with the availability of micro-electronics, it is economically feasible, convenient and comfortable for research respondents to wear such devices. Five years ago there were no such portable devices and so studies were confined to testing laboratories.

### Five Senses Research A Brief Literature Review:

Please see below a review of selected (rather than a comprehensive) review of the academic journal literature on the five senses research:

The order chosen to list the literature is alphabetical by first author family name.

Table 1 Five Senses Research Studies

Author/s	Year	Title	Conceptual framework	Principal findings
Kim, J, & Fesenmaier, D. R.	2015	Designing Tourism Places: Understanding The Tourism Experience Through Our Senses	Two frameworks are provided. Firstly, the stages of tourism experience from Pre-Planning to Post-Trip. Secondly, A Framework of Tourism Experiences	Human senses should be considered as the foundation of how humans interact with environments and make meaning from these interactions. Secondly deconstruction of the touristic experience provides the essential

<b>Author/s</b>	<b>Year</b>	<b>Title</b>	<b>Conceptual framework</b>	<b>Principal findings</b>
			Creation as adapted from Krishna, 2012	foundation for the design of tourism places and destination management
Khirodhur, L., Tooraiven, P., & Monishan, B.; Randhir, R.,	2016	Analyzing The Impact Of Sensory Marketing on Consumers; A Case Study of KFC	Different models are suggested. A literature review covers each of our five senses.	However this paper suggests that they are combined by our brain into what are termed atmospherics. 90% of the information transmitted to the brain is visual; The brain processes visual information 60,000 times faster than text.  Continued/...
<b>Author</b>	<b>Year</b>	<b>Titles</b>	<b>Conceptual framework</b>	<b>Principal Findings</b>
				Smell is the sense most closely related to our emotional life; A human can remember more than 10,000 different scents. Hearing stimulated by music stimulates endorphins and is a powerfully influences emotions and emotional responses; Taste was briefly discussed but no citations were offered; Touch can create a tactile stimulation that stimulates our brain. numerous citations were provided.
Nagarjuna, K., & Sudhark Far, B.,D.	2015	Refine The Service by Touching The Customer Senses: Sensorial Marketing Strategy	An adaptation of Anandakumar, V., (2009) model	Kumar's model linked the five senses to perception A model by the authors linking sensory stimuli to sense receptors and their influence by exposure

Author/s	Year	Title	Conceptual framework	Principal findings
		for Hospitality Industry		attention and thence to interpretation The authors gave a brief review of the literature on several but not all of five senses. Mention was made of Lindstrom's (2005) study of sub-conscious influences on our behaviour Continued/...

**Table 1 Five Senses Research Studies (continued)**

Author/s	Year	Title	Conceptual framework	Principal findings
Williams, Alistair	2006	Tourism and hospitality marketing: fantasy, feeling and fun	Review of the literature. The Pine and Gilmore (1998) four dimensions of tourism and hospitality experience was adapted to show the range of customer participation and customer connection which were used to highlight the four realms namely education, entertainment, escapist and esthetic. The internet virtual reality were mentioned as facilitators of these four realms	There are few examples of tourism and hospitality organizations using Experiential marketing as of 2006. Those who were evident and successful were. Guinness Store; Disney World; Star Bucks Coffee; Rainforest Café.

## **Analysis of the Findings of empirical studies**

Study 1: Importantly the findings by Kim & Fesenmaier. (2015) highlights the importance of five senses research in how we understand that participants in tourism and hospitality scenarios make sense of their experience. Those researchers believed that through making use of the five human senses, opinions will develop into attitudes and if sufficient positive stimulus is developed to reach or exceed a threshold at which point respondents will act.

This study encourages readers to include inputs from all five senses, but the study falls short of measuring any of the senses. To this researcher's mind it remains an opinion or attitude survey.

The second important finding of this research by Kim & Fesenmaier. (2015) is that by deconstructing what the tourist or guest experiences with each of the tourist or guest's five sense. We can then adjust or design the environment to maximize the tourist or guest experience on each sense, rather than just take a blanket approach, which may be wasteful by over compensating on some senses and undercompensating on others. It is necessary to understand that in making the immediately preceding statement that individual responses to each of the five senses stimuli will likely be unique to an individual on each occasion which suggests that each stimulus be targeted to each sense of each individual when technology has been developed enabling that to be achieved.

A limitation of the research described here is that it did not physically measure each sense in reaching a conclusion so in that sense it was an opinion or attitude survey driven to the point of action.

Study 2: Khirodhur, L., Tooraiven, P., Monishan, B; & Randhir, R., (2016) This was a case study application within a KFC

restaurant Opinions on the effect of each of the five senses were sought. Direct sensory measurements were not made. An interesting result in this study was that the effect of each of the five senses were combined into what is termed *Atmospherics*. This is an interesting concept but there was no justification as to the weight applied to each sense in combining them to reach the total *Atmospheric* combination or amalgam.

Study 3: Nagarjuna, K., & Sudhark Far, B.,D. (2015), This was a useful study from several perspectives: Firstly it made use of Anandakumar's (2009) five senses of perception model and a small literature selection on three of the five senses. Lindstrom's (2005) study of the subconscious influences on behaviour of respondents was also part of this study. A limitation was that only three of the five senses were measured as part of the study, implying that two other senses were ignored.

Study 4: Williams, A., (2006), This was the earliest study in this listing and so lacks the sharp focus on each of the five senses. The study involved determining people's participation and connection with their immediate environment. The cases in this study were: Guinness Store; Disney World; Star Bucks Coffee; Rainforest Café. A strength of the study was that it resulted in all five senses being employed to the point where the threshold to action was achieved but the weakness was that each of the five-senses were not separately identified and measured which makes apportioning focus on each sense stimulus impossible.

## **Beyond the Five Human Senses**

In addition to sight, smell, taste, touch, and hearing, humans also have awareness of balance (equilibrioception), pressure, temperature (thermoception), pain

(nociception), and motion all of which may involve the coordinated use of multiple sensory organs. The sense of balance is maintained by a complex interaction of visual inputs, the proprioceptive sensors (which are affected by gravity and stretch sensors found in muscles, skin, and joints), the inner ear vestibular system, and the central nervous system. Disturbances occurring in any part of the balance system, or even within the brain's integration of inputs, can cause the feeling of dizziness or unsteadiness.

**Kinesthesia** is the precise awareness of muscle and joint movement that allows us to coordinate our muscles when we walk, talk, and use our hands. It is the sense of kinesthesia that enables us to touch the tip of our nose with our eyes closed or to know which part of the body we should scratch when we itch.

**Synesthesia.** Some people experience a phenomenon called synesthesia in which one type of stimulation evokes the sensation of another. For example, the hearing of a sound may result in the sensation of the visualization of a color, or a shape may be sensed as a smell. Synesthesia is hereditary and it is estimated that it occurs in 1 out of 1000 individuals with variations of type and intensity. The most common forms of synesthesia link numbers or letters with colors.

Anon 1 2017 Beyond The Five Human Senses available at <http://www.scientificpsychic.com/workbook/chapter2.htm>

This study we will not concern itself with these additional human senses, other than to identify them. This study did not consider that when we measure these five human senses what or who else might influence the outcome?

A potential difficulty when conducting any research, including five senses research,

concerns the influence of others, such as companions, partners, spectators, or onlookers, either on one's sensory response or on one's willingness to frankly express an opinion, when in the presence of those others. (Gibson, 1996, Kim and Fesenmaier, 2015). The influence is often neglected or ignored in many of the studies cited and discussed here. However, I believe that ways and means can be provided to a researcher or respondent to either incorporate, compensate, isolate or overcome those difficulties. Earlier research, other than tourism and hospitality contexts, was conducted by Fishbein and Ajzen (1968) titled the Theory of Reasoned Action and later by Ajzen (1972) The Theory of Planned Behaviour, the use of which, may facilitate, compensate or overcome the influence of others when conducting five senses research.

#### **Conclusion:**

Five senses research in tourism and hospitality remains in its infancy, meaning that there are many opportunities for its application. This research found that to-date, none of the studies identified here sought to measure each of the five human senses, but instead sought respondent's opinions on how each sense influenced them within one or more tourist or guest environment.

This researcher suggests that opportunity should to be taken by researchers to avail themselves of low-cost, miniaturized wearable, sense-measuring instruments to measure and record the respondent's exposure to each environmental determinant of experience.

Researchers need to develop a way of recording each sensory input of the participant and of and of possibly accumulating them into a meaningful total or average of distribution. One should not assume that each sense carries equal weight

in the total calculus nor that the contribution of each sensory input will be fixed for that individual over time.

The influence of "others" undoubtedly has an influence on both our senses and our behaviour and this too is a research area awaiting further investigation and development of both theoretical and practical models.

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