Tourism Experience and Tourism Design

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Abstract This chapter argues that experiences are dynamic and emotional in nature and should be conceptualized as a series of 'micro-events' during the trip. Further, the advent of new sensor technology provides new tools for understanding the ways in which these experiences—events are perceived and the meanings created hold great promise in addressing a number of critical questions empowering the design of tourism places. We then describe traveler experiences through a series of case studies.

Keywords Tourism experience • Emotion • Events • Physiological response • Tourism design

1 Introduction

A meaningful 'experience' is seen as the main factor effecting traveller satisfaction, engagement, and long-lasting memory. Over the past decades, acknowledging the important role of experience in tourism has resulted in a large number of interpretations and descriptions of the term 'experience' (Pine and Gilmore 1998; Lockwood 2010; Poulsson and Kale 2004). With this research, the basic of concept of experience has been interpreted in many ways and its measurement has been the focus of much debate. Research in psychology, geography, landscape architecture, and tourism has focused mainly on stimulus-response relationships, and more recently, on information processing and decision-making processes (Lubart and Getz 1998). Because the nature of experience is temporal and psychological, it is argued in this chapter that the tourism experience has a vitality not captured by simply examining aspects of the tourist's internal factors (e.g., needs, motivations, prior experiences), external factors (e.g., physical environment, social environment), or outcomes (e.g., satisfaction, future behavioral intentions) separately. Rather, it (i.e., the tourism experience) should be understood as a part of a continuous creative process wherein travellers create (share or reshape) meaningful

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experiences across all aspects/activities which comprise a trip (Arnould and Price 1993; Aho 2001). Indeed, traveler's emotions, one's experience and its components change across time and space and the tourism experience should be considered as fleeting phenomena rather than stable attributes of an individual that come and go with the ebb and flow of the trip (Kuppens 2015).

This dynamic nature, however, poses substantial obstacles to understanding the true nature and structure of the tourism experience (Mannell and Iso-Ahola 1987). For decades, researchers have measured the tourism experience using the self-report method based upon the assumption that travelers' experiences during a trip are strong mediators of overall satisfaction (Bigne and Andreu 2004; del Bosque and Martin 2008) and behavioral intention (Bigné et al. 2008). This approach is strongly supported by Bagozzi et al. (1999) who found that verbally expressed self-report methods can be useful because: (1) They can be easily adapted to accommodate diverse reactions; (2) They afford anonymity and minimize reactive effects due to the physical absence of the observer; (3) Do not require special equipment; (4) Enable the researcher to reach wider samples; and, (5) Enable the research to measure both the direction (positive or negative), as well as the content of the emotions. However, there are a number of important limitations to this approach to measuring travelers' experiences. First, self-report measures can be (and, often are) subject to huge biases created by the respondent's ability to remember or explain (Wilhelm and Grossman 2010). Second, the timing and goal of the experience moderate the relationship between cognitive reappraisal and self-reported emotions (Russell 2003). Third, very few of studies in tourism have examined experiences after the trip whereby the results (i.e., the overall assessment) represent aggregate or summary appraisals of the events (e.g., Hosany and Gilbert 2010). Some studies have examined traveler experiences using an experience-based sample design approach whereby the visitor was asked to respond to the same questions at regular intervals throughout the visit (Graham 2008; Gretzel and Fesenmaier 2010; Tussyadiah and Fesenmaier 2009). However, even in these studies there is usually a significant time lag between the time of the experience and the reporting time and therefore are subject to potential bias.

With the advent of a variety of sensor technologies, a host of alternative approaches to measuring experiences are based upon neuro-physiological observations including facial-expression, eye-tracking, functional magnetic resonance imaging and skin conductance (Wilhelm and Grossman 2010; Kim and Fesenmaier 2015). Physiological measurement has been used in consumer research as early as the 1920s to measure advertising responses (Bagozzi et al. 1999) and is based upon automatic body reactions that are partially (or, largely) beyond an individual's control when encountering an environmental stimulus. Further, physiological measurements complement self-report methods in that they can provide systematic and moment-to-moment information on useful relations between particular stimuli (e.g., place, event or food) and elicited reactions in varying aspects of emotion on different time scales (Gretzel and Fesenmaier 2003; Sørensen 2008; Wilhelm and Grossman 2010). As such, it is argued that the study of experience should be understood as first a physiological process within the human body that can be

captured (i.e., measured) using a variety of new technologies and which can be used to capture traveller sensory experiences and other psychological responses in real time (Kim and Fesenmaier 2015; Carù and Cova 2003). We begin this chapter defining the concept of 'experience' within the context of tourism design by considering its epistemological foundation. We then outline the psychological basis of experience in tourism research through the use of a series of case studies.

2 Meanings of Experience

According to the Oxford Advance Learners' Dictionary, experience as a noun can be defined in four perspectives: (1) the knowledge and skill that you have gained through doing something for a period of time; the process of gaining this; (2) the things that have happened to you that influence the way you think and behave; (3) an event or activity that affects you in some way; and, (4) events or knowledge shared by all the members of a particular group in society that influences the way they think and behave. Experience as-a-noun refers to an action (e.g., observation and spatial participation in an event), an outcome (e.g., an emotional, psychological, or learning outcome), and entertainment (Ek et al. 2008; Hosany 2012). In this perspective, space and time of the actor (e.g., an attractive and dynamic artifact) the experience designer or the consumer of the event) is limited (Ek et al. 2008). However, Svabo et al. (2013) defines experience as "a process where people undergo the influence of things, environments, situations and events, and a wide range of materials play active roles as mediators of experience" (p. 316). Thus as a verb, experience refers to a process such as an emotional sensation (Ek et al. 2008) or a transformation process (Aho 2001). With this perspective, a traveller is considered an active agent tightly engaged in a series of experience creating processes. Further, experience is seen as "a mental journey that leaves the customer with memories of having performed something special, having learned something or just having fun".

Importantly, the different interpretations of experience reference different spans of time (and space) as they cannot be separated from them (Nath 2004; Lindberg et al. 2014). As illustrated in Fig. 1, the concept of experience (as either a noun or verb) can be described as an instantaneous response to some event having just occurred; within this perspective, a trip may be comprised of many (perhaps millions or billions) micro-experiences (e.g., think of the many times one feels the wind and/or the sand and sun while at the beach, or the smells of a city such as Vienna, New York, Sydney or Beijing) which are 'assembled' using a variety of cognitive and emotion-based processes to create meaning. At the other end of the spectrum, one's experience is comprised of the multitude of micro or macro experiences, but these are 'capsulized,' 'summated' or accumulated through a lifetime into an overall assessment (Chronis 2006; Dewey 1934); an easy example would be to say that one is an experienced traveller because he/she has visited many international destinations. Finally, an experience may simply reflect a single event

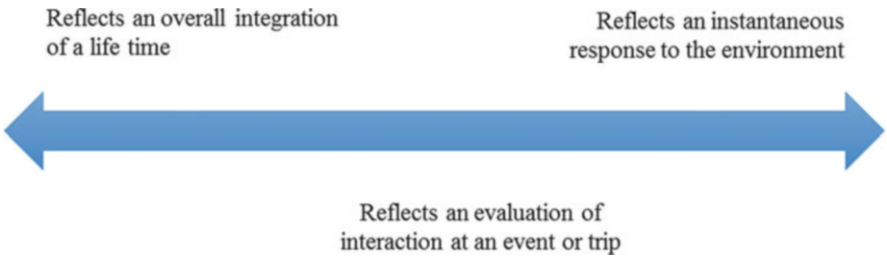

Fig. 1 The meanings of experience

within an overall trip (Gibson 1966; Tuan 1977); for example, one may indicate that a concert or visit to the zoo was an exciting experience.

3 Physiological Foundations of the Tourism Experience

Within the continuous framework, experience as a response to the environment is generally considered a systematic process which starts from detecting external stimulus to sensing and reacting to the stimulus, and bringing knowledge to the perceived situation (Hekkert 2006; Goldstein 2010). Thus, sensation is the first order of experience. According to the Oxford Dictionaries (www.oxforddictionaries.com), sense is defined as "a faculty by which the body perceives an external stimulus; one of the faculties of sight, smell, hearing, taste, and touch", and "a feeling that something is the case; an awareness or feeling that one is in a specified state". The first definition emphasizes the basic processes of detecting environmental stimuli such as light, sound waves and encoding those information into neural energy so that our brains can process and is referred to as 'sensation.' The second definition focuses on how people 'interpret' the stimuli and 'make' meaning from them and generally is framed within the mechanisms of perception.

As classified by Aristotle, it has been widely accepted that humans have five senses including vision, hearing, smell, touch, and taste. However, recent research suggests that human have more than basic five senses (Gardner and Martin 2000). For example, Gibson (1966) argues that people have exteroceptive (external) senses and interoceptive (internal). More recent findings suggest that human senses are physiopsychological systems consisting of a group of sensory cell types that not only respond to an explicit bodily phenomenon but also relate to a specific area in the brain (Craig 2002). Therefore, Craig (2002) suggests that interoceptive senses also should be recognized as important human senses. Although subject appreciation of some interoceptive senses such as balance, pain, temperatures are below perceptive thresholds, they affect (and are affected by) both emotional states and motivation (Damasio 2000; James 1981). Converging evidence from functional imaging studies suggest additional human senses which relate environmental stimulus and feelings, emotions and various activities (Craig 2002; Damasio 2000).

According to Jung (1981), the collective unconscious and complexes of collective unconscious create emotions and meaningful experience; hence, a big part of human experiences, especially sensory experiences, is not accessible for conscious awareness (Craig 2002). Thus it is argued, travellers' perceived senses are not direct records of the world around them. Rather, they are 'constructed' internally along with constraints imposed by the construction of the nervous system and its functional abilities (Gardner and Martin 2000). Hence, the notions of sensation and perception are complex "behind the scenes" processes (Goldstein 2010, p. 5). For example, taste buds in the mouth and olfactory receptor cells enable people to perceive the texture, temperature, and sweet taste of the dark-colored liquid. This is sensation. However, recognizing 'dark-colored liquid' as a 'hot chocolate'—that is, turning sensation into meaning—is perception. Of all kinds of environmental stimuli around us, people record limited information through receptor cells and process these information through brain. Thus, colors, tones, smells, and tastes that we experience are mental creations constructed by the brain out of sensory experience (Gardner and Martin 2000).

4 Emotion and Tourism Experience

Emotions are understood a result of interaction within the touristic environment (Hosany 2012; Kim and Fesenmaier 2015). Cognitive appraisal theories argue that emotions arise in response to an evaluation of an experience in relation to goals, motives or concerns produce (Frijda 1988). According to Roseman, Spindel, and Jose (1990, p. 899), emotions are "evaluations and interpretations of events, rather than events per se, [that] determine whether an emotion will be felt and which emotion it will be." Thus, cognitive appraisal theorists have tried to explain the antecedents of certain emotions and its effects on decision-making and memory (Hosany 2012). Further, they argue that emotions are produced by the cognitive processes that arise after comparing an actual state with a desired state rather than by actual events or physical stimuli (Ellsworth and Scherer 2003). In contrast, other researchers have focused on more internal and on-going processes of emotional responses (Zajonc 1980) wherein they argue that emotions may occur with minimum deliberation or even without cognition (Hoch and Loewenstein 1991; Zajonc 1980). Recent findings from consumer behavior research shows that human senses can be used as unconscious triggers which can result in emotional states without cognitive deliberation (Tussyadiah and Zach 2012). Thus, Izard (2009) argues that emotions should be considered as a phase rather than a consequence of the neurobiological activity or body expression of emotions, and that they are similar to the other neurobiological activity.

Within this perspective of experience, especially tourism experience, it is argued that experience is inherently emotional in nature and therefore is the outcome of an on-going meaning-making process (Russell 2003). The key principle is that emotional experience is not a single process, but rather is constituted by a collection of

more basic elements (Barrett 2006). It is often referred to as "emotional meta-experience", which means all its components produce low-level experiences in-of-themselves such as the sensation of smell, the surprising of new encounter which lead the felt arousal and valence and this interactional process continually (re) shapes one's tourism experience (Davidson and Milligan 2004). As Russell (2003, p. 165) puts it: "Emotional meta-experience is the construction of a coherent narrative, interpreting, packaging, and labelling the episode—thereby integrating this episode with general knowledge." Therefore, we argue that both tourism experience (and emotional experience) creation processes share the same logical address space (Hosany and Gilbert 2010).

Research confirms that emotions can play dual roles in tourism experience: antecedents and consequences (Hosany and Gilbert 2010). Firstly, emotions provide the basis to understand work motivation and acts as constraints on the current situation which then influence basic cognitive processes (Bagozzi et al. 1999). Based on the Affects-as-Information Theory, Clore and Huntsinger (2007) argue that people process information at different levels of detail based on their emotional states. For example, positive emotion leads to "global, category-level, relational processing" whereas negative emotion leads to "local, item-level, stimulus-specific processing" (Clore and Huntsinger 2007, p. 395). Further, positive evaluation can be induced by one's positive emotion because individuals tend to use their current emotional states as reference points (Clore and Huntsinger 2007). This research also shows that emotions influence our level of attention (which is referred to as motivational activation) wherein it "initiates a cascade of sensory and motor processes, including mobilization of resources, enhanced perceptual processing, and preparation for action" (Bradley 2009, p. 1). Further, in a series of studies based on Appraisal Tendency Theory, demonstrated that by stimulating a particular value through activating emotional states makes appraisal more accessible for the evaluation of certain objects/situations. Thus, a change in emotional states can be induced by internal physiological events or artefacts such as the influence of smoking on the brain or a sudden drop in blood pressure and further, Kleinginna and Kleinginna (1981) find that emotion can generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labelling processes.

5 A Framework of Tourism Experience Creation

Figure 2 describes a conceptual framework for the tourism experience creation process and can be seen as comprised of four levels: (1) A sensory level which is below the conscious level (Craig 2009); (2) A perceptive level which travelers are fully aware (Volo 2009) of those aspects effecting how they see and experience a place; (3) A cognitive and emotional level where travelers' brains, minds, and bodies actively respond to the world around them; and, (4) An action level where information transformation, learning, and memory occurs (Volo 2009). Thus, the tourism experience is based first upon embodied cognition and emotion and posits

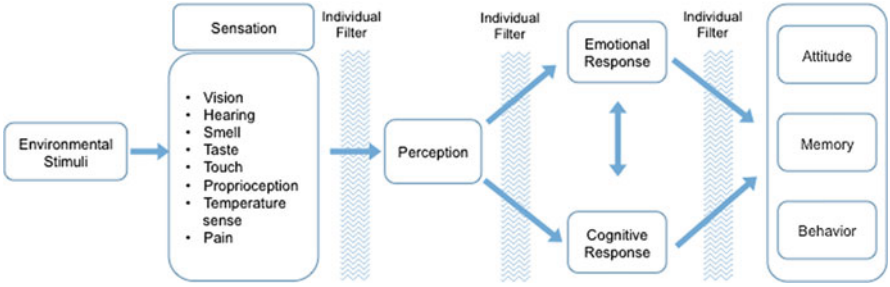

Fig. 2 Framework of tourism experience creation [adapted from Krishna (2012)]

that the sensory process begins with environmental stimuli affecting the human body's sense organs, the gates of the emotional and cognitive responses. While the tourism experience is the result of unconscious sensations and conscious perceptions during the trip (Volo 2009), outcomes of tourism experience process vary based on individual and situational filters (Sandström et al. 2008). Psychological filters such as goals, prior experiences, culture, or travel companions shape perceptions and they cause variations in the individual responses towards environmental stimuli. In other words, how people 'interpret' various stimuli and 'make' meaning from them accounts for the underlying mechanisms of the perception, whereas the basic processes of detecting environmental stimulus such as light, sound waves and encoding those information into neural energy so that our brains can process is referred to as 'sensation' (Goldstein 2010). Further, sensations occur before our conscious mind can evaluate or attach significance to current situations.

The framework of the tourism experience creation process is based upon general models of human-environment interaction and expands the scope/role of information-processing. Importantly, this framework is psychologically sustainable and multidimensional, emphasizing all five subsystems—sensation, perception, emotion and cognition, and behavioral outcomes and memory. With a wide array of fundamental psychological characteristics, the framework provides a basic description of the experience creation process and the mechanisms responsible for translating 'objective' (i.e., sensation) into subjective meaning (Takatalo et al. 2013).

6 The Tourism Experience and Tourism Design

If we focus on a single event resulting from an interaction with a place or an object, then understanding and designing an experience may be easy. All we need to do is to identify what the environmental stimuli are and how one processes it psychologically. However as emphasized previously, tourism experiences should to be considered as an on-going dynamic and reflective process involving a series of 'micro-experiences' which, in turn, produces a series of sensory, emotional,

cognitive, behavioral and social outcomes (Schmitt 1999). Designing tourism places within this perspective of the tourism experience requires new approaches to the measurement various psychologically relevant aspects of tourism experience. The following provides two studies which describe traveler experiences as measured by emotional response to stimuli within substantially different contexts using biophysical responses to stimuli.

6.1 The Dynamics of Visitor Emotions in Philadelphia

A case study of city tour bus riding in Philadelphia, Pennsylvania describes the emotional experiences of two travelers during a four day visit to Philadelphia in real-time. As described in Kim and Fesenmaier (2015), they were exposed to a range of events and places during the trip and their physiological arousal data using skin conductance responses were collected simultaneously. For this study, we used the Affectiva Q-sensor to measure EDA based upon the premise that, when one becomes mentally, emotionally, or physically aroused, a response is triggered in one's skin; this response is described as EDA and can be used as an indicator of one's level of excitement or relaxation (Strauss et al. 2005). It is a wrist worn, wireless sensor (two electrodes are placed on the ventral side of the arm) that measures EDA for 24 hours with a sampling frequency of at 2, 4, 8, 16 and 32 Hz. It has been shown to produce stable and comparable results across a range of environments and location. The EDA data were then combined with post hoc interviews including time, locations, activities and perceptions to aid interpretation. The follow-up interview revealed that travelers could recall only certain events from the entire trip (i.e., visited murals, riding a tour bus etc.). On the contrary, their arousal data (Fig. 3) shows much richer information documenting their response to the many stimuli they experienced throughout their visit to Philadelphia: the visitors exhibited substantial variation in emotions depending upon the places visited, their activities, and the people they met. Also, the two visitors responded differently to the environment throughout the four-day period. In sum, traveler's body and sensory experiences are continuous (Dubé and Morgan 1998; Kang and Gretzel 2012). The study demonstrates how one's sensations, perceptions, as well as emotions and cognitive responses can vary substantially across time and space.

6.2 Evaluation of Online Tourism Advertising

Next, we take a look at how people draw meaning from a story (i.e., something that they are reading, seeing or experiencing) provided within online destination marketing websites. Since TV/online tourism advertising can be considered a series of audio-video messages, this lab-based study focuses on the viewer's perceived experiences while viewing different destination online ads (e.g., Utah, Louisiana,

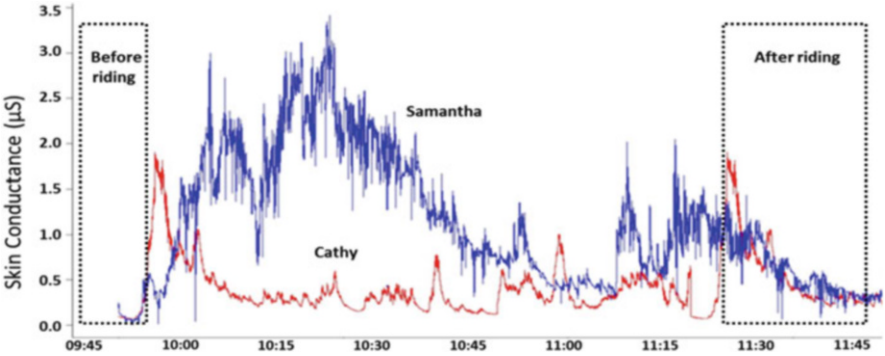

Fig. 3 Two travelers' arousal (emotion) data of tour (Kim and Fesenmaier 2015)

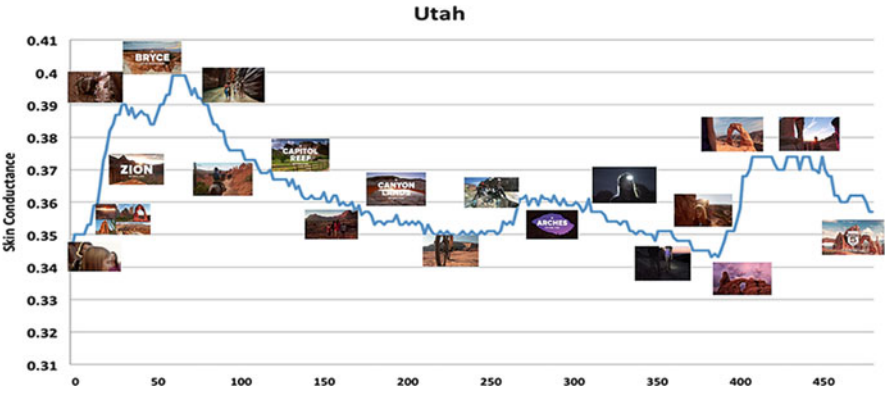

Fig. 4 Mapping Utah's advertising with EDA data

Oregon, and Ohio). Specifically, ten participants viewed four different online ads in random order and their physiological arousal data (EDA) and self-reports data were collected during the experiment. In this study, even though the online ads for both Oregon and Utah contain similar images (e.g., mountain, hiking course), the patterns of arousal data are completely different.

Combined with self-reported data and image data from actual destination ads, the results indicate that online ads which evoke dynamic emotional response (e.g., Fig. 4) are more effective at obtaining higher positive outcomes and better attitude toward ads than monotonic or decreasing ones (e.g., Fig. 5) (see Table 1). Also, the findings from this study indicate that simple scene changes are not sufficiently salient to affect the meaning-making of story at least for participants used to viewing online advertising.

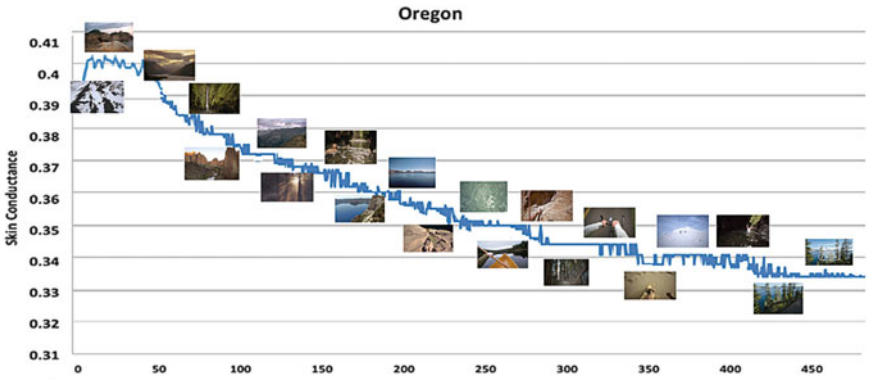

Fig. 5 Mapping Oregon's advertising with EDA data

Table 1 Means for verbal self-report measures

	Utah		Oregon		Louisiana		Ohio	
	M	S.D	M	S.D	M	S.D	M	S.D
Positive emotion	4.4	0.70	3.8	0.79	4.2	0.84	3.4	0.94
Negative emotion	1.3	0.48	2.2	0.84	1.8	0.42	2.0	0.67
Attitude toward ads	6.4	0.97	4.4	1.16	6.1	0.87	4.7	0.96

7 Concluding Remarks

The tourism experience is subjective, multidimensional and provide a vital foundation for the design of tourism places. What constitutes an experience, however, has long been debated. In this chapter, we argue that experience is a continuous process which shapes and reshapes itself through interaction in time and space. Further, we argue that experiences are initiated through sensing using basic human physical capabilities and translated into meaning through three subsystems—perception, emotion and cognition and translated into behavioral outcomes and memory. Finally in this chapter, we argue that with the advent of new technology it is now possible to identify key moments in real time that become meaningful, and the measurement of these key moments provide new essential information for tourism design. We illustrate our conception of experience and its measurement within the context of tour bus riding and a lab-based study of online advertising and found that patterns of emotional response can be very powerful indicators of meaningful experiences. Thus, the emergence of new tools for real-time measurement and multi-data analysis provide a useful new framework for designing tourism places and experience.

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