Journal of Destination Marketing & Management xxx (xxxx) xxxx

Contents lists available at ScienceDirect

Journal of Destination Marketing & Management

journal homepage: www.elsevier.com/locate/jdmm

Research paper

Managing the structure of tourism experiences: Foundations for tourism design

Jason Stienmetz[a], Jeongmi (Jamie) Kim[b], Zheng Xiang[c], Daniel R. Fesenmaier[d,e,*]

[a] Modul University Vienna, Vienna, Austria
[b] Fox School of Business, Temple University, USA
[c] Howard Feiertag Dept. of Hospitality and Tourism Management, Virginia Tech, USA
[d] University of Surrey, United Kingdom
[e] Modul University Vienna, Austria

ARTICLE INFO

Keywords:
Tourism experiences
Trip journey
Moments-based measurement
Touchpoints
Journey mapping
Experience design
Tourism design

ABSTRACT

Understanding the nature of tourism experiences holds the key to effectively managing tourism destinations. Research in psychology, economics, geography, marketing and, more recently, services management, offers new insight into consumer experiences which are defined by moment-to-moment and as discreet (and summarized) events. This paper synthesizes this literature and then identifies emerging tools such as blueprinting and journey mapping which enable design solutions to better manage tourism experiences. Finally, the implications and directions of this new moments-based paradigm for designing tourism experiences are discussed.

1. Introduction

The tourism experience has enjoyed a long and rich history of research and critical discussion, and, indeed, it is arguably one of the most central problems or issues in tourism research as experience is considered the principal 'product' of travel (Cohen, 1979; Pearce, 2011; Ryan, 1997; Uriely, 2005). As a result, there are many different definitions, ways to examine, and levels of description of the nature and structure of the tourism experience (Ek, Larsen, Hornskov, & Mansfeldt, 2008; Volo, 2009). Studies in many disciplines including psychology, economics, geography, sociology, and anthropology, as well as applied studies in marketing and management, have contributed substantially to this work (Gretzel, 2011; Kahneman, 2000; Pine & Gilmore, 1999; Prebensen, Woo, & Uysal, 2013; Tuan, 1977; Turner & Bruner, 1986). Recent research using advanced methodologies related to information technology (and various aspects of big data) have taken a moments-based perspective wherein the notion of experience is measured as a continuous and on-going process (Baumgartner, Sujan, & Padgett, 1997; Kahneman, 2000; Kim & Fesenmaier, 2015; O'Neal, 2016; Ramanathan & McGill, 2007). Borrowing from what Kahneman (2011) refers to as 'instantaneous' experiences (i.e. those experiences remembered for a very short time) as compared to 'remembered' experiences, this emerging paradigm essentially posits that experience is extremely dynamic and idiosyncratic, which has proved to be essential to the design and management of many service-related businesses and, in particular, the tourism industry.

This conceptual paper synthesizes this literature and then discusses its importance in tourism management and extends this work by providing a discussion of how the basic structure of activities/attractions visited within an overall trip journey influences the linkages between tourism moments. It also discusses the implications of this research for tourism design (which includes experience design as well as the design of places, attractions, etc), particularly in relation to emerging tools such as journey mapping and blueprinting as new technologies have enabled the industry to capture and, therefore, represent moments-based experiences. In the conclusion, the paper argues that a stronger evidenced-based foundation is needed for designing and managing tourism destinations.

2. Defining the tourism experience

Much research has been conducted to define, describe and understand the nature of the tourism experience. Memorable experiences or extraordinary experiences are argued to be important as they represent the defining aspects of the overall trip (Cohen, 1979). The traditions of tourism research examining the nature of the tourism experience are

* Corresponding author. University of Surrey, United Kingdom.
E-mail addresses: jason.stienmetz@modul.ac.at (J. Stienmetz), jeongmi.jamie@gmail.com (J.J. Kim), philxz@vt.edu (Z. Xiang), daniel.fesenmaier@modul.ac.at (D.R. Fesenmaier).

https://doi.org/10.1016/j.jdmm.2019.100408
Received 26 September 2018; Received in revised form 25 December 2019; Accepted 29 December 2019

quite broad, ranging from descriptive and interpretive perspectives to quantitative and positivist approaches (Ryan, 1997). Interestingly, it appears that while researchers intuitively understand and accept the notion of experience, its definition differs substantially from study to study (Kim & Fesenmaier, 2017; Pearce & Zare, 2017). Indeed, the word 'experience' as a noun can refer to an action (e.g. observation and spatial participation in an event), an outcome (e.g. an emotional, psychological, or learning outcome), or entertainment (Ek et al., 2008; Hosany, 2012; Hosany & Gilbert, 2010). Furthermore, this outcome-based perspective implies that an experience is highly delimited in terms of space and time (Ek et al., 2008). In contrast, Svabo, Larsen, Haldrup, and Bærenholdt (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 (Pine & Gilmore, 1999). Within the framework of experience as a process, a traveler is therefore an active agent that is more or less engaged in the experience creation process (Pine & Gilmore, 1999). With this perspective, experience can be seen as "a mental journey that leaves the customer with memories of having performed something special, having learned something or just having fun" (Sundbo & Hagedorn-Rasmussen, 2008, p. 83). Finally, the tourism experience has been conceptualized as an 'orchestration' of multiple processes including restorative, introspective, transformative, and cognitive facets (Packer & Ballantyne, 2016).

These different meanings of experience imply different spans of time and space, and as such, one of the major concerns of experience research is how to address both temporal and spatial aspects which range from the ephemeral to eternal and from one place to multiple places. As illustrated in Fig. 1, at one end of the spectrum is the instantaneous, moments-based perspective where each interaction or stimulation within the setting contributes to experience: thus, one can have many 'experiences' in the many moments spent participating in an activity or visiting a destination (Gibson, 1966; Tuan, 1977). This moments-based conceptualization of experience contrasts sharply with the notion that experience reflects an accumulation of 'micro events', which are integrated together in the longer-term (Chronis, 2006; Dewey, 1934). As such, one might argue that a person has 'experienced' because they have, for example, visited a destination multiple times, and have therefore gained an intimate knowledge or understanding of the place.

The current literature describing the tourism experience largely reflects an activity-based process which takes a strong temporal perspective (Jennings & Weiler, 2006; Pearce & Zare, 2017). Others argue, however, that the tourism experience is not a singular event, but rather part of a continuous or staged process (e.g. journey) which enables travelers to create (e.g. shape or reshape) meaningful experiences (Gretzel, Fesenmaier, & O'Leary, 2006; Kim & Fesenmaier, 2017). Indeed, the tourism experience is also considered as 'extraordinary' which is different than an everyday/daily experience (Cohen, 1979). Studies focusing on the role of authenticity, self-identity, social relationships, skill formation, and learning suggest that the underlying goal of the tourism experience is to create symbolic meaning through travel which translates into self-identity and learning (Rickly & McCabe, 2017; Scuttari & Pechlaner, 2017; Volo, 2017). Fig. 2 offers a conceptual framework for the tourism experience creation process based upon the embodied cognition and emotional perspective, which posits that the

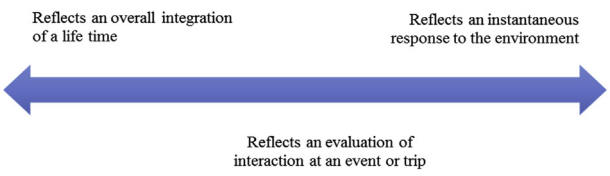

Fig. 1. The multiple meanings of experience.

sensory process starts where the environmental stimuli come across the human body's sense organs (Kim & Fesenmaier, 2017). As can be seen, it is argued that the tourism experience can be seen as comprised of four subsystems of processes: (1) a sensory subsystem which operates below the conscious level; (2) a perceptive subsystem of which travelers are fully aware; (3) a cognitive and emotional subsystem where travelers' brains, minds, and bodies respond to the world around them; and finally, (4) an action subsystem where transformation, learning, and memory happen (Hosany, 2012; Scherer, Shorr, & Johnstone 2001; Volo, 2009).

Although tourism experiences are the result of unconscious sensations and conscious perceptions during a trip (Volo, 2009), the outcomes of the process vary based on individual and situational filters (Pearce & Zare, 2017; Prinz, 2006; Sandström, Edvardsson, Kristensson, & Magnusson, 2008). Some studies suggest that sensations often occur before our conscious mind can evaluate or attach significance to current situations: this is why the concept of 'sensation' has begun to receive attention from academia as it can provide objective and context-specific information (Krishna, 2012; Zadra & Clore, 2011). Further, psychological filters such as goals, mood, prior experiences, cultures, or travel companions are believed to shape (and reshape) perceptions which result in huge variation in individual responses toward environmental stimuli (Prinz, 2006; Wolf, Kluender, & Levi, 2019). In other words, how people interpret stimuli and make meaning from them accounts for the mechanisms of perception, whereas sensation is the basic process of detecting environmental stimuli such as light and sound waves and encoding that information into neural energy so that our brains can process them (Krishna, 2012; Wolf et al., 2019).

3. Structure of the tourism experience

Extensive research has shown that experiences constantly change thereby creating patterns over time, and these patterns are related to the overall evaluation of experiences (Ariely & Zauberman, 2000; Duerden, Ward, & Freeman, 2015; Hsee & Abelson, 1991; Loewenstein & Prelec, 1993; Nicolau, Losada, Alén, & Domínguez, 2019; Varey & Kahneman, 1992). Specifically, Kahneman (2003, 2011) and others (Ariely & Carmon, 2000; Ariely & Loewenstein, 2000; Zacks & Tversky, 2001) have shown that experiences are highly structured, and, therefore, can be understood based upon certain underlying rules (referred to as heuristics). For example, Kahneman (2011) argues that there are a few essential rules which govern the transfer (or translation) of instantaneous experiences into remembered experiences, which, in turn, translate into overall assessments of satisfaction and/or perceived value; these heuristics include the peak experience, end experience, and overall trend or degree of change in emotions within the overall experience. Further, Zacks and Tversky (2001) and colleagues (Zacks, Speer, Swallow, Braver, & Reynolds, 2007; Zacks & Swallow, 2007) argue that through automatic psychological processes experiences are organized as discrete events (or episodes) similar to acts or scenes in a play since humans are unable to process moments-based inputs (i.e. continuous, instantaneous experiences) and must, therefore, organize (or summarize) these inputs as 'chunks' of experiences.

One promising area of related research posits that while humans sense the environment continuously, experiences are created by segmenting sensations or micro experiences into meaningful units called 'events' (Zacks & Tversky, 2001). Zacks and Tversky (2001, p. 21) define an event as "a segment of time at a given location that is perceived by an observer to have a beginning and an end." The process of event formation can be thought of as similar to object perception (see Zacks and Tversky (2001), Richmond and Zacks (2017), Speer and Zacks (2005) and Kurby and Zacks (2007) for detailed discussion of event theory and its application), wherein our perceptual mechanisms serve to identify patterns of related motion in objects which have ecologically meaningful properties such as animacy and causality. Research focusing on the perception of coherent units within a continuous stream of

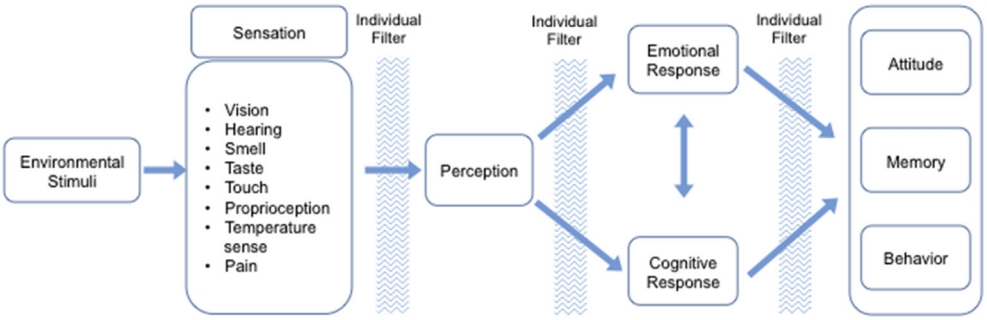

Fig. 2. Framework of tourism experience creation (Adapted from Krishna, 2012).

stimulus information has been conducted in the field of social perception (Zacks & Tversky, 2001) and shows, for example, that simple behaviors (e.g. reading a newspaper or watching a movie) hold substantial structure, and, therefore, can be organized into a series of events (Blau, Petrusz, & Carello, 2013).

The sequence of events is an important aspect of the structure of the experience, both within the context of preference formation and within the context of storytelling. That is, when reading a story (or book) one might expect that the first event (i.e. the first section or chapter) sets the stage (i.e. conditions) for the second event; the second event continues to set the stage for the third event, and so on. This idea of 'staging' is consistent with Pine & Gilmore, (1999), who argue that tourism experiences should be managed within a 'theatric' framework wherein traveler experiences are staged from beginning to end. There are many examples of this staging in our everyday life. For example, in stories (expressed in books, plays, or movies) the beginning paragraphs, chapters or scenes of a story set the stage for subsequent chapters; when eating at a restaurant, the dish we eat first is often much different (and smaller) than the second or main dish (can we start meals with dessert?); and finally, the early part of our life (as a young child) sets the stage or conditions for our early adult life, and this, in turn, sets the foundation for our life later on.

Another set of central features of the experience, i.e. gestalt characteristics, has been shown to govern summary evaluations of events and to moderate the experience (Ariely & Carmon, 2003). The first feature is described as a static (state) characteristic, which reflects the intensity of the momentary experiences (i.e. transient states) at specific key points in time such as the peak and end moments. The second feature is described as a dynamic (i.e. configural) characteristic, which reflects the change in the intensity of the transient states or the relationships among extracted transient states as the experience unfolds; examples of these characteristics comprise the trend in the experience profile as well as its variation throughout the overall experience (Hsee & Abelson, 1991; Hsee, Salovey, & Abelson, 1994). One of the most noteworthy findings regarding dynamic characteristics is the preference for improvement over time (Loewenstein & Sicherman, 1991). Based on a study of the assessment of a painful day at a hospital, Ariely and Carmon (2000) found that the ratings of overall daily pain were best predicted by the intensity of the final state and the slope of the changes in pain ratings throughout the day, rather than the average or the sum of the pain experienced. Fig. 3 depicts key components of the gestalt characteristics of experience patterns. As shown, peak is the maximum intensity, end is the intensity at the final moment of the experience, and slope is a single measure of the profile's overall linear trend. Importantly, this research also suggests that the duration of experiences significantly influences summary evaluations when attention is drawn to the duration of an experience (Ariely, Kahneman, & Loewenstein, 2000; Ariely & Loewenstein, 2000); that is, when duration is inherent to the experience, the role of duration clearly increases (Ariely & Loewenstein, 2000).

This research of moments-based experiences has been extended to

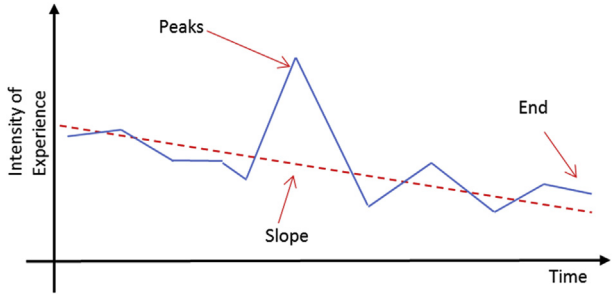

Fig. 3. The gestalt characteristics of experience patterns.

services management using the 'customer journey' paradigm and has emphasized the importance of the various components or 'stops' within the overall customer experience (Lemon & Verhoef, 2016; O'Neal, 2016; Schmitt, 1999, 2003). The customer journey paradigm posits that a central feature of the customer experience is how the customer interacts with firms within various 'touchpoints', conceived as the various channels and media which are used to plan, purchase, and reflect on the product/service being purchased (Lemon & Verhoef, 2016). Touchpoints may also be referred to as events, actions, and/or activities (Halvorsrud et al., 2016), but all imply either virtual or material interactions between customer and service provider such that an experience is co-created. This emphasizes the social and co-creating aspects of the customer experience wherein customers are influenced by their relationships with others including the objects (or services) being purchased (Tax, McCutcheon, & Wilkinson, 2013). Further, it is argued that service experiences can be deconstructed and, therefore, managed based upon a series of events within the overall customer journey (e.g. Baxendale, Macdonald, & Wilson, 2015; Chakravorti, 2009; Kracht & Wang, 2010; Lemon & Verhoef, 2016; O'Neal, 2016; Verhoef et al., 2009). Concomitant with this research and based upon similar logic, tourism scholars have examined the basic nature and structure of the consumption experience (e.g. Gnoth & Jaeger, 2007; Gretzel, 2010; Nicolau et al., 2019; Stienmetz & Fesenmaier, 2013; Tax et al., 2013). For example, Lue, Crompton, and Fesenmaier (1993) argued that tourism travel is highly structured, largely multi-destination and multi-activity, and, therefore, a trip can be conceptualized as a bundle of events (i.e. activities/attractions/places) that meet the needs of the traveler. Further, Brathwaite (1992) posited the value-chain assessment framework for deconstructing the tourism experience based upon one's activities. Brathwaite (and others) argued that the overall tourism experience can be deconstructed into a series of micro-experiences which can be examined in terms of importance or impact and, therefore, managed. Based upon this research, Lew and McKercher (2006) and McKercher and Lau (2008) identified many of the underlying forces creating this structure. Fesenmaier and Lieber (1987, 1988), Kim and Fesenmaier (1990) and Lieber and Fesenmaier (1988) found that the spatial structure of attractions significantly affects basic travel decisions such as the choice of destination. More recently, Nicolau et al. (2019)

found that the trip planning efforts of senior travelers are hierarchically structured by four basic decisions: (1) whether to travel; (2) whether to make it an international vacation; (3) whether to travel within an organized tour; and, (4) whether to use publicly subsidized travel; further, they found that the relative importance of this structure differed significantly by gender and financial status.

Additionally, Shih (2006), Gretzel (2010), Stienmetz and Fesenmaier (2013, 2014) and Zach and Gretzel (2011) recognized that these travel patterns can be conceptualized as networks where both the activities participated in and the attractions visited can be seen as nodes within the network, and where the links describe the relationships between the respective nodes. Building upon this work, Stienmetz and Fesenmaier (2015) used a basic network representation of the places visited in Northern Indiana, USA, to estimate the economic value of visitation to each of the attractions within the region. More recently, Baggio and Scaglione (2017) proposed strategic visitor flow (SVF) analysis wherein network analysis (using many types of traveler information) can be used to provide extremely useful insights into traveler behavior. Similarly, Stienmetz and Fesenmaier (2017) constructed a destination value system (DVS) using spatial information from 4.3 million Flickr photographs and Florida county-based tax records to conduct network analysis; the results of this study indicate that DVS network measures including centrality, density, etc, and seasonal effects have significant relationships with tourism-related expenditures. Stienmetz and Fesenmaier (2017, 2018) extended the DVS framework to include communications channels wherein the use of the internet, personal communication, etc represents additional 'touchpoints' throughout the trip experience. Thus, these studies and others (c.f. Scott, Baggio, & Cooper, 2008; Sfandla & Björk, 2013) clearly demonstrate that the representation of the trip journey as a structured network provides meaningful insight into the relationships between the traveler, the structure of the moments comprising the tourism experiences (including their activities, attractions visited, events attended, and channels used), and the various systems comprising the tourism industry.

4. Implications for tourism experience analysis and design

A sustainable competitive advantage for tourism destinations requires the delivery of excellent customer experiences (Halvorsrud, Kvale, & Følstad, 2016). Therefore, destination managers must understand the implications of the structure of tourism moments discussed above and consider new approaches for the design and analysis of destination experiences (Fesenmaier & Pearce, 2019; Fesenmaier & Xiang, 2017; Xiang & Fesenmaier, 2017). That is, adopting the moments-based perspective suggests that the summary evaluations of tourist experiences (i.e. overall assessments) alone are not sufficient for managing and designing tourism destinations. For example, the traditional summative approach to understanding tourism experience using classic scale measurement items such as SERVQUAL (e.g. Fick & Brent Ritchie, 1991) and HOLSAT (e.g. Tribe & Snaith, 1998; Truong & Foster, 2006) must be supplemented with evaluations and understanding of the sequence and pattern of the separate moments and events that comprise the tourism experience, before, during, and after travel. Therefore, the design and assessment of tourism experiences from multiple perspectives is required; these include the holistic, retrospective (i.e. remembered) evaluations of an overall destination experience and both the instantaneous and remembered evaluations of touchpoint moments.

A number of new tools have been developed for tourism managers to organize the process of experience design. First, stories and storytelling are considered basic and universal forms of communication wherein tourism experiences have often been framed using the metaphor of a drama or story with scenes, acts, characters and so on (e.g. Moscardo, 2017; Pine & Gilmore, 1999). While tourists' stories have often been used to understand tourism experiences and the meanings that tourists attach to destinations, stories may also be used as a tool for designing tourist experience at both touchpoints (i.e. 'scenes') and the destination (i.e. overarching narrative) (Moscardo, 2017). As such, those involved in the design and management of tourism experiences need to work with attractions to make certain that they somehow tell a story or create a narrative which enables visitors to remember key aspects of the place and which engenders experiences consistent with or supportive of the overall destination image. When building a story architecture, important considerations must be given to the type of story (e.g. adventure, comedy, love, revival), the plot (i.e. the sequencing of touchpoint moments), and the characters, particularly the tourists' central role and control of the story. The story framework must consider the audience (e.g. the tourists' social media followers) and the staging and cooperation among different destination stakeholders needed for the story to continue from touchpoint to touchpoint as well as the deviations and surprises from the script that make each tourist's story to be uniquely their own (Magnini, 2017; Moscardo, 2017).

Secondly, the notion of 'plot' within destination-focused stories is analogous to the customer journey paradigm of services management in that touchpoints (i.e. destination 'scenes') are the building blocks for customer journeys. Within a destination, tourists are free to combine touchpoints in countless ways, and the unique paths that each tourist activates along their journey have significant implications on the overall experience (Zach & Gretzel, 2011). To support and manage the customer journey, service blueprinting is now considered an essential tool to anticipate and describe the processes through which a customer goes through to achieve a specific goal or objective (Bitner, Ostrom, & Morgan, 2008; Shostack, 1984). A service blueprint is a type of map or flowchart (i.e. process chart) that is used to identify the components (touchpoints) of an experience and the relationships among components. Importantly, service blueprinting focuses primarily on supply-side processes of experience co-creation (both front of house and back of house activities) and enables management to design ideal experiences and to identify potential 'pain' points within the system. There are a growing number of examples of service blueprinting used in designing tourist experiences (e.g. Rong-Da Liang, 2017; Joy, Belk, Charters, Wang, & Peña, 2018). Importantly from a destination management perspective service blueprinting emphasizes the value of coordination and cooperation among the independent stakeholders that directly control the touchpoint moments within the destination system (Beritelli, Reinhold, Laesser, & Bieger, 2015). Further, blueprinting provides a useful approach for understanding and addressing failures is service/experience provision (Dickinger & Leung, 2017).

Third, related to service blueprinting which focuses on the supply-side processes that management can control, customer journey mapping is the design science-based, customer-centric, demand-side approach which uses similar diagrams and flowcharts to describe customer experiences and may include the series of touchpoints, steps, and interactions with one or more service providers (Halvorsrud et al., 2016). Customer journey mapping for destination management therefore considers the context of the experience, as well as the sequencing of events and how these are perceived and interpreted by the traveler. Customer journey mapping distinguishes between planned (i.e. blueprinted) and actual journeys and between the objective and subjective factors previously discussed which shape the experience (Halvorsrud et al., 2016).

Fourth, experience design tools such as blueprinting and journey mapping should be used in a holistic manner and experiences must be managed by collecting, evaluating, storing, and reusing relevant data on all touchpoints comprising the customer experience (Dickinger & Leung, 2017; Zach & Krizaj, 2017). Thus, customer journey analysis is typically based on qualitative methodologies that draw upon a case study approach to examine experiences using multiple data sources. An iterative design process requires a human-centered, holistic perspective that can be gained from experience narratives captured through phenomenological and ethnographic methods (such as participant observation, user shadowing, interviews, focus groups, experience-based

survey tools, diaries) (Tussyadiah, 2014). Further, qualitative customer journey data can be complemented with secondary data through data mining, 'netnography' and service-process data from providers (Brown & Spinney, 2010; Spinney, 2011, 2015). Recently, new digital tools have emerged to assist in the analysis of customer journeys and, in particular, mobile apps can now be used to capture and evaluate customer journeys within a destination. For example, mobile ethnography is a new approach for customer-centric understanding of the journey (i.e. touchpoint sequence) and experience structure (Spinney, 2011, 2015). Using an application installed on their smartphones, travelers can define their own significant (i.e. peak) touchpoint events and describe their experiences with text, pictures, video, and audio (Tussyadiah, Fesenmaier, & Yoo, 2008). When evaluations of touchpoint moments are combined with time and location metadata, a holistic mapping and analysis of destination experience can be constructed (Stickdorn, Frischhut, & Schmid, 2014; Tussyadiah, Fesenmaier, & Yoo, 2008). Further, data obtained from mobile systems can also be complemented with pre-trip/post-trip questionnaires (Tussyadiah et al., 2008). Importantly, these mobile ethnography tools enable destination managers to deconstruct the tourism experience-based on the tourists' instantaneous (rather than retrospective) evaluation of touchpoint moments, so that key touchpoints can be identified and managed.

Finally, new and innovative data analytics tools and methods are being developed to leverage the vast amounts of big data generated by the various sensors, organizations, and tourists in order to improve understanding of destination moments and design higher value experience (Choe & Fesenmaier, 2017; Xiang & Fesenmaier, 2017). For example, sentiment analysis of user-generated content from tourism rating websites and social media posts can provide insights for the experience of specific destination touchpoints (Höpken, Fuchs, Menner, & Lexhagen, 2017). The structure of visitor experience can also be quantified using volunteered geographic information (VGI) obtained from public photo sharing services such as Flickr (Stienmetz & Fesenmaier, 2017). Based on the location and timestamp data embedded in photos, researchers and destination managers can reconstruct the sequence of touchpoints that are visited within a destination (e.g. Kádár & Gede, 2013), and the content analysis of both photos and photo descriptions can additionally be used to deconstruct and evaluate experience at each touchpoint along the customer journey (Stienmetz & Fesenmaier, 2018). The quantification of experience from touchpoint to touchpoint within a tourism destination is also made possible through specialized mobile GPS tracking devices (Shoval, Schvimer & Tamir, 2018), more common devices such as fitness trackers, and even sensors such as Wi-Fi hotspots and RFID or Bluetooth beacons (Choe & Fesenmaier, 2017). Further, this large-scale data can be merged with data from mobile eye-tracking glasses, heart rate monitors, and sensors for detecting emotional arousal through galvanic skin response so as to enable destination managers to more holistically measure and understand individuals' instantaneous, emotional response to destination touchpoint moments (Kim & Fesenmaier, 2017; Zhang, Kim, Kim, & Fesenmaier, 2020).

While these tools can substantially enhance the ability of destination management organizations to create and manage all aspects of the destination (Packer & Ballantyne, 2016), studies have shown people participating in the same activity can have widely different experiences (Knobloch, Robertson & Aitken, 2017; Mossberg, 2007); therefore, a one size fits all approach to designing experiences is not effective. Indeed, tools such as customer journey mapping are most beneficial for standardized services and high-volume encounters (Lillrank, 2009) and in situations where experience is more easily explicated and controlled. Tourism experiences, however, are not homogenous, and as such, touchpoints often convey multiple meanings or levels of abstraction (cf. Shoval, Schivmer, & Tamir, 2018). The use of personas in the design of 'ideal' experiences may be useful and, increasingly, the understanding of what makes experiences memorable or satisfying for distinct visitor profiles will be fundamental in designing tourism experiences (Tung & Ritchie, 2011). Importantly, emerging tools such as storytelling, blueprinting, journey mapping, journey analysis, and big data analytics which merges 'large' and 'small' data can enable destination managers to identify key touchpoints that represent 'moments of truth' capable of defining and then (re)shaping the structure of an overall destination experience (Xiang & Fesenmaier, 2017).

5. Conclusions and future directions

The paper provides an overview of the literature which discusses the nature and structure of the tourism experience and argues that there are a variety of powerful tools that enable destination managers to measure, design and mange tourism experiences; however, this review also clearly indicates the need for additional moments-based research to guide management decisions. Following from this discussion, it appears that there are several new avenues for tourism design research. First, one important issue raised by the moments-based paradigm for defining and measuring tourism experiences is the need for a fundamental understanding and classification of the various types of touchpoint moments which comprise the overall tourism experience. Indeed, Google (2016) suggests that there are four important types of 'micro experiences': I-want-to-get-away moments; time-to-make-a-plan moments; let's-book-it moments; and, can't-wait-to-explore moments. However, tourist moments can (and should be) characterized in a number of different ways based on factors such as planned vs unplanned, new vs repeat, duration, frequency, emotion, content, and intensity. With the development of a clear typology of touchpoint moments, future studies can then examine the ways in which these types of moments moderate the relationships between the structure and sequencing of the tourism-related experiences and the overall evaluation of the trip journey. In examining moments-based experiences research should be conducted to address the following questions: Would the sequence of a strong positive emotional touchpoint followed by (or proceeded by) a weak negative physical type of touchpoint moment result in improved overall visitor satisfaction? Are there certain kinds of travel moments that are more important during specific times within the trip journey? For example, are 'dreaming moments' or 'inspiration moments' (i.e. I-want-to-get-away moments) important only during the beginning phase of the trip or are they essential throughout the trip? And, last, how do (i.e. what are the underlying processes) these moments affect the overall satisfaction of the trip? It is posited that answering these questions is vital to designing and managing tourism places; indeed, the report by Google (2016) emphasizes the importance of hospitality and tourism-related firms being intimately involved in the trip journey by *always* being available (i.e. online) and being useful in addressing the concerns of current and potential customers.

Second, future studies should also investigate the degree to which the visitor evaluations of tourism touchpoint moments can be reliably predicted. That is, an important assumption of the experience co-creation paradigm is that the tourism experience is a product of both subjective internal psychological processes of the visitor and the objective external conditions provided by the suppliers or providers of the experience. Future research should examine the degree to which the desired evaluations of tourism moments can be reliably designed through staging and reproduced (or personalized) given the diversity of expectations, motivations, and previous experiences found among visitors. These studies should evaluate the relative impact of the facets of tourism design proposed by Fesenmaier and Xiang (2017) including theming, technology, stories, co-creation, affordances and atmosphere on the predictability of visitor's experience evaluation. Indeed, this model should be expanded to consider additional factors such as the role of perceived authenticity.

Third, as the role of information communication technology, particularly mobile social networking services, continues to grow in importance, there are several important areas for new research. In particular, the ubiquity of social networks suggests that increasingly tourism

moments are perceived and evaluated in both physical and virtual spaces. Questions around what makes tourism moments or experiences 'memorable' must now be supplemented with what makes them 'sharable.' As such, an important question is: How do the evaluation heuristics identified by Kahneman differ between private and shared moments? In addition, other relevant questions for future research should focus on examining the moderating role of social media in the relationship between experience and emotional or cognitive arousal, and the significance of the accuracy or authenticity of shared moments and the overall tourism experience 'story' presented to a visitor's followers on social media.

It is posited in this article that the sequence and structure of moments-based experiences is an essential quality of the overall trip experience, and as such, the deconstruction of the trip journey provides a powerful perspective when considering how to design and manage tourism experiences. Indeed, there is substantial and wide-ranging research that has been conducted in many fields which demonstrates the importance of sequence and touchpoints. This research indicates that a trip is broken down (and remembered) as a series of events and these events are somehow organized as a story (or series of stories) which then provide meaning and the essential organizational structure supporting memory. Importantly, this work indicates that most experiences are not stored in long term memory, and as such, only a few events within the entire trip journey are remembered and as such influence overall trip satisfaction. Finally, this research indicates that emotion is a central organizing principle defining tourism experiences and that tourists' emotions should vary substantially throughout the trip experience so as to create peak moments while at the same time affording 'quiet time' (i.e. appeals to low emotions) which is essential for recovery. While this research is quite promising and a series of new tools have resulted, there are many outstanding questions which need to be addressed including the need to develop more comprehensive models to predict the outcomes of efforts to design tourism destinations. With this said, it is argued that experience design is a very important new area of study in tourism, offering a new and exciting path for those interested in shaping the future of cities, theme parks and other tourism places.

CRediT authorship contribution statement

Jason Stienmetz: Conceptualization, Visualization, Writing - review & editing. **Jeongmi (Jamie) Kim:** Conceptualization, Visualization, Writing - review & editing. **Zheng Xiang:** Conceptualization, Writing - original draft, Writing - review & editing. **Daniel R. Fesenmaier:** Conceptualization, Writing - original draft, Writing - review & editing.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jdmm.2019.100408.

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