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Attachment to tourism destinations: The relationship between memory and place attachment

Introduction

A recent call has come from tourism researchers to integrate key concepts from psychology into the field (Pearce and Packer, 2013). Such concepts aim to advance the field as they have shown strong potential to be adapted into tourism frameworks. Pearce and Packer (2013) cited multiple concepts including the Elaboration Likelihood Method, memory, and many more. However, little research has truly adopted the constructs into their tourism research as of today. Upon review of psychology literature, we identified one recommended concept, autobiographical memory, which may explain deeper meanings within the tourism experience. Autobiographical memory are personal recollections of past experiences or events (Conway and Plydell-Pearce, 2000; Fivush, 2011). A form of long-term memory, autobiographical memory is a specific typology of information recall which allows the individual to piece together their life story. Rooted in episodic memory, autobiographical memory has proven critical in explaining how people understand the events that occur throughout different periods of their life and their decision-making processes (Conway and Plydell-Pearce, 2000).

During this time, a call to action was released by the National Park Service Advisory Board Science Committee (2012) to provide “transformative experiences” to national park visitors. These experiences aim to build an emotional relationship and inspire visitors to appreciate national parks as destinations into the future. In other words, the National Park Service strives to create an attachment between the general public who visits and the place itself. Place attachment is defined as an emotional connection between a person and a place (Williams and Vaske, 2003; Hidaldgo and Hernandez, 2001). While a large amount of research has been published on place attachment in both the tourism and recreation field, there is little known about how these attachments form. Thus, the purpose of this study was two-fold; integrate autobiographical memory as an innovative method to study the visitor experience, and to explore the relationship between memory and place attachment.

Literature Review

Autobiographical Memory

Memory has become a popular topic in the past decades within the psychology and medical fields. Autobiographical memory is only one of many forms long-term memory recall (Tulving, 1972). Memory research today primarily uses a model developed in 1968 by Atkinson and Shiffrin which hypothesized memory following a specific structure. This structure includes sensory memory, short-term memory, and long-term memory with each feeding into one another. Most interested in long-term memory, Tulving (1972) further delineated long-term memory into two sub-dimensions: episodic and semantic.

Autobiographical memory in-particular lies within episodic memory. Autobiographical memories go beyond simply remembrance of the event, but also take into account the emotions, details, and stages of one’s life that contribute to their life story (Fitzgerald and Broadbridge, 2013). These memories may also be “self-defining” for the individual (Fivush, 2011). Self-defining autobiographical memories can change the way we see ourselves or the decisions we make in our life. In fact, Kuwabara and Pillemer (2010) found that eliciting autobiographical

memories lead to higher donations from university alumni than those who did not state any memories. Quantitatively, Fitzgerald and Broadbridge (2013) developed the Autobiographical Memory Questionnaire (AMQ) which allows for assessment of individual's recollections. Divided into two constructs, the AMQ measures autobiographical memory impact and rehearsal using four variables each.

The purpose for utilizing autobiographical memory derived from Pearce and Packer's (2013) call to adopt new psychological models to measure the visitor experience. Upon further review, autobiographical memory paralleled in function and definition the notion of creating a "transformative visitor experience" that was stressed by *Revisiting Leopold* (2012). Thus, this not only brought in a new concept to measure the visitor experience, but also had the potential to explain the effect the experiences have on people's lives.

Place Attachment

Humanistic geographers began in earnest discussing the concepts of "space and place" in the 1970's (Tuan, 1972; 1975). Space and place are two related concepts which are used to explain the ways in which people experience the natural world. Space is defined as "a dimension within which matter is located or a grid within which substantive items are contained (Agnew, 2011, p.1)." In other words, space is an area where human meaning is not yet imbued. Places have meaning that is given through human interactions. Place became of interest to researchers in multiple fields as these human meanings were identified as an important part of individuals' lives. Place is conceptualized through three primary constructs: location, locale, and sense of place (Agnew, 1987). Of these constructs, sense of place is most applicable to social science research.

Sense of place is the emotional connectedness people have with a particular area (Williams, 2008). However, "place attachment" is more commonly used in the tourism field as it shows the strength of one's attachment instead of a holistic connectedness. Place attachment is defined as an "affective bond or link between people and specific places (Hidalgo and Hernandez, 2001, p.274)." Through prior research, we now know that people can form strong connections with particular places. As Williams (2008, p. 8) describes, people develop "feelings of possession for the resource." Place attachment is conceptualized primarily through two dimensions: place identity and place dependence (Williams and Vaske, 2003). Place identity is the emotional connectedness to the place whereas place dependence is the degree of substitutability to receive the same experience the place possesses.

Place attachment in tourism research aid in understanding traveler's relationship with a destination. If people become attached to places, they tend to have higher levels of satisfaction and higher likelihood to revisit the destination (George and George, 2004). Lewicka (2011) reviewed a large swath of place attachment literature, including a number of antecedents and outcomes. The author highlights a number of concepts that have shown to be predictive of place attachment such as socio-demographics, involvement, and physical characteristics. However, there is no mention of how the experience itself drives attachment. In Tuan's (1975) influential paper about experience and place, he notes that direct experiences are necessary to fuel place formation. Therefore, it seems natural to hypothesize that measuring the quality or salience of the visitor experience could lead to place attachment. Autobiographical memory may be an additional antecedent of place attachment. Additionally, it may be a link to a better understanding of place formation.

Thus, two hypotheses were identified:

H1) There is a significant relationship between autobiographical memory salience and place dependence.

H2) There is a significant relationship between autobiographical memory salience and place identity.

Methodology

The purpose of the study was to investigate the relationship between nature-based visitors' memory of an experience and their level of place attachment. The site selected for this study was America's 1st national park: Yellowstone National Park. Visitors to the park were surveyed during the summer season of 2015. Park staff was highly interested in understanding their visitors in a more complex manner, which facilitated site selection. Yellowstone National Park is situated primarily in northwest Wyoming with parts in Montana and Idaho. Little research exists for summer season visitation compared to the winter season in the park, mainly due to sensitive topics requiring intensive research (snowmobiles and wildlife issues). The park consists of 3 million acres of diverse, mountainous landscape. The most prominent draw for the park is a variety unique geothermal features (geysers, mud pots) and vast array of abundant wildlife including grizzly bears and American bison.

Visitors were stopped at the five entrance gate throughout the 2015 summer season. Researchers flagged all vehicles off the road to invite them to participate in a voluntary front-end survey (10 questions) followed by a more in-depth mail-back survey. Front-end survey questions were used a means to gather large sample demographic data and non-response bias checks. The mail-back survey contained all information related to memory and place attachment, thus, the mail-back survey results are used for the analysis of this study. A postage paid envelope was included with the mail-back survey to return to the researchers. In total, 2,216 mail-back surveys were handed out to respondents with 802 completed for a response rate of 36 percent. For analysis purposes, the sample of interest for this paper was repeat visitors. These visitors are most applicable for use to evaluate the relationship between memory and place attachment as they have had enough experience in the park to begin to form an attachment if one exists.

Through the use of Fitzgerald and Broadbridge's (2013) 8-item scale to measure autobiographical memory and Williams and Vaske's (2003) 8-item scale to measure place attachment, we hypothesized a significant and positive relationship between the two concepts. Autobiographical memory contained two dimensions: impact and rehearsal, which each had four observed variables each. Place attachment was measured using two dimensions: place identity and place dependence. Each dimension also contained four observed variables. The researchers selected these two constructs as they are the two most prominent dimensions used in past quantitative studies.

Results

A confirmatory factor analysis (CFA) was performed on both autobiographical memory and place attachment to identify whether the prior dimensions found were intact for our study. As mentioned, Fitzgerald and Broadbridge (2013) initially found two latent constructs of named “impact” and “rehearsal”, containing four observed variables each. Our initial model attempted to replicate this model, but large inconsistencies existed. Some variables loaded onto incorrect dimensions while others had generally low loadings and poor fit statistics. This led us to explore an alternative hypothesis of a one-factor model. Thus, we created a model of autobiographical memory salience containing eight observed variables. Seven of the eight observed variables had significant loadings greater than 0.5 with p -values $< .001$, but one variable was excluded due to a poor loading. Furthermore, goodness of fit statistics indicated a strong fit as a one-factor model of autobiographical memory salience. Results indicate a CFI = .988, SRMR = .021, and RMSEA = .059, all within the level of acceptability (Table 1).

Place attachment was analyzed using a CFA as well containing place identity and place dependence. Following Williams and Vaske’s (2003) model, place identity and place dependence were separated and individually tested, covarying the two latent constructs. One variable “I am not able to substitute other places for the experience I receive in Yellowstone National Park” was removed to a low loading. Results of the CFA indicate all observed variables were significant at the $p < .001$ level. Goodness of Fit Statistics indicate a CFI = .967, SRMR = .033, and an RMSEA = .088 (Table 1). The RMSEA of .088 is somewhat higher than a commonly accepted threshold of .08, but it is only one of many fit statistics that can be used to measure whether it is a good fit.

Table 1: Goodness of Fit Statistics for CFA of AM and Place Attachment

Goodness of Fit Statistics	CFI	SRMR	RMSEA
Autobiographical Memory	0.988	0.021	0.059
Place Attachment	0.967	0.033	0.088

To determine the relationships between memory and place attachment, a structural equation model was developed that predicted that a) autobiographical memory has a direct, positive relationship with place identity, and b) autobiographical memory has a direct, positive relationship with place dependence.

Figure 1: Structural Equation Model - Autobiographical Memory Salience and Place Attachment

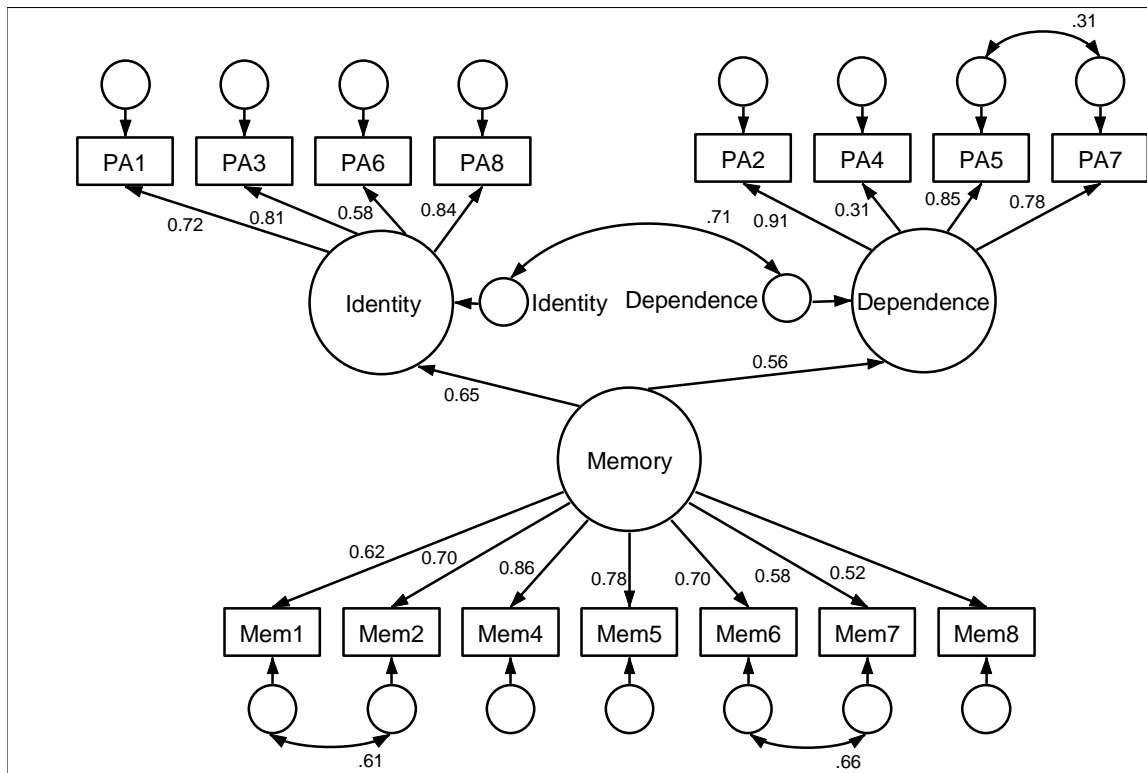


Table 2: Goodness of Fit Statistics - Full Model

Goodness of Fit Statistics	CFI	SRMR	RMSEA
Full Model	0.962	0.047	0.063

Figure 1 displays the full structural equation model between autobiographical memory and place attachment. Results indicate all relationships significant at the $p < .001$ level, which represents a significant, positive relationship between autobiographical memory salience and place attachment. Goodness of Fit Statistics for the full model are presented in Table 2 and appear to be strong. The direct relationship between memory and place identity has a standardized estimate of .65, whereas the relationship between memory and place dependence is .56. Thus, there is a slightly stronger relationship between place identity and autobiographical memory, but both relationships are significant. We can conclude that we have sufficient evidence to prove our hypothesis statements to be true. Autobiographical memory salience appears to drive place attachment.

Conclusion and Discussion

The results of this study appear to add a large amount to a number of fields of research. For one, there has been little research done to investigate how people become attached to places. Rethinking Tuan's (1975) discussion of how people conceptualize "place", we can now truly identify how we develop these attachments by using memory. Our personal memory system, through autobiographical memories, processes experiences which allow us to become attached to

places through positive, impactful recollections. Future research should test the memory typologies on place attachment to determine the most likely experiences that would lead to place attachment.

Secondly, we have the ability to quantitatively measure the visitor experience using advanced psychological techniques. Ever since Pearce and Packer's (2013) study highlighting the integration of psychological concepts into tourism research, the importance of this study has increased. This study adopts a framework from psychology to directly test its use in the tourism field, which was successful despite some adaptations to the original model. The results of this study further validate that researchers should look towards outside disciplines to explore issues in tourism. Thus, our development of the autobiographical memory salience model provides a field-based scale to measure the visitor experience. Future research should look towards testing the effects of autobiographical memory on concepts of decision-making constructs such as destination loyalty.

Finally, our findings have implications for practitioners in the field and for the call to action put out by the National Park Service Advisory Board Science Committee (2012). Forming an attachment between your destination and the visitor has shown to be a critical piece of management as well as explains what is defined as the "transformative visitor experience". Destination managers can promote the experiences the visitors receive at the destination in ways that would trigger positive memories of the place. Furthermore, the experiences that are highly salient in the memory of visitors and that lead to place attachment should be defined as transformative experiences. However, more work is needed to be done to classify the experiences that are transformative. Utilizing quantitative techniques on visitors who have highly salient memories and are highly attached would pinpoint what the National Park Service seeks in providing transformative experiences. Thus, the potential for identifying critical visitor experiences at each destination is now possible through the results of this study. Not only does this provide national parks with much needed information, but the potential for expanding this study beyond nature-based destination is vast.

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