

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/144606/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Qionglei, Yu, Steve, Pickering, Geng, Ruoqi and Dorothy, Yen 2021. Thanks for the memories: exploring city tourism experiences via social media reviews. *Tourism Management Perspectives* 40 , 100851. 10.1016/j.tmp.2021.100851

Publishers page: <https://doi.org/10.1016/j.tmp.2021.100851>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



# **Thanks for the memories: Exploring city tourism experiences via social media reviews**

## **Abstract**

This study uses online reviews to explore memorable tourism experiences of tourists visiting different city attractions. Seeking to identify a collection of themes and concepts reflecting tourists' memorable experiences during their attraction visits, this study reveals the most shared tourism memories in cognitive-emotive-behavioral themes. By developing a matrix that categorizes tourist city attractions based on an ideographic approach, the study also argues that there are different types of tourist memorable experiences at different types of attractions (i.e., human-marker, nature-sight and human-sight tourist attractions). The findings extend previous understanding of the research in tourism experience and attractions by analyzing 156,986 TripAdvisor tourist reviews of the top ten most popular tourist attractions in London. This study also provides recommendations for destination management organizations and various city tourism stakeholders to plan, market and manage city tourism products and services.

**Keywords:** *city tourism, tourism attractions, memorable tourism experience, London*

# **Thanks for the memories: Exploring tourism experiences in London via social media reviews**

## 1. INTRODUCTION

Tourist experiences have long been considered an important subject to investigate, but they remain one of the more complex areas to understand. This is because tourism experiences vary at different stages of travelling, and at different locations (Clawson & Knetsch, 1966; Morgan & Xu, 2009; Tung & Ritchie, 2011). Individual experiences may also differ due to a tourist's motivations, preferences and demographic background (Knutson et al., 2007).

While the study of tourist experiences is complex and subjective, one of the more effective means of studying tourism experiences is through the “memorable tourism experience” (hereafter MTE) (Kim, 2010, 2014; Chen & Rahman, 2018). MTE represents a consumer-centric reflective view of experience, capturing a consumer's emotional (Johnston & Kong, 2011) and subjective responses to the attractions that they visit (Kladou & Mavragani, 2015). MTE is composed of the critical moments of what tourists did, how they felt, and what they thought when they visited a destination, composed of a selective construction most relevant and critical experiences (Kim et al., 2012).

By identifying a collection of themes and concepts that reflect tourists' most recalled experiences during their attraction visits, this study aims to explore the shared MTEs among tourists in terms of their cognitive evaluation, emotional response and related behaviors (Kim et al., 2012). The cognitive evaluation of an attraction stays in a person's memory based on the concepts or knowledge which are generated by the emotive stimuli people receive at destinations (Ghosh & Gilboa, 2014). Emotions are an important part of MTEs as they are more likely to be remembered and expressed by using ‘affect words’ in narratives (Brewer, 2010; Kim, 2010). Both cognitive evaluation and emotional response are inseparable from

tourists' behavioral engagements (e.g., see, listen, touch, smell, learn, walk, dance, or play) (Servidio & Ruffolo, 2016). When tourists have actively participated in an activity or engaged with the environment, they are more likely to remember such an experience (Pine & Gilmore, 1998). The more tourists engage with the activities, the better they can retrieve the MTEs (Coudounaris & Sthapit, 2017)).

This study further argues for the importance of categorizing city attractions and explores how memorable tourism experience varies at different types of attractions. The study develops a conceptual grid to divide city attractions into four quadrants. A total of 156,986 TripAdvisor tourist reviews about London were downloaded and then analyzed using Leximancer. A phenomenological perspective was then taken to understand different MTEs at different types of attractions.

The findings present themes and concepts across different types of city attractions, which vary in terms of how tourists think and feel, and what they do at the attractions. For example, strong emotional appreciation is expressed towards people, animals and city green space in nature-sight attractions. Taking photos of iconic London tourism products is a must-do in the human-marker attractions, while time, service and attraction environment could be considered priorities when visiting human-sight attractions. By revealing the connections between cognitive, emotive and behavioral themes and concepts that tourists use to recall their visit experiences at different types of attractions, this study tries to provide destination management organizations (DMOs) a "short-cut" to valuable tourist insights.

## 2. LITERATURE REVIEW

### *2.1 Memorable tourism experience*

There are multiple definitions of the tourism experience. Cohen (1979) defined a tourism experience from a phenomenological perspective as the relationship between people and their world-view, dependent on the society to which they belonged. This definition requires an in-

depth understanding of tourists, their society, and the experience at the destination based on personal, social and cultural factors. Pine and Gilmore (1998) define tourism experience by focusing on a person's emotional, physical, spiritual, and intellectual impressions that are felt during an event. Tung and Ritchie (2011, p. 1369) defined tourism experience as "an individual's subjective evaluation and undergoing (i.e., affective, cognitive and behavioral) of events related to his/her tourist activities" before, during, and after the trip.

One of the ways to examine after-trip experiences is by exploring tourists' MTEs. People remember specific past experiences because these experiences are vital to them. Remembered experiences usually relate to a high level of motivation and involvement (Hoch & Deighton, 1989). A memorable tourism experience is therefore "a tourism experience remembered and recalled after the event has occurred" (Kim, 2010, p.2) and is "selectively constructed from tourism experiences based on the individual's assessment of the experience" (Kim et al., 2012, p. 13). In other words, although a tourism experience is a subjective mental state felt by individuals during their travel, not all of the experience will be recalled. An experience that is recalled suggests its distinctiveness and evocativeness (Larsen, 2007).

One major approach to study tourism experience is from a phenomenological perspective which is concerned with the study of experience from the perspective of the individuals through inductive, qualitative methods such as interviews, discussions and participant observations (Hycner, 1985). Phenomenology is powerful for understanding subjective experience, plus gaining insights into people's motivations and actions. For example, Masberg & Silverman (1996) conducted an exploratory study by using a list of open-ended questions among 60 college students after they visited a heritage site. They found a comprehensive set of categories and themes for each question. Seven salient aspects relating to the visit were reported. The perceived outcomes of the visit were categorized into two broad themes, with several sub-themes for each. Hayllar & Griffin (2005) conducted 20 in-

depth interviews with visitors to the Rocks in Sydney, Australia over a week. Interviewees were asked to describe their visit experience. The interview results generated three central themes with eight sub-themes. Tung and Ritchie (2011) used in-depth interviews of Canadian university students to investigate MTEs and revealed four key themes: affect, expectations, consequentiality and recollection. Such research seeks essentially to describe rather than explain, and to start from a perspective free from hypotheses or preconceptions (Hycner, 1985; Coelho et al., 2018).

Other research starts with a phenomenological perspective and then tests the relationship between the themes coded from the qualitative data. For example, Anderson and Shimizu (2007) investigated factors shaping vividness of memory episodes of the 1970 Japan World Exposition by asking 48 Japanese participants who had visited the Expo to recall their experiences relating to different aspects, such as salient memories, stories and events recalled from respondents' social context. Two or three memory episodes were identified and collected from each of the participants and a total of 112 memory episodes were examined. They were then categorized into four factors to test the relationship with memory vividness using regression analysis. Morgan and Xu (2009) applied a similar approach, starting with open-ended questions like "what is the most memorable place you have visited?" (p. 225). The data were analyzed firstly using a grounded approach to identify the patterns on holiday experiences, and then by quantitative analysis of these patterns. The results of their study argue that the most cited memory of the holiday concerns socializing with friends.

However, recent studies on MTE emphasize the development of universal dimensions that compose MTE. For example, Kim and colleagues (Kim, 2010; Kim et al., 2012) conducted a series of research projects on developing the construct of MTE and its validation. They initially generated a pool of MTE items based on a review of research pertaining to participants' experiences. After refinement of their instrument, a 24-item memorable tourism

experience scale that comprises seven domains was developed (Kim et al., 2012). Kim (2014) explored destination attributes that might affect tourists' MTEs. The study supported the impact of a 10-dimensional construct of destination attributes (local culture, variety of activities, hospitality, infrastructure, superstructure, etc.) on MTEs. Zhang, Wu and Buhalis (2018) examined the influence of country and destination images on the construct of MTEs. Their study indicated that MTEs played a mediating effect between images of country and destination, and tourists' travel intentions. Wei, Zhao, Zhang and Huang (2019) furthered this research by using the original MTE dimensions as psychological factors that have a prior impact on MTEs which can be measured by the recollection of memories and their vividness. The results of their study demonstrated that MTEs were strongly associated with novelty, involvement and social interaction. Their study also highlighted the role that culture plays in the relationship between psychological factors and MTEs. This strand of research is useful for constructing variables and testing relationships using quantitative methods.

Existing MTE research has either followed an inclusive approach to generate universal opinions of memorable experiences regardless of attraction type, or conducted in-depth studies regarding a particular type of attraction, such as Mediterranean beach resorts (Morgan & Xu, 2009) or the Rocks in Australia (Hayllar & Griffin, 2005). A distinction should be made for city tourism experiences, however, as tourists visit different types of attractions in cities which are associated with multiple factors, such as the natural features, infrastructure, services, and spatial scales.

Instead of developing hypotheses relating to MTEs, this study looks at how MTEs change in different types of city attraction. To do this, it takes a consumer-centric reflective view to capture the essential characteristics of MTEs (Hayllar & Griffin, 2005; Kladou & Mavragani, 2015; Johnston & Kong, 2011). Using tourist reviews as MTEs provides an objective view to

explore how MTEs change in different city attractions. Interpreting MTE through online reviews can inform, support or challenge current practices and policies.

## *2.2 Tourist attraction categorization*

Tourist attractions have long been considered a useful Petri dish to understand the wider tourist experience (e.g., Shoval & Raveh, 2004; Townsend, 1992) because a tourist city hosts a series of sub-systems that provide different functions for tourists to pursue pleasure, consume city experiences and allocate different time for leisure activities (Hernández et al., 2021). As tourists' motives and preferences are different, their engagements and interaction with different types of city attractions may differ. MacCannell (1976) defined an attraction as “an empirical relationship between a tourist, a sight, and a marker – a piece of information about a sight” (p. 41). This definition proposes that an attraction has to include three key elements: a person who visits the place, a site to be visited, and a marker that reveals the important information about the site.

Lew (1987) proposed a framework that categorizes tourism attractions from three different perspectives: ideographic, organizational and cognitive. The ideographic perspective mainly focuses on the tangible specialty of a site and is important when developing attraction typologies, which are classified into nine categories based on a human/ nature matrix. An organizational perspective focuses on planning and the organization of attractions in terms of “their spatial, capacity, and temporal nature” (Lew, 1987, pp.558-559), which takes considerations of time and space seriously so as to provide useful recommendations for planners and organizers. These considerations include whether the visit is short-stay or long-stay. The cognitive perspective emphasizes tourist perceptions and experiences, which involves exploring tourists' motivation for taking risks at different degrees. Studies from the cognitive perspective are useful to understand tourists' itinerary planning and new attraction development.



Leiper (1990) used the term “nuclear mix” to describe attractions available to tourists. He classified tourism attractions based on the importance that tourists placed in their schedule and developed a hierarchical classification of attractions for individual tourists: “primary”, “secondary” and “tertiary” attractions. A “primary” attraction corresponds to the main purpose of the holiday and therefore plays a decisive role in tourists’ destination choice. A “secondary” attraction has some attributes known to the tourists before they visit the place, but tourists will not place enough significance to this attraction when they plan their itinerary. A “tertiary” attraction usually is unknown to tourists until they visit the place.

Cacomo and Solonandrasana (2002) grouped tourism attractions into the broad categories of “Discovery” and “Escape”, based on the amount of time tourists spent at an attraction and their satisfaction with the attractions, which is also decided by individuals’ motivation and preference to visit certain places. The “Discovery” (or “D”) attractions refer to those in which tourist satisfaction is temporal, and their interest is lost immediately once their curiosity is satisfied. The “Escape” (or “E”) attractions are those in which tourist satisfaction is lasting, mostly due to the tourist’s initial interest. These categorizations are changeable, as different tourists have different motivations and preferences; one tourist’s “D-attraction” could be another tourist’s “E-attraction”.

Botti et al. (2008) linked the works of Leiper (1990) and Cacomo and Solonandrasana (2002) by a common unit (time) to create a new classification of tourist attractions. They argued that tourists might change their attraction preferences when they visited the place, which meant the pre-visit “secondary” attraction might turn into a “primary” attraction post-visit. As a primary attraction usually represents an E-attraction, where tourists tend to spend more time and achieve more satisfaction, the time involved may also turn a D-attraction in an E-attraction.

By reviewing existing tourism attraction categorization research, we develop a tourism attraction framework following an ideographic approach suggested by Lew (1987) to discover tourist city MTEs. Unlike the cognitive and organizational approaches that either focuses on the subjective perceptions from the tourists or focus on the planning and organization of attractions in terms of space-time arrangement, the ideographic approach categorizes attractions into different types based on their tangible features.

### 3. CITY ATTRACTION FRAMEWORK

Existing research on city attractions usually looks at how tourists' demographic profiles influence their choices of attractions. For example, Cooper (1981) identified differences in the spatial patterns of tourists according to two variables: life stage and socio-economic status. Shachar and Shoval (1999) discussed tourist space segmentation based on different national and religious groups visiting the city (see also Shoval & Raveh, 2004).

Apart from research focusing on the relation between spatial-behavior patterns and tourist attractions, few studies have used an organizational approach to examine tourist districts in cities. For example, Townsend (1992) explored the popularity of different types of tourist attractions using the number of attractions visited in the UK. Instead of using the city and town data in a country, Pearce (1998) developed a general understanding of tourist districts in Paris by examining the characteristics, structure and functioning of these districts. With the development of technology, other methods have been applied to investigate tourists' behavioral patterns in city tourism as well. For example, Li, Yang, Shen and Wu (2019) used Global Positioning Systems and conventional questionnaire survey data in Xiamen to uncover tourists' micro-scale movements between attractions. Their research suggests that variables such as proximity, history and attractiveness have significant impacts on tourist destination choices.

A recent attraction study conducted by Hernández, Santana-Jiménez, and González-Martel (2021) investigated factors that influence the probability of the co-occurrence of visits to attractions in the city of Madrid. They grouped attractions into seven categories, the first of which (Iconic) was based on their popularity, city representativeness and variety. The Iconic attractions are the most popular destinations in terms of singularity and uniqueness. They then categorized the other six types of attraction by using the attraction tags shown on the TripAdvisor webpage, namely Monuments and Streets; Museums and Theatres; Non-Religious Architecture and History; Nature, Parks, and Animals; Religious Sites; and Shopping.

Based on our understanding of the research in city attraction and attraction categorization, we argue it is imperative to investigate city MTEs further by exploring how MTEs differ by the newly categorized attractions. Such knowledge could help us understand what makes such city attractions unique, spectacular, and memorable (Edwards et al., 2008; Ritchie et al., 2011; Wearing & Foley, 2017). Applying an ideographic approach, we developed a framework to study MTEs at different attractions using two interrelated feature-focused dimensions (see Figure 1).

<b>Nature</b>	Attractions that have features strongly linking to the natural environment and have been advertized and promoted as the iconic places to visit in a city.	Attractions that have features strongly linking to the natural environment and tourists' engagement with the attractions themselves.
<b>Human</b>	Iconic landmarks have strong man-made characteristics, and they usually represent the most advertized and promoted attractions as the city's must-see places.	Attractions that are highly oriented towards the human side, with cultural and historical features and meanings.
	<b>Marker</b>	<b>Sight</b>

Figure 1: Conceptual grid of attractions

The first dimension divides attractions into nature-oriented versus human-oriented (Lew, 1987; Mehmetoglu & Abelsen, 2005; Leask, 2016). Nature-oriented attractions emphasize how tourists' experiences vary based on the types of landscape, the geological and biological landmarks, and the ecological features of the destination (Mehmetoglu, 2007), while human-oriented attractions may focus more on the infrastructure relating to shopping, transportation, accommodation, and leisure superstructure relating to recreation entertainment, culture, history and art (Wearing & Foley, 2017). City attractions by nature are more human-oriented but do not exclude nature-human interfaces, for instance, parks, zoos, botanical gardens, and archaeological reservations.

The second dimension is based on a key characteristic of an attraction, whether it is regarded as a sight or a marker (MacCannell, 1976). A "sight" attraction emphasizes the authenticity of the place, which stimulates tourist interests as the actual site itself, whereas a "marker" attraction emphasizes the label that is attached to the attraction rather than the attraction itself. A good example to illustrate the difference between a marker and a sight is the Santa Claus Village, wherein *Santa Claus Village* provides the sight for a visit, and the marker refers to the celebration of *Christmas* (Pretes, 1995). The marker can make the sight more meaningful or interesting by highlighting or promoting a piece of information or representation of that sight (Pretes, 1995).

A sight and a marker are not separable in an attraction and it is more about how tourists experience it (MacCannell, 1976). Tourists are generally interested in markers because these are often the most promoted or advertized attractions, rather than the direct experience. From tourists' behavioral perspectives, some people are more interested in the symbolic label that is attached to the attraction than the attraction itself, thus consuming the attraction for its symbolic meaning rather than the actual experience. Outstanding natural landscapes and

culturally unique places are examples where sight involvement often predominates over marker involvement (Leask, 2016).

#### 4. RESEARCH METHODS

##### *4.1 London tourist attractions*

Although tourism has long been associated with land-use, the geographies of cities have evolved in modern days to create patterns and forms of tourism products with specific characteristics, practices and modes of consumption in time and space (B. Hayllar et al., 2008). Cities have become the point where knowledge is transformed into the creative development of experiences and tourism products. Many cities demonstrate the high standard of the environment or architecture, the quality of life, or the visiting experience via their iconic or cultural images (Jenks et al., 2008).

London is one of the most popular cities for tourists in the world. London attracts around 21 million tourism visits annually which generated £2,104 million of direct expenditure in 2019. Of these, attractions in the City of London attracted 7.42 million visits in 2019 (City of London, 2019). There is an array of research about London from different perspectives, such as using London as a leading world destination in global tourism in terms of post-disaster marketing effort (e.g., Ladkin et al., 2007), the tourism labor market (e.g., Church & Frost, 2004), and urban tourism analyzed through tourist surveys (e.g., Bull & Church, 2001). While most existing tourism research has tried to understand London as an overall destination, this study orients toward discovering tourists' emotive, cognitive and behavioral patterns by analyzing their recalled experiences of the attractions that they visited in London.

##### *4.2 Data collection: TripAdvisor comments*

Tourists' narratives are fundamental in the construction of tourism experiences (Church & Frost, 2004). Specific moments of stories, such as the location or events that individuals involved in their travelling experience, are not only the 'touchpoints' of narratives, but they

also refer to the event-specific knowledge of episodic memories which are the essential elements of memory formation (Woodside, 2010).

Contrasted with storytelling narratives in which participants passively recall specific types of experiences in response to interviewers' questions (Woodside, 2010), online review comments are memorable moments that tourists have left proactively. Tourists nowadays often use digital devices to record their encounters and experiences with people and spaces, such as posting photos, comments and travel blogs on social media sites (such as Instagram, Facebook, WeChat, etc.). Online review comments tend to be short and hence reflect the essential attributes that the reviewers want to highlight. For example, Bosangit, Hibbert and McCabe (2015) studied 19 travel blogs written by British bloggers to depict their travel experience and argued that "the process of narration is a critical activity through which individuals construct personalized meaning" (p. 12). Kladou and Mavragani (2015) used tourists' reviews on TripAdvisor to identify the cognitive, affective and conative components of destination image from the tourists' point of view. Hence, this study endeavors to discover the content of MTEs by analyzing the data collected from TripAdvisor reviews at attractions in London to provide recommendations for those involved in tourism marketing and organization.

To understand tourism experience, we scraped online tourists' reviews of the ten most popular destinations in London from TripAdvisor (tripadvisor.com), which is the world's most-visited travel and tourism review platform (rankings performed by SimilarWeb, 2021). TripAdvisor is increasingly popular as a data source for research in tourism management (Banerjee & Chua, 2016; Hu et al., 2019; Wu et al., 2014). In August 2017, we programmed a crawler using Perl and scraped all the reviewers' comments from the ten most popular attractions in London on TripAdvisor from the earliest reviews posted on the platform (July 2003) to July 2017 (see Table 1). The ten most-popular attractions (illustrated in Figure 2) are

Big Ben, the British Museum, the Churchill War Rooms, the Houses of Parliament, Hyde Park, the National Gallery, St James's Park, Tower Bridge, the Tower of London and the Victoria and Albert Museum (V&A). We downloaded the titles and contents of all reviews that were written in English. Altogether, the total number of 156,986 reviews was obtained.

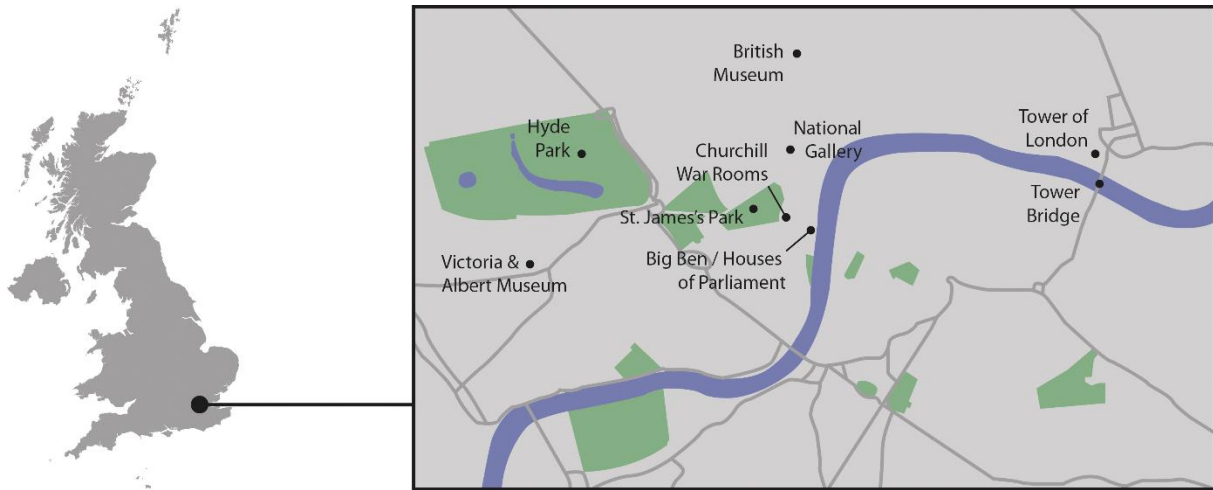


Figure 2: Map of the ten most popular attractions, according to TripAdvisor (2017)

#### 4.3 Research method

We used Leximancer 4.0 to analyze London tourist reviews. Unlike conventional software such as NVivo, ATLAS.ti and CATPAC that focuses on the frequency of the word, Leximancer uses Bayesian methods to extract the main themes from the fragmented pieces of text (Wu et al., 2014; Sun et al., 2014; Tseng et al., 2015; Schweinsberg et al., 2017). The method is to convert lexical co-occurrence messages from natural language into configurations based on semantics and relationships, with no prior dictionary requirement (Smith & Humphreys, 2006). These semantics and relationships are then coded into the concept, using the thesaurus as a classifier. Therefore, a concept map is generated from such asymmetric concept co-occurrence information. We further applied the 'Auto Tags' function in Leximancer to determine where the attractions fell in the matrix. Specifically, 'Auto Tags' can be used for data mining correlations with textual concepts, and for determining which text columns should be selected. Such an analysis is also popular in tourism studies (e.g., Wu et

al., 2014; Tseng et al., 2015; Li & Ryan, 2020).

Table 1. Summary statistics of the review sample.

<b>Distribution of rating</b>	<b>Frequency</b>	<b>Percentage</b>
1-star	654	0.2%
2-star	1290	0.8%
3-star	7260	5%
4-star	36191	23%
5-star	111591	71%
<b>Distribution of reviewer gender</b>	<b>Frequency</b>	<b>Percentage</b>
Female	36221	23%
Male	34297	22%
Undisclosed	86468	55%
<b>Distribution of reviewer age</b>	<b>Frequency</b>	<b>Percentage</b>
13-17	122	0.07%
18-24	989	0.9%
25-34	5666	4%
35-49	10793	7%
Above 50	4605	3%
Undisclosed	121211	85%
<b>Distribution of year of posting</b>	<b>Frequency</b>	<b>Percentage</b>
2002-2005	5410	3%
2006-2009	34315	22%
2010-2013	70051	45%
2014-July 2017	47210	30%

#### 4.4 Data analysis

We applied several technical operations (discussed below) to get valid and interpretable results. We followed previous studies (e.g., Wu et al., 2014; Hu et al., 2019) to fine-tune concept lists based on the frequency of co-occurrence and the meaning of the identified concepts. First, we removed all the attraction names (Big Ben, British Museum, Churchill War Rooms, Houses of Parliament, Hyde Park, National Gallery, St James's Park, Tower Bridge, Tower of London and V&A) since those names are simply destination labels. Second, we merged similar concepts (e.g., visit, visiting, visited; exhibit, exhibits and exhibition). Then, we checked the results of the concept seed and thesaurus. Finally, we repeated previous steps to explore the modified setting and set up the concepts as a theme.

## 5. FINDINGS

### 5.1 Overall representations of London attractions



The memory of travel experiences is encoded as the autobiographical memory which refers to the recollection of memories that belong to a person’s past (Skavronskaya et al., 2017). An online review as a format of narrative/story telling can be used to decode how individuals organize their autobiographical memory (Kim, 2010), including recall of emotions, engagements, the spatial layout of a destination area and other relevant objects (Kim, 2010; (Appel & Richter, 2010)). The findings from the analysis of the most frequently mentioned words in tourist online reviews present the outstanding schemas in the memory. By examining 156,986 reviewer comments from the top ten ranked attractions in London, eight themes have emerged. These eight themes reflecting MTE include emotional responses (e.g., “love” and “fascinating”), objective stimuli (“history”, “exhibits” and “art”), and behavioral engagement (“visit”, “walk” and “trip”) for these attractions. Table 2 presents the details of the themes and concepts.

Table 2. Results of themes and concepts for the top ten attractions

<b>Theme</b>	<b>Concepts</b>
Visit	visit, time, day, place, spend, hours, worth, amazing, enjoyed, wonderful, things, lots, excellent, old
History	history, tour, interesting, guide, jewels, recommend, experience, during, audio, informative, tickets
Exhibits	exhibits, free, world, best, everything, special, display
Love	love, beautiful, building, look, different, food
Walk	walk, people, nice, view, down
Art	art, collection, paintings, huge
Fascinating	fascinating, life, staff, British
Trip	trip, inside, long

Then, we looked at the attractions by group, as shown in Figure 3. The 10 attractions are placed into three categories (nature-sight, human-marker and human-sight) none of which fall into the category of nature-marker.

<b>Nature</b>		Hyde Park St James Park
	Big Ben Tower Bridge of London	Churchill War Room Museum British Museum V&A Museum Tower of London National Gallery House of Parliament
<b>Human</b>		
	<b>Marker</b>	<b>Sight</b>

Figure 3. Top 10 London Attraction Categorization

### 5.2 Nature-sight Attractions

The nature-sight attraction group includes two attractions: Hyde Park and St James’s Park.

Figure 4 shows the concept map on the reviewer comments for these attractions from 14,409 reviews. The map is heat-mapped, meaning that hot colors (red and orange) denote the most important themes, and cool colors (blue and green), denote those less important. Table 3 presents the top seven themes to emerge by removing the word “park”, as park is part of the name of both attractions. The table also shows the details of the concepts under each theme. These seven themes expressed tourists’ MTE in emotional responses (“lovely” and “beautiful”) towards cognitive evaluations of the places (“city”, “Buckingham Palace”, and “winter”) by engaging in certain behaviors (“visit”, “sit”, “stroll”, and “walk”).



Figure 4. Concepts map

Table 3. Themes and concepts

Theme	Hits	Connectivity	Concepts
Walk	9132	53360	walk, place, nice, relax, take, sit, watch
Lovely	5928	36454	lovely, ducks, birds, squirrels, stroll
Beautiful	4236	26372	beautiful, lake, lots
City	3238	20989	city, people, green
Visit	1721	11638	visit
Buckingham Palace	1726	8649	Buckingham Palace
Winter	435	5848	winter

MTEs for nature-sight attractions in London revealed strong connections between tourists' behavioral engagements and emotional responses to people and animals in the environment. Typical behaviors include walk, sit, watch, stroll and visit. "Walk" is the most frequently mentioned word, indicating the most behavioral engagement for this type of attraction as, unlike museums or art galleries where tourists walk a lot *inside* the attraction, nature-sight attractions present a lot of walking opportunities in a natural environment. The activity "walk" has a high level of connection to other behaviors, such as "relax", "sit", and "watch".

The theme “lovely” is the second most mentioned theme with five concepts: lovely, ducks, birds, squirrels and stroll. Tourists expressed the feelings of enjoyment and loving (“lovely” and “beautiful”) towards the beauty of the natural environment, which is highly associated with the prominent features of these attractions, such as “ducks”, “birds” and “squirrels”. The following quotations present vivid pictures of how tourists feel when they walk around these attractions:

- *“It is a pretty **relaxing** park which is **walking** distance from Buckingham Palace and also Oxford shopping area. There are a variety of **birds** and little **animals** that will come **running to you** when you have food in hand.” (St James’s Park)*
- *“A nature haven in the center of London. A **pleasant walk** through the park with a vast array of **birds, ducks and squirrels** to **keep you company**.” (Hyde Park)*

This finding is in line with Edward and Griffin’s (2013) suggestion that tourists enjoy walking through the city, an activity allowing them to become connected. Tourists use the totality of their senses to see, smell, touch and hear as they stroll about. It is also interesting to find that the word “city” is highly associated with this group of attractions in tourists’ MTEs. The park environment brings the tourists’ positive evaluation of a “city” where they may have chances to escape and immerse in “green” spaces, which make them feel good. Typical comments include:

- *“Is **green** and **romantic**, perfect for **relax** in city full of **people**.” (St James’s Park)*
- *“Large and expansive grounds that give you a chance to **escape** the hustle of the major **city** it’s located in. **Lovely** at all times of day.” (Hyde Park)*
- *“Hyde Park has got to be one of my **favorite** places in London, it somehow lets you **get away** from the **busy city** without having to go very far at all!” (Hyde Park)*

### 5.3 Human-marker attractions

Figure 5 shows the concept map on the reviewer comments (23,293 reviews) for human-marker attractions, which includes two attractions: Big Ben and Tower Bridge. Seven themes emerged: “time”, “London”, “walk”, “visit”, “history”, “glass” and “clock”. “Time” appears to be the most mentioned theme (58,775 times) with six concepts: “time”, “beautiful”, “night”, “take”, “photos” and “place”. Table 4 shows the details of the themes and concepts.

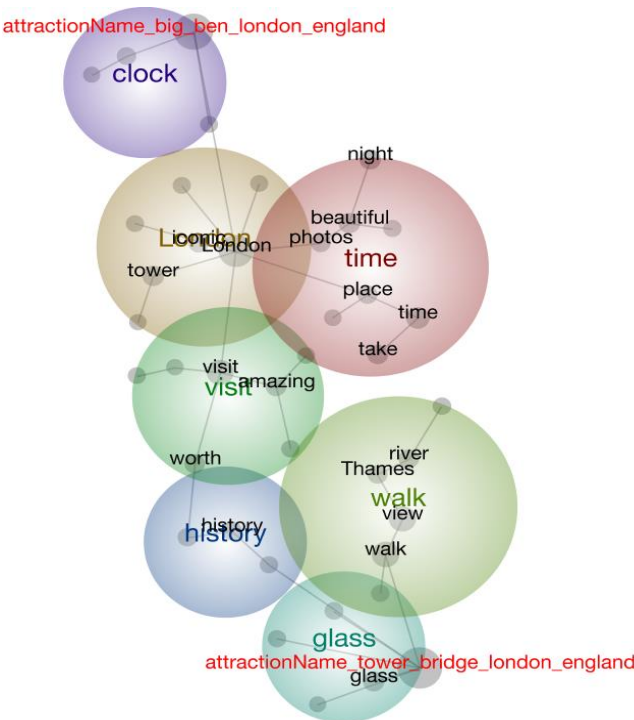


Figure 5. Concepts map

Table 4. Themes and concepts

Theme	Hits	Connectivity	Concepts
Time	11088	58775	time, beautiful, night, take, photos, place
London	10443	58497	London, tower, iconic
Walk	9499	52607	walk, view, river, Thames
Visit	7426	46475	visit, worth, amazing
Glass	2219	26329	glass
History	3513	17941	history, tour
Clock	1578	12629	clock

When tourists recalled their most MTE at these human-marker attractions, the objective stimuli and behavioral engagements of tourist experience dominate the key themes generated

from reviews. Tourists' comments placed more emphasis on what to see (e.g., "glass", "clock" and "river"), when to visit (e.g., "time" and "night") and what to do (e.g., "walk", "view" and "take photos"). Compared with other groups, we found that taking photos was a typical tourism activity for such attractions, typically associated with the word "amazing" (unlike the previous category in which different emotion-related words were expressed, such as "lovely", "beautiful", "relax", "interesting" and "fascinating"). The human-marker attractions are listed in the must-visit attractions in tourists' MTE as iconic London tourism products, which are important for them to leave a trace of visiting. Some comments below show how tourists feel, see and do:

- *"This is the absolute '**No 1 Must Do**' when in London, so I don't know why you are even looking it up on Trip Advisor!!!! Just go! It is especially lovely at **dusk** when the lights begin to shine."* (Big Ben)
- *"Yes it's a real tourist trap but has to be seen, it's a **classic** image of London and offers **amazing views**. I love being round this area lots going on and of course great for a **photo** opportunity."* (Big Ben)
- *"The most **spectacular views**. A **must do and see**. Took a lovely **walk** over the bridge. Got some **great shots** of London and was just too pretty for words."* (Tower Bridge)
- *"**Walk** across, **ride** under, **take images** from the Tower... This **landmark** is lovely from all viewpoints. A **favorite memory**."* (Tower Bridge)

#### 5.4 Human-sight attractions

Figure 6 shows the concept map of this group including six attractions: the British Museum, the National Gallery, the V&A, the Churchill War Rooms, the Houses of Parliament and the Tower of London. Seven main themes have emerged from 119,283 reviewer comments: "visit", "exhibits", "history", "Crown Jewels", "building", "excellent", "early", "artifacts" and

“life”. From these seven themes, we can tell reviewer comments tend to focus on revealing their cognitive evaluations of what to see (“history”, “exhibits”, “building”, “Crown Jewels” and “artifacts”), their affective responses (“excellent”, “amazing”, “love”, “enjoyed” and “wonderful”) and activities (“visit”).

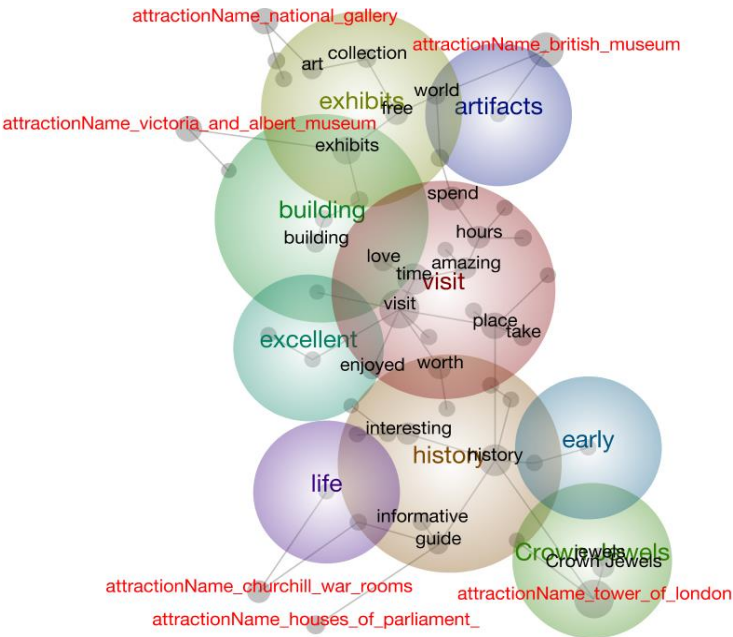


Figure 6. Concepts map

From the Leximancer results, we observed two sub-groups within the human-sight attractions. Group I is composed of 54,505 reviews, including the Tower of London, the Churchill War Rooms and the Houses of Parliament: its top-ranked themes were “History” and “British” (see Figure 7). Group II is based on 64,778 reviews including the British Museum, the National Gallery and the V&A; its key themes were “World”, “Art” and “Exhibits” (see Figure 8).

5.4.1 Group I: Historical British

Seven themes have appeared in this group: “history”, “tour”, “interesting”, “jewels”, “museum”, “tickets” and “building”. Table 5 shows the details of the themes and concepts.

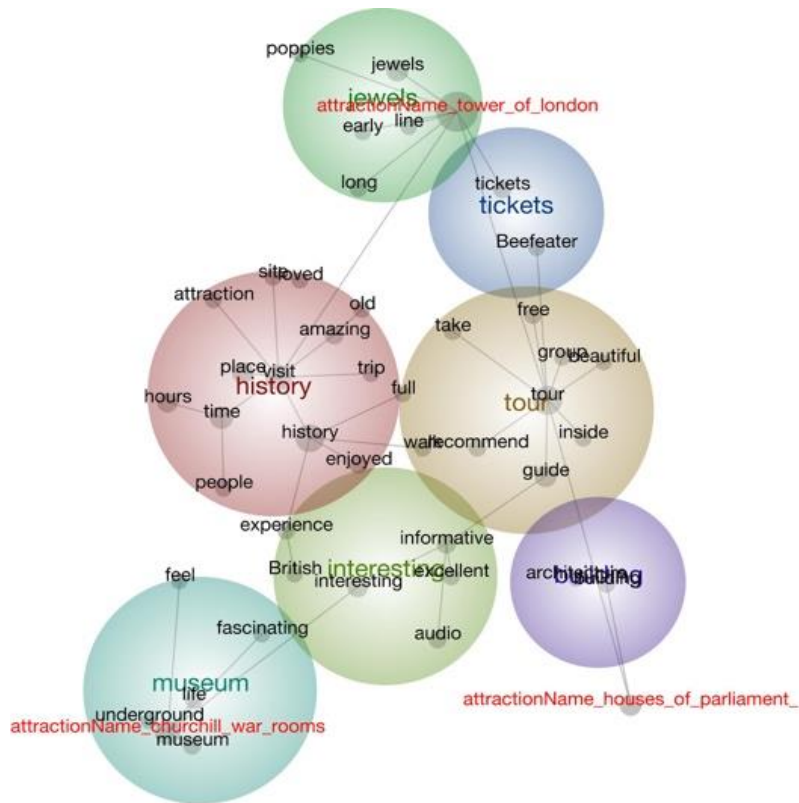


Figure 7. Group I concept map

Table 5. Group I themes and concepts

Theme	Hits	Connectivity	Concepts
History	46350	242157	history, visit, time, place, hours, amazing, enjoyed, people, old, attraction, trip, loved, site
Tour	27976	144426	tour, guide, take, recommend, free, inside, walk, full, beautiful, group
Interesting	17175	70255	interesting, informative, audio, experience, excellent, British
Jewels	14583	70255	jewels, long, early, line, poppies
Museum	8997	35037	museum, life, fascinating, underground, feel
Tickets	4933	17284	tickets, Beefeater
Building	2998	10943	building, architecture

Group I attractions place heavy emphasis on cognitive stimuli relating to British culture in its history (e.g., “jewels”, “Beefeater”, “museum”, “buildings”, “place”, “attraction” and “architecture”), highlighting what to see at these places. Our analysis indicates that tourists used an array of words – “amazing”, “interesting”, “enjoyed”, “beautiful”, “loved” and



“excellent” – to express different emotional responses towards different cognitive stimuli. Comparatively speaking, unlike the nature-sight attractions which involve a lot of different behavioral engagements, the analysis of results showed that tourist behavior at Group I attractions are mainly “visit”, “tour”, “walk” and “trip” with specific features of the attractions, such as “underground” and “inside”, etc. In particular, “tour” (e.g., “audio guide” or “guided tour”) was a typical activity for such attractions. It is also interesting to discover that paying for the “tickets” is something highly recalled among tourists. They expressed their willingness to pay a price which was accompanied by free guided tours, such as the British style of Beefeater tour. Some comments are listed below to reflect the themes identified and the importance of certain attributes.

- *“Yes the admission is pretty **pricey** but you could easily spend all day here if you want to see everything. There are **guided tours by a Yeoman Warder or Beefeater** every half hour and I cannot recommend this enough - you will not be disappointed.” (Tower of London)*
- *“This place is pretty fun to visit. You can do a **free tour with a Beefeater** (cool guards) and walk through a lot of **history** and see the **Crown Jewels of England**.” (Tower of London)*
- *“A very **interesting** museum. You learn a lot about Churchill as well the **British** efforts during WWII. **Prices** are a tad **expensive** but take the plunge if you are a **history lover**.” (Churchill War Rooms)*
- *We loved this **museum** as it didn’t feel like a typical museum. It was really **interactive** and the **audio guide** allowed us to move at our own pace. I like that they broke up the **tour** in the middle with this big exhibit about Churchill.” (Churchill War Rooms)*

#### 5.4.2 Group II: Free world exhibits

Figure 8 shows the concept map of review comments for attractions including the British Museum, the National Gallery and the V&A. Eight themes appeared: “free”, “exhibits”, “world”, “building”, “art”, “Egyptian”, “guide” and “cafe”. The reviews reflect three of the most significant themes of MTE from these attractions: “free”, “exhibits” and “world”. The details of the themes and concepts are presented in Table 6.

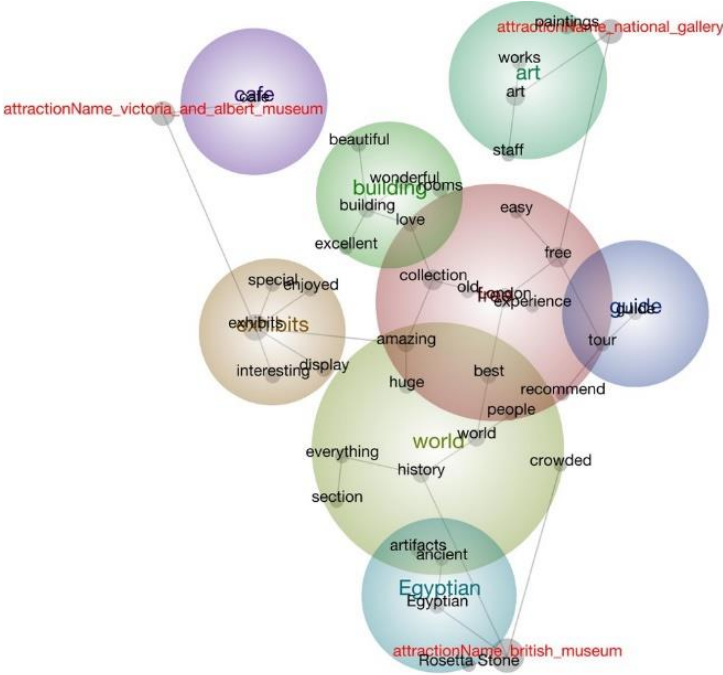


Figure 8. Group II concept map

Table 6. Group II themes and concepts

Theme	Hits	Connectivity	Concepts
Free	35704	124814	free, collection, London, amazing, best, tour, recommend, experience, old, easy
Exhibits	23576	76887	exhibits, interesting, display, special, enjoyed
World	17941	56252	world, history, everything, huge, people, crowded, section
Building	16240	54981	building, beautiful, rooms, wonderful, love, excellent
Art	13853	46357	art, paintings, works, staff
Egyptian	7987	28962	Egyptian, artifacts, Rosetta Stone, ancient
Guide	1820	4997	guide
Cafe	1741	4054	cafe

By analyzing the key concepts generated from the review comments, we discovered that the cognitive cues relating to what tourists are most likely to see are expressed in words such as “exhibits”, “collection”, “building”, “art”, “artifacts”, “rooms”, “Egyptian”, “Rosetta Stone” and “history”. Oriented towards the human perspective, the comments focus more on the cognitive evaluations of the attractions, telling others what to see (e.g., “exhibits”, “world history”, “building”, “rooms” and “art”) especially if this was something impressive and eye-catching (i.e., “Egyptian” and “Rosetta Stone”) and how to plan their trip. Apart from what to see, the word “free” was mentioned frequently by tourists which reflected its imprint in MTEs. Tourists develop cognitive understandings that they can visit the best collections of the world in London for free, and they are impressed by this. Tourist MTEs also revealed their affective response in a wide range of feelings, such as “interesting”, “amazing”, “love”, “enjoyed”, “beautiful”, “special” and “easy”, etc. Comparatively speaking, words involving behavioral engagements are limited (“tour”, “recommend” and “guide”). As Group II attractions need a high level of sight-involvement which typically requires tourists’ full engagement and time commitment, active participation and immersion in the experience (Pine & Gilmore, 1998), peripheral services (e.g., “staff” and “cafe”) become important schemas of MTEs to facilitate the sight-involvement.

- *Free to get in, lovely sandwiches and coffee in the cafe. Egyptian stuff is amazing. Would need lots of visits to see it all (British Museum)*
- *“Terrific museum, lovely architecture, so much on display including the Rosetta Stone. There are many shops on the ground level. The staff was very helpful”.*  
*(British Museum)*
- *The fabulous museum, wonderful art, lovely cafes, unique gifts...and free! A lovely way to spend a rainy morning...or any morning! (National Gallery)*

- *Wonderful exhibition of haunting images with a **fabulous** audio commentary (additional fee) which made my visit very **enjoyable**. It was **not crowded** which meant that visitors were polite and accommodating (National Gallery).*
- *The **cafeteria** has excellent food so make it a day at the museum. The sculpture hall is **lovely** and they offer plenty of **free escorted tours** where you will learn a lot. (V&A Museum)*
- ***Gorgeous exhibits**, and a lovely little **cafe** perfect for families. Would definitely **recommend** to any home birds or tourists! (V&A Museum)*

However, unlike the emotions expressed in other groups, negative feelings towards certain cognitive concepts (e.g., “people”) are frequently mentioned as well (e.g., “crowded”). For example:

- *Yes, this is one of the **greatest** museums in the world. Is it enjoyable? Not as much as it should be due to **ridiculous crowds**. I love this in theory more than I enjoy visiting in person. (British Museum)*
- *This is a quite **crowded** museum. Though there were lots of people in other major museums in line, I never **felt packed** in them whereas in British Museum, it was like people were **flooding** from every angle and I did not like it, it **spoiled** (British Museum)*

## 6. DISCUSSIONS

Following Tung and Ritchie (2011)’s definition of tourism experience and together with the understanding of autobiographic memory (Skavronskaya et al., 2017), we explored city MTEs based on online reviews, illustrating how MTEs differ by nature-sight, human-marker and human-sight attractions, from a phenomenological perspective. Table 7 shows MTEs across the three types of attractions. By using a holistic view of tourist MTEs of different types of attractions in London, key stimuli of MTE are identified.

Table 7. MTE based on the different categories of attractions

Types		Attractions	Cognitive concepts	Emotive concepts	Behavioral concepts
<b>A: Nature-Sight Involvement:</b>		Hyde Park; St James Park	Place, ducks, birds, squirrels, lake, city, people, green, winter, Buckingham Palace	Lovely, beautiful, nice, relax	Walk, take, sit, watch, stroll, visit
<b>B: Human-Marker Involvement</b>		Big Ben; Tower Bridge	Time, night, place, London, tower, river, Thames, glass, history, clock, iconic	Amazing, beautiful	Walk, take, photos, view, visit, tour
<b>C: Human-Sight Involvement</b>	<b>Group I: (British History)</b>	Churchill War Rooms, Houses of Parliament, Tower of London	History, time, place, hours, people, attraction, site, old, attraction, audio, British, jewels, lines, poppies, museum, tickets, Beefeater, free, building, architecture	Amazing, enjoyed, loved, beautiful, interesting, informative, excellent, fascinating	Visit, tour, guide, recommend, trip, walk
	<b>Group II: (Exhibits Arts and World):</b>	British Museum, National Gallery, V&A Museum	Free, collection, London, exhibits, world, building, art, Egyptian, cafe, easy, old, crowded, everything, painting, works, display, staff, Rosetta Stone, artifacts, ancient	Amazing, best, enjoyed, beautiful, wonderful, love, excellent, crowded	Guide, tour, recommend, experience

### 6.1 Cognitive difference

Memory is a mental process by which information is encoded, stored and retrieved (Atkinson & Shiffrin, 1968). The information stored in a person's memory forms a cognitive structure that includes knowledge about a concept or type of stimuli, for example, a person, event, object, and its attributes (Ghosh & Gilboa, 2014). When information is distinctive, it is more likely to be remembered during attempts to recall (Brandt et al., 2006).

Table 7 reflects the differences in the cognitive information generated among the three types of attractions. The words used to reflect tourists' recall of cognitive stimuli in Type A (nature-sight attractions) have high associations with living objects, such as "squirrels", "ducks", "birds" and "people" while things that you can see from the distance are mentioned frequently in Type B (human-marker attractions), such as "river", "tower", "clock" and "glass".

The words used to reflect tourist MTE cognitive cues in Group C (human-sight attractions) are much more detailed and diverse. Tourists are more likely to recall names of items precisely, such as "Egyptian", "Rosetta Stone" and "Beefeater". This phenomenon illustrates the fact that tourists involve more in-depth information processing and cognitive analysis at human-sight attractions ( Craik & Lockhart, 1972). This finding highlights the different aspects of knowledge that tourists remember about attractions, based on the different types of attraction they are visiting. For example, the cognitive concepts of Type A and B attractions are broader in general with a clear external environment feature (e.g., "green", "lake" and "river") while the cognitive stimuli involving in Type C focus on items (e.g., "Rosetta Stone", "Beefeater", "jewelry" and "poppies").

The cognitive concepts of these attractions not only reflect what to see, but also reveal when to see. For instance, tourists frequently associated the time when they visited nature-sight attractions (e.g., "winter") and human-marker attractions (e.g., "night") as making the experience special and memorable. Other related perceptions are also important to notice. For example, "free" and "tickets" in Group I of Type C are often mentioned by tourists, showing close associations with outstanding MTEs. However, all cognitive concepts should not be viewed separately because the generation of cognitive structured in tourist memories are highly linked to behavioral engagements, such as participation in different activities and both

the positive and negative feelings they experience during their visits (Brunner-Sperdin et al., 2012).

### *6.2 Emotional difference*

Research in memory shows that affective feelings and cognitive evaluations are key factors that lead to the memorability of an event. Affective thoughts are an important part of memory as emotions are more likely to be remembered (Brewer, 2010). In narratives, people are also more likely to use affect words to express their autobiographical memories (Kim, 2010). By comparing the emotional responses expressed by tourists at different types of attractions, Table 7 shows that tourists use more substantial superlatives (“amazing”, “fascinating”, “excellent” and “wonderful”) to express their feelings of awe towards human-oriented attractions (Keltner & Haidt, 2003). However, interactions with wildlife and people play an important part in tourist emotions and memory; tourists usually expressed their feelings towards the nature-sight attractions in a more relaxed and warmer tone (“lovely”, “beautiful” and “relax”) (Ballantyne et al., 2011).

We also noticed that Type C (human-sight involvement) attractions generate a broader range of affect from positive feelings (e.g., “fascinating”, “interesting” and “beautiful”) to negative feelings (e.g., “crowded”). This finding confirms existing work by Vittersø et al. (2000) showing that tourist emotional arousal would differ based on the types of attractions. Our analysis discovers that when tourists have an immersive involvement with human-sight attractions with an active process of cognitive information, they tend to have more diversified feelings. On the other hand, the human-marker attractions are more likely to generate simpler but stronger feelings (e.g., “amazing”) responding to iconic features. The finding extends previous understanding about city attractions, by specifically illustrating how tourists’ emotional responses differ regarding human-oriented versus nature-oriented attractions, and sight-oriented versus marker-oriented attraction.

### *6.3 Behavioral difference*

Tourists are more likely to remember events or objects that involve a high level of interaction (Wang, 1999; Tsaur et al., 2006). While Type A (nature-sight) attractions are heavily associated with different behavioral engagements (e.g., “walk”, “sit”, “stroll”, “watch” and “visit”), Type C (human-sight) attractions have fewer types of behaviors with a focus on “tour” and “guide”. Although the word “walk” appears frequently in London attractions, the meanings of “walk” recalled by tourists were very different from nature-sight attractions to human-sight attractions. Walking at nature-sight attractions is referred to relaxing strolls, accompanied by small conversations with fellow travelers, and pleasant encounters with wildlife such as squirrels and birds during the walk. Conversely, walking at human-sight attractions was mentioned as tours in the buildings to see different exhibitions, while walking at human-marker attractions refers to the movement of tourists through the city and visiting iconic city landmarks (Wearing & Foley, 2017).

Tourist behavioral engagement in MTEs can also be highly associated with the notion of time. Our findings show that tourists usually spend more time at human-sight attractions which require tourists to immerse themselves, browse through the exhibitions, engage with various organized activities and cognitively process information and knowledge about the attractions (Botti et al., 2008). The longer the tourists stay, the more support services are required, such as cafes and resting areas. Provided that these augmented products are of high quality, they can be transferred into positive MTEs. This is different for human-marker attractions, wherein tourists tend to have less immersive moments but respond with strong emotions at the sight, as marker attractions usually have iconic features which trigger tourists’ awe towards the view (Lew, 1987). Although tourists have not spent as long at human-marker attractions, there are still clear traces in MTEs, such as taking photos. At the same time, tourists feel satisfied to tick off the attractions from their must-visit list.



## 7. IMPLICATIONS AND LIMITATIONS

By demonstrating the full picture of MTEs of tourists who visited London, this study discovered key cognitive themes, emotional responses, and behavioral engagements in tourists' MTEs relating to different types of attractions. The findings highlight the importance of capturing the outstanding episodes of memories from the tourist-centric perspective, revealing important insights to DMOs.

### *7.1 Theoretical contributions*

By conceptually explaining and empirically showing how MTEs vary by different types of city attractions, this study contributes to existing tourism literature in several ways. Firstly, the study extends previous understandings of city attraction literature by developing a new attraction categorization tool that groups London attractions based on nature-human and sight-marker dimensions. Secondly, by categorizing city attractions into different types using an ideographic approach, the study highlights different compositions of MTEs in terms of cognitive processes, emotional responses and behavioral engagements across different types of attractions (Kim et al., 2012, Wearing & Foley, 2017). Although experiences are highly subjective and private, and are likely to vary due to different factors, such as time of visit, an individual's demographics, and whether people travel together, this study has argued that tourists' MTEs can be generalized to a certain degree based on attraction types. Finally, by demonstrating the in-depth differences of MTEs among the groups of attractions, the study encourages research to explore ways for attraction categorization so as to help generate profound understandings of MTEs across different types.

### *7.2 Managerial implications*

Analyzing key themes and concepts from online reviews provides stakeholders in the tourism industry with prominent insights of tourists' cognitive understanding, emotional response and behavioral engagement regarding different types of attractions. Realizing the strong

association between the depth of cognitive processing and an individual's memory (Craik & Lockhart, 1972; Brandt et al., 2006), the key themes of MTE tell us what tourists find most interesting, what they do, and how they feel in relation to different types of attractions in a city. The findings also show that the same moment of memory for one particular event (e.g., admission price) may have different meanings. Managed wisely, this can be important for MTEs as well. For example, while free of charge world-famous attractions (e.g., the British Museum and the National Gallery) can lead to tourists being amazed to find the best value of their trip, this does not mean that expensive tickets will necessarily put off tourists. When the price is associated with events or facilities that tourists value highly, it can still be a memorable cue (e.g., the Free Beefeater tour guide or the Crown Jewels at the Tower of London). Hence, we argue that free or paid-entry can be stimuli of MTEs either way, but the importance lies at how the marketing and management team create values that match the price and expectations.

Protecting the distinctiveness of MTEs is crucial for tourism planning and destination/ attraction management and marketing (Wearing & Foley, 2017). When developing and managing tourism attractions in the city, we recommend that city tourism planners and attraction managers explore and identify the unique patterns of existing attractions and organize them in a way that is easy for tourists to visit based on time allocation and transport accessibility. Being provided with a clear idea of what a tourist can see and do and giving an indication of the amount of time required, tourists can plan their route and arrange their priorities accordingly. Hence, there should be a series of attractions in a city that are responsible for facilitating tourists' mobility from one site to another and bringing more interactions among the attractions themselves, local people and tourists. Along the belt of the walkable attractions, the organization of iconic landmarks and nature sightseeing of the city plays a crucial role in connecting different places and creating various aspects of the MTE.

Although this study tries to discover the MTEs based on clusters of attractions in London, we have to admit that other cities such as Paris, New York and Bangkok have their unique value proposition. Hence, we expect cities of different sizes to have their own tourism positioning and may have an unbalanced composition of various attractions due to their existing inheritance (e.g., culture, geographic location, history, religion, political importance). The tourism experience in our study is not replicable elsewhere. Second, our analysis is based on the top ten most commented attractions from a social media platform, and we do not jump to the conclusion that they are the only places that tourists' MTEs are based on. There may be other less commented attractions that are as important in forming an individual's travel experience. For example, the theme "Buckingham Palace" is not on the list of top ten but is one of the main themes has been mentioned frequently in reviews concerning nature-sight attractions. Third, from the methodological perspective, due to limitations of Leximancer, we only analyzed reviews that were written in English. Tourists writing in other languages may have had different experiences in London. Therefore, the generalizability of our study may be limited without deviance in the sample. Moreover, our study can be subject to self-selection bias because of the use of TripAdvisor.

## References:

- Anderson, D., & Shimizu, H. (2007). Factors shaping vividness of memory episodes: Visitors' long-term memories of the 1970 Japan World Exposition. *Memory, 15*(2), 177–191. <https://doi.org/10.1080/09658210701201312>
- Appel, M., & Richter, T. (2010). Transportation and need for affect in narrative persuasion: A mediated moderation model. *Media Psychology, 13*(2), 101–135. <https://doi.org/10.1080/15213261003799847>
- Atkinson, R. C., & Shiffrin, R. M. (1968). Human Memory: A Proposed System and its Control Processes. *Psychology of Learning and Motivation - Advances in Research and Theory, 2*(C), 89–195. [https://doi.org/10.1016/S0079-7421\(08\)60422-3](https://doi.org/10.1016/S0079-7421(08)60422-3)
- Ballantyne, R., Packer, J., & Falk, J. (2011). Visitors' learning for environmental sustainability: Testing short- and long-term impacts of wildlife tourism experiences using structural equation modelling. *Tourism Management, 32*(6), 1243–1252. <https://doi.org/10.1016/j.tourman.2010.11.003>
- Banerjee, S., & Chua, A. Y. K. (2016). In search of patterns among travellers' hotel ratings in TripAdvisor. *Tourism Management, 53*, 125–131. <https://doi.org/10.1016/j.tourman.2015.09.020>
- Bosangit, C., Hibbert, S., & McCabe, S. (2015). “If I was going to die I should at least be having fun”: Travel blogs, meaning and tourist experience. *Annals of Tourism Research, 55*, 1–14. <https://doi.org/10.1016/j.annals.2015.08.001>
- Botti, L., Peypoch, N., & Solonandrasana, B. (2008). Time and tourism attraction. *Tourism Management, 29*(3), 594–596. <https://doi.org/10.1016/j.tourman.2007.02.011>
- Brandt, K. R., Gardiner, J. M., & Macrae, C. N. (2006). The distinctiveness effect in forenames: The role of subjective experiences and recognition memory. *British Journal of Psychology, 97*(2), 269–280. <https://doi.org/10.1348/000712605X73685>

- Brewer, W. F. (2010). Memory for randomly sampled autobiographical events. In U. Neisser & E. Winograd (Eds.), *Remembering Reconsidered: Ecological and Traditional Approaches to the Study of Memory* (pp. 21–90). Cambridge University Press.  
<https://doi.org/10.1017/cbo9780511664014.004>
- Brunner-Sperdin, A., Peters, M., & Strobl, A. (2012). It is all about the emotional state: Managing tourists' experiences. *International Journal of Hospitality Management*, *31*(1), 23–30. <https://doi.org/10.1016/j.ijhm.2011.03.004>
- Bull, P., & Church, A. (2001). Understanding urban tourism: London in the early 1990s. *International Journal of Tourism Research*, *3*(2), 141–150.  
<https://doi.org/10.1002/jtr.296>
- Cacomo, J. L. Solonandrasana, B. (2002). Réflexions autour du Concept d'Attraction Touristique: Analyse et Taxonomie. *Revue de Recherche En Tourisme UQAM (Canada)*, *3*, 68–71.
- Chen, H., & Rahman, I. (2018). Cultural tourism: An analysis of engagement, cultural contact, memorable tourism experience and destination loyalty. *Tourism Management Perspectives*, *26*, 153–163. <https://doi.org/10.1016/j.tmp.2017.10.006>
- Church, A., & Frost, M. (2004). Tourism, the global city and the labour market in London. *Tourism Geographies*, *6*(2), 208–228. <https://doi.org/10.1080/1461668042000208462>
- Clawson, M., & Knetsch, J. (1966). *Economics of outdoor recreation*. Johns Hopkins University Press.
- Coelho, M. de F., Gosling, M. de S., & Almeida, A. S. A. de. (2018). Tourism experiences: Core processes of memorable trips. *Journal of Hospitality and Tourism Management*, *37*, 11–22. <https://doi.org/10.1016/j.jhtm.2018.08.004>
- Cohen, E. (1979). A Phenomenology of Tourist Experiences. *Sociology*, *13*(2), 179–201.  
<https://doi.org/10.1177/003803857901300203>

- Cooper, C. P. (1981). Spatial and Temporal Patterns of Tourist Behaviour. *Regional Studies*, 15(5), 359–371. <https://doi.org/10.1080/09595238100185351>
- Coudounaris, D. N., & Sthapit, E. (2017). Antecedents of memorable tourism experience related to behavioral intentions. *Psychology and Marketing*, 34(12), 1084–1093. <https://doi.org/10.1002/mar.21048>
- Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11(6), 671–684. [https://doi.org/10.1016/S0022-5371\(72\)80001-X](https://doi.org/10.1016/S0022-5371(72)80001-X)
- Edwards, D., & Griffin, T. (2013). Understanding tourists' spatial behaviour: GPS tracking as an aid to sustainable destination management. *Journal of Sustainable Tourism*, 21(4), 580–595. <https://doi.org/10.1080/09669582.2013.776063>
- Edwards, D., Griffin, T., & Hayllar, B. (2008). Urban Tourism Research. Developing an Agenda. *Annals of Tourism Research*, 35(4), 1032–1052. <https://doi.org/10.1016/j.annals.2008.09.002>
- Ghosh, V. E., & Gilboa, A. (2014). What is a memory schema? A historical perspective on current neuroscience literature. In *Neuropsychologia* (Vol. 53, Issue 1, pp. 104–114). Pergamon. <https://doi.org/10.1016/j.neuropsychologia.2013.11.010>
- Hayllar, B., Griffin, T., & D., E. (2008). *City Spaces-Tourist places: Urban Tourism Precincts*. Butterworth-Heinemann.
- Hayllar, Bruce, & Griffin, T. (2005). The precinct experience: A phenomenological approach. *Tourism Management*, 26(4), 517–528. <https://doi.org/10.1016/j.tourman.2004.03.011>
- Hernández, J. M., Santana-Jiménez, Y., & González-Martel, C. (2021). Factors influencing the co-occurrence of visits to attractions: The case of Madrid, Spain. *Tourism Management*, 83, 104236. <https://doi.org/10.1016/j.tourman.2020.104236>
- Hoch, S. J., & Deighton, J. (1989). Managing What Consumers Learn from Experience.

- Journal of Marketing*, 53(2), 1. <https://doi.org/10.2307/1251410>
- Hu, N., Zhang, T., Gao, B., & Bose, I. (2019). What do hotel customers complain about? Text analysis using structural topic model. *Tourism Management*, 72, 417–426. <https://doi.org/10.1016/j.tourman.2019.01.002>
- Hycner, R. H. (1985). Some guidelines for the phenomenological analysis of interview data. *Human Studies*, 8(3), 279–303. <https://doi.org/10.1007/BF00142995>
- Jenks, M., Kozak, D., & Takkanon, P. (2008). *World Cities and Urban Form: Fragmented, Polycentric, Sustainable?* Routledge.
- Johnston, R., & Kong, X. (2011). The customer experience: A road-map for improvement. In *Managing Service Quality: An International Journal* (Vol. 21, Issue 1, pp. 5–24). Emerald Group Publishing Limited. <https://doi.org/10.1108/09604521111100225>
- Keltner, D., & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion. In *Cognition and Emotion* (Vol. 17, Issue 2, pp. 297–314). Cogn Emot. <https://doi.org/10.1080/02699930302297>
- Kim, J. H. (2010). Determining the factors affecting the memorable nature of travel experiences. *Journal of Travel and Tourism Marketing*, 27(8), 780–796. <https://doi.org/10.1080/10548408.2010.526897>
- Kim, J. H. (2014). The antecedents of memorable tourism experiences: The development of a scale to measure the destination attributes associated with memorable experiences. *Tourism Management*, 44, 34–45. <https://doi.org/10.1016/j.tourman.2014.02.007>
- Kim, J. H., Ritchie, J. R. B., & McCormick, B. (2012). Development of a Scale to Measure Memorable Tourism Experiences. *Journal of Travel Research*, 51(1), 12–25. <https://doi.org/10.1177/0047287510385467>
- Kladou, S., & Mavragani, E. (2015). Assessing destination image: An online marketing approach and the case of TripAdvisor. *Journal of Destination Marketing and*

- Management*, 4(3), 187–193. <https://doi.org/10.1016/j.jdmm.2015.04.003>
- Knutson, B. J., Beck, J. A., Kim, S. H., & Cha, J. (2007). Identifying the dimensions of the experience construct. *Journal of Hospitality and Leisure Marketing*, 15(3), 31–47. [https://doi.org/10.1300/J150v15n03\\_03](https://doi.org/10.1300/J150v15n03_03)
- Ladkin, A., Fyall, A., Fletcher, J., & Shipway, R. (2007). London tourism: A “post-disaster” marketing response. *Journal of Travel and Tourism Marketing*, 23(2–4), 95–111. [https://doi.org/10.1300/J073v23n02\\_08](https://doi.org/10.1300/J073v23n02_08)
- Larsen, S. (2007). Aspects of a Psychology of the Tourist Experience. *Scandinavian Journal of Hospitality and Tourism*, 7(1), 7–18. <https://doi.org/10.1080/15022250701226014>
- Leask, A. (2016). Visitor attraction management: A critical review of research 2009–2014. In *Tourism Management* (Vol. 57, pp. 334–361). Elsevier Ltd. <https://doi.org/10.1016/j.tourman.2016.06.015>
- Leiper, N. (1990). Tourist attraction systems. *Annals of Tourism Research*, 17(3), 367–384. [https://doi.org/10.1016/0160-7383\(90\)90004-B](https://doi.org/10.1016/0160-7383(90)90004-B)
- Lew, A. A. (1987). A framework of tourist attraction research. *Annals of Tourism Research*, 14(4), 553–575. [https://doi.org/10.1016/0160-7383\(87\)90071-5](https://doi.org/10.1016/0160-7383(87)90071-5)
- Li, F., & Ryan, C. (2020). Western guest experiences of a Pyongyang international hotel, North Korea: Satisfaction under conditions of constrained choice. *Tourism Management*, 76, 103947. <https://doi.org/10.1016/j.tourman.2019.07.001>
- Li, Y., Yang, L., Shen, H., & Wu, Z. (2019). Modeling intra-destination travel behavior of tourists through spatio-temporal analysis. *Journal of Destination Marketing and Management*, 11, 260–269. <https://doi.org/10.1016/j.jdmm.2018.05.002>
- MacCannell, D. (1976). *The Tourist: A New Theory of the Leisure Class*. Macmillan.
- Masberg, B. A., & Silverman, L. H. (1996). Visitor Experiences at Heritage Sites: A Phenomenological Approach. *Journal of Travel Research*, 34(4), 20–25.



<https://doi.org/10.1177/004728759603400403>

Mehmetoglu, M. (2007). Typologising nature-based tourists by activity - Theoretical and practical implications. *Tourism Management*, 28(3), 651–660.

<https://doi.org/10.1016/j.tourman.2006.02.006>

Mehmetoglu, M., & Abelsen, B. (2005). Examining the visitor attraction product: A case study. *Tourism Analysis*, 9(4), 269–284. <https://doi.org/10.3727/108354205789807201>

Morgan, M., & Xu, F. (2009). Student travel experiences: Memories and dreams. *Journal of Hospitality and Leisure Marketing*, 18(2–3), 216–236.

<https://doi.org/10.1080/19368620802591967>

Pearce, P. (1998). Marketing and management trends in tourist attractions. *Asia Pacific Journal of Tourism Research*, 3(1), 1–8. <https://doi.org/10.1080/10941669908722002>

Pine, J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), 97–105.

Pretes, M. (1995). Postmodern tourism. The Santa Claus Industry. *Annals of Tourism Research*, 22(1), 1–15. [https://doi.org/10.1016/0160-7383\(94\)00026-O](https://doi.org/10.1016/0160-7383(94)00026-O)

Ritchie, J. R. B., Tung, V. W. S., & Ritchie, R. J. B. (2011). Tourism experience management research: Emergence, evolution and future directions. *International Journal of Contemporary Hospitality Management*, 23(4), 419–438.

<https://doi.org/10.1108/09596111111129968>

Schweinsberg, S., Darcy, S., & Cheng, M. (2017). The agenda setting power of news media in framing the future role of tourism in protected areas. *Tourism Management*, 62, 241–252. <https://doi.org/10.1016/j.tourman.2017.04.011>

Servidio, R., & Ruffolo, I. (2016). Exploring the relationship between emotions and memorable tourism experiences through narratives. *Tourism Management Perspectives*, 20, 151–160. <https://doi.org/10.1016/j.tmp.2016.07.010>

- Shachar, A., & Shoal, N. (1999). Tourism in Jerusalem: A Place to Pray. In D. Judd & S. S. Fainstein (Eds.), *The Tourist City* (pp. 198–211). Yale University Press.
- Shoal, N., & Raveh, A. (2004). Categorization of tourist attractions and the modeling of tourist cities: Based on the co-plot method of multivariate analysis. *Tourism Management*, 25(6), 741–750. <https://doi.org/10.1016/j.tourman.2003.09.005>
- SimilarWeb. (2021). *Top Travel and Tourism Websites in the World*.  
<https://www.similarweb.com/top-websites/category/travel-and-tourism/travel-and-tourism/>
- Skavronskaya, L., Scott, N., Moyle, B., Le, D., Hadinejad, A., Zhang, R., Gardiner, S., Coghlan, A., & Shakeela, A. (2017). Cognitive psychology and tourism research: state of the art. In *Tourism Review* (Vol. 72, Issue 2, pp. 221–237). Emerald Group Publishing Ltd. <https://doi.org/10.1108/TR-03-2017-0041>
- Smith, A. E., & Humphreys, M. S. (2006). Evaluation of unsupervised semantic mapping of natural language with Leximancer concept mapping. *Behavior Research Methods*, 38(2), 262–279. <https://doi.org/10.3758/BF03192778>
- Sun, M., Zhang, X., & Ryan, C. (2014). Perceiving tourist destination landscapes through Chinese eyes: The case of South Island, New Zealand. *Tourism Management*, 46, 582–595. <https://doi.org/10.1016/j.tourman.2014.08.010>
- Townsend, A. R. (1992). The attractions of urban areas. *Tourism Recreation Research*, 17(2), 24–32. <https://doi.org/10.1080/02508281.1992.11014647>
- Tsaur, S. H., Lin, Y. C., & Lin, J. H. (2006). Evaluating ecotourism sustainability from the integrated perspective of resource, community and tourism. *Tourism Management*, 27(4), 640–653. <https://doi.org/10.1016/j.tourman.2005.02.006>
- Tseng, C., Wu, B., Morrison, A. M., Zhang, J., & Chen, Y. chen. (2015). Travel blogs on China as a destination image formation agent: A qualitative analysis using Leximancer.

- Tourism Management*, 46, 347–358. <https://doi.org/10.1016/j.tourman.2014.07.012>
- Tung, V. W. S., & Ritchie, J. R. B. (2011). Exploring the essence of memorable tourism experiences. *Annals of Tourism Research*, 38(4), 1367–1386.  
<https://doi.org/10.1016/j.annals.2011.03.009>
- Vittersø, J., Vorkinn, M., Vistad, O. I., & Vaagland, J. (2000). Tourist experiences and attractions. *Annals of Tourism Research*, 27(2), 432–450. [https://doi.org/10.1016/S0160-7383\(99\)00087-0](https://doi.org/10.1016/S0160-7383(99)00087-0)
- Wang, N. (1999). Rethinking authenticity in tourism experience. *Annals of Tourism Research*, 26(2), 349–370. [https://doi.org/10.1016/S0160-7383\(98\)00103-0](https://doi.org/10.1016/S0160-7383(98)00103-0)
- Wearing, S. L., & Foley, C. (2017). Understanding the tourist experience of cities. *Annals of Tourism Research*, 65, 97–107. <https://doi.org/10.1016/j.annals.2017.05.007>
- Wei, C., Zhao, W., Zhang, C., & Huang, K. (2019). Psychological factors affecting memorable tourism experiences. <https://doi.org/10.1080/10941665.2019.1611611>.  
<https://doi.org/10.1080/10941665.2019.1611611>
- Woodside, A. G. (2010). Brand-consumer storytelling theory and research: Introduction to a *Psychology & Marketing* special issue. *Psychology & Marketing*, 27(6), 531–540.  
<https://doi.org/10.1002/mar.20342>
- Wu, M. Y., Wall, G., & Pearce, P. L. (2014). Shopping experiences: International tourists in Beijing's Silk Market. *Tourism Management*, 41, 96–106.  
<https://doi.org/10.1016/j.tourman.2013.09.010>
- Zhang, H., Wu, Y., & Buhalis, D. (2018). A model of perceived image, memorable tourism experiences and revisit intention. *Journal of Destination Marketing and Management*, 8, 326–336. <https://doi.org/10.1016/j.jdmm.2017.06.004>