EFFECTS OF INSTAGRAM ON VISITORS' PLACE ATTACHMENT TO THE HISTORIC CITY CENTRE IN GEORGETOWN, PENANG

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ABSTRACT

Sustaining place identity has become a great challenge today due to the globalization and fast urbanization of cities. Historic city centres are vital cores of place identity because they hold meaning and special memories. However, most revitalization and conservation approaches for historic urban areas focus on physical aspects and undermine the meaning of place and significance of people's attachment to place. Due to the ever-increasing social media usage, people-place bonds have also been transformed irreversibly. This paper examines the effect of Instagram usage on visitors' place attachment to historic city centres by incorporating destination image, place involvement, and collective memory as mediators in a proposed research model. The data is collected from 41 visitors of Georgetown, Penang in Malaysia. The results' analysis reveals that Instagram usage has a positive effect on destination image, place involvement and collective memory, which lead to place attachment. Theoretical contribution of the study involves a model that adopts the destination image, place involvement and collective memory concepts testing their effect as on visitors' place attachment to historic city centres. Second, this study demonstrates the utility of six-dimensional place attachment. Findings also benefit urban practitioners for enhancing place identity in heritage revitalization projects.

1. INTRODUCTION

Historic city centres are the main elements of a city's identity because they have witnessed the events of a community for a long time. They are crucial foundations of urban character due to their tangible and intangible aspects in terms of meaning and value. Due to the rapid urbanization, some historic city centres went through decay and abandonment leading to physical deterioration and safety problems. Moreover, core elements of cities' identities started to diminish. Today, most modern cities experience loss of identity as a result of rapid urbanization and uniform planning (Saleh, 1998). Nevertheless, revitalization of historic places generally focusses on physical aspects and neglect place attachment whereas it can actually restore place identity (Ujang, 2010). Place meaning is an essential aspect of community and self-identity (Hull, Lam & Vigo, 1994). For a sustainable preservation strategy of historic urban areas, place attachment and sense of place should be utilized (Martokosumo & Zulkaidi, 2015) because they ensure continuity over time (Scanell &

Gifford, 2010). This way, conservation and development can happen simultaneously resulting in a balance.

In order for historic city centres to stay alive and be a part of cities' daily lives, both visitors and locals need to perceive these places as attractive and use them actively. Place attachment potentially results in return visitations (Ujang & Shuhana, 2008) and people develop place attachment stronger when destinations are attractive (Dredge, 2010). This means visitors' place attachment to historic city centres is significant in terms of locals' income since such centres are main tourism attractions in a city.

Internet and social media usage transformed the way we perceive our environment and our interaction with place irreversibly, hence the meaning and identity of places (Houghton, 2010). Although the discussions about new technologies' effect on place is increasing, research about the impact of popular social media tools, such as

Instagram, on place attachment to urban heritage sites stays under explored (Dameria et al., 2018; van der Hoeven, 2019). Lack of research about how social media effects human-place bonds sometimes results in less meaningful and less memorable places (Felasari et al., 2017). Therefore, this research focuses on the link between Instagram and place attachment process in Georgetown historic city centre in Penang, Malaysia. Instagram, as a powerful social media tool, may enhance visitors' place attachment to historic city centers resulting in attracting more visitors and hence bringing more income for the locals.

2. LITERATURE REVIEW

2.1 Place Attachment

Place attachment is an affective bond between a person and a specific place (Hernandez et al., 2007) or a notion defining how people identify with and value specific places (Moore & Graefe, 1994). Place attachment concept has been found relative in many research areas including environmental psychology (Low & Altman, 1992), geography (Tuan, 1977), and tourism (Lee et al., 2012; Moore & Graefe, 1994). Especially in the context of touristic attraction points, place attachment has been used to investigate people's behaviours and perceptions towards destinations (Gross & Brown, 2008; Han et al., 2015; Lee et al., 2012; Loureiro, 2014; Moore & Graefe, 1994; Prayag & Ryan, 2012; Ramkissoon, Smith, & Weiler, 2013; Xu & Zhang, 2016). It is a complex phenomenon that has many facades such as functional, affective and cognitive dimensions (Stedman, 2002; Halpenny, 2010; Kyle, Graefe, & Manning, 2005; Moore & Graefe, 1994; Ramkissoon et al., 2013; Williams & Vaske, 2003; Xu & Zhang, 2016) with an influential character on human perceptions, choices and behaviours (Harris, Brown, & Werner, 1996).

Scannel and Gifford's tripartite place attachment model, as seen in Figure 1, is a comprehensive model reflecting the concepts studied by previous authors and it frames the psychological place attachment process occurring between people and places. In this research, place dependence, place identity, affective attachment, social bonding, and interactional past and potential dimensions of place attachment are used to operationalize theoretical concepts for investigating the psychological process of place attachment.

Figure 1: *Tripartite Conceptual Model for Place Attachment (Scannel and Gifford, 2010)*

The most widely acknowledged place attachment dimensions are place identity (Kyle, Bricker, Graefe, & Wickham, 2004; Moore & Graefe, 1994; Vaske & Kobrin, 2001) and place dependence (Williams & Roggenbuck, 1989; Vaske & Kobrin, 2001; Williams et al., 1992). In addition to these two main dimensions, four other dimensions are investigated in literature, which are affective attachment (Kals, Schumacher, & Montada, 1999; Ramkissoon et al., 2013), social bonding (Hammitt, Kyle, & Oh, 2009; Scannell & Gifford, 2010), interactional past and interactional potential (Chen, Dwyer & Firth, 2014).

The relationship between an individual's self-identity and a place forms the basis of place identity (Kyle et al., 2004; Moore & Graefe, 1994). Through their experiences in a specific place, visitors' symbolic and emotional meaning given to that place develops and their identification with place evolves (Moore & Graefe, 1994; Williams et al., 1992). Place dependence, another dimension of place attachment, is more focused on functional fulfilment ability of a place (Gross & Brown, 2008). It is concerned with how well a place can satisfy a visitor's goals (Jorgensen & Stedman, 2001) and in the case of destinations, this refers to the unique physical, social and cultural resources the place can offer (Vaske & Kobrin, 2001). Affective attachment, the third dimension, describes the sentimental bonds between a place and individuals (Jorgensen & Stedman, 2001; Kals et al., 1999) and this emotional attachment is beyond judgements and cognition (Jorgensen & Stedman, 2001). Kyle et al. (2005) define social bonding, the fourth dimension of place attachment, as the social relation between people with other individuals, cultures and communities in a place. When a person experiences a place with friends and family, place-based social bonding emerges (Scannell & Gifford, 2010). The last two dimensions of place attachment are interactional past and interactional potential, which are rooted in experiencing a place, in other words interaction with place (Milligan, 1998; Stamboulis & Skayannis, 2003). Since interaction with place can create meaningful memories and adding meaning to place, place attachment can occur after experiencing a place or it can strengthen (Chen, Dwyer & Firth, 2014). Interactional past dimension refers to the strong memories about a place, whereas interactional potential is more about an individual's expectations from a place based on gathered information about that place (Chen, Dwyer & Firth, 2014; Milligan, 1998). While interactional past dimension can be dynamic due to the reinterpretive nature of memories (Katovich & Hintz, 1997), interactional potential is more focused on physical features of a place since setting an expectation based on physical aspects is easier (Milligan, 1998).

Although place attachment is mostly attributed to locals that live in a specific place, visitors are also capable of generating place attachment (Kaltenborn & Williams, 2002; Brown & Raymond, 2007). They attain meaning to places as well and develop emotional bonds to places, that are significant to them (Brown & Raymond, 2007). Nevertheless, visitors' place attachment is more complicated

when compared to locals because locals naturally have bonds with places that they consider their homes whereas place is temporary for visitors (Zhou & Xu, 2009).

The afore-mentioned dimensions of place attachment have taken place in tourist/visitor behaviour studies in literature and have been found relative to visitors' place attachment (Williams et al., 1992; Xu & Zhang, 2016; Lee et al., 2012; Hatipoglu, 2014). However, research investigating the relationship between Instagram usage and place attachment including all six dimensions remains limited. To the best of the author's knowledge, no studies have incorporated six-dimensional place attachment in examining the effect of Instagram usage on visitors' place attachment to historic city centres. This research investigates the six-dimensional place attachment as a second-order factor construct.

2.2   Instagram Usage and Place Attachment

Today, we experience a reality that co-exists with a digital media layer (Miller & Horst, 2013). Digital media irreversibly changed how we perceive and experience place. Physical space and digital space are linked and co-dependently experienced realities (Graham, 2004). Digital media tools, such as social media, affect people-place bonds because they transform people's ideas about a place. Nevertheless, most of the studies exploring human-place relationships focus on the non-mediated physical place experiences.

Instagram is a free place-based social media application among other social media channels. It can be used to share visuals instantly with a location tag and digital hashtags (Hanan & Putit, 2014). Users can also interact with other users by private messages, liking others' posts and commenting on them. Instagram posts are like story narratives consisting of individuals' experience layers (Cauchi-Santoro, 2016). There are 3.8 billion social media users as of 2021 and 1.2 billion of them are Instagram users (Tankovska, 2021). 500 millions of them use Instagram daily (Aslam, 2021). The number of social media users in urban settings is considerably high (Duggan & Brenner, 2013).

Instagram posts are used as mediators for emotion and thought expressions, which has the possibility of affecting other users' feelings. The platform has a location-based nature and it provides social interaction between users, which as a result helps increase place attachment (Tussyadiah & Fesenmaier, 2009). In the case of historic city centres, Instagram can alter or generate feelings towards place and therefore, it is an important asset to explore in the context of place attachment.

According to the three-staged temporal process theory of Craig-Smith and French (1994), the anticipatory phase is the stage before visiting a place. Sometimes, a bond with a particular place may occur even before visiting that place (Lee, 1999; Moore and Graefe, 1994; Halpeny, 2006). At this stage, one collects information

about the place to be visited and forms an image of the specific destination based on the gathered information. According to Chi and Qu's tested model of destination image (2008), some of the underlying dimensions that constitute destination image are travel environment, entertainment and events, historic attractions, travel infrastructure, and accessibility. In previous studies, destination image has been found effective on place attachment (Veasna, Wu & Huang, 2013; Prayag & Ryan, 2011; Fan, Qiu, & Wu, 2014; Lemos, 2008). Destination image of a place starts to form before the visit and it influences emotions towards a place because mental imagery imitates the real world (Holmes & Mathews, 2005) and it lets visitors make a judgement about whether the place will fulfil their goals and values (Plunkett, 2013). Visitors generally take a place's media image as its real character **(**Avraham & Ketter, 2008) and digital media significantly impacts people's perception of place in the anticipatory phase (Zook et al., 2004). Thus, the following hypothesis is formulated:

Hypothesis 1: *Destination image positively influences visitors' place attachment to revitalized historic city centres.*

The second stage of the temporal process is the experiential phase where the visitor personally interacts and engages with the physical environment and experiences the social and cultural aspects of the place (Jennings & Nickerson, 2006). Experiencing a place and doing activities in a place is the major part of understanding a place (Cresswell, 2004). This is also relevant to attributing personal meaning to place. In touristic places, especially in heritage sites (Hwang, Lee & Chen, 2005), activity involvement level is directly proportional with the level of visitors' place attachment (Bricker & Kerstetter, 2000; Mowen, Graefe & Virden, 1997). In the modern world, people's place experience is inseparable from the layer digital media. Almost all social media users share their place-based memories, or thoughts and emotions about places on social media tools, such as Instagram. Furthermore, on some occasions, sharing place experience on Instagram is the only reason one visits a particular place. "Instagram Worthy" spots are sought after by visitors and they are valuable assets for touristic points, such as historic city centres. On a personal level, taking pictures at a place, creating Instagram worthy frames and sharing that place experience on social media is a satisfying activity that the visitors get involved with. Instagram gives people the opportunity to express their identification with a place in the experiential phase. Thus, the following hypothesis is formulated:

Hypothesis 2: *Place involvement positively influences visitors' place attachment to revitalized historic city centres.*

The third and last stage is the after-visit phase called reflective phase. At this stage, one remembers the memories about visiting a specific place (Meng, 2006). Memories give meaning to our experiences, hence to places we experience (Lim, 2000). A place is a space with

meaning, so memory is significantly important for a meaningful space. When a group of individuals collectively remembers an experience they shared, collective memory occurs (Lewicka, 2008) and the identity of place is valued (Hague, 2005). Historic places in urban settings are venues for collective memory and they are the core of city identity (Misztal, 2003). Such places that nestle collective memory enhance people's feelings towards the city, and therefore contributes to place attachment (Borden et al., 2002). It is also common to share memories of experiences in that place via social media platforms in this phase (Buhalis, 2003). Especially Instagram acts as a visual place-based collective memory archive in today's trends. The platform also allows users to socially interact with each other about shared memories. This process significantly contributes to place's meaning and therefore to place attachment. Thus, the following hypothesis is formulated:

Hypothesis 3: *Collective memory positively influences visitors' place attachment to revitalized historic city centres.*

During the three temporal phases, which are anticipatory (before visit), experiential (during visit), and reflective (after visit) phases (Jennings & Nickerson, 2006), Instagram is a powerful tool to affect people-place bonds due to its impact on interaction with place.

Interaction with place starts in the anticipatory phase via other individuals' shared experiences and memories on Instagram. This helps to shape the destination image a person has and bonding with place starts. In the experiential phase, Instagram acts as a tool to create a richer place experience because it contributes to the act of meaning making practices. Visitors try to capture their experiences to share on Instagram and this gives them a purpose that enhances the place involvement, hence the place attachment. In the after-visit stage, which is reflective phase, people remember their memories about a certain place and continue sharing them on Instagram in addition to social interaction about that place with other individuals on Instagram (Simon, 2012). Instagram almost acts as a virtual diary to store attached emotions and memories of a place. Thus, the following hypotheses are formulated:

Hypothesis 4: *Instagram usage, as a second-order factor, positively influences visitors' destination image of a revitalized historic city centre.*

Hypothesis 5: *Instagram usage, as a second-order factor, positively influences visitors' physical experience of a revitalized historic city centre.*

Hypothesis 6: *Instagram usage, as a second-order factor, positively influences visitors' collective memory of a revitalized historic city centre.*

Based on previous literature, it is obvious that Instagram usage impacts place attachment in every stage of place experience. Although there are studies investigating the relationship between destination image and place attachment, place involvement and place attachment, and collective memory and place attachment, the mediating roles of these constructs on the relationship between Instagram usage and place attachment have not been tested in the literature. Therefore, this research proposes that Instagram usage affects place attachment process via the notions of destination image, place involvement and collective memory. Thus, the following hypotheses are formulated:

Hypothesis 7: *Instagram usage, as a second-order factor, positively influences visitors' place attachment to revitalized historic city centres.*

Hypothesis 8: *The effect of Instagram usage on visitors' place attachment is mediated by destination image.*

Hypothesis 9: *The effect of Instagram usage on visitors' place attachment is mediated by physical place experience.*

Hypothesis 10: *The effect of Instagram usage on visitors' place attachment is mediated by collective memory.*

Based on the hypotheses, a research model is presented in Figure 2. This model was developed based on place attachment literature, with its six sub-dimensions, and extended by the mediators, which are destination image, place involvement and collective memory for investigating the effect of Instagram usage on place attachment. Thus, this model investigates not only the direct effect of Instagram usage on place attachment, but also the indirect effect of Instagram usage on place attachment via destination image, place involvement, collective memory.
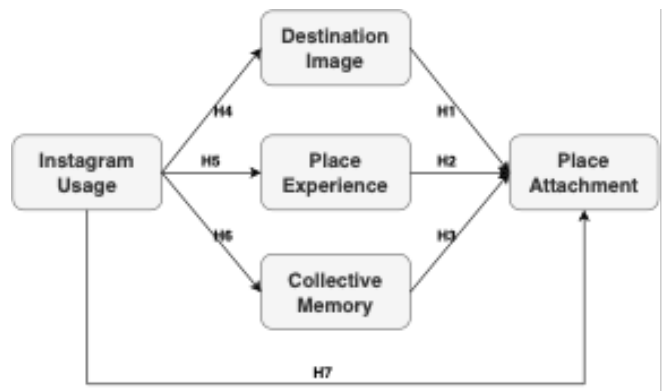

Figure 2: Proposed Research Model (Author)

3.   METHOD

The paper is based on a pilot study with 41 respondents in the UNESCO protected historic city centre of Georgetown, Penang in Malaysia, which is regarded as a main touristic attraction point with a distinct character. Data collection is done by using a questionnaire survey consisting of the respondents' profile, engagement pattern (frequency and purpose of visit), destination image, place involvement, collective memory and place attachment variables.

3.1 Study Site

The study area for this study is the core zone of Georgetown historic city centre, which is set by UNESCO in 2008. The core zone is roughly 1 km2 and it is bordered by Lorong Love to the Northwest, Jalan Perangin to the Southwest, and Straits of Malacca on the Northeast (Malaysian State Party, 2008). With more than 1700 historic buildings, Georgetown historic city centre has a distinct character and it is highly popular on Instagram due to the street art on its streets.

Figure 3: *Georgetown Historic City Centre Core Zone (Penang Global Tourism, nd)*

Georgetown historic city centre is a very convenient case for this study as it nestles a very significant part of the city identity and yet it is still going through change and still evolving. It receives high number of visitors because it is a main touristic attraction as well as a main commercial centre. Such historic centres are generally the cores of collective memory that reflect how people perceive their city's character. Thus, it is a very suitable example for examining the effects of Instagram on visitors' place attachment to historic city centres.

3.2 Measurement of Variables

This research employed a questionnaire survey to conduct a causal research design. The employed questionnaire had the aim to examine the causal link between Instagram usage and visitors' place attachment via mediators of destination image, place involvement and collective memory within the time frame of temporal process. The measurement items of destination image consisted of 7 sub-dimensions (spatial presence, spatial imagery, travel environment, entertainment and events, historic attraction, infrastructure and accessibility), which were adopted from previous literature (Go & Gretzel, 2016; Chi & Qu, 2008). Place involvement constructors including attraction, centrality, social bonding, identity affirmation and identity expression were

measured using a 13-item scale adopted from Kyle et. al.'s (2005) Involvement Scale. Measures for collective memory consisted of ten items and is inspired by the research of Tussyadiah and Fesenmaier's (2009) about mediation of tourist experiences and Chen, Dwyer and Firth's (2014) subscale of Place Memory. Visitors' place attachment had six sub-dimensions, which are place identity, place dependence, affective attachment, social bonding, place memory and place expectation, and the 21-item scale to measure this construct is adopted from Chen, Dwyer and Firth's (2014) place attachment dimensionality scale. All items were measured with a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). 5-point Likert scales are easily understood by the respondents and they increase the response rate as well as the accuracy of the results. This research takes the Cronbach's Alpha score of .70 as the measurement reliability threshold value based on previous literature (George & Mallery, 2003; Kline, 2010; Delmas & Toffel, 2008).

Variables	Cronbach's Alpha Scores
Destination Image	0.89
Place Involvement	0.93
Collective Memory	0.91
Place Attachment	0.95

Table 1: *Cronbach Alpha Scores of Variables*

The survey had 74 items in total and the overall internal consistency of the survey was determined with Cronbach's alpha score of .95 based on the pilot study results.

3.3 Measurement Models

The latent constructs to be measured in this study were the variables of place attachment and the mediating variables of destination image, place involvement and collective memory. All questions in the survey asked the respondents were based on the posts they saw about Georgetown on Instagram.
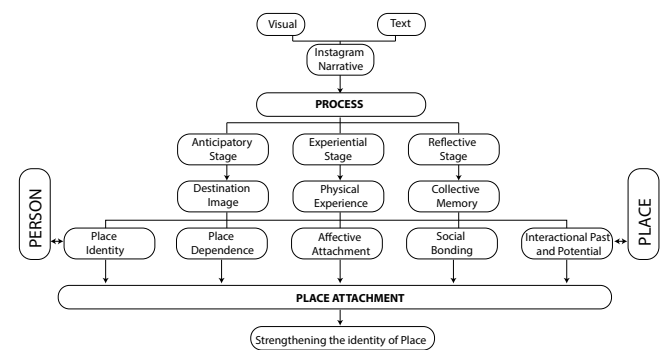

Figure 4: *Conceptual Framework, by the author*

The variable of destination image is the first measurement model shown in Figure 13. Destination image was also a mediator latent construct between Instagram narratives and place attachment. It was measured with seven constructors and 30 indicators. The constructors consisted of spatial presence, spatial imagery, travel environment, entertainment and events, historic attractions, infrastructure and accessibility.
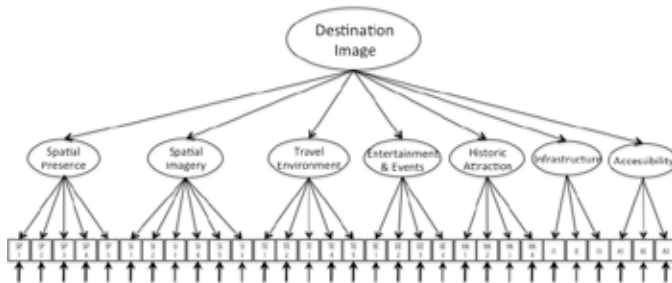
Figure 5: Measurement model for the variable of destination image, by the Author

Figure 14 depicts the variable of place involvement. Place involvement was also a mediator latent construct between Instagram narratives and place attachment. It was measured with five constructors and 13 indicators. The constructors consisted of attraction, centrality, social bonding, identity affirmation and identity expression.
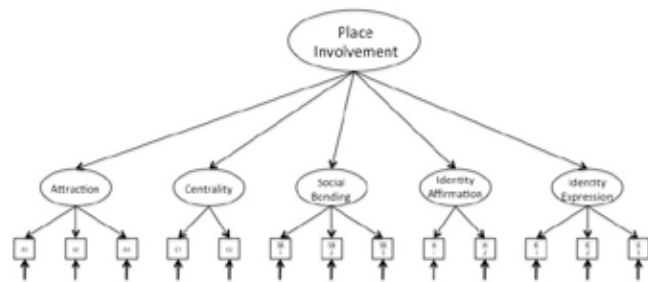

Figure 6: Measurement model for the variable of place involvement, by the Author

Figure 15 illustrates the variable of collective memory. Collective memory was also a mediator latent construct between Instagram narratives and place attachment. It was measured with 10 indicators.
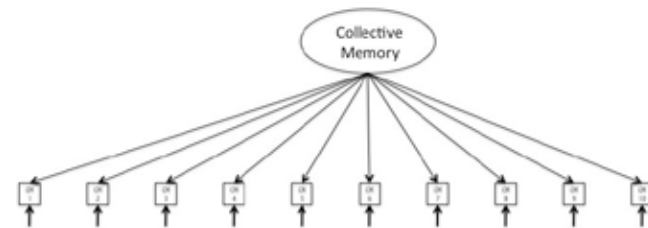

Figure 7: Measurement model for the variable of collective memory, by the Author

Figure 16 depicts the variable of place attachment. It was measured with six constructors and 21 indicators. The constructors consisted of place identity, place dependence, affective attachment, social bonding, place memory and place expectation.
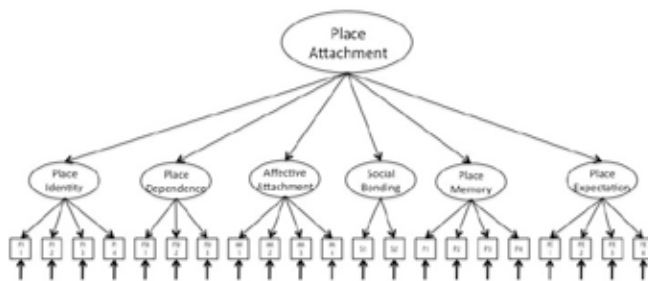

Figure 8: Measurement model for the variable of place attachment, by the Author

3.4 Data Collection

The population of this study are the visitors of Georgetown historic city center, who are active Instagram users and above the age of 18. A web-survey was conducted for the pilot study and respondents were reached through Facebook groups related to travel. The survey link was posted in English with a brief explanation to specific Facebook groups. Then the group admins approved researcher's post. During Covid-19 outbreak, electronic surveys were an efficient and practical data collection instrument and international limitations were also decreased. The total number of respondents is 41 but the usable results were 38, since 3 of the respondents were not active Instagram users.

This pilot study was constructed to enhance a covariance structural model aiming to examine the causal relationship between latent variables with a sample size of 200 based on previous literature (Kline, 2011; Boomsma & Hoogland, 2001; Sideridis, Simos, Papanicolaou & Fletcher, 2014). However, for this paper, the pilot study results are presented from 38 samples before the final survey.

3.5 Data Analysis

In order to provide a simple summary of the collected data, descriptive analysis is used because inferential statistical tests are not suitable in a pilot study (Leon, Davis & Kraemer, 2011). Performing only descriptive statistics and reliability tests should be preferred (Bunn et al., 1998; Bauhofer et al., 2001; Carfoot et al., 2002). In order to give a general idea about the frequency distribution of the results and examine the main characteristics of the data, descriptive analysis of each variable is discussed briefly.

4. FINDINGS

4.1 Characteristics of Respondents

Table 1 provides the frequency distribution for the participants' characters. 61% of the participants were between the ages of 31-45. The remaining majority of the age groups were between 18-30 (12.2%) and 46-60 (24.4%). Only 1 respondent was between the ages of 61-75. According to the results, females constitute the larger part of the participants with 58.5%, while 41.5% of the participants were male. While international participants constitute the majority of the respondents, the remaining group is from Malaysia (24.4). The occupations of respondents varied extensively while respondents' levels of education were distributed evenly.

Characteristics		N (41)	%
Age	18-30	5	12.2
	31-45	25	61
	46-60	10	24.4
	61-75	1	2.4
Gender	Female	24	58.5
	Male	17	41.5
Origin	Malaysian	10	24.4

Characteristics		N (41)	%
	International	31	75.6
Education	Up to High School	1	2.4
	High School	5	12.2
	Bachelor's Degree	14	34.1
	Master's Degree	13	31.7
	PhD	8	19.5

Table 1: Respondents' Characters

4.2 Pattern of Engagement

The next 5 questions of the survey aimed to understand the respondents' familiarity with Georgetown and how frequently they use Instagram. Majority of the respondents (42,1%) stated that they spent more than 4 days in Georgetown and their purpose of visit was tourism (55,3%). 39,5% of the respondents claimed to be moderately familiar with Georgetown. Those who use Instagram daily constituted the majority of respondents (71,1%), while 18,4% claimed to be using Instagram a few times a week. The results briefly depict that daily Instagram usage among Georgetown visitors is high.

4.3 Destination Image Variable

This section gives descriptive information on destination image variable of the study. Destination image is a mediating variable, which mediated the relationship between Instagram narratives and place attachment in the anticipatory phase. This variable of the study was measured by multiple constructors with a total of 30 items to identify information about participants' destination image of Georgetown historic city centre.

The first 5 questions measured the spatial presence perception of respondents based on the Instagram narratives they saw about Georgetown. Majority of the respondents stated that they felt a spatial presence above average. For example, the majority of respondents (55,2%) chose to mark 4 and above on the 5-point scale indicating that they "had a sense of being there" while looking at Georgetown's visuals on Instagram. In all 5 questions, the vast majority of the responses were marked 3 and above, weighing towards extremely agree.

The next 6 questions measured the spatial imagery of respondents based on the Instagram narratives they saw about Georgetown. Majority of the respondents answered 3 and above in the scale for all 6 questions. For example, the vast majority of respondents (84,2%) chose to mark 3 and above on the 5-point scale indicating that they had a precisely detailed image of the described surroundings in their minds while looking at Georgetown's visuals on Instagram.

The next constructor had 5 questions and measured how the respondents perceived the travel environment in Georgetown historic city centre based on the Instagram narratives they saw. The questions asked whether and to what extent the participants thought Georgetown had a safe, secure, clean and tidy environment, friendly and helpful local people, tranquil and restful atmosphere and pleasant weather. Majority of the respondents answered 4 and above in the scale for all 5 questions.

The next two constructors were Entertainment & Events and Historic Attraction and in total, they had 8 questions. The questions asked whether and to what extent the participants thought Georgetown had a variety of entertainment and events and historic attractions based on the Instagram narratives they saw. Majority of the respondents answered 4 and above in the scale for all 5 questions. For example, the vast majority of respondents (71,1%) chose to mark extremely agree on the 5 point scale indicating that they thought Georgetown offers memorable historic streets while looking at Georgetown's visuals on Instagram.

The following two constructors were Infrastructure and Accessibility and in total they had 6 questions. The questions asked whether and to what extent the participants thought Georgetown offered a variety of infrastructure and an accessible surrounding based on the Instagram narratives they saw. Majority of the respondents answered 4 and above in the scale for all 6 questions. For example, the vast majority of respondents (65,8%) indicated that they thought Georgetown offers a wide variety of shop facilities and Georgetown is a walkable place while looking at Georgetown's visuals on Instagram.

4.4 Place Involvement Variable

This section gives descriptive information on place involvement variable of the study. Place involvement is a mediating variable, which mediated the relationship between Instagram narratives and place attachment in the experiential phase. This variable of the study was measured by multiple constructors with a total of 13 items to identify information about participants' involvement with Georgetown historic city centre.

The first 3 questions are for the attraction constructor and ask the respondents to what extent sharing visuals of places in Georgetown is important to them. According to the results, those who thought sharing visuals of places that they visit on Instagram is one of the most enjoyable things they did in Georgetown constituted a larger group of participants (57,9%) than the ones who didn't agree. However, the ones who thought sharing visuals of the places that they visit on Instagram is one of the most satisfying things that they do are smaller in number than the ones who do not.

The following two questions were under the centrality constructor and they asked how much sharing visuals of visited places on Instagram occupies a central role in respondents' lives. Unexpectedly, majority of the respondents didn't agree that this activity is central to their lives.

The next constructor had 3 questions and measured to what extent sharing visuals of visited places on Instagram effects social bonding of respondents with their friends. In all 3 questions, the answers were almost equally distributed between 1 to 5 on the scale. For example, 36,8% of the participants chose to mark 4 and above for the statement "I enjoy talking to my friends about sharing visuals of places that I visit on Instagram" while 42,1% of the participants chose to mark 2 and below.

The following two constructors were Identity Affirmation and Identity Expression and in total they had 5 questions. The questions asked whether and to what extent the participants can affirm and express their identities via the place visuals they share on Instagram. While majority of the responses (52,6%) weighed towards disagreement indicating that they can't really be themselves when they share visuals of places that they visit on Intagram, a larger portion of respondents (68,5%) marked 3 and above on the scale stating that they identify with the people who share visuals of visited places on Instagram.

4.5 Collective Memory Variable

This section gives descriptive information on collective memory variable of the study. Collective memory is a mediating variable, which mediated the relationship between Instagram narratives and place attachment in the reflective phase. This variable of the study was measured by a total of 10 items to identify information about participants' collective memory about Georgetown historic city centre based on their Instagram experience.

According to the results, those who thought sharing visuals on Instagram from Georgetown historic city centre after their visit helps them remember the place constituted the majority of participants (76,3% marked 4 and above). Two of the questions investigate whether and to what extent the respondents feel like they contributed to the collective memory of Georgetown historic city centre by sharing Instagram narratives. A larger portion of respondents feel they contributed to the collective memory while 92% marked 3 and above in the scale indicating that they feel like they have a common memory about Georgetown historic city centre when they see visuals on Instagram from there. It was also evident that seeing and sharing Instagram visuals from Georgetown helped the participants remember the place fondly and as a unique experience.

4.6 Place Attachment Variable

Place attachment is an endogenous variable with multiple dimensions and this variable of the study was measured by multiple constructors with a total of 21 items to identify information about participants' attachment to Georgetown historic city centre.

The first 4 questions are for the place identity constructor and ask the respondents whether and to what extent they identify themselves with Georgetown historic city centre. According to the results, those who

identify themselves with Georgetown historic city centre constituted a larger group of participants (73,2% -marked 3 and above) than the ones who didn't identify with Georgetown. However, the ones who feel committed to Georgetown were distributed almost equally among the scale. Still, those who found Georgetown special are more than the ones who didn't.

The following 3 questions is for the place dependence constructor and ask the respondents whether and to what extent they feel dependant on Georgetown historic city centre. According to the results, those who prefer Georgetown historic city centre over other places for the activities that they enjoy constituted a larger group of participants (79% -marked 3 and above) than the ones who didn't. However, the ones who stated that Georgetown is their favourite place to visit and the ones who claimed to miss Georgetown when they are away from it were distributed almost equally among the scale. This is expected since the respondents are only visitors in Georgetown and do not have much history there.

The next two constructors are affective attachment and social bonding. The affective attachment constructor has 4 questions that ask the respondents whether and to what extent they feel affectively attached to Georgetown historic city centre. 63,1% of the respondents marked 3 and above when they stated their emotional attachment to Georgetown and its settings while 65,8% of the respondents claimed (marked 3 and above) that they feel a sense of belonging to Georgetown. However, the answers to the question that asked the respondents if they have a special connection with Georgetown were distributed almost equally among the scale. This can again be due to the fact that the participants are visitors, not residents. The case was similar for the 2 questions of social bonding constructor.

The last two constructors were place memory and place expectation with 8 questions. These two constructors are taken from Chen, Dwyer and Firth (2014) and they aim to gain information about the place attachment of respondents based on a short-term stay. Each constructor had 4 questions. Majority of the respondents stated that their memories in Georgetown are unique and unforgettable. 78,9% of the respondents marked 3 and above when they were asked if they felt connected to Georgetown due to their experiences there. Place expectation constructor questions' answers also weighed towards the positive side of the scale (3 and above). For example, those who thought Georgetown will create unique experiences for them in the future constituted the majority of the respondents (94,8% marked 3 and above).

5. DISCUSSION

5.1 Summary of Findings

In regard to the dimensionality of place attachment, this research confirms the six dimensions of place attachment, which are place identity, place dependence, place affection, social bonding,

interactional past and interactional potential in the context of revitalized historic city centres. Findings show that if visitors have a favourable destination image (H1), positive place involvement (H2), and strong collective memory (H3), then they are likely to develop place attachment towards the visited historic city centre. Additionally, results show that visitors' destination image (H4), place involvement (H5), and collective memory (H6) are highly and positively affected by Instagram usage. At this stage, the pilot study results show that the relationship between Instagram usage and place attachment is mediated by destination image (H8), place involvement (H9), and collective memory (H10). As a final conclusion based on the findings, Instagram usage positively influences visitors' place attachment towards historic city centres (H7).

5.2 Theoretical Contributions

Studies that investigate people-place relationships have taken place in literature for decades. The current research contributes to the urban studies literature by expanding the knowledge about visitors' place attachment to historic city centres. Two major academic contributions including specific theoretical discussions are addressed by this research.

First, this study creates a model that adopts the destination image, place involvement and collective memory concepts to test their effect as mediators of Instagram usage on visitors' place attachment in the context of historic city centres. The results show that the three concepts directly and positively affect visitors' place attachment, which is an expected outcome. These findings also match previous literature (Fan, Qiu, & Wu, 2014; Mowen, Graefe & Virden, 1997; Borden et al., 2002). In addition, this research also confirms that Instagram usage positively influences destination image, place involvement and collective memory. Previous research has limited studies about Instagram usage's effect on people-place relationships despite the increasing role of the social media tool in people's daily lives. The present research's results confirm that the created model can be applied to visitors' place attachment particularly to historic city centres. To the best of our knowledge, this research is the first attempt to employ destination image, place involvement and collective memory in an extended framework to explain the role of Instagram usage on visitors' place attachment to historic city centres.

Second, this study demonstrates the utility of six-dimensional place attachment (Chen, Dwyer & Firth, 2014), whereas existing studies on place attachment, although beneficial, do not fully consider this model and do not integrate it into a precise theoretical framework. This approach allowed an in-depth understanding of Instagram usage's impact on visitors' relationships with the place they have visited. The results of the research are in-line with several researchers' previous arguments (Kyle et al., 2005; Ramkissoon et al., 2013; Chen, Dwyer & Firth, 2014).

Another significant theoretical contribution of this research is the

indirect influence of Instagram usage on place attachment rather than a direct link between the two variables. Place attachment development is a complex psychological process, in which multiple drivers play roles. Based on the results of this study, the indirect effect of Instagram usage may point to a hierarchal structure of place attachment formation. More precisely, Instagram usage strengthens visitors' destination image, place involvement and collective memory, thereby increasing the likelihood of place attachment development. This cognitive process will occur hierarchically.

Due to the globalized world, which is losing place meaning and identity, understanding place attachment has become crucial in the context of historic city centre revitalizations. This research recognizes that the meaning nestled in historic city centres is the driving force behind the city identity, as well as the touristic development. Given the unique character of historic city centres that carries local cultural values, the research's proposed model supports the idea that Instagram usage enables visitors to produce personal meaning and develop place attachment. Visitors in Georgetown historic city centre identify with the place (Halpenny, 2010), are satisfied with the place's facilities (Jorgensen & Stedman, 2001), form sentimental bonds with the place (Kals et al., 1999), have social bonds with the place (Hidalgo & Hernandez, 2001), have strong interactional past and potential perceiving about the place (Chen, Dwyer & Firth, 2014), and thereby form place attachment. In understanding the influence of Instagram usage on place attachment process, the proposed model is a step forward.

5.3 Practical Contributions

The findings of the research provide practical information for destination managers and tourism professionals. The results indicate that visitors' place attachment to Georgetown is strongly affected by Instagram usage via mediators of destination image, place involvement, and collective memory. When developing destination marketing strategies, considering the afore-mentioned factors can be beneficial. Instagram can be utilized as a handy tool to induce place attachment within the three phases of visiting a place. Marketing promotions may target potential visitors, current visitors and potential re-visitors by using Instagram and generating favourable perceptions of the place. This can result in long-term economic benefits and sustainability.

Due to the increasing usage of social media, specifically Instagram, interacting with place brought about new opportunities. This research can also benefit urban practitioners in the context of historic city centre revitalizations for enhancing place identity and keeping city identity alive. Today, the ever-increasing effect of communication technologies on place is evident, yet utilizing this within urban practices is still a debate (Dameira et al., 2018). This model framework can be utilized in heritage revitalization projects, which are mostly focused on physical aspects, to incorporate Instagram usage influenced place attachment process in the approach. Attachment to places acts as a supporting element in making places and preserving meaning.

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