Recall and Post-trip Evaluation of Tourist Destinations; the Effects of Travel Order

Thesis submitted by

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The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council (NHMRC) *National Statement on Ethical Conduct in Human Research*, 2007. The proposed research study received human research ethics approval from the James Cook University Human Research Ethics Committee.

Approval Numbers: H6631, H6858 and H7231.

Samira Zare Date

Statement of the Contribution of Others

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Abstract

The multifaceted and complex connection between memory and tourist experiences is the subject of investigation in this thesis. The remembered experience and the perception that it creates, provide a foundation for future decision-making, recommendation, and evaluation. Therefore, staging memorable and engaging experiences is key to creating competitive advantage for the businesses in the experience economy world. Contemporary studies of memorable tourism experiences have, however, emphasised the connection between memory and behavioural intentions and given less attention to the heuristic biases involved in experience recall and evaluation tasks. This thesis, therefore, draws attention to a ubiquitous yet overlooked memory bias: the order of presentation.

The study has chosen the most common multi-episode tourist experience as its context, which is travelling to multiple destinations in a single trip. The spatial positions of destinations and their effects on tourist behaviours have been the subject of multiple investigations. However, the visit order or the temporal position of destinations has surprisingly never been studied before. This research, seized the opportunity to explore the possibility of order effects as significant influences on memorability of experiences by conducting a foundation study at the destination level. The research goal was to examine the existence and the nature of order effects on the recall and evaluation of destinations that were visited in a sequence. To fulfil this objective, three studies were designed to explore the relationships between order, recall and judgment. In study one these relationships were investigated from the tour guides' perspectives. Next, tourists' views were considered in study two. Then the moderating effects on order-recall-judgment were hypothesised and tested in study three.

The thesis is divided into seven chapters. Chapter one provides background to the research and its structure. Chapter two reviews the literature and reveals the path to the hypotheses under investigation. Chapter three provides thorough information about the study context (cultural destinations in Iran) and the design steps used in the research. As the topic of order effects in the context of destinations was novel, and there were no clear previous research efforts on which to build, the researcher elaborates on the requirements for the quasi-experimental design of this study and the ways to fulfil these factors in chapter three.

Chapter four covers the first study of this thesis that was conducted with the tour guides. A sample of 40 professional tour guides in Iran were selected as the closest observers of the phenomenon of order effects. They were asked to report on their observations of how different visit orders affect the memorability of destinations. Direct questions were asked and a set of hypotheses about order-recall and well as recall-judgment relationships were examined. The clear and compelling answers about the existence and strength of order effects supported by logistic regression analysis provided initial credible evidence for the following studies.

Chapter five presents study two with a more sophisticated empirical investigation into the order effects. A number of hypotheses and sub-hypotheses were explored directly by assessing responses from a sample of 269 international tourists to Iran. The hypotheses were built on the reviewed literature about serial position effects and memory-based judgments. The existence of order effects on the recall and evaluation of destinations were confirmed through statistical analysis. Patterns of primacy in recall and recency in judgment were revealed through cross tabulation of the results.

Chapter six reports on study three in which the possibility of travel length and destination attractiveness as moderating factors on the order effects were explored. Logistic regression showed that destination attractiveness moderates the order-recall and order-judgment relationships. The second hypothesis about the effect of travel length influencing mentioned relationships was not supported in this investigation.

Chapter seven synthesizes the findings from the three studies and outlines the theoretical and practical implications. The limitations of this research are addressed and multiple avenues for future studies are suggested.

Research outputs from this thesis work

This thesis was formatted in accordance with the James Cook University thesis guidelines for a Doctor of Philosophy. Under these guidelines, PhD candidates are encouraged to publish parts of their thesis before submitting it for examination. Hence, parts of this thesis have been presented at academic conferences and published in peer-reviewed publications which are summarised in the list below.

Manuscripts under preparation
Zare, S., & Pearce, P. (to be submitted by October 2019). Order effects in visiting multiple destinations. Intended submission to the *Journal of Travel Research.* **Zare, S., & Murphy, L. (to be submitted by November 2019).** Benchmarking Iranian tourist destinations. Intended submission to the *Journal of Destination Marketing and Management.* **Zare, S., & Tung, V. (to be submitted by January 2020).** Memorable tourism experiences, systematic review of a decade of research. Intended submission to the *Annals of Tourism Research.*
Peer reviewed journal articles
Zare, S., & Pearce, P. (2018). Order effects and multi-city visits: tour guides' perspectives. *International Journal of Tourism Cities*, *4*(2), 194-206. **Pearce, P. L., & Zare, S. (2017)**. The orchestra model as the basis for teaching tourism experience design. *Journal of Hospitality and Tourism Management*, *30*, 55-64.
Book chapters
Zare, S. (2019). Remembering. In Pearce, P.L. (Ed.), *Tourist Behaviour, The Essential Companion* (pp. 322-364). Cheltenham, England: Edward Elgar.
Peer reviewed conference papers
Zare, S. & Pearce, P. (2018). Tourists' recall and evaluation of destinations; the effects of visit order [online]. In: Young, Tamara (Editor); Stolk, Paul (Editor); McGinnis, Gabrielle. CAUTHE 2018: Get Smart: Paradoxes and Possibilities in Tourism, Hospitality and Events Education and Research. *Newcastle, NSW: Newcastle Business School, the University of Newcastle, 2018: 397-407*
Refereed conference presentations
Zare, S. & Pearce, P. L. (2018, February). Tourists' recall and evaluation of destinations; the effects of visit order. *Presenter at Council for Australian Tourism and Hospitality Education (CAUTHE), New Castle, Australia).* **Zare, S & Riasati, A. (2017, June).** Culture and memorable tourism experiences; the retrospective gaze of Iranians. *Presenter at 15th APacCHRIE conference, Bali, Indonesia.*

Thesis aligned publications
Zare, S. (2019). Cultural influences on memorable tourism experiences. *Anatolia, 30 (3),* 316-327. **Zare, S. & Pearce, P. (2019).** Encounters with Iranian Culture, In Correia, A., Kozak, M., & Rodrigues, A. I. (Eds.) *Experiencing Persian Heritage (Bridging Tourism Theory and Practice, Vol. 10)* (pp. 43-63), Bingley, England: Emerald.
Thesis aligned conference presentations
Pearce, P.L. & Zare, S (2019, February). Let me tell you a quick story; connecting mundane authenticity and knowledge emotions. *Co-author at CAUTHE 2019, Cairns, Australia.* **Zare, S. & Pearce, P. L. (2018, July).** Knowledge emotions and tourism: what surprises, confuses or interests you in a trip to Iran?. *Presenter at SMAANZ- CAUTHE 2018 HDR conference, Brisbane, Australia.* **Zare, S. & Pearce, P. L. (2016, December).** Interpreting cultural variations among tourists' savoring processes. *Presenter at Consumer Behavior in Tourism Symposium 2016, Brunico, Italy.* **Pearce, P.L. & Zare, S (2016, December).** James Holman, the famous blind tourist; a clinical contribution to tourism and memory studies. *Co-author at Consumer Behavior in Tourism Symposium 2016, Brunico, Italy.*

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Chapter One

Introduction and Overview of the Research

Chapter One Contents

1.1 Introduction

In the current tourism world, many efforts are made to sell experiences as consumable commodities. The shift from the service to the experience economy has been built on a range of disciplines such as business, psychology, drama and performing art. The value of experience consumption, therefore, has been viewed from different aspects. For tourism businesses, the potential earnings from innovative approaches to the travel product has been the prominent incentive to move towards this kind of economy. The experience consumption idea is widespread across different levels of the tourism industry (Andersson, 2007; Oh, Fiore, & Jeoung, 2007; Otto & Ritchie, 1996; Quan & Wang, 2004). It can involve designing travel packages with innovative additions to manage complex tourism economies such as cities, and countries.

In this contemporary form of business, the demand side is as dynamic as the supply aspect. Tourists are active co-producers and co-performers of the experiences they consume, and users' perspectives are critical for the successful design, and sustainability of experiences. The focus on the role of tourists as active participants rather than spectators has shifted the attention of tourism researchers to a more dynamic view of experience (Ek, Larsen, Hornskov, & Mansfeldt, 2008).

From the supply side, it is known that staging a memorable, exciting and engaging destination experience is the key to financial prosperity. Many studies offer evidence of how providing memorable experiences can lead to revisiting and recommending (Barnes, Mattsson & Sørensen, 2016; Kim, 2018; Kim, Ritchie & McCormic, 2012; Marschall, 2012; Zhang, Wu & Buhalis, 2018). Therefore, attention has been paid to defining memorability in the destination experience context, scales have been constructed and recommendations made. However, before putting too much weight on all types of memorability feedback as the signs of satisfaction, revisit intentions and recommendations, there is arguably a need for more research about the complicated processes of recall and evaluation of the experienced destinations and the ways tourists form conclusions. Therefore, as an overarching topic, the researcher intends to study these processes in depth and suggest implications for the better design of tourism experiences, especially at the destination level.

1.2 Research Background

There is an ever-increasing amount of research on designing experiences especially memorable tourism experiences. To understand the area of design science, the decomposition of the experience seems to be the first step (Fesenmaier, & Xiang, 2016b). And to deconstruct experiences, the ways experiences are defined, examined and described is a key starting point. Different views about tourism experiences and their components will be reviewed in detail in the next chapter.

In the context of this study, deconstruction is explained with the following example. Consider a trip to Italy; the experience may start by landing in Rome (point A in space) on a Saturday morning (point A in time) and ends in Venice (point D in space) on the next Sunday (point D in time) with some visits to other cities such as Florence and Milan, (points B and C) during certain points in the intervening period. Therefore, it can be seen that this experience (like most travel experiences) is highly structured in two dimensions of space and time. Every trip starts at a point in time and ends in another one and it may later be remembered and evaluated for the overall or moment-by-moment inputs depending on the context of required recall and judgment. Each event occurring in this experience has an associated temporal and spatial position. From the tourists' perspective, the overall or instant moments have their own cognitive, emotional, sensory and behavioural connections to the time and space of the experience. Therefore, the events, feelings and thoughts related to this trip have a sequence both in time and in space. In addition, these two dimensions are important for the actual experience and the remembered one.

Upon their return, tourists might be asked to recall and evaluate their experience for their family and friends or as feedback to tourism operators. High value might be placed on these post-travel assessments both by future tourists and by tourism providers. At the time of the feedback, the human mind is unable to recall all the moments in a trip but individuals do remember the episodes and chunks of an experience (Zacks & Swallow, 2007). In a multi destination trip (a week in different cities of Italy), it is likely that people, classify their chunks of memory based on the location where some events happened. For example, in a multi destination trip, tourists may summarize their trip as *"when we landed in **Rome**, it was rainy so we didn't do much, but when we went to **Venice** the weather was lovely so we did lots of walking*". However, in a single destination trip (one week in a

resort in Bali) tourists may narrate the experience based on the time. For instance: "*On the **first day** we went to a spa as we were jet-lagged and couldn't go out. **Next day**, however we went to the beach and had a relaxing day".* Therefore, the simple structure of space and time with the embodied sequence of events creates experiences, their recall and evaluations.

Despite the fact that all human activities occur in a specific location and time, the temporal–spatial properties of experiences have not been investigated thoroughly (Hägerstrand, 1970; Shoval, McKercher, Birenboim, & Ng, 2015). In tourism, some attention has been paid to the travel experience as a process in space and spatial behaviour of tourists have been investigated in order to manage destinations (Edwards & Griffin, 2013; Modsching, Kramer, Gretzel, & Hagen, 2006; Page & Hall, 2014; Shoval et al., 2015). Nevertheless, the importance of the sequence in time (or tourists' temporal behaviours) has been rarely explored. Therefore, in this thesis, the patterns of individual memory of a destination in a multi-city visit with a certain sequence will be compared against the same combination of cities with different sequences of visiting these destinations. Implications for better design and recall of destinations are then drawn.

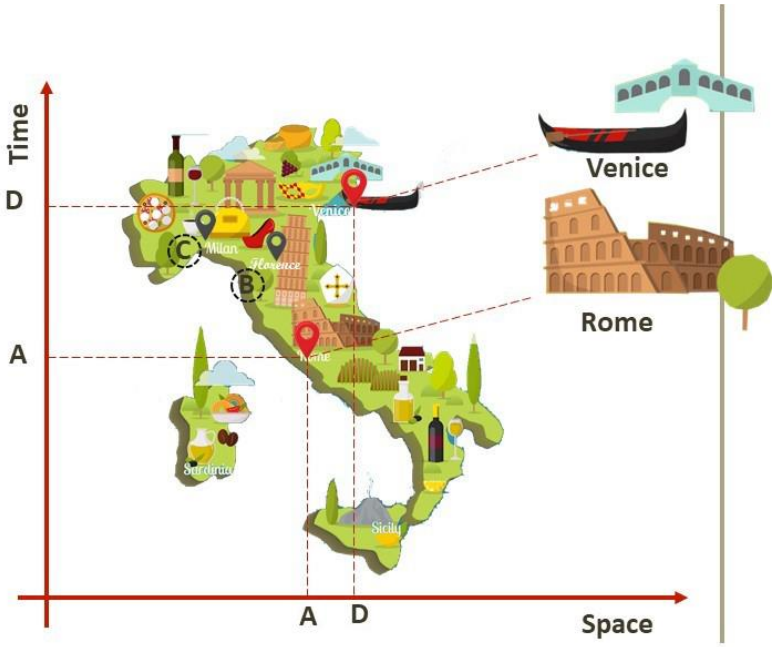


Figure 1.1 A typical tourist experience displayed in two dimensions of time and space

1.3 Research objectives

As already mentioned, most holiday trips not only have a clear beginning, middle and end, but also unfold as a planned sequence of visiting a set of destinations or sites. In particular, many packaged offerings by tour companies consist of a sequence of visits to key places within cities. The scale, sophistication and order of such tours varies considerably. The special interest in this study is the importance of order in visiting multiple and similar destinations (for example cultural cities) in a relatively short holiday period. The content focus here is the order of visiting cities as representations of other tourism offerings with sequences. In the context of this study similarity in the attractiveness of the cities that are going to be recalled and evaluated when visited in a sequence, will be defined based on grouping through some primary and secondary data in chapter three.

The examination of the effects of order on human memory and judgment has taken place in different contexts. Researchers in psychology and consumer behaviour have examined order effects in relation to free recall of words, impression formation and evaluation of products (Ebbinghaus, 1902; Haugtvedt & Wegener, 1994; Kardes & Herr, 1990; Murphy, Hofacker, & Mizerski, 2006; Walls, Okumus, Wang & Kwun, 2011: Unkelbach & Memmert, 2014). In tourism and hospitality, some researchers have explored the effects of sequencing and position of items in designing such services as travel websites, restaurant menus and hotel online bookings. (Kim & Fesenmaier, 2008; Dayan & Bar-Hillel, 2011; Ert & Fleischer, 2014). Surprisingly perhaps, researchers have not systematically investigated the temporal order in which tourists visit a set of destinations such as cities. The opportunity to offer a novel contribution to the study of order effects in the tourism context can start from the investigation of visiting several destinations in a single trip. Results of this study can be one step forward in understanding the influence of sequence in memorability and favourability of destinations.

The researcher's goals are to examine if there is any preferential advantage for destinations in a sequence of visits to maximize memorability and favourability of those targeted destinations.

The objectives of the thesis are approached by focusing on two overarching questions for two kinds of respondents: tour guides (tourism phenomenon observers- etic view) and tourists (tourism phenomenon experiencers- emic view):

1) What is the relationship between order and recall in visiting destinations?
2) What is the relationship between order and Judgment in visiting destinations?

1.4 Definition of key terms

Throughout this work, the words memory and recall are used interchangeably. Evaluation and judgment both refer to the same concept of destination favourability assessment by the tourists. The terms position and order are also utilized interchangeably. Position in the context of this research refers to temporal position rather than spatial location. There are two common acronyms in this thesis, MTEs (memorable tourism experiences) and SPE (serial position effects). The detail definition and relevance of each of these key words will be presented in the following chapters.

In the literature review chapter, the term *tourism experience* has been used to refer to the broader concept of experience from the supply side (etic) but then the thesis has narrowed its focus on *tourist experience* to explore the actual users' perspective (emic), therefore, the latter term is employed from chapter three onwards.

1.4.1 Emic and ethics perspectives

Before the start of any academic investigation, the perspective taken by researchers and the way they approach the understanding of a topic needs to be explicitly acknowledged. This section, therefore, introduces the two pathways of emic and etic views and clarifies the stand of the current research.

The terms of emic and etic were first introduced by Pike (1954) who derived these words from the linguistic concepts of "phonetic" and "phonemic". Pike was an advocate for the emic approach himself and regarded the etic analysis merely as a means of access to emic point of views. The discussion on the implications of employing each of these two perspectives did not receive much attention until a decade later when an anthropologist, Harris (1964), strongly advocated that the etic approach is as important as emic. After years of discussion, current scholars believe it is necessary to employ both approaches to further advance knowledge. The terms can be explained as follows.

Etic. Etic perspectives involve the researchers' imposed categories and assessments and it requires scholars to adopt empirical analysis from outside the system. Therefore, etic

statements depend on the appropriate judgment by the community of scientific observers and a significant or meaningful finding does not merely depend on the researcher's opinion (Harris, 1964).

Emic. Emic views, however, require the researchers to approach the topic from within the system and from the participants' full frame of reference. To study behaviour from subjects' point of view, methods such as interviews, observation and self-report surveys are utilized to derive meanings and values (Pike, 1967).

Tourism research can benefit from an integrated use of emic and etic approaches. The emic view allows a deeper investigation of the ways tourists see their experiences no matter how these experiences may be seen as superficial to the observer or judges (Gottlieb, 1982; Pearce & Packer, 2013). The complementary nature of the two approaches, emic and etic, has been acknowledged by a number of scholars (Feleppa, 1986; Niblo & Jackson, 2004; Scoones, 1998; Warner, 1999).

1.5 Research and applied significance

Recollection is the final major phase of a travel experience (Clawson & Knetsch, 1966). The importance of creating tourist experiences that are better recalled and evaluated stems from the fact that past memories influence future behaviours (Chandralal & Valenzuela, 2013). Past travel memories have been found to be the source of information for a range of future behaviours such as choosing the next destination, recommending and revisiting (Hoch & Deighton, 1989; Kim, et al., 2012; Raju, & Reilly, 1980; Wirtz, Kruger, Scollon, & Diener, 2003). Understanding the effects of order in evaluation and judgment of not only tourist destinations but also different tourism and even hospitality products has far-reaching implications for the design and management of tourism destinations, services and products. The result of this thesis could be a start for using sequences smartly in constructing, managing and marketing tourism products.

The present interest in order effects and sequences are manifested in tourism in several ways. Cruises, walking tours, self- drive itineraries, and packages designed by travel agents are some of the arenas of tourism action where the tourist encounters the visited world through experiencing a sequence of units.

To select a company as an example, consider G Adventures as a global leader in small group tour experiences. Their offerings are more than 700 different tours to more than

100 countries in the world (G adventure, 2018). These travel itineraries include visiting a few cities in a country or a few countries in a region. From one side, these itineraries are written based on travel agents' knowledge of the geographical locations of the attractive cities, logistics and other convenient factors such as international airports, frequency of the flights from/to a certain destination and so on. From another side, tourists' feedback on their overall experience with the company, with each level of services (hotels, restaurants, tour guides, destinations visited) are sought after the trip. It is acknowledged that evaluation differences may exist within a group experiencing the same route and services. It is however argued that there is a certain level of control over the between group evaluation of tourists if they undertake different sequences of visits. In other words, tourists may display higher satisfaction and willingness to recommendation if they visit city A at the beginning rather than the end. The same implication is expected for the other comparable and sequenced components of a trip such as hotels, restaurants and so on.

As for the academic significance of order effect topic, several important implications can be anticipated. First, the topic of order effect in visiting destinations is a novel investigation in the contemporary direction of applying knowledge from other disciplines (psychology and consumer behaviour in this case). The implications of the theory of serial position effect and memory-based judgments, although established in other disciplines, has rarely been applied to tourism and has never been explored in the travel destinations context. Second, the quasi-experimental design required for this study is a contribution to the need to perform experimental studies in tourism to distinguish between what tourists say and what they actually do (Dolnicar & Ring, 2014). Third, as will be argued in the next chapter, there is a call for tourism scholars in memorable tourism experience research to advance knowledge on the retrieval phase of memory and its role to understand the post-travel behaviours of tourists such as evaluation. This gap will be developed in the following chapter by comparing how many studies have concentrated on memory links to decision making in the planning and on-site phases of travelling while the cognitive processes behind recollection have scarcely been studied (Tung & Ritchie, 2011a).

1.6 Research structure overview

A map of the connections and flow of the chapters in this thesis are indicated in Figure 1.2.

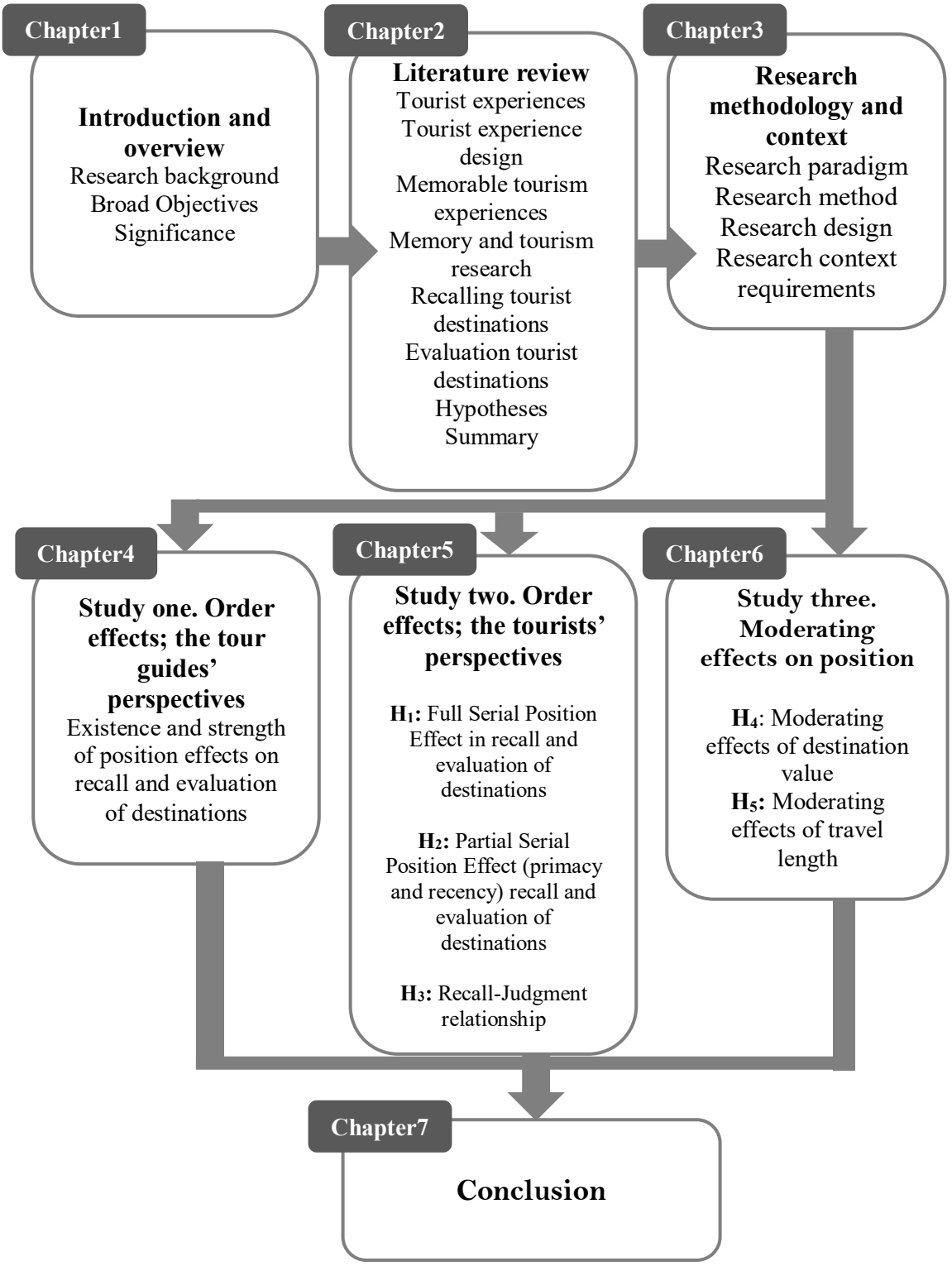


Figure 1.2 The linkages and content of the chapters in this thesis.

Chapter two

Theoretical Foundation and Literature Review

Chapter Two Contents

2.1 Introduction

The central concern of this chapter is to review the memory biases in tourist behaviours such as recall and evaluation of destinations. Previous work on tourist experiences, their sequenced design, their memorability and evaluation are therefore highlighted. Relevant connections are made between memory and tourist experiences from past and present research. Foundation theories of serial position effect and memory-based judgments are elaborated at the end of the chapter leading to the general hypotheses to be tested in this thesis. The chapter concludes with a summary of the relevance and importance of the current work.

2.2 Tourist experiences as episodic memories

Tourist experiences, as the essence of the travel industry, have been studied in the past three decades and they are central to the concepts of tourist satisfaction, loyalty, profitability and long-lasting memory (Bagdare, 2016; Kim & Fesenmaier, 2017). Researchers with different interests gradually came together around the idea of understanding tourist experiences as an essential step towards comprehending tourists and their behaviours. Holbrook and Hirschman (1982) and later Krippendorf (1987) developed the idea of consumption experience specifically for tourism. From Pearce (1988), Dann, (1996) Ryan (1997), Baerenholdt, Haldrup, Larsen, & Urry, (2002), Uriely, (2005) to Morgan, Lugosi & Ritchie, (2010) they all stressed different dimensions of tourist experiences. They popularized this expression to refer to a holiday or attraction visit. More contemporary interests were generated simultaneously or after these studies, offering other approaches to the study of tourist experiences including value creation and co-creation (Prebensen, Woo, & Uysal, 2014; Volo, 2009), the experience economy (Pine & Gilmore, 1998), and experience marketing (Schmitt, 1999).

Studies from a psychological lens, however, remain pivotal for the understanding of tourist experiences in the current thesis. Many researches have attempted to present perspectives in this domain (see McCabe, 2005; Ryan, 2010; Uriely, 2005; Walls et al., 2011; Jennings, Lee, Ayling, Lunny, Cater, & Ollenburg, 2009; Larsen, 2007; Pearce, 2011; Prebensen et al., 2014; Quan & Wang, 2004; Ritchie & Hudson, 2009; Tung, & Ritchie, 2011a). Among these contributions, some empirically based studies have led to conceptual understandings of tourist experiences (Larsen, 2007; O'Dell, 2007; Pearce,

2011; Vittersø, Vorkinn, Vistad, & Vaagland, 2000). For example, Larsen (2007) considered tourist experiences to be psychological phenomena based on individual experiences. He stated that tourist experiences are formed within the individuals by means of psychological processes, mainly memory operations. He proposed a definition where a tourist experience is regarded as "*a past personal travel event, emotionally strong enough to have entered long-term memory*" (p. 15). Larsen's definition shares important similarities with some other definitions of tourist experiences. For example, Tung and Ritchie (2011a) defined memorable tourism experiences (MTE) as: "*An individual's subjective evaluation and undergoing experience (i.e., affective, cognitive, and behavioural) of events related to his/her tourist activities which begins before (i.e., planning and preparation), during (i.e., at the destination), and after the trip (i.e., recollection)"*

The links Larsen, Tung and Ritchie are drawing to the concept of time and memory are central to the approach towards tourism experience in the current study. In these two definitions, there are also connections to the topic of emotions and individuals' evaluations. In terms of strong emotions, authors such as Schmitt (2003) and Pearce (2011) have identified affective components as one of multiple facets of tourist experiences. Pearce (2011) proposed that both ongoing and remembered experiences consist of a dynamic mix of cognitive, sensory, affective, social identity and behavioural components. His model is referred to as the orchestra model where a tourist experience is considered as an orchestra rising and falling in different instruments (components) as the musical piece (the tourism event) unfolds.

In the above conceptualization of tourist experiences, it is implicitly indicated that the actual tourist experiences are different from the remembered experiences (due to the reconstruction process in the memory). Previous researchers have also established that the individuals' evaluation of an experience is different from that of the actual experience. The German language has two separate single words, which identifies the distinction between the immediate experience (Erlebnis), and the remembered experience (Erlebnis) whereas it is harder to stress this point enough in English. In German, Erlebnis used to refer to the creation and consumption of immediate experiences while Erfahrung is the sum of experiences over time that is now considered as one level of prior experience, which may influence decision making and other travel behaviours (Seeler, 2018). The

foundation ideas were introduced and expanded by a Nobel laureate psychologist Daniel Kahneman and his colleagues (Tversky & Kahneman, 1973; Kahneman, 2011). They first provided evidence for physical and mental experiences (pleasure, pain, happiness or misery) to be different as they are experienced and later when they are remembered. Over decades, their studies established that what people feel at a certain moment, "moment utility", may not correspond with their individual's global evaluation of an entire episode in the past. Therefore, the remembered experience may not necessarily be reliable in predicting future behaviours. Another term introduced by Kahneman and his colleagues was "total utility". Total utility is derived from the moment-based approach of measuring the real time pleasure or pain experienced by the individual. Realizing that there is a contrast between remembered and overall experience prompts two different ways to view our experiences. One approach is to view the experiencing self and the other to acknowledge the remembering self. The experiencing self goes through a succession of moments while the remembering self keeps the overall memories. People make decisions based on their remembering self, therefore individuals' memories are heavily involved in the decision making, evaluation and recall. Therefore, if the "remembered utility" is maximized and directed towards the desirable outcome, tourism experiences can be managed favorably (Kahneman, 2011).

As it will be elaborated more in the online versus memory-based judgment discussion in this chapter, most evaluations of multi-episode real-life events follow either a normative (online) or heuristic model (memory-based). Normative models explain how people form moment-by-moment judgments of experiences while heuristic models assume that the computation of each moment does not determine the overall judgment (Simon, 1957; Tversky & Kahneman, 1973). People's judgments depend on mental shortcuts and segments that are not necessarily representing the whole experience (Miron-Shatz, 2009). Heuristic models have two important aspects; peak and end rule and duration neglect. Peak and end rule posits that evaluation and recall of an experience are based on when the events reached extreme intensity (peak sensation), and when it ended (Fredrickson & Kahneman, 1993; Tversky & Kahneman, 1973). Duration neglect states that people's overall evaluation of experiences have little to do with the duration of those experiences (Bell, Raiffa, & Tversky, 1988; Miron-Shatz, 2009).

An illustrative example of how these two rules create the overall conclusion is manifested in medical procedure studies, especially a famous colonoscopy experiment (Redelmeier & Kahneman, 1996; Redelmeier, Katz, & Kahneman, 2003). In a randomized trial, some participants experienced a typical colonoscopy, while for others the procedure was modified slightly to be longer but with less pain at the end. The subjects in the modified procedure evaluated their peak of pain with significantly lower average and they had a less painful memory of the procedure, and therefore, were more willing to return for further colonoscopy. This experiment and similar others revealed that although participants were aware of the duration of the longer event, they did not incorporate this into their judgments resulting in discrepancy between experience and evaluation (Kahneman, Fredrickson, Schreiber, & Redelmeier, 1993; Schreiber & Kahneman, 2000; Stone, Schwartz, Broderick, & Schiffman, 2005).

Finally, there is another important and less studied aspect of tourist experiences to be considered in the definition of such experiences in the context of this study and that is tourist experiences' structure, sequence and dimensions in time and space. As illustrated by a travel example in chapter one (a trip to Italy), tourist experiences have a clear beginning and ending in time and space, therefore the events and activities happen as a sequence. Tussyadiah and Zach (2012), Stienmetz and Fesenmaier (2013) as well as Kim and Fesenmaier (2015) among others, demonstrated that the entire tourist experience (including the emotions raised in every moment) can be recognized as a series of 'micro' experiences or series of 'events' within a travel journey. The recognition of the importance of these micro experiences individually and in the formation of overall tourist experiences and their evaluations has valuable contributions for the design, marketing and management of such experiences.

Synthesizing the reviewed work, the researcher of this study adopts the two fundamental terms of tourist experiences and tourist evaluations (of their experiences) as follows. *Tourist experiences are recalled episodic memories of past travel events in two dimensions of time and space with all their cognitive, affective, sensory, behavioural and social identity associations*. The evaluations of such experiences are, therefore, considered as *the judgment of the remembered experience rather than the actual experience and the two dimensions of space and time are embedded in all the micro events that constitute an experience*. Figure 2.1 is used to outline these links.

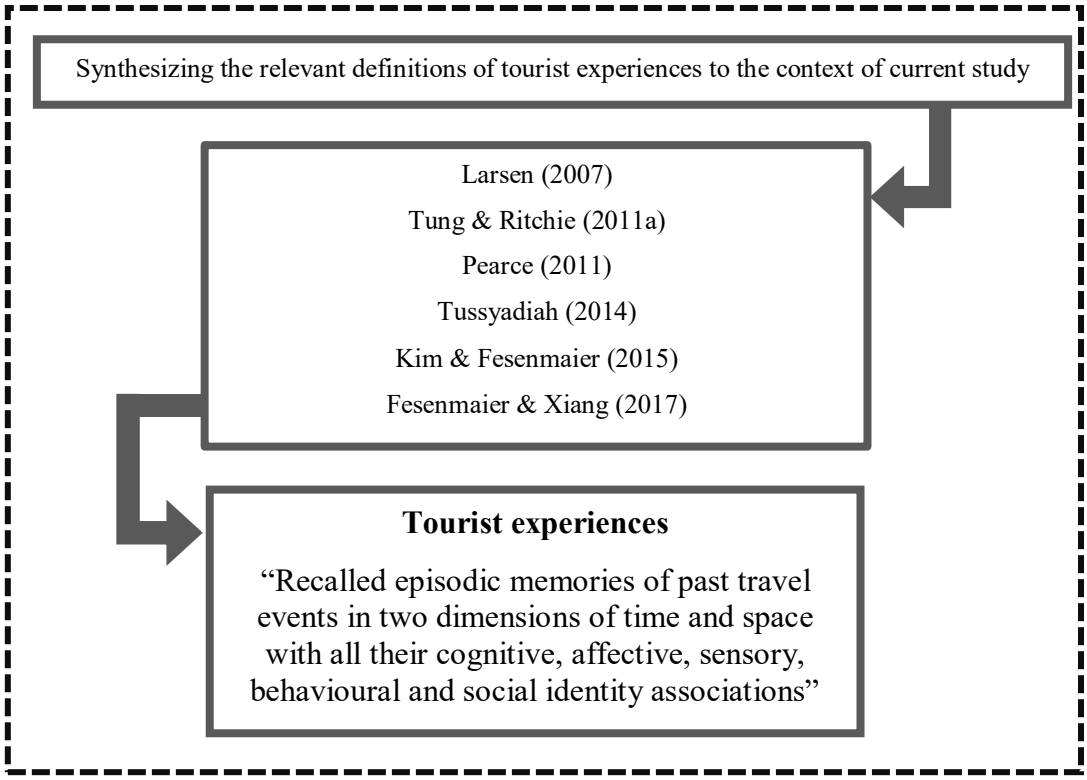


Figure 2.1 Tourist experiences as episodic memories

2.3 Tourist Experience design

Contemporary tourism research places emphasis on the quality of tourist experiences. Extraordinary and memorable experiences are considered as the survival keys for tourism businesses. Tourism marketers and managers are increasingly trying to offer unique and differentiated experiences to their customers. In consumer research, special meanings and differentiations to the services are mostly interpreted in the form of value-added factors. In these contributions, emotions are seen as tools to be evoked through advanced design of products. In service design, value is added by substantial consideration and engagement of customers in the design process. Tourism experiences, however, result from a combination of services, events, and interactions with people and places. Therefore, "experience design" is a more suitable term for the tourism context. The "experience design" term was introduced to the research world to guide business processes, and to inform theoretical application to this contemporary field of study (Tussyadiah, 2014).

As a way of classifying design and design research in the context of this study, a review of the previous studies starts with consideration of the terms *design* and *designing* (eg.

Ek, et al., 2008; Tussyadiah, 2014; Fesenmaier & Xiang, 2016). Ek et al., (2008) with no claim for finding the ultimate definition, explained that to them design is the "*static form of something shaped out of something"* while designing means "*the constant delimitation or shaping in form"*. Tussyadiah (2014), based on Love (2002, p. 357) suggest that *designing* refers to "*intentional human activities that result in a design*". Other scholars emphasized the same two points of the definitions above to stress that first, the act of designing is distinctive from the design as a noun. Second, the process of designing evolves, as more information is unfolded (Ralph & Wand, 2009).

Next, important concepts for consideration are design research and methods in the context of tourism. Comparing studies of experience design in different disciplines such as psychology, anthropology, social and behavioural sciences, marketing and management reveals a substantial emphasis on human-centered design (Stickdorn & Schneider, 2011). In this approach, extensive attention is offered to the needs and wants, limitation and expectations of the customers. Examples of underpinning theories in this domain include phenomenology (Moustakas, 1994), ethnography, activity theory (Leont'ev, 1978), utility theory and cumulative prospect theory (Kahneman & Tversky, 1979), and customer focus (Gulati & Oldroyd, 2005; Parasuraman, 1997). The goal in these approaches is to make a connection between customers' internal state, design attributes and the contexts of interactions between customers and design. A second approach to experience design is an iterative designing process, which is mostly a cyclical process of several repetitions in which every recent iteration changes and refines the design. This type of approach is mostly used in industrial design and computing management (Stickdorn & Schneider, 2011). The iterative design approach follows prototyping, testing and user feedback to minimize risk of failure or wrong presumptions about the market. An iterative design thinking process follows the steps of discovering, defining, developing and delivering. Sitckdorn and Schneider (2011) elaborated five principles for iterative approach in tourism service design: user-centred, co-creative, sequencing, evidencing and holistic. User-generated design goes beyond exploring demographic background of customers to understand the situational context in which service experiences are encountered. Co-creative design refers to the need for all stakeholders to be involved in the design project. Sequencing reminds the designer that every experience is a sequence of interdependent steps. Therefore, having a visualization of these steps prior to the design improves the delivery and management of the experience. The focus on every step of the sequence may

be different depending on the purpose of the design. Evidencing is to bring the invisible part of the customer experience into the light. For example, hotels make housekeeping efforts noticeable by folding the changed toilet papers or towels. Through this approach, they create evidence for the steps undertaken in the customer journey. Finally, holistic principle refers to taking the entire physical environment of an experience into account, including what customer smells, hears, touches, tastes and sees.

The third mainstream approach towards design is the holistic experience concept that has been used in service design as well as travel and tourism. The idea here is to design for "*human experiences as a complex interaction between design attributes and sociocultural contexts where meaning and values emerge*" (Tussyadiah, 2014). The priority is to acknowledge the complexity of human experiences and create bridges between consumer minds and the organization's strategies. This design perspective has previously applied theories such as the service and experience concept (Goldstein, Johnston, Duffy, & Rao, 2002), holistic tourism experience (Volo, 2009; Walls et al., 2011) structural framework of experience (Ye, Tussyadiah, & Fesenmaier, 2009), and peak and supporting experiences (Quan & Wang, 2004).

Pearce and Zare (2017) outlined key principles of a holistic approach to tourism service and experience design as; 1) being emic (adopt the perspective of the customer), 2) consideration for realistic and sustainable options (what can be created, and what can be changed from a pragmatic point of view, sustainability, regulations and political decisions), 3) using consumer segments (determining who is likely to visit and use the space based on patterns of motives and interests) and 4) tracking the use of space over time (considering temporal and spatial boundaries of tourist experiences in the design of touchpoints). This fourth principle is particularly relevant to the topic of this thesis. The structure of an experience in the joint interaction of space and time with the associated feelings and meanings of the key junctures for the tourists is where design can make a difference. To understand where the current study lies in the realm of all approaches reviewed in tourist experience design Figure 2.2 is presented below.

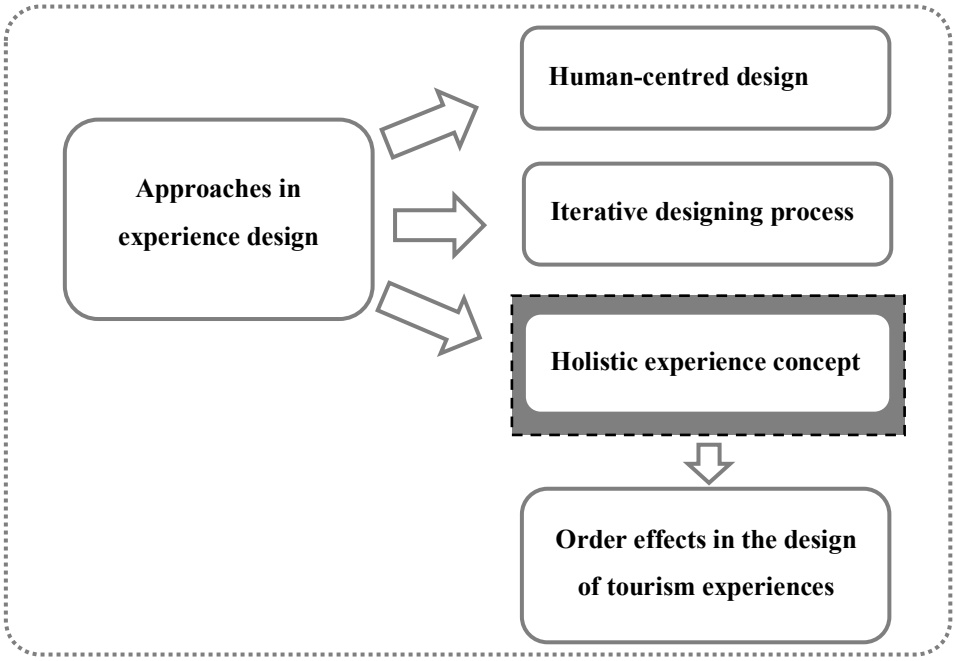


Figure 1.2 The conceptual foundation of approaches in experience design. Adapted from Tussyadiah (2014)

There is an extensive toolkit for each of the above-mentioned approaches to the design. The designers may mix and match several tools, not all are used at the time (Pearce & Zare, 2017). For example, Fesenmaier and Xiang (2016) in an edited volume about the design science in tourism put strong emphasis on tourists' emotions and the use of emotional touch points throughout the customer journey. Therefore, physiological approaches along with self-report are encouraged in the understanding and evaluation of the outcomes of different designs.

Pearce and Zare (2017) list the following tools that can be selectively used in tourism experience design; Stakeholder maps, systematic observation, contextual interviews and photo elicitation techniques, netnography, cognitive mapping, storyboards, desktop models and simulations, service staging and role plays, service blueprints and co-creation, narratives, personas and market segments.

Tussyadiah (2014) categorized tourism experience design tools and methods into three areas of naturalistic inquiry, participatory design, and integrative research. The conceptualization of tourism experience through naturalistic inquiry includes gathering

information through observation of tourists and their behaviours in natural experience settings such as destinations or attractions. This approach enables researchers to not only study tourists' actions and reactions but also their sociocultural background. Participatory design, is an active engagement of tourists at every phase of designing and can be implemented through participatory activities such as sketch mapping, clay models, simulation exercises to name a few. As a third approach, integrative research combines explorative, generative and evaluative research together. As a result, the design may need to be renewed. The current thesis is positioned under the integrative research approach as the methods in this thesis use naturalistic settings (explorative research), experiments, and heuristic evaluation (evaluative research).

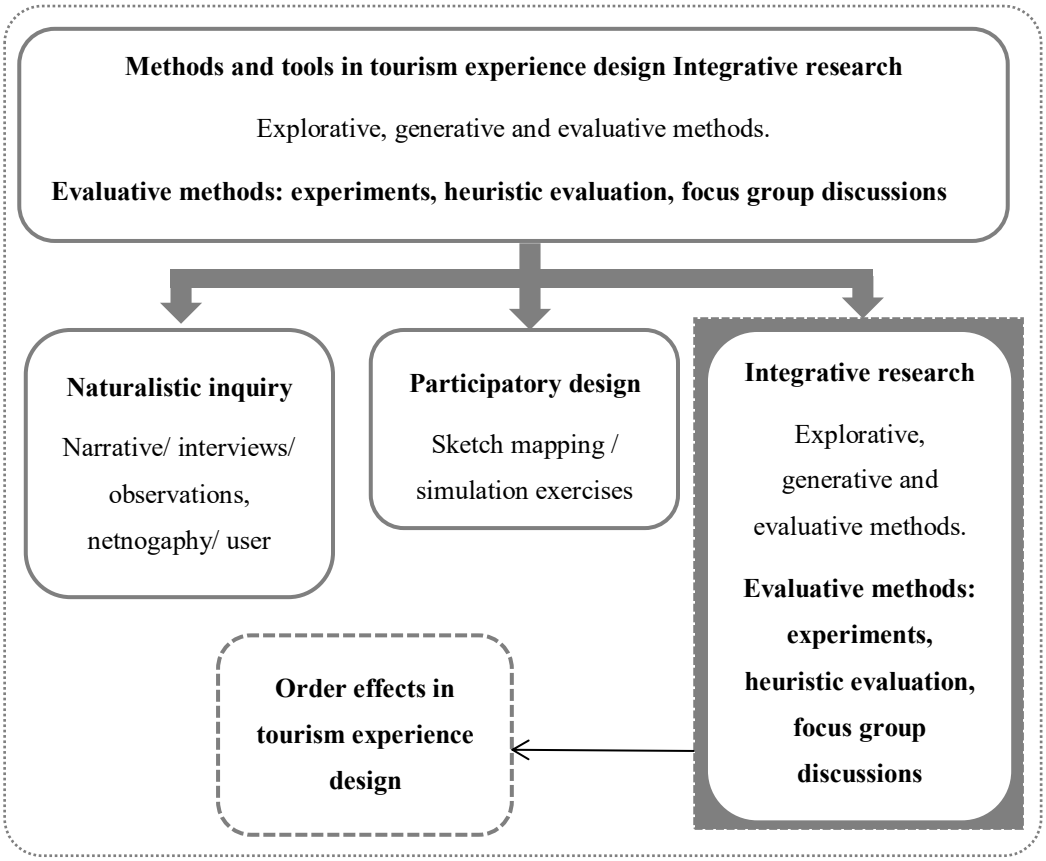


Figure 2.2 Methods and tools in tourism experience design. Adapted from Tussyadiah (2014)

2.4 Destination experience design

Destination experience is a holistic experience that consists of hundreds of steps. Vacation trips are produced and consumed at the destination and tourists have to deal with various people and situations in the destination to fulfil their needs and wants (Ryan 1997; Prebensen, et. al., 2014). Destinations, therefore, are key part of tourist

experiences. Then, to a large extent, tourist experience design arguably translates into the destination design (Sitckdorn & Schneider, 2011). These holistic environmental units with their physical attributes can be improved to enhance the likelihood of creating memorable tourism experiences (Kim, 2014). As holistic experiences, they cannot be fully managed but specific components or dimensions can be managed. For example, at the destination attributes level, Kim (2014) developed a scale with ten dimensions related to designing memorable experiences. These factors included infrastructure, accessibility, local culture or history, physiography, activities and events, destination management, quality of services, hospitality, place attachment, and superstructure. Understanding and managing such attributes assist destination managers in designing appealing environments to deliver memorable experiences.

Other important levels in the management of tourism destinations are time and space. By creating intangible touch points throughout a travel timeline and in different locations, unforgettable memories can be formed more easily. The focus for this study is the order and structure of trips. By manipulating the order of visits or presentation of destinations, it may be possible to direct travel experiences towards desirable outcomes. The way these factors are considered in the structure of a travel journey can create value and consequently satisfaction and loyalty (Verhoef, et al., 2009).

2.5 Memory and tourism research

As Pine and Gilmore (1998) identified, the nature of experience offering is to be "memorable". "*The value of the experience lingers in the memory of the individual who was involved in the event"* (P 13). Their model, however, was devised for business and it has crossed to other disciplines. The research on memorable experiences in tourism, was, ignited earlier by Krippendorf (1987), Pearce (1988), and Ryan (1995) before the publication of Pine and Gilmore (1998). Based on any of these previous studies, it is agreed that tourism businesses may survive through delivering memorable tourism experiences and the word "memorable" has been used with the similar meaning in a range of work (Kozak, 2002; Lehto, Oleary, & Morrison 2004; Wirtz, et al., 2003; Tung & Ritchie 2011a; Chandralal & Valenzuela, 2013; Kim, 2014; Kim & Ritchie, 2014). So far, tourist experiences have been defined as episodic memories, and the need to design memorable tourist experiences has been discussed. Whether we take the word "memorable" in these expressions literally or as positive, enjoyable, happy, or highly

valued, a review of the fundamental ideas about memory followed by the links between tourist experiences and memory is required for this research.

2.5.1 Fundamentals of human memory

To understand the process of remembering tourism destinations, it is useful to start with a neuroscience view of memory. What actually is memory? There are sensory processors in the brain to sense information from the outside world in the form of physical and chemical stimuli. These synapses are connected by neurotransmitters in specific patterns and networks. When a stimulus causes a neurotransmitter to activate a certain part of a network, and if a similar stimulus appears again, the same pattern is activated and that is the way memory traces are formed and memory functions (Baddeley, 2007; Braasch, 2008; Tulving, 1985). Various brain regions are involved in different types of memory. For instance, the studies of positron emission have suggested a greater pattern of left hemispheric neural activity for the retrieval of semantic information and a right hemispheric pattern for the retrieval of episodic information (Fink, et al., 1996). It is also believed that different memory systems are in mutually supportive relationships in the neuronal networks and no single imaging study can capture the entire network involved in recollection. Therefore, the memory of an experience is a multi-modal process in the brain almost certainly involving different aspects of an event or episode. For spontaneous or voluntary activation of a memory, first, one component of it should be activated, then this activation extends over the other components of the same experience, and this process is completed associatively. When the patterns among the neurons related to a certain memory are not activated very often, they may become weak or even dissolved so the experience cannot be recalled (Braasch, 2008).

From a basic and simplistic psychological point of view, memory can initially be conceived as involving three processes: encoding, storage and retrieval (Braun, 1999). Encoding (also known as learning) refers to the process that is occurring at the time of receiving information. It involves extracting the material to remember. Storage is when some of this information is stored in long-term memory. Finally, retrieval is the process of accessing the stored information (Eysenck, 2012). Figure 2.4 illustrates the three stages of memory.

Figure 2.4 Stages of memory. Adapted from Eysenck (2012)

The most common categorization of memory, one built on the type of information involved, has three components: sensory memory, short-term memory and long-term memory (Atkinson & Shiffrin, 1968). This theory is called the multistore model since information from the environment is received in separate stores related to each of the senses (visual, auditory, and so on). Information in the sensory stores lasts for a very short time, typically for only one to two seconds. Some of this information receives further attention and transfers to short-term memory to be processed. Short-term memory also has a limited capacity to hold information (Cowan, 2008). Consider remembering a phone number that is read to you once. It is difficult to hold on to the numbers without rehearsal. Rehearsal is a process which assists in taking some of the information from short term-memory to the next storage which is long-term memory. Long-term memory has unlimited capacity and very few memory traces get lost completely from the long-term memory. The multistore model of memory is displayed in Figure 2.5.

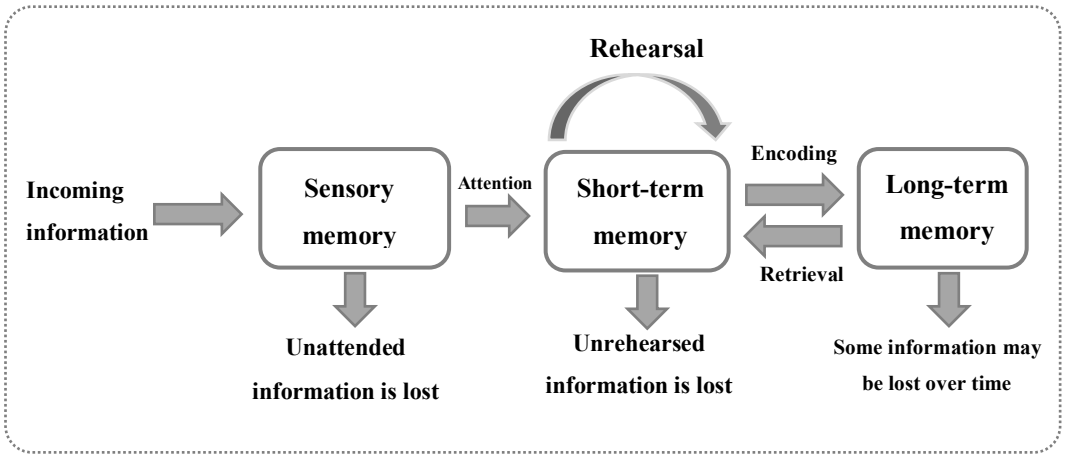


Figure 2.5 Multistore model of memory (Atkinson, & Shiffrin, 1968)

Although the multistore model was the first detailed account of memory processes and structure, it was criticized as oversimplified for two reasons. First, experiments did not support the model's prediction that full capacity of short-term memory is consumed during non-stop rehearsal. Experimental findings indicated that subjects could rehearse and do other activities at the same time (Eysenck & Wilson, 1984). A second reason was related to the model's assumption that long-term memory processes all kinds of

information; a perspective which experimental work also dismissed (Cermak, Lewis, Butters & Goodglass, 1973).

Long-term memory itself can be divided into two systems; declarative memory (knowing that) and procedural memory (knowing how). This led Miller, Galanter, and Pribram, (1960) to suggest that there is another type of memory called working memory. Working memory has been considered as a synonym for short-term memory in some theories while other researchers make a distinction between the two forms. The main difference between short-term memory and working memory is that information can be manipulated and not just stored in working memory (Baddeley & Hitch, 1974; Cowan, 2008). People rely on working memory to recall such details as what they had for lunch yesterday. Clearly such information lasts for more than a few seconds but may not be recalled if the individual is asked for these sorts of details a week later. In the context of travel and tourism, short term (and/or working memory) is more relevant to the mundane tasks such as attending to dates, flights, room numbers and internet access passwords while long-term memory, is involved in more important tourist behaviours such as evaluation, story-telling or savouring (Pearce & Zare, 2018).

2.5.1.1 Autobiographical memory

As mentioned earlier, long term memory divides into two systems: declarative and non-declarative/procedural memories. Each of these two systems can be divided further. Declarative (explicit) memory has two key components; semantic memory, and episodic memory (Atkinson & Shiffrin, 1968). *Semantic memory* refers to that section of long-term memory that stores information about the world. This information can be specific such as meaning of words or general knowledge. For example, knowing that Canberra is in Australia is a responsibility of semantic memory. *Episodic memory* on the other hand is in charge of storing information about one's own experienced events (Atkinson & Shiffrin, 1968). For example, the memory of a tourists' flight abroad is part of their episodic memory.

While tourists need all facets of their memory to be working well, for researchers the most important type of memory in the tourism context is called *Autobiographical memory* (Kim 2014; Kim, Ritchie & McCormic, 2012; Larsen, 2007; Pearce & Packer, 2013; Rubin, 2005; Tung & Ritchie, 2011a). Neurologically, the autobiographical memories are constructed through activation of some processing regions at the front of the brain in the

neocortex. It appears that the brain bases for such memories build over time as memory is constructed, and shift in part to areas in the middle and toward the posterior of the brain (Conway, 1996). Psychologically, autobiographical memory consists of mostly episodic memory with some components of semantic memory. That means, the recollected memories of own life experiences are combined with semantic memory in the form of general knowledge and facts about the world. Therefore, memories such as which schools we went to, or the relationships we had in the past, are all part of our autobiographical memory (Conway, 1996). Autobiographical memory is an intricate and complex form of cognition where emotion, identity, knowledge, and culture intersect over the course of remembering (Atkinson & Shiffrin, 1968).

One way to understand the complexity of autobiographical memory is to refer to a model developed by Conway and Pleydell-Pearce (2000) in which they consider three key components for autobiographical memories including lifetime periods, general events, and event specific knowledge (ESK). The autobiographical memory can be best explained based on remembering general and specific components. For example, I recall a trip to Newcastle, Australia (general event) when I was a second year postgraduate student (life period themed by the stage of my studies) with specific details of a particular afternoon on that trip on a beautiful beach, with a strong breeze coming down from the sea onto my face while I was watching few kite surfers, and I suddenly felt anxious about my way back and had to leave although I did not want to (event specific knowledge) (Conway & Pleydell- Pearce 2000). A summary of long-term memory classification is presented in Figure 2.6.

Autobiographical memories have been found to have a profound influence on human behaviour especially decision-making (Conway, Wang, Hanyu, & Haque, 2005). A valuable starting point for tourism scholars may be an understanding of autobiographical memory, its processes and implications for the design and delivery of memorable experiences. Recent studies in tourism have paid attention to some of the functions and impacts of this form of memory (Jorgenson, et al., 2018; Kim & Chen, 2018; Kim & Jang, 2016). Experiences can sometimes strongly shape a person's life and become self-defining and transformative events (Fivush, 2011). A memory's influence on an individual is measured through "the properties of significance, emotional intensity, and consequences (Fitzgerald & Broadbridge, 2013). Following these ideas, the impact and

rehearsal of travel experiences can be measured through an autobiographical memory scale (Jorgenson, et al., 2018).

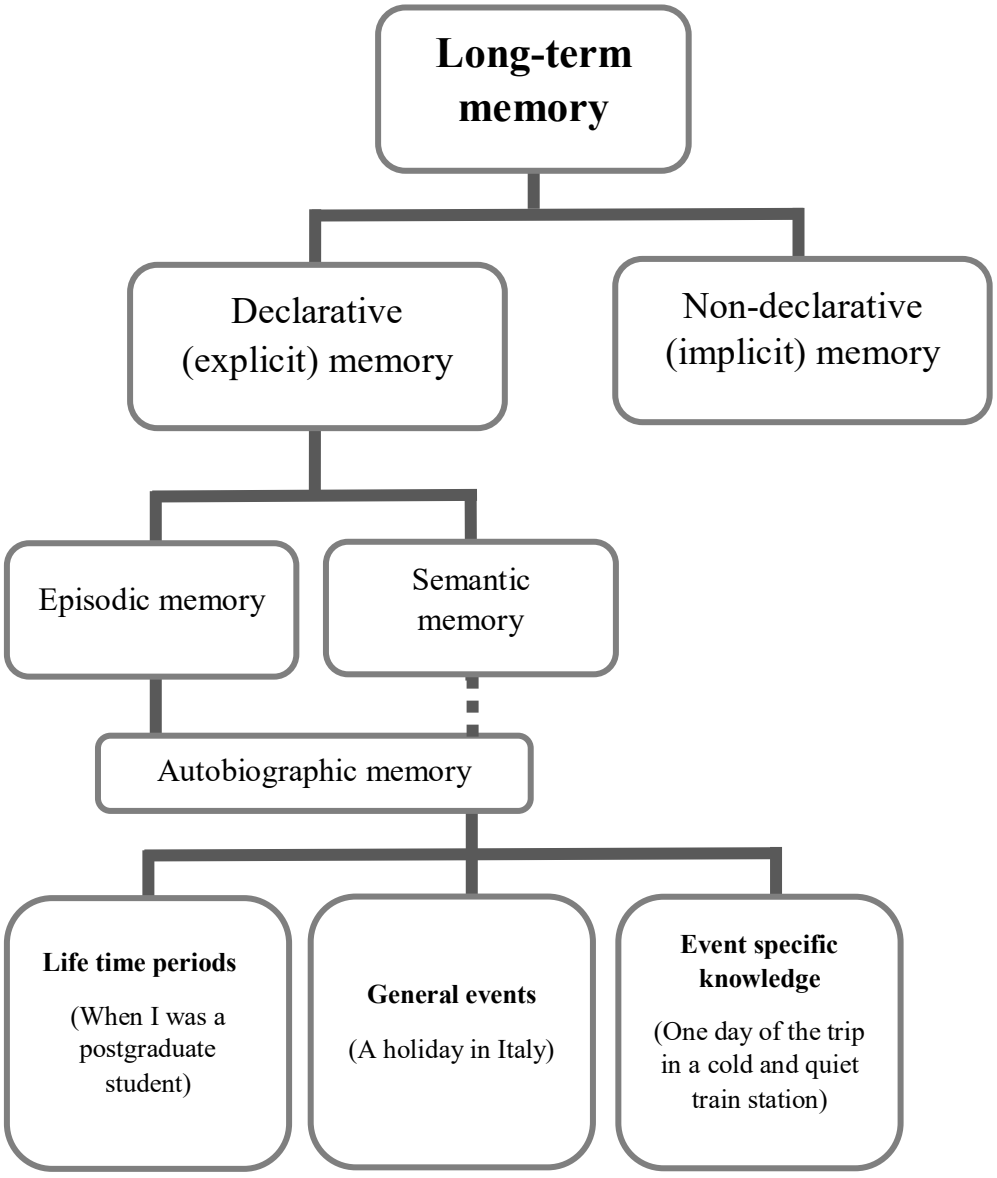


Figure 2.3 Long-term memory classification. Adapted from major memory theories.

Kim and Chen (2018) referred to the three functions of autobiographical memories in the travel context which are directive, self and social. The distinctive function is a reference to present and future thinking and behaviour. Tourists using their past travel autobiographical memories to enhance their present satisfaction and avoid bad decision making for the future. Autobiographical memories also maintain and increase self-identity, a function that is improved by positive travel experiences. Lew (2018) suggests

that a global consciousness, an awareness of the self in relation to the world, may be achieved through travel and such claims are built on the self-identity facet of autobiographical memory. Finally, the social function of autobiographical memories of tourism experiences is a significant player in fostering social interactions (Kim & Chen, 2018). In this context, the social value of autobiographical memory may be helping individuals understand others' experiences, connect them to world events, and provide material for their often-humorous stories (cf. Pearce & Pabel, 2015).

Autobiographical memory is formed and recalled in a non-uniform way. Factors such as individuals' demographic background, experienced emotions during the event, individuals' personality and cultural differences may affect this process (Tung & Ritchie, 2011a). Pillemer, Steiner, Kuwabara, Thomsen and Svob (2015) found that women's memory styles were more episodic than men. Autobiographical memories especially positive and unique events are more important to women and recalled vividly by them. There is also a key tourism study by Hamond and Fivush (1991) about memories of children in a Disneyland experience when they were three and four years old. While all of the children in this study recounted a large amount of information about their Disneyland experience, the older children mentioned more specific details of this event rather than younger children. The finding of this study is in line with an earlier work by Pearce (1981) where age was found to be an influential factor in shaping tourists' recall. When asked to remember towns and attractions along a 300-kilometre route, senior tourists were more attentive to details and locations, while young adults emphasized social and district features more often. Falk and Dierking (1990) also investigated childhood memories of professionals who work in museums and found that these professionals often remembered the social aspect of their first visit to a museum the most (e.g. with whom they went, what they did together). The majority of recollections included affective memories. Such feelings may in part be correlated with these respondents' later career decisions to become museum professionals. Additionally, Tung and Ritchie (2011b) investigated the reminiscence bump (events from the period of 10-30 years old) in senior visitors and found that they are better in recalling such events than the younger counterparts. Based on Conway et al. (2005, p. 741) experiences from this period of life receive more "privileged" encoding in autobiographical memory than the other events in individuals' life cycles. The reminiscence bump occurs for positive memories while the retention of negative experiences decreases over time.

The influence of certain aspects of personality on memory accessibility is extensive and powerful. Various personality and attachment styles can selectively increase access to certain memory types (Conway, 1966; McAdams, 1982; Woike, 1995). For example, Woike (1995) explored implicit and explicit motives of a group of people who recorded their memorable experiences in a period of two months. He found that affective experiences raise memories with implicit motives such as achievement and intimacy whereas less affective and routine experiences are associated with explicit motives such as social values. Similarly, it is argued that power centered and independent individuals may recall memories of their high achievements and leadership acts more than the social interactions (Conway & Pleydell-Pearce 2000).

Research in the area of cross-cultural psychology suggests that remembering autobiographical memories differs across cultures (Jobson, 2009). Since early childhood, cultural variation in self-construal influences the structure and narrative of autobiographic memory; therefore, adult individuals recall their experiences by employing these dominant reporting structures (Jobson, Moradi, Rahimi-Movaghar, Conway, & Dalgleish, 2014).

The autobiographical memory and the factors that influence can be discussed further in the tourism research section. In the following heading, some of the early studies connecting tourism and memory are reviewed and then the contemporary research about memorable tourism experiences are highlighted.

2.5.2 Memory and previous tourism research

The links between memory and tourism started to appear in city and route perception studies by Pearce (1977, 1981). In the first study, Pearce (1977) investigated the city perception of the tourists by asking them to draw the sketch maps of the city they visited. He found that the longer tourists stay in an unknown place the more they can report on its spatial arrangement. He also found that the streets and paths are better remembered by men while women demonstrated a better memory of the landmarks and districts. In his second study in 1981, Pearce, using a cognitive mapping technique, examined the recall of tourists who drove in some of the Australian classic countryside roads. In this study, he asked selected tourists (who took the same route) in a caravan park to draw a sketch of their journey between the origin and the destination with as many details as possible. He compared these recalled maps in several ways such as across genders, ages and the

travel experience by road. Results showed that females remembered the social activities they had during the route more than their male companions and older tourists made more errors in labelling the landmarks on the way. These two studies were among the first publications to use a method (cognitive mapping) which is heavily dependent on the memory-skills. The study also pioneered exploring the effects of memory on the evaluations of the trip over time.

In an exploration of the effect of time on travel memories, Kaplan and Talbot (1983) studied tourists who visited wilderness and demonstrated that negative experiences are likely to fade, while positive experiences may be recalled more accurate. Fridgen (1984) conceptualized each phase of travelling based on the connection between environmental and social psychology and restated that the immediate memories and evaluations of an experience may interact with memories and evaluations of that trip over time.

Arnould and Price introduced the term "extraordinary experiences" for the first time in 1993. Over the course of two years, the researchers employed multiple methods of data collection to articulate the meanings of such experiences from both perspectives of tour guides and adventure tourists. They found a complicated relationship between tourists' expectations and satisfaction, where the narrative of the rafting experience, was key to the evaluation of the experience. The vivid descriptions they collected from their tourists linked memory and experiences. They also confirmed the difficulty of accurate recall as time passed.

The importance of narratives in tourism studies received more attention after Arnould and Price's work (Noy 2004 & 2007, Cary 2004, Selstad 2007, Pearce & Foster 2007, Moscardo, 2010). Noy (2004, p. 84) defined the term "narrative" or "story" as "*the sequential linkage of certain selected events in one's life, depicting a personal trajectory that begins in the past and continues into the present"*. Through tourists' narratives, Noy sought the links between documenting an external voyage and internal voyage to the self-change. From this work it is apparent that, individuals' narratives are changed and revised in the ongoing process of re-telling their stories throughout the lives. The work has clear connections to memory skills.

Through the gradual emergence of storytelling as an important tool to directly analyse tourists' memories, research attention towards storytelling principles increased (Moscardo, 2010; Schank, 1999; Woodside, 2010). For example, researchers started to

prompt tourists to recall specific types of experiences in order to investigate the effects of the experience on certain attitudes, service quality, memory performance and visit intentions (Desforges, 2000; Cary, 2004; Obenour, Patterson, Pedersen, & Pearson, 2006; Kim & Youn, 2016). This method has been especially popular in the studies of memorable tourism experiences where the researchers ask respondents to describe one of their most memorable trip experiences with as many details as possible and then they use these narratives to extract themes and categories. However, recent research in storytelling and tourism design goes beyond the approach of using stories to understand the user experiences and advocates using stories as a framework to guide the design of tourist experiences (Moscardo, 2017).

It was mentioned in the previous section that time is an integral part of a travel structure. Every trip happens during a limited period of time. Therefore, the actual experience will be recollected later as the remembered experience (Tversky & Kahneman, 1973). It was also highlighted that Fredrickson and Kahneman (1993) found that an experience is not judged by its entirety, rather by its peak and end points. The peak and end rule has been investigated in different contexts. Kemp, Burt, and Furneaux (2008) designed a study in the context of holiday experiences to test this rule. They asked students participants going on a short holiday to send the researchers daily text messages detailing the happiness they had experienced over 24 hours. When the students returned, they were required to also form an overall evaluation of their happiness with the trip they experienced. The result revealed that the happiness of the end point but not peak or trough happiness better predicted the overall happiness evaluations. Based on such previous knowledge, the researcher is aware of the potential effects of peak micro experiences (emotions) within a single experience. A consideration of how such effects are controlled for in the overall design of the thesis research will be considered at a later juncture.

In summary, a combination of psychological and tourism studies in the past have established some foundation ideas about memory and tourist experiences:

1) the demographic background of tourists such as gender and age may influence certain aspects of trip memories such as how social episodes are better recalled by women rather than by men or how memories of young children differ from adults in the lower amount of details they can remember. These differences are not however relevant to the recall of destinations by naming them, the method used in this thesis. On these grounds, the

researcher did not plan to include explorations of demographic backgrounds and two variables of destinations recall and evaluation from the beginning (Full demographic information however has been collected for other descriptive analysis and they are presented in relevant research chapters).

2) Travel memories can decay and become distorted over time. Even flashbulb memories (very distinctive and strong memories, for example September 11, 2001) are susceptible to the decay (Myers, 2003; Talarico & Rubin, 2003). Consequently, stories or narratives of travel memories constantly change in telling and retelling of these experiences. Therefore, the process of recall and evaluation is never fully accurate and based on the actual experience. However, between the choices of conducting surveys immediately after the trip and a while later, the researcher has chosen to do the immediate recall survey as this scenario is closer to the common industry practices where tourism service providers send the feedback links to the customers immediately after the trip. Therefore, to contribute to real world issues, timing with real world involvement was selected.

3) It is acknowledged that tourists' experiences and their interpretations are subjective even if the opportunities provided to the tourists are objective (Uriely, 2005; Cohen 1979a; Larsen 2007; Kim, Ritchie & McCormic, 2012). While tourism planners, to a considerable extent, have control over providing the products and services in an objective manner, they may not have much control over tourists' interpretations. Therefore, tourists involved in a range of similar services and activities may not necessarily form the same memory and interpretation of their experiences (Ooi, 2005). The researcher acknowledges this point fully and does not make a different claim. Instead a naturalistic study is considered within a context that offers similar standard services for every individual (group tours in Iran).

4) Studies of retrospective global evaluations, indicate that memories of experiences rather than actual events are superior in predicting peoples' future choices (Wirtz et al., 2003; Larsen, 2007). In other words, the actual experience and the remembered experience have distinctive roles in predicting tourists' future behaviours. This key point introduces a very practical rationale for tourism researchers to attend to the study of tourists' memory processes. Following this established point, current research was conducted after the trip, exploring the remembered experience rather than the actual experience.

5) Narratives and stories provide access to memories and their study. As reviewed and will be highlighted more in the next section, many studies have employed narratives and open-ended questions to collect data about travel memories. This is mainly because these studies have been concerned with motives, meanings and outcome of tourist experiences in relation to memory. There is, however, an important point of departure between those studies and the current research. The focus in this thesis is not on why tourists show a specific behaviour (remember and evaluate certain destinations better than the others) but to provide evidence for the existence of such behaviour at the first place. To this end quantitative data collection and analysis have been used to test the hypotheses in this study.

The next section reviews contemporary studies about memory in tourism and reveals the further sources shaping the logic of thesis studies.

2.5.3 Memory and current tourism research

The focus of tourism and memory research has shifted to the views about the design of "memorable travel experiences" (MTEs). Based on Pine and Gilmore's model of experience economy, tourism operations started to move in a fresh direction, in which memories of experiences are considered as the actual products. Consequently, tourism businesses had to orchestrate memorable experiences for their customers and find ways for managing such memories as they are important resources shaping different future decisions, hence profitability (Chandralal & Valenzuela, 2013; Kim, 2014; Kim & Ritchie, 2014; Kozak, 2002; Lehto et al., 2004; Tung & Ritchie, 2011a; Wirtz, et al., 2003). Recent potential connections and applications of memory in tourism studies are highlighted by review articles such as Braasch (2008), and Pearce and Packer (2013). Braasch (2008) offered some understanding and applications for memory in the context of society, culture and self-identity. Pearce and Packer (2013) also identified that memory is a significant underpinning of major tourists' behaviours such as decision-making, motivations, attitude, recollection and savouring. In this section, a systematic and comprehensive review of tourism-memory connections with a focus on memorable tourism experience studies is offered.

The three keywords of memorable tourism experiences were placed into google scholar address bar, and 25 journal articles were selected from the first 15 pages of the result. No journal filter was applied, as the researcher did not want to exclude any relevant quality

work that has been published in lower ranked journals. Tung and Ritchie (2011a)'s article, *exploring the essence of memorable tourism experiences,* has been arguably considered as the beginning of the review on MTEs, however, the researcher acknowledges earlier studies lead on to this work and the popularization of memorable tourism experiences as a term (e.g Kim, 2010; Kim, Ritchie, & Tung, 2010; Ritchie, & Hudson, 2009). Therefore, the review includes the relevant studies between 2011 up to 2018. Not all the identified studies include all the three keywords of memorable tourism experiences. The selection was based on reasonable to strong contributions offered by these work to MTEs studies. A summary tables of these studies is presented in Table 2.1.

The studies in Table 2.1 are reviewed based on their contributions to each of the three phases of memory encoding (the largest share), storage or consolidation (rare) and retrieval stages (few studies). Many researchers are currently concerned with the characteristics of MTEs in order to guide better design of such experiences for tourism industry. This stream of studies involves optimizing the encoding stage of autobiographical memories. Very few studies however questioned the retrieval phase of memory and how to contribute to practice through the management of remembered experiences. The logic behind this classification will be illustrated further at the end of this review.

Table 2.1 Summary of recent memorable tourism experiences studies

Study title	Contribution	Authors	Year
Exploring the essence of memorable tourism experiences	A model of MTEs with four dimensions of affect, expectations, consequentiality and recollection	Tung & Ritchie	2011a
Investigating the memorable experiences of the senior travel market: an examination of the reminiscence bump	Five aspects of memorable experiences from reminiscence bump of seniors: identity formation, family milestones, relationship development, nostalgia re-enactment, and freedom pursuits.	Tung & Ritchie	2011b
Development of a scale to measure tourism experiences	A model of MTEs with seven dimensions: hedonism, refreshment, local culture, meaningfulness, knowledge, involvement, and novelty	Kim, Ritchie, & McCormick	2012
Memorable tourism experience	A new MTEs model including the following dimensions: physically challenging, complex and surprising, attitudes and expectations prior to the travel, building social capital, serendipitous moments and self-discovery.	Horváth, Z	2013
A cross-cultural comparison of memorable tourism experiences of American and Taiwanese college students	MTEs components may be culture-dependent	Kim, J. H.	2013
Exploring memorable tourism experiences: antecedents and behavioural outcomes	A model of MTEs with nine dimensions: perceived meaningfulness, opportunities to encounter authentic and local experiences, significant outcomes, novelty, social interaction, local hospitality, serendipity and surprise and professional tour guides and positive emotions.	Chandralal, L., & Valenzuela, F. R.	2013
Cross-Cultural Validation of a Memorable Tourism Experience Scale (MTES)	The validity of a previously devised model was confirmed	Kim, J. H., & Ritchie, J. B	2014
The antecedents of memorable tourism experiences: The development of a scale to measure the destination attributes associated with memorable experiences	Developed a scale to measure memorability of destinations	Kim, J. H.	2014
Memory retrieval of cultural event experiences: examining internal and external influences	External influences on memory such as scent, music and mementos were examined.	Kim, J. H., & Jang, S.	2016
An Application of Travel Blog Narratives to Explore Memorable Tourism Experiences	Explored their previously devised scale.	Chandralal, Rindfleish, & Valenzuela	2015
Creating memorable experiences in a reuse heritage site	Few correlations including the one between nostalgia and memorable tourism experiences were found.	Lee, Y.J.	2015

Table 2.1 continued

Study title	Contribution	Author	Year
A Conceptual Framework for Management of Tourism Experience	A framework to manage MTEs was offered	Bagdare, S.	2016
Memorable tourist experiences and place attachment when consuming local food	Relationships between place attachment, behavioural intention and MTEs construct were confirmed	Tsai, C. T.	2016
Exploring the relationship between emotions and memorable tourism experiences through narratives	The relationship between emotional involvement, narration and MTEs. Emotions support the recall of tourism experiences	Servidio, R., & Ruffolo, I.	2016
Investigating the effects of memorable experiences: an extended model of script theory	Satisfaction partially mediates experience-recollection relationship while recollection and satisfaction both affect loyalty behaviours.	Manthiou, A., Kang, J., Chiang, L., & Tang, L	2016
A cross-cultural comparison of memorable tourism experiences of Asians and Europeans tourists	Four out of seven factors of Kim et al. (2012)'s MTE model are significantly different between Asian and European group.	Mazlina, M., & Ahmad, S.	2016
Exploring the tourist experience: a sequential approach	Memorable themes of backpacker tourists were based on three successive travel stages: Pre-travel: excitement and collecting formation. On-site experience: flexibility and freedom, interactions with others. Post-travel: unique and unexpected experiences	Park, S., & Santos, C. A.	2017
A framework of memory management and tourism experiences	A conceptual model was proposed to link relevant concepts in psychology and tourism research to each stage of the long-term memory system.	Tung, V. W. S., Lin, P., Qiu Zhang, H., & Zhao, A.	2017
Elements of memorable food, drink, and culinary tourism experiences	Not all MTEs are destination related. Culinary tourism experiences can be memorable too.	Stone, M. J., Soulard, J., Migacz, S., & Wolf, E.	2017
The impact of memorable tourism experiences on loyalty behaviours: The mediating effects of destination image and satisfaction	MTEs influence loyalty behaviours directly and indirectly through destination image and destination satisfaction.	Kim, J. H.	2018
A model of perceived image, memorable tourism experiences and revisit intention	The MTEs mediates the relationship between perceived destination image and revisit intention.	Zhang, H., Wu, Y., & Buhalis, D.	2018
The memorable travel experience and its reminiscence function	Relationships between MTEs and three functions of autobiographic memory were tested.	Kim, H., & Chen, J. S.	2018
Measuring visitor experiences: creating and testing the tourism autobiographic memory scale	Measuring self-defining qualities through autobiographic memory (impact of an experience and WOM)	Jorgenson, J., Nickerson, N., Dalenberg, D., Angle, J., Metcalf, E., & Freimund, W.	2018

Table 2.1 continued

Study title	Contribution	Author	Year
Tourism experiences: Core processes of memorable trips	Conceptualized MTEs based personal, relational influences, environmental/cultural influences.	de Freitas Coelho, M., de Sevilha Gosling, M., & de Almeida, A. S. A	2018
Cultural influences on memorable tourism experiences	Culture has influence on memorability aspects of experiences.	Zare, S.	2019

2.5.3.1 Encoding and MTEs

As mentioned, Tung and Ritchie (2011a), acknowledged previous studies in which memorable experiences were looked at from authenticity, satisfaction and other classic standpoints (eg. Gunter, 1987; Cohen, 1979b; Ryan, 1997; Pearce, 2007). They then raised the question of what would be the essence of memorable tourism experiences from the psychological lens especially memory. From the start, it was clarified that the reason to create and study MTEs is to be able to personalize some aspects (not all) of tourist experiences and maximize the memorability of them. Snowball sampling was used to recruit respondents at a Canadian university. The interviewees were asked about what they felt has contributed to one of their most memorable tourism experiences. Qualitative analysis resulted in four dimensions of affect, *expectations, consequentiality,* and as contributors to experience memorability. Affect refers to positive emotions that enhance attention and produce long-lasting memories. Events that are surprisingly above and beyond expectations create a second theme in MTEs. Consequentiality refers to the times when tourists have received a somewhat personally important outcome from the trip. For example; if their relationships were improved or they appreciated family more after the trip. Consequentiality involves individual's development and self-discovery as well as being proud by overcoming physical challenges. Finally, the recollection aspect of MTEs refers to the desires and efforts to recall, re-live and re-tell the experience to the others.

For further understanding and measuring MTEs, Kim, Ritchie and McCormic (2012) developed a scale, which comprised seven domains of refreshment, hedonism, meaningfulness, local culture, involvement, knowledge and novelty. Similar to the Tung and Ritchie (2011a) study, they asked respondents to remember and describe their most MTE. Results overlapped and confirmed some of previously mentioned dimensions of

MTEs by Tung and Ritchie (2011a). The seven constructs introduced by Kim, et al. (2012) are mostly emotion-based; therefore, they first of all support the importance of affect in memorability of experiences. Second, the role of "expectations" and surprises have been duplicated by the "novelty" construct. For the third, "knowledge" is the equivalent of consequentiality in Tung and Ritchie's work. However, the fourth aspect, recollection, in the sense that it was mentioned by the Tung and Ritchie (2011a) was not discussed in Kim et al. (2012)'s. Nevertheless, Kim et al. (2012)'s study popularized the term memorable tourism experiences further and it became a foundation article research for the following studies. The constructs of their model are discussed in detail.

Hedonism. The first component of memorable tourism experiences is hedonism which is considered as an integral part of tourism service experiences, influencing tourists' satisfaction and future behaviours (Kim, 2014; Otto & Ritchie, 1996). Hedonism is realized in the activities and products that people seek to enjoy. Therefore, there is an emotional component attached to hedonism (Bohanek, Fivush, & Walker, 2005; Porter & Birt, 2001). Positive emotions, as the outcome of hedonic experiences, are major influences on memory because emotional events of the individual's past frequently come to mind. They are reminisced more and, therefore, remembered in more detail over time (Bohanek, et al., 2005). To benefit from the effects of emotions on memorability of travel experiences, encounters and interactions are best designed with several emotional peaks.

Refreshment. Refreshment meaning relaxation and renewal, is generated by a distinction between tourists' daily life versus tourism activities (Cohen, 1979a; Turner & Ash, 1975). Feeling refreshed during and after an experience means tourists have felt a contrast from their daily environment, norms and values. They may have behaved differently and comprehend a different perspective in the new environment (Kim, 2014; Pearce & Lee, 2005). Although it might be challenging to create refreshment for every tourist in every experience, tourism planners have to consider ways of offering such a feeling through delivering experiences that are removed from the available activities in normal and routine life.

Novelty. Another important component of memorable tourism experiences is novelty. The concept of novelty has four different dimensions; change from routine, surprise, boredom alleviation, and thrill (Lynch, 1991). In novelty-seeking, the desire is not only to experience something new in a different place but also to engage with different activities

and people or learn new skills compared to previous behaviours. This dimension has been consistently reported as an important motivation to travel (Cohen, 1972a; Lee & Crompton, 1992; Pearce, 1988) as well as an element that creates memorable tourism experiences (Chandralal & Valenzuela, 2013; de Freitas Coelho, de Sevilha Gosling, & de Almeida, 2018; Kim 2014; Kim & Chen, 2018; Kim, Ritchie, & McCormick, 2012) . Again, tourism designers need to offer novel experiences to increase the memorability of the experiences especially through creating more surprise points during a trip (c.f. de Botton, 2002)

Active participation, attention and interaction with local people. It can be suggested that travel experiences in which local people help tourists out of trouble or show them unexpected hospitality are the most memorable. Social interaction and local culture have been found to be of important influences on memorability of an experience (de Freitas Coelho, et al., 2018; Kim 2014; Kim & Chen, 2018; Tung & Ritchie, 2011a). Opportunities to interact with people of other cultures have become a part of the co-creation experiences of contemporary tourism (Brown, 2005; Campos, Mendes, do Valle & Scott, 2016; Prebensen & Foss, 2011). The experiences where tourists engage with the local way of living, local culture and language have found to be significantly more memorable than passive observations of the visited world (Morgan & Xu, 2009; Tung & Ritchie, 2011a). Through studies on "mindfulness" and "co-creation" in the tourism context, it is also known that active participation, interaction, and attention can increase experience memorability (Campos et al., 2018; Moscardo, 1999). Therefore, increasing and managing attention through co-creating opportunities is a key part of memorable tourism experience design (Campos, et al., 2016).

After the work off Kim et al., (2012), a series of follow up studies on cross validating the constructs followed. Kim (2013) cross-validated the scale among United States and Taiwanese students. Five of the seven constructs were significantly different between the two groups and the research concluded that cultural studies should be conducted for designing MTEs in different cultures. This study opened the discussion for research about cultural differences in recollecting tourism experiences. Kim and Ritchie (2014) using the same contexts of America and Taiwan, also validated the MTEs scale within each culture. Later, Mazlina and Ahmad (2016) also compared the differences and similarities of MTEs factors among Asian and European tourists visiting a Malaysian national park.

The result revealed that four out of seven constructs of MTEs were significantly different for the two groups. Europeans rated cultural knowledge, stimulation, meaningfulness and novelty higher than Asians. Zare (2019) further investigated the cultural influences on the memorability of tourist experiences by exploring Iranians MTEs and found that there are at least four particularly cultural themes in the data; togetherness, independence and control, spontaneity and flexibility as well as distinctiveness. The work emphasized that the role of culture in shaping memories should be considered in designing MTEs as some of the general constructs by previous MTEs scales may be redundant or replaced by unique cultural values of targeted societies.

A year later, Kim (2014) also conceptualized destinations attributes associated with MTEs. In this research, destinations experiences were taken as equivalent to the tourism experience. This study also focused on the emotional factors on memory as the way to look at the memorable destination. Theories of destination competitiveness were reviewed as a basis for the connection between competitive destinations and memorable experiences (Crouch & Ritchie, 2005). The ten aspects of memorable tourism destinations were found to be accessibility, physiography, local culture/history, activities and events, infrastructure, destination management, hospitality, quality of service place, superstructure and attachment. The specific aim of the study was to assist DMOs to design environments with the ability to deliver MTEs.

Chandralal and Valenzuela and their colleagues undertook a parallel stream of studies about MTEs in 2013 and 2014. Chandralal and Valenzuela (2013) conducted a qualitative study to find the antecedents of MTEs. Their findings consisted of nine components for MTEs, one of which is affective and the rest are cognitively based. These antecedents are opportunities to encounter authentic and local experiences, significant outcomes, perceived meaningfulness, local hospitality, novelty, surprise, social interaction, professional tour guides and serendipity (cognitively-based) and positive emotions (affective based). The extracted MTEs themes had commonality and some distinction with MTEs models discussed before. For example, the role of tour guides emerged as a reason for memorability of a trip in this study. The research also drew attention to an important point about the impact of MTEs on future behaviours. While previous studies mentioned the effect of MTEs on the revisit intention as one of significant reasons for the reserach, Chandralal and Valenzuela (2013) found that tourists may not necessarily be

willing to return to a destination they positively for a variety of reasons. Some of these reasons are visiting other new areas, and not re-writing on a special memory by visiting it for the second time. Nevertheless, they recommended their MTEs to the other travellers. In a second study, Chandralal, Rindfleish, and Valenzuela (2015), repeated the original study using travel blog narratives and a netnography method and found the same components for MTEs.

Next, Horváth (2013) took a different approach to conceptualize memorable tourism experiences by asking tourism management college students in Budapest about their perception of what these experiences would be and how to co-create them. The student respondents perceived that MTEs are mental processes that they start from before the trip and continue after the journey. MTEs were described as physically challenging, complex and sometimes surprising. Attitudes and expectations prior to the commencement of travel were considered to be affecting MTEs. Building social capital, serendipitous moments and self-discovery were among the perceived values of MTEs. Park and Santos (2017) also asserted that memories are derived not only from the post-travel phase but also from anticipation and on-site experience. They explored what was memorable in each of these stages. Their findings suggest tourists recall most the process of collecting information and their excitement for the travel opportunity in the anticipation period, flexibility and freedom as well as interactions with others in the on-site experience, and finally unique and unexpected personal experiences in the post-travel.

In 2016, Servidio and Ruffolo explored the relationships of six basic emotions of happiness, fear, sadness, anger, surprise and disgust in the recall of MTEs through the narratives of tourists in Italy. The findings of this study demonstrated that positive emotions were more important in the recall of MTEs and anger did not play a role at all. The intensity of the five basic emotions differed through different stages of the holiday experience.

De Freitas Coelho et al. (2018) offered a new conceptualization of MTEs which is based on grounded theory work in Brazil. The theoretical model they suggest had nine categories in three influence areas: 1) Personal influences included lived emotions, travel motivations, dreams and desires fulfilment, degree of perceived novelty. 2) Relational influences consisted: interpersonal interaction, travel companion, travel planning. 3) environmental/cultural influences: tourism attractions, and cultural exchange. They also

highlighted three core processes of MTEs which are: 1) Ambience (the immersions of tourists in the environments that the activities take place) 2) socialization (the interpersonal relationships that bring people together) and 3) emotion (remarkable emotions create MTEs) and reflection (dreams and fulfillment).

Stone et al. (2017) stressed that not all memorable tourism experiences are destination related. Food and drinks (culinary) experiences can create powerful memorable experiences as well. The elements leading to these experiences are, however, more specific. For example, they discovered five themes for food and drink topics: location or setting, the occasion, companions, and tourist elements such as extraordinary view or entrée contribute to memorable gastronomy experiences. An adaptation of memory-work (Haug, 1987) was employed to collect data for this study.

The above efforts resulted in finding frequent themes in regard to the nature of activities or destination characteristics that are highly engaging and can lead tourists to be more mindful and attentive during their trip. In other words, efforts were made to design for better encoding and consequently improved memorability. After this array of studies about what constructs MTEs, research attention moved to the links between MTEs and future travel behaviours.

Manthiou, Kang, Chiang, and Tang (2016) assessed the impact of MTEs on the relationships between satisfaction, recollection and loyalty of theme park visitors in Chile. Script theory (Tomkins, 1981) explains that human behaviour follows a script-liked pattern in the long-term memory that is activated at the time of future behaviours such as decision making. This concept can be used in the prediction and evaluation of consumer behaviour. Tsai (2016) selected three other variables of memorable food experiences, place attachment and behavioural intention and explored the relationships among them. The MTEs model by Kim et al. (2012) was also used in this study. The findings indicated that having positive local cuisine experience enhances the identification with or place attachments to the local attractions. Furthermore, it was also confirmed that four of seven constructs from the applied MTEs model are strongly related to behavioural intentions. That is, experiencing hedonism, local culture, knowledge and refreshment through local food increases the willingness to repeat a visit or recommend the destination to the others.

Kim (2018) discussed the indirect and mediating effects of MTEs on loyalty intentions. The study compared the effects of destination image and overall satisfaction on revisit and WOM intentions. MTEs were the strongest power on the behavioural intention while the other two factors had direct and indirect impacts on the loyalty decisions. In a similar study, Zhang et al. (2018), confirmed almost the same kind of relationship between destination image, MTEs and revisit intention.

More recently, the focus seems to have shifted towards finding deeper psychological connections between autobiographic memory and MTEs. For example, Jorgenson et al., (2018) created and validated a new memorable tourism experience scale called Tourism Autobiographic Memory Scale (TAMS). Based upon the scale developed by Fitzgerald and Broadbridge (2013) concerning memory strength, the memories of tourism experiences were measured through the two constructs of impact and frequency of rehearsal. Visitors to a famous national park in the US agreed to mail back their responses to a seven-point scales on a questionnaire. Results revealed the practicality of personal memories to explain self-defining qualities such as protection of wildlife learnt through a trip.

Kim and Chen (2018) focused on the functions of MTEs from the autobiographic memory for three categories: distinctive, self and social roles. The distinctive function uses the past information to guide individuals in present and future thinking. When tourists deal with a new challenge, they seek help from their past experiences to overcome and solve the problem. Similarly, past information coming from personal memories directs tourists in their future behavioural intentions. The self-function refers to the application of recalled positive memories to maintain a sound identity over an individual's life. Finally, the social function of autobiographic memory builds and promotes social bonds. Sharing autobiographic memories for instance, provides opportunities to interact and get closer to other people. Researchers used a mixed method to collect data in public spaces (city parks) in the United States to produce another scale for MTEs with four dimensions of social interaction, novelty, destination enthusiasm and learning. They also found MTEs were significantly related to their three functions of directive, self and social. The social function proved to have the strongest relationship among three areas.

Finally, some work such as Bagdare (2016) and de Freitas Coelho et al. (2018) have attempted to offer frameworks for the management of MTEs by demonstrating different

dimensions of tourism experiences as well as their interactive processes and responses to the them. From MTE's model by Kim et al. (2012) to the latter ones, the models suggest the possibility of creating MTEs by selectively using the items. In other words, a trip may be identified as memorable with only some of the items in the scale. MTEs researchers admit that memorability can be crafted not just by the factors mentioned in these studies but it can have subjective, personal and socio-cultural dimensions as well. The proposed frameworks so far summarize the experiential factors that constitute memorable experiences. There is, however, a gap in knowledge about the important stage of retrieving memory and its processes. Therefore, the next sub-section reviews the current trends of MTEs in relation to the retrieval phase of memory.

2.5.3.2 Retrieval and MTEs

The information stored in long-term memory is accessed through another facet of memory function which is called retrieval. Arguably, a memory does not exist if it cannot be recalled successfully and the stored information should be first retrieved to be considered effective in making decisions or judgments (Tulving & Thomson, 1973). There is a fundamental distinction between "availability" and "accessibility" in retrieval processes. The information entered the long-term memory is always available whereas only a small portion of that information is accessible for retrieving at any point in time. Whether the information is accessible to retrieve or not is the matter of 1) the amount of competition in the same content domain and 2) self or externally generated retrieval cues being present or absent at the time (Tulving & Psotka, 1971). Thus, the available information is not always accessible.

Recall is sometimes intentional and under conscious control while at other times it might be spontaneous and involuntary (Berntsen & Hall, 2004; Conway & Pleydell-Pearce, 2000). From the tourism business point of view, both types of recall are important (Kim & Jang, 2016). In the complicated process of recalling memories, a set of patterns are activated across the structure of knowledge in long-term memory. If we consider the example of a vacation memory, one may be in the middle of a conversation with a friend during which they recall some incidents from a trip they experienced together. Thus those incidents as cues activate the memory of the common visited location, and this process can go further use to find other lifetime periods and general events associated with that memory (Conway, 1996). Investigating retrieval cues such as in this example can be a

starting point for an understanding of memory retrieval process and the ways it can benefit tourism marketing. As reviewed, already, MTEs studies were mostly about encoding tourism offerings and destinations. There is though a clear lack of studies about the retrieval stage of the memory process and the opportunities to facilitate desirable retrieval (Kim & Jang, 2016).

In consumer behaviour studies, significant effort has been put on increasing the favourability of services and products through cues (Davies, Kooijman, & Ward, 2003; Ward, Davies & Kooijman, 2004; Lwin, Morrin, & Krishna, 2010). Autobiographical memory may be elicited spontaneously or it can be accessed by mental time travel to a past experience with the help of triggering cues and sensory modalities (Conway 1996; Rubin, 2005). Following the methods in business studies, tourism providers can identify and apply retrieval cues that can improve individuals remembering their tourism experiences more favourably.

Generally, the stimuli influencing memory retrieval can be categorized as two types; internal and external (Kim & Jang, 2016). In a theoretical model by Kim and Jang (2016), the researchers considered personality traits as internal while olfactory cues, auditory cues and mementos were categorized as external influences. Emotional arousal induced by music was also considered as an internal influence on memory retrieval. The internal influences are innate forces that can influence recall. For example, personality traits, such as openness to a different culture were revealed to be one of the internal influences on recall of a cultural event (Kim & Jang, 2016). Unlike internal influences that are difficult to manage, external influences can be manipulated. Such cues are important in marketing. External retrieval cues assist in the process of bringing out memories from long-term storage. In a study by Kim and Jang (2016), the visitors of a cultural event later participated in classroom experiments. Those who were assigned to an experimental manipulation based on scented questionnaires (olfactory cue), or circumstances involved with listening to the same music when completing the questionnaire, or who were given a poster of the event before doing the survey (mementos cue), all performed better in recall than members of the control group. The reason behind the power of these external cues to improve recall is explained with theories about retrieval mode focus. Such external cues affect the relationship between past and present inputs whereby the retrieval cues reinstate the initial memory codes at the time of recall (Tulving, & Thomson, 1973).

Many of these theories are summarised under *encoding specificity theory* (Tulving, & Thomson, 1973). This principle asserts that during the recall, original encoded information is linked to the situation or environment in which it was learned. As a consequence, memory is improved when information available at the time of retrieval matches that at encoding. For example, individuals going to a restaurant for the second time can recall details of the first experience more successfully when they are at the spot rather than when they are asked about the first experience in a different location. Therefore, the contextual cue of location is helping memory retrieval. Some examples of cue modalities include words, images, scents, music and mementos. In psychology research, there is a long history of reinstalling these cues to provide original encoding conditions and improve retention (Goh & Lu, 2012; Tulving, 1985).

An understanding of retrieval cue types leads to two approaches of cueing techniques used by businesses. One approach is matching encoding and retrieval conditions by putting the person trying to recall an episode or experience in the same environment as when they received the information (material/context-dependent cue match). A second path is to locate the person remembering the event, product or experience in the same state of mind as when they were learning the information (emotional/state-dependent cues) (Godden & Baddeley, 1975; Smith, Glenberg & Bjork, 1978). The second approach, however, is less manageable since it depends on reinstating an individual's subjective mood.

Although cueing techniques have been established as a valuable tool in enhancing elicitation of personal memories (Conway & Bekerian 1987; Goddard, Pring, & Felmingham 2005), attention in tourism studies to such techniques and the retrieval phase of memory in general is scarce (Kim & Jang, 2016; Zare & Pearce, 2018). Recently, Tung, Lin, Qiu Zhang, & Zhao (2017) attempted to develop a conceptual model to connect relevant psychological concepts and tourism research to each stage of memory (encoding, consolidation and retrieval). They conducted focus groups to examine how practitioners are helping tourists encode, consolidate, and retrieve their memories in the context of tourism. The proposed model emphasized the relevance of attention, positive evaluations and sensory cues at the encoding and retrieval stages.

In summary, further theoretical research is needed to conceptualize the forces operating in different phases of the memory process related to memorable tourism experiences.

Meanwhile, tourism product and service designers may use cue and sensory marketing more often to improve their brand's memory. For example, some businesses, including hotels may use signature olfactory cues to help their customers recall positive information about their services (Hultén, 2011). Tour package designers may also think about ordering and framing visits for maximum memorability (Zare & Pearce, 2018). Qantas, an Australian airline, often plays "I still call Australia home" when passengers are arriving in Australia. The positive emotional connotations of return with the words of the song and the music from the singer Peter Allan are likely to be linked as the music is played at the end of the long flights; this is an order effect cue reinforcing the impact of emotional nostalgia.

The middle phase of memory processes, storage or consolidation of memory, and the mechanisms related to that have been rarely discussed in the tourism business context. Consolidation, which is the process of memory stabilization in the brain, occurs through two distinct stages; one happens during the first few hours of learning while another takes weeks to years (Dudai, 2004). There is only one recent study about the management of travel memories that has referred to this stage of memory and the role of social identity in consolidation of memories (Tung et al., 2017). Other than that, however, there are many research opportunities related to consolidation phase that can be explored. For example, is there any difference between consolidated travel memories and immediate ones? This question and many more can be answered through further studies. Finally, Figure 2.7, summarizes the conceptualization of tourism studies based on the three memory phases.

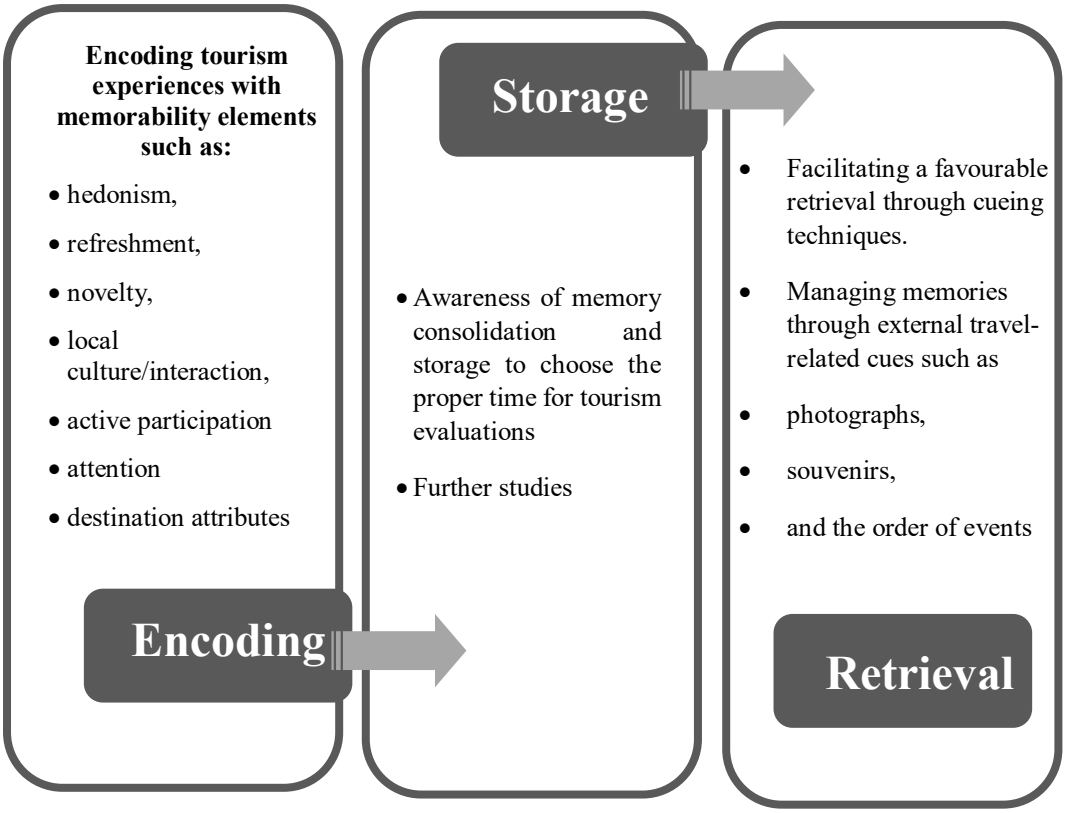


Figure 2.7 Conceptualization of tourism studies based on memory process

2.5.3.3 Summary

Studies reviewed above can be summarized under the four categories by the approach they adapted to explore aspects of memorable tourism experiences; 1) scale development and themes discovery 2), relationships exploration (mostly between elements of MTEs and future travel behaviours), 3) psychological understanding of the links between the autobiographic memory and its functions or outcomes to memorable trips, and 4) a limited number of studies explored intercultural and demographic differences in MTEs context. The current study is more of a combination of level one and three: that is directing attention to a deep understanding of the recall process and how it can be used in the design of MTEs.

The understandings, gaps, and implications for the design of the current thesis are summarized below:

- The developed MTEs' scales are mostly emotion-based and the role of actual cognitive processes involving the construction and retrieval of MTEs have not been explored thoroughly.
- A stronger focus on the encoding stage of memory for the design of MTEs was displayed in the reviewed research. Although identifying the attributes that can be

employed to design such experiences will ultimately result in optimizing travel autobiographical memories and make the desirable management of them easier, more attention should be paid to the retrieval stage of memory and how to maximize favourable recall of events. To this end, the current study focuses on one of several external forces affecting memory retrieval that is specifically the order of visits.

- In regard to study methods, limited variation was observed in previous studies. Researchers mostly used direct interviews or netnography to obtain data. In the case of netnography methods, however, there is a concern that unless targeted blog posts are written specifically to describe a MTE, we may not be able to distinguish between trip reviews in general and MTE reviews in particular.
- In the second category, where relationships between MTEs items and travel behaviour are explored, structural equation modelling has been a popular statistical approach and behavioural intention, especially revisit intention, is one fixed variable in almost all of those studies. SEM results sometimes are not accompanied with in depth understanding of the relationships discovered, therefore, the contributions are occasionally hard to interpret (Dolnicar, Coltman, & Sharma, 2015). Focusing on revisit intention as a major outcome of MTEs may also be arguable and even unnecessary. In some studies, such as Chandralal and Valenzuela (2013), a strong connection between these two variables (MTE and revisit intention) was not even confirmed. MTEs applications and outcomes extend beyond only revisit and repeat customer studies; there is a need to shift the attention to other outcomes of MTEs.
- In terms of study context, most of the reviewed studies were based on nature-based tourism experiences while the current thesis is concerned with cultural-based travel trips.
- Some of the above studies did not differentiate between data from first time and repeat visitors or did not mention this point (e.g. Jorgens, Nickerso, Dalenbe, Angle, Metcalf, & Freimund, 2018). However, based on the fundamental ideas in memory, reactivity exists because previous experiences affect current ones. Therefore, for more accurate results, only first-time visitors are considered when colecting data in this thesis.
- Many previous studies used student/academic samples that may not represent as typical travellers (Chandralal, et al., 2015). Being aware of this limitation, the current study relies on actual tourists rather than students to provide information.

- Current research is inspired by the above studies and uses the same terms and definitions as them but the lens to look at memorable tourism experiences is dramatically different. This thesis investigates an external effect on memorability of travel destinations and suggests a novel approach to the tourists' experience design through retrieval mechanism.

2.6 Towards research hypotheses

The relevant knowledge foundation for this thesis have been considered in the preceding section. More specific theories underpinning the hypotheses are followed in this section.

2.6.1 Remembering tourist' destinations

In remembering a place, almost like remembering anything else, the final process of memory, which is retrieval, is necessarily important. Fundamental theories about retrieval process and its connection to tourist experiences were already explained in previous sections (cf. section 2.5.3.2). Here, there are further ideas to consider about the process of retrieving memories or recall. There are two prominent theories about recall. Two staged theories or generate-recognize (Tarnow, 2015; Watkins & Gardiner, 1979) and encoding specificity (Tulving & Thompson, 1973) and for the better understanding of these key technical terms in these theories, the two types of recall are defined below.

Types of recall. In most early experimental work on memory, the respondents were asked to recall a list of words in different ways to test various aspects of memory. Therefore, techniques including free recall, cued recall, serial recall and recognition were developed. *Free recall* is when the respondents are asked to recall the word list given to them in any order. Serial recall, on the contrary is when they are asked to recall the words in the order it was presented to them. Cued recall could be formed by employing any cue such as giving the first few letters of each word and asking the subjects to recall the rest. Finally, recognition is when the respondents are given a combination of list-words and non-list words and asked to select the list-words from that composite of items (Eysenck, 2012).

Generate-recognize theory. This theory accounts for the recall process by involving a generation process followed by a recognition process (Anderson & Bower, 1972; Bahrick, 1970). The most obvious achievement of this theory is that it simply explains why recognition is more likely to be successful than recall. Failure of recall may be the result of failure at either the generation or the recognition stage, whereas failure of

recognition may only occur at the recognition stage (Watkins & Gardiner, 1979). However, the theory has failed in some other experiments where study participants consistently failed to recognize many recallable words in a list under certain conditions. Provisional explanations for the recognition failure were then subsumed under the encoding specificity principle (Tulving & Thomson, 1973)

Encoding specificity. Based on this theory, memory is improved when the information available at the encoding phase, is available at the time of retrieval. The specific encoding operations performed by the system on the input stimuli determines the effectiveness of retrieval cue. Therefore, there are similarities between recall and recognition process. This theory and its applications in tourism were explained before in section 2.5.3.2, where the cueing technique was discussed.

2.6.1.1 Factors affecting recall

To improve recall several ways and the factors involved can be highlighted. For example, reinstalling the original encoding conditions (through context dependent or state dependent cues) represents one successful pathway to improving recall. Other factors influencing recall include paying attention and being mindful in the learning process, the role of emotions (both positively and negatively loaded words have been found to be easier to recall), the power of motivations (encouraging respondents with incentives for higher number of recall has improved the recall rate), and delay interferences (whether there has been any delay between presentation of messages) (Cohen, 1989; Craik, Knoedler, Hellwig, & Neath, 2000; Craik, Naveh-Benjamin, Ishaik & Anderson, 2000; Gotoh, 2012). In this thesis, the focus is on one of the context-dependent influences on memory that is the “order” or “temporal position” effect. The core idea here is to find the effects of different orders of visiting destinations on the memorability of them while controlling for the other factors (above) affecting memory as much as possible.

2.6.1.2 Serial Position Effect

The most relevant theory about order effects in the context of this study is called serial position effect. The phenomenon of a serial position effect was first introduced by Ebbinghaus (1902, p. 624-626). He studied the free recall of nonsense words or sets of syllables in memory tasks. Many researchers have replicated his original findings in different contexts (see Crowder, 2014; Goldstein, 2014). In essence the foundation work suggested that the first and last few elements in a series are recalled best (the primacy and recency effects). The midpoint has the lowest performance which means that there is a bow-shaped (or U shaped) relationship between recall and the serial position of listed items (Hilgard, Atkinson & Atkinson, 1967).

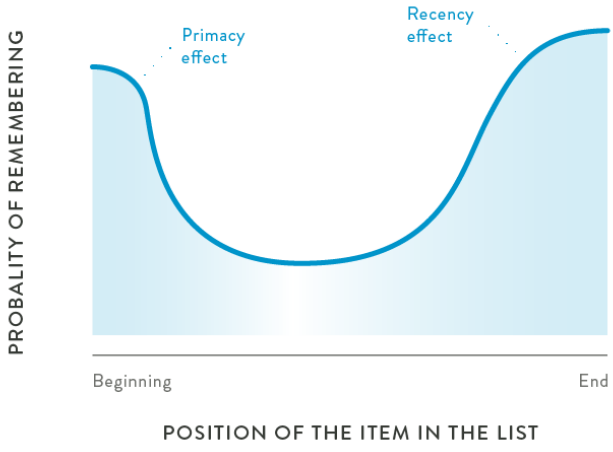


Figure 2.8 Serial position effect curve in free recall (Hilgard, et al., 1967)

The serial position curve as shown above refers to the graph relating the probability of recall with the position on the word list. The x-axis indicates the serial position of the to-be-remembered items in the list (e.g., the first item, the second item, the third item, and so on). The y-axis shows the probability of recall for the item, which is typically obtained by averaging across a number of subjects (Hilgard et al., 1967).

Initially the importance of the curve for cognitive science was in the evidence that it provided for memory to be seen as an organized set of subsystems (short and long-term memory). The normal U shape of serial position effects in free recall is a composite of two output curves: The first one declines from beginning to end of list that represents output from long-term storage and the other, rises from beginning to end of list, which represents output from short-term storage (Glanzer & Cunitz, 1966). Later SPE curve

began to be used in predicting the *probability of the first recall* (PFR). PFR refers to participants' tendency to initiate recall of a list that might be with the words at the end of the list usually for longer lists (Hogan, 1975; Howard & Kahana, 1999; Laming, 1999), or words at the beginning of the sequence for shorter lists (Ward, Tan, & Grenfell-Essam, 2010).

2.6.1.3 Primacy effects

The effects that early items in a list have a memory advantage, is called primacy effect and it is due to the first items having less competition from other items for limited memory capacity (Crowder, 2014;Waugh & Norman, 1965). When a primacy effect appears in free recall, it seems to be the result of subjects recalling items directly from semantic memory. This is because the primacy effect can be sharply attenuated by performing manipulations that adversely affect this system- such as using fast presentation of items (which does not permit much elaborative rehearsal to transfer memories from short-term to long-term stores), or by using list items that have similar meanings (and thereby producing semantic confusions) (Hilgard et al., 1967).

2.6.1.4 Recency effect

In a normal free recall test, the last few items in the list also receive a memory advantage (a recency effect), because these items may still be available in short-term memory during the memory test. The recency effect appears to be the result of subjects recalling items directly from the maintenance rehearsal loop used to keep items in primary memory. In other words, it reflects short-term memory for items. This is because the recency effect can be sharply attenuated by performing manipulations that adversely affect such rehearsal -- such as delaying recall of list items with a distractor task, or by using list items that have similar sounds (Wyer & Srull, 1986; Brown, 1824; Calkins, 1896).

2.6.2 Evaluating tourist destinations

To define evaluation in the context of this thesis, it is important to know about two levels of processing information. Theories of importance in this domain are *two levels of processing*, *mindfulness vs mindlessness,* and the *elaboration likelihood model of persuasion.*

Two levels of processing theory. When Craik and Lockhart (1972) noticed that learning is improved if meaning is processed at the time of encoding, they proposed that there are

two levels of processing for long-term memory: deep processing and shallow processing. Besides depth of processing, it came to the researchers' attention that *elaboration* or the amount of information that is processed also influences long-term memory. Numerous studies supported this theory. Some of these theories, have been applied in tourism context. An example is the theory of *mindfulness vs. Mindlessness.* Mindfulness, is ''*a state of mind that results from drawing novel distinctions, examining information from new perspectives, and being sensitive to context*" while Mindlessness, on the other hand, is defined as ''*a single-minded reliance on information without an active awareness of alternative perspectives or alternative uses to which the information could be put*'' (Langer, 1993, p. 44). Material, which is processed mindfully, is likely to be remembered better. Moscardo and Pearce (1986), Moscardo (2009) as well as Frauman and Norman, (2004) recommended that mindfulness-training exercises develop more flexible thinking rather than stereotyped thinking skills in a range of tourism situations and mindfulness can be used as an integrated concept to enhance the quality and sustainability of the visitor experience.

Using a similar concept in persuasion studies, Petty and Cacioppo (1984) delineated two basic routes to processing information. The first route is based on a careful and thoughtful consideration of arguments central to the issue (central route) whereas the second path is based on affective associations or simple inferences tied to peripheral cues in the persuasion context (peripheral route). The approach is referred to as *Elaboration Likelihood Model (ELM)* and it has been borrowed to explain tourist behaviours. Kim and Fesenmaier (2005) as well as Morosan and Fesenmaier (2007) asserted that the type of involvement that consumers have with travel websites are the result of either taking the central route or peripheral route. When the consumers know exactly what kind of information they are looking for, they follow the central route of being goal-directed and pass through the classical decision-making theory with its five stages: *need recognition, information search, evaluation of alternatives, purchase decision, and post-purchase evaluation* (Morosan & Fesenmaier, 2007).

Decision-making has been discussed in the tourism literature as a key part of tourists' behaviour involving memory (Cohen, Prayag, & Moital, 2014; Horner & Swarbrooke, 2004). And the core part of decision-making studies is "choice set" models (e.g., Barros, Butler, & Correia, 2008; Crompton & Ankomah, 1993); Nicolau & Mas, 2005). Sirakaya

and Woodside (2005) explained the phases of a choice set model in the purchase of a tourism product or choosing a destination. Tourism services, products or destinations are holistic, compounded, and risky to purchase; therefore, customers follow a funnel-like process in their buying decision. At the first step they rule out options from the "total set" (this consists of all available options) to create a "consideration set" and they then reach a narrower "choice set" from which they eventually choose (Jones & Chen, 2011; Sirakaya & Woodside, 2005). Memory is involved in each stages of this process to some extent. In the post travel evaluation of few visited cities for example, however, customers are involved in first recalling and then comparing those cities. Similar to the models such as two levels of processing information, there are two levels of involvement with the cognitive tasks; high involvement and low involvement (Hawkins, Best, & Coney, 1995). The process of purchasing tourism services and products is usually expensive and requires extensive time and consideration; therefore, there is a high level of involvement in planning and buying holidays. Post travel evaluation tasks, however, naturally involve less pressure and perceived risk because a choice has been made and paid for and tourists are only reporting on their experience. Further, biases occur in both the decision-making and evaluation processes and more often than not, they are due to the use of heuristics or shortcuts to simplify decisions or evaluations (Tversky & Kahneman, 1973; Kahneman, & Tversky, 1973).

The focus of this thesis is on the post-travel evaluation of destinations where there is less pressure (or no pressure) on the individuals to employ a deeper level of processing information when answering the evaluation surveys. The post-travel evaluation is therefore, considered to be a low involvement process. The cognitive processes involved in the post-travel evaluations especially in the context of memory and order effects have not been the centre of much attention and that is the first point of distinction between this thesis with previous studies. The second difference is that destinations are holistic experiences with various attributes and aspects, therefore controlling for all the factors that could be measured is not easy. Yet, it is the argument of the current study that in many post travel evaluations, heuristic processes are involved where the cues or forces making these evaluations can be understood and managed. In the next section, the cognitive process of evaluating travel destinations after a trip will be discussed further. The additional literature review ultimately leads to the formulation of the research hypotheses for the thesis.

2.6.2.1 Evaluation based on recall vs satisfaction

Previous studies in tourism have traditionally interpreted an experience's overall evaluation in the form of satisfaction; however, there is a growing shift to understand the overall evaluation in terms of their links to memorability (Kim & Chen, 2018). Measuring experiences through satisfaction may be indirect, ambiguous and prone to measurement biases while evaluating events by recall is more direct and suitable for assessing some components (Pearce, 2005). The customer satisfaction source or outcome can be systematically and artificially influenced by factors other than satisfaction, therefore, self-reports do not always necessarily reflect true satisfaction (Peterson & Wilson, 1992). Some possible factors skewing service and product satisfaction ratings are related to expectation effects (satisfaction depends on confirmation or disconfirmation of prior expectations) or methodological issues. Some relevant methodological and contextual biases are:

- Ceiling effect (not having sufficient number of categories in the scale),
- Response rate bias (satisfied customers are more likely to respond to satisfaction surveys)
- Data collection method bias (the result may be different if the survey is conducted in person, telephone or by email),
- Question form bias (wording the satisfaction questions in positive terms is likely to result in higher satisfactions than framing the questions in negative terms) and
- Question context bias (e.g. question-order bias; how earlier questions may influence later questions) (Grigoroudis & Siskos, 2009; Hu & Li, 2011; Noe & Uysal, 1997; Peterson & Wilson, 1992).

Although some of these biases may also apply to the evaluation process, evaluation by simple recall is arguably superior to satisfaction assessment because it provides a focus and the language issues in the way recall is asked are carefully tested for biases and triggers (Pearce, 2005).

2.6.2.2 Context effects on judgments

In considering "order" as a context feature affecting evaluations, more information about these types of evaluations can be reviewed. Plous (1993) identified four categories for context dependent evaluations: the contrast effect, the halo effect, the primacy effect, and

the recency effect. The simple experiment to identify the contrast effect is to ask subjects to initially lift heavy weights, followed by a light weight. It has been observed that people subsequently rate the second weight as lighter than if it is judged alone (Sherif, Taub, & Hovland, 1958). The halo effect happens when a judgment about a person, place or a thing is formed based on unrelated attributes. For example, viewing someone attractive as being also successful and warm (Thorndike, 1920). Asch (1946) pioneered the primacy effects experiments in impression formation cases. He asked half of the subjects in his experiments to make an overall impression about someone who was envious, stubborn, critical, impulsive, industrious and intelligent while the other half were asked about someone with the same characteristics only with reverse order (presenting the positive features first). He found that the items appearing earlier in the sequence had stronger effects on the overall impression about a person than the later characteristics (primacy effect). The primacy effect does not occur only in forming an impression but in many different situations involving the evaluation of sequential information. Primacy effect does not always operate and sometimes a recency effect occurs, that is, the latest items have greater influence on judgment and decision making. Among the four mentioned effects, the focus of this thesis is on the primacy and recency effects in evaluations. More specifically, the role of temporal position of destinations that are visited in a single trip on the recall and evaluations of these cities is central to the thesis. Order as an influential and important contextual characteristic of travel experiences can provide information for the improved design and management of itineraries and visit patterns.

2.6.2.3 Online versus memory-based evaluations

Tourist post travel evaluations of services or destinations are typically collected through self-report surveys after the trip. These are the type of evaluations that are of interest in the context of this study. Based on Hastie and Park (1986), there are two types of evaluation formation processes: online and memory-based. Some information is likely to be evaluated on the spot, for example in a talent show where judges have to comment and write down notes about each performer right after the performance. There are also situations that lead people to evaluate the information at a later point in time. For instance, a professor who has visited few students' presentations is surprised by an evaluation task where the department dean seeks his views of the student work after he leaves the class. As he has not had expected to be asked about his opinion, now he has to form judgments

using the memory of all the presentations that he has observed. In the first scenario, a talent show, the judges are aware of their task, and they process the information as they receive it (performance by performance) to form an overall evaluation on the spot. In the second case, however, the information is not processed when it is received but later when the judgment task is required. This leads to the professor using his long-term memory as much as possible to form the overall evaluation about the students. In brief, on-line judgments are mostly independent of long-term memory and memory-based judgments are not. Therefore, the most important distinction between these two forms of evaluations concerns the source of inputs into judgment operators (Bizer, Tormala, Rucker & Petty 2006; Anderson & Hubert 1963; Lichtenstein & Srull, 1987; Kardes & Herr, 1990). After information is presented to a person, the judgment operator performs its function to generate a conclusion on which a response is based on. Some judgment researchers have described judgments operators as cognitive heuristics limited by working-memory capacities and this constrain reduces the complexity of elementary information processes that can be executed at any point in time (e.g., Kelley, 1973; Tversky & Kahneman, 1974).

The source of input for memory-based judgments is long-term memory, and therefore susceptible to the biases such as order. In other words, the relationship between judgment and memory will depend on the order of retrieved information; if recall-order input and judgment-order outputs match, a strong relationship is found and when they differ, a weak relationship is informed. Table 2.1 summarizes these relationships. These links highlight how the order of recall influences judgment. In the context of this study, destinations are products that can be sometimes judged overall and sometimes by their attributes depending on the evaluation task required.

It is possible to adopt and illustrate these relationships in the context of tourists' destinations. If tourists who visited three cities A, B and C are asked about their evaluation of each city right at the destination, they form on-line judgments. However, if researchers wait and ask the tourists about these cities at the end of the tour, they have to create a memory-based judgment. In that case, if the tourist recalls the cities, say in the following order, A, C, B, (order of recall) and they state that they liked the cities in the same order (recall-order input matches judgment-order outputs), then there is a strong relationship between recall and judgment, otherwise the relationship is weak.

To provide conditions that result in memory-based judgment, the requested judgment for the subjects should be novel and unlikely to be preceded by a relevant on-line judgment, as in the professor scenario. Therefore, the most reliable method to produce memory-based judgment is to surprise subjects with a novel judgment. Many tourism destination evaluations are naturally memory-based, just like in the current study, because the judgments tasks are usually required at the end of tours/experiences and tourists are not aware of these evaluations until this point. Nevertheless, ongoing online assessment may be occurring if, for example, a guide asks tourists at the end of each day what they think of specific elements of that day's tour and the cities visited.

Table 2.2 Memory and Judgment relationships (Based on Hastie & Park 1986, Lichtenstein & Srull 1985, 1987).

The form of the Judgment	Memory-Judgment relationship	Explanation
Online	Null	Judgment is formed on-line as information is acquired. The overall evaluations and the specific attribute information are stored independently in memory.
Memory-Based	Strong	Evaluations are formed after information acquisition. Judgment-order outputs are as the same as recall-order inputs. The attribute information that is retrieved at the beginning of recall protocol serves as a direct input for evaluative judgments.
Memory-Based	Weak	Evaluations are formed after information acquisition. Judgment-order outputs differs from recall-order inputs

Independent processing,

Biased retrieval, Biased encoding

Incongruity biased encoding

Availability biased model

The identified relationships (shown in Table 2.2) has been extracted from variety of tasks in more than 50 published experiments in the domain of social judgment including impression formation, liability, behaviours, attitude formation and change, and decision making (Hastie & Park, 1986). In these studies, four alternative theories of social cognition relate memory to online judgments, they include; independent processing,

biased retrieval, biased encoding and incongruity biased encoding (cf. Hastie & Park, 1986) . Only one alternative theory explains the judgment and memory relationship in memory-based judgments and that is the availability model discussed before in section 2.6.1.4. In some cases, however, the relationship between memory and judgment is more complicated and is not justified solely based on the availability theory. Manipulation of order is the most common feature of experiments in previous studies; therefore, the concept of order effects especially the serial position effect is implied in memory-based judgments studies, thus providing a foundation for the current work.

The family of availability models assumes that memory availability causes judgment (Hastie & Park, 1986). The most common work in this regard is by Tversky and Kahneman (1973) on the "availability heuristic". This model can once again be summarized as follows:

(a) Individuals encode the information in working memory as they receive it. No judgment is formed at this point; because subjects are not aware that a relevant judgment is required later.

(b) Encoding process continues by transferring the information from working memory into long-term memory

(c) An evaluation task is prompted; therefore, individuals start the evaluation process by retrieving information from long-term memory to put into the judgment operator

(d) A judgment based on the long-term memory is formulated and reported by the subjects

(e) The retrieval process will be repeated in the same way if a memory test is given to the subject (Hastie & Park, 1986, P. 260).

2.6.3 Adaptation of serial position effect in recall and evaluation of tourist destinations

Before applying SPE in the context of recalling and evaluating tourist destinations three major questions or concerns may arise:

Question One) Serial position effects is an outcome theory of a phenomenon involving short term memory (presentation and recall of listed words over few seconds), therefore, how can this theory also apply to remembering destinations visited over days?

After a long duration of testing SPE in different contexts, it is now widely accepted by contemporary researchers that similar memory mechanisms operate on episodic memory especially autobiographical memories over different timescales such as days, months and

years (cf Howard, Shankar, Aue, & Criss, 2015; Moreton & Ward, 2010) and serial position effects can occur for real-world stimuli for which short-term memory explanation of primacy and recency is untenable (Mack, Cinel, Davies, Harding, & Ward, 2017).

Question Two) if the original SPE theory is about recall, how is it possible to apply it to the evaluation process?

Soon after the introduction of SPE researchers started to investigate the order effects in other contexts besides laboratory experiments of free recall resulting in a rich body of knowledge informing us that SPE is certainly involved in different cognitive processes such as impression formation, decision making and evaluation.

Question Three) considering that SPE has been originally devised to test the free recall of words, how is it possible (or right) to consider cities as words in the context of this thesis?

Previous applications of SPE theory in the recall of non-word items such as tangible products and advertisement messages are numerous in consumer behaviour studies. The following review of select key studies in social science and tourism, provide answers to questions two and three.

2.6.3.1 Position effect in social science studies

Associated studies of the position effect exist for both the choice of physical items as well as non-physical options. For example, Valenzuela and Raghubir (2009) reported a preference for middle positions in the context of choosing among a variety of identical chewing gums. For non-identical and non-physical choices, studies of ballot voting about the position effect of the candidate's name (in a list) on the outcome of election by Koppell and Steen (2004), as well as Miller and Krosnick (1998) reported a primacy effect.

Destinations visited in a sequence have a non-identical and non-physical (holistic) nature. Cities as tourism products are intangible and not standard products. Such categorization matters because 1) it introduces the issue of non-equivalence as a potential moderator on the effect of position that will affect the formulation of one of the hypothesis in this study. 2) It is also important because it suggests psychological reasoning processes may be operating rather than physical convenience as possible explanations of why and how

position effects operate in the destination context. To clarify this distinction, there are multiple reasons mentioned for position effects in relation to physical and tangible items. For example, the middle effect mentioned in the retail stores for the identical items in a vertical shelf (identical chewing gums), may in part be due to the middle products being at the eye or hand level (Campo & Gijsbrechts 2005; Chandon, Hutchinson, Bradlow, & Young, 2009). In his extensive observation studies of shopping behaviour and merchandising, Underhill (1999) discovered that convenience and body mechanics, specifically reaching with the right hand to place objects in a basket carried in the left hand, predisposed customers to choose middle and right-hand edge items in a display. In a relatively similar context, on guessing the correct answer from multiple-choice questions, Attali and Bar-Hillel (2003) proposed another reason for their middle-scale bias findings. They suggested a generic tendency to avoid boundaries, which they labeled as *edge aversion* phenomenon. Unkelbach and Memmert (2014) called the need to avoid extreme categories in the beginning of a serial evaluation as calibration effect. According to this effect in serial evaluations such as in sports, talent shows, or academic examinations, to be good and at the beginning of a sequence is better because one is more likely to be judged as "average" than "good," whereas being bad at the beginning is advantageous because one is more likely to be categorized as "average" than "bad.". The type of judgment explained by this model is an online evaluation.

Obviously, the same justifications as above cannot be applied to the non-physical holistic items such as tourist destinations being evaluated based on memory. A range of psychological theories suggests possible explanations for the selection of non-physical items in a sequence. These theories may have been named differently but in essence, they refer to the same idea summarized under the "*availability biased model*" discussed earlier. For instance, it is more compelling for the primacy effect occurred in the voting studies (Koppell & Steen 2014; Miller & Krosnick, 1998) to be due to the "*satisficing principle"* (Simon, 1957). This principle suggests that people may choose the most accessible satisfactory option, not necessarily the optimal option when they are presented with a list of non-identical items. This approach is consistent with being a "*cognitive miser*" (Fiske & Taylor, 1984) or "*shallow processor"* (Langer, 1989) as such concepts suggest that less effort is required to adopt an adequate solution to a complex decision compared to thoroughly processing all available options. Similarly, the recency effect found in previous studies has been suggested to be linked to memory-based principles such as

memory-based judgments and the serial position effect. For instance, Murphy et al. (2006) in their research about how a link's position on a website page may influence its clicking rate, reported that primacy and recency effects affect clicking on such website links. They hypothesized that the reason for the recency effect in clicking behaviour is that the last few items on a list receive a memory advantage due to being more available in short-term memory during the memory test.

2.6.3.2 Position effects in tourism studies

It is notable how tourism has not been a substantial subject area for the investigation of position effects despite many tourism experiences occurring over time and in structured and carefully planned sequences. To the author's knowledge there are only a few studies about position effects on the choice of tourism products, such as food on restaurant menus (Dayan & Bar-Hillel, 2011) or hotels on booking websites (Ert & Fleischer 2014). Select older studies have also investigated the importance of position effects for impression formation in travel brochures (Chiou, Wan & Lee, 2008; MacKay & Smith 2006) and website design (Kim & Fesenmaier, 2008).

Dayan and Bar-Hillel (2011) investigated the effects of position of the food on the restaurant menu. Over a few days, the same menu with same items but different orders were presented to the customers of a café. The items placed at the beginning or the end of the list were found to be almost twice as popular compared to being placed in the center of the list. In the second study, order effects were examined when booking a hotel online (Ert & Fleischer, 2014). This study built on the previous studies about position effects on clicking behaviours and online bookings. The researchers tested the probability of the hotels with similar attributes (controlled experiment) to be selected based on their positions in a vertical list on a website. They developed a website that simulated a hotel-booking website such as Booking.com where respondents were presented with 10 hotels with highly similar attributes and prices. Ten different conditions were presented to the respondents on the screen. In each of these conditions the order of presenting the hotels changed (a 10*10 grid). The analysis of the results revealed that the hotels listed at the top and at the bottom of the list were more likely to be chosen than those in the middle (primacy and recency effects both occurred).

As can be seen, in above studies, the spatial (position in a list) not temporal position (sequence of presentation over time) was examined in relation to the choice. The "choice

set" model and decision-making processes are the core part of those studies. The current study, however, is different in exploring memory and evaluation processes rather than decision making. Another important point of differentiation with the above studies is that the current study is designed in a natural field-experiment setting (Only the study of food on the menu used a real life situation). In this thesis, actual tourists who took commercial tours with naturally manipulated visit orders are studied. Obviously, controlling extraneous effects in such a natural and holistic context would be more difficult but if done well, the external validity especially the ecological validity of the result is higher. Naturalistic research and its strengths will be discussed further in chapter three. In terms of design, previous studies have used factorial design, hypotheses testing and logit regression analysis as the right fit for experiments on order effects. Similarly, the researcher will follow these analytical approaches to reach the study goals.

2.6.3.3 Moderating factors on position effects

Initial processing goal. Close tracking of the literature also leads us to a set of moderating effects on the importance of position. For example, Kardes and Herr (1990) observed that the initial expectation about whether an evaluation will follow the choice or is needed to justify the choice shapes the effects of position. Primacy effects, and other order effects, tend to appear when the initial goal is one of simply remembering attributes of a product (such as features of a television set). In contrast, when consumers have an initial processing goal of directly choosing a product and committing to a decision, primacy effects disappear. The study, therefore suggest that the nature of the goals and the timing of questions about recall are critical for the memory and choice tasks. The way that initial processing goals affect the position/order effects is through the level of involvement and motivation (Alba & Hutchinson 1987; Petty & Cacioppo 1986; Kahnman et al. 1982, Nisbett & Ross 1980).

Involvement level and motivation to think. The concept of involvement was introduced earlier. From the literature, it seems that involvement moderates and further explains position effects. Both recency and primacy effects are often found to be moderated by the individual's involvement or motivation to think about the object or the activity (Murphy et al., 2006). Haugtvedt and Wegener (1994) showed that situations with high levels of message elaboration result in greater influence of an initial message on final judgments (a primacy effect) whereas situations that involve low levels of message relevant

elaboration cause greater influence of a second message on final judgments (a recency effect). Position effects were also different for various level of involvement with the act of voting. Miller and Krosnick (1998) who studied the effects of candidates' name order in the list on the election result and found primacy effects in more than 50% of the cases noticed that in election races where voters were perceived to be highly involved, the effect of the candidate's serial position was less apparent. Besides personal relevance and responsibility as motivations to think (Petty, Cacioppo, Strathman, & Priester, 2005) involvement is often determined through the perceived risk with the decision (Arnold, Price, & Zinkhan, 2004). In a field experiment the risk and benefits of medical treatment were presented in two different orders to the subjects. The patients who received a brochure on a low-risk treatment were significantly more willing to consent to the treatment when the brochure mentioned the benefits first. For the brochures stating high risks first, no position effect was found.

The type of evaluation tasks. Different evaluation tasks create various position effects. For example, in the *Impression task*, which is a task of expressing the overall impression of a product by consumers, it is most likely that judgment- primacy effect occurs. In these tasks, an online, judgment-updating process causes the earlier information to colour the way subsequent information is interpreted (the "change in meaning" or "belief adjustment" models) (Hogarth & Einhorn, 1992; Jones & Goethals, 1972). In *Memory tasks,* that is when the instruction to memorize the information is given, the information integration process is disrupted by memorization intention; therefore, either judgment-recency (Jones & Goethals, 1972) or judgment primacy effects occur (Kardes & Herr, 1990). Finally in *Choice tasks* where a set of products is given and the decision must be made to choose from this set, it is not yet clear how the effects of order operate. As mentioned, the choice process is complicated as it involves integration and differentiation and consumers often need to compare and contrast alternative information (Tetlock & Kim 1987). Therefore, they are less likely to show overconfidence in reasoning about complex issues such as political issues and may process the information more carefully with less judgmental biases such as primacy and recency (e.g., Kahneman et. al., 1982; Nisbett & Ross 1980; Tetlock, 1989).

Lessons learnt for the design of this research are that 1) order effects exists in different domains 2) sometimes the effect shows itself as primacy, at other times recency, and for

some choice situations there is a middle effect or a combination of influences 3) A full serial position effect is rarely expected (Last, first then middle). 4) The order effects in various contexts have different results and a thorough exploration should be performed for each given case 5) most studies simply speculate about the reasons behind the position effects as they are designed to identify the position effects patterns rather than finding the answers as to why they occur. 6) position effect studies do, nevertheless, repeatedly raise explanations for the order effects in terms of levels of processing, convenience and common heuristics and 7) there are moderating factors on position effects specific to different context that need attention in any study.

2.6.3.4 Moderating effects in this thesis

In this research, two possible moderating effects- destination value and travel length- that are relevant to the recall and evaluation of destinations are considered for further exploration.

Destination value. As discussed, when comparing destinations as non-identical and holistic products, their non-equivalent value could probably be moderating their position effects (Einhorn & Hogarth, 1981). If city B is more powerful in its attraction power than cities A and C, it can be proposed that the middle position effect of B in the visit sequence of A - B - C would be moderated by this higher level of attractiveness. Stated differently, it is almost impossible to find a group of cities that are equally attractive in all aspects. Depending on how significant is the difference between attractiveness of one city to the next in a combination of destinations, the destination value may moderate the position effect. For a city that is even a little more attractive (as assessed through a range of measures), it should be less important where it will be visited in the itinerary. Therefore, hypothesis four is formulated to test this idea.

Travel length. Early studies of serial position effects found that the longer the list of words are the less primacy and more recency appears in the recall (Murdock, 1962; Ward, 2002). The length of word list manipulation can equally be considered as analogous to the number of days (or destinations) in a trip and again it can be proposed that for longer trips (or more destinations visited), less primacy and more recency in recall and evaluation will occur. Hypothesis five is therefore formulated based on these ideas.

2.7 Research Hypotheses

The overall ideas reviewed in this chapter especially the theories of serial position effect and memory-based judgments direct the hypotheses in this thesis:

As discussed across the first two chapters, the work has two key aims: 1) to investigate whether the position of a tourism offering (a destination in this case) in sequence (the order of visits in a travel itinerary of a package tour) has any strong pattern of effects on the recall of that particular offering; 2) to examine the order effects on the overall favourability evaluation of destinations. These two major relationships (order-recall & order-evaluation), if supported by evidence, suggest possibilities of finding a third relationship between order of recall and order of evaluation. The basis for this hypothesis is the suggestion by Hastie and Park (1986) that memory-based judgments (such as when tourists are asked about their favourite destination after the trip), are influenced by the recall order. In other words, if city C is the last city that is visited and it is the first city that is remembered, then there is a high probability that this city will be evaluated as the favourite destination of the trip. This is due to the judgment operator using the entries with the same order coming from the long-term memory.

Table 2.2 summarizes all the hypotheses and sub-hypotheses in this research, divided into three separate studies. Theoretical foundation for each hypothesis and the study in which it is going to be explored is also displayed in Table 2.3.

2.8 Summarizing the relevance and importance of the research

As noted in previous pages, tourism experiences are highly idiosyncratic, and the ability of the tourism industry to affect them directly is limited. The literature review revealed that most components of MTEs are experiential and difficult to manage, however DMOs can for example focus on designing memorable destination attributes and indirectly manage experience memories. Tourism planners and marketers can also facilitate and provide an environment that delivers the best chances of memorable trips. One such environment would be the way travel packages are put together with an understanding of the structure of itineraries, paying attention to space, time and order effects.

Previous studies in consumer behaviour have utilized the knowledge of position effects in the design of websites, commercial advertisements, and media messages or managing the attitudes towards brands and people. Increasing memorability and likability of these items, persons or places through an understanding of position effects results in increased profitability, and effectiveness of marketing and design.

The next chapter of this work provides a situational context for the testing of the hypotheses. These contexts include a discussion of research paradigm and the role of researcher, the location of interest and the prevailing tourism in that setting. Additionally, an overview of suitable methods congruent with the paradigms and the context will be considered.

Table 2.3 Hypotheses in the thesis

Hypothesis		Statement	Theoretical foundation	Study
H_1		In a multi-destination trip, the destination at the end is likely to be seen as better remembered than the destinations at the beginning and in the middle.	Exact serial position effect	**Study one** (from tour guides perspectives)
H_2		The first recalled destination will be the most likely to be favoured.	Memory-based judgment	
H_3		The power of the position effects will be more apparent when the destinations in the itinerary are rated as more similar by external criterion and assessors.	Moderating effect destination value	
H_1	H_{1a}	In a multi-destination trip, the destination at the end is likely to be better remembered than the destinations at the beginning and in the middle respectively.	Exact serial position effect in recall	**Study two** (from tourists' perspectives)
	H_{1b}	In a multi-destination trip, the destination at the beginning or the end is likely to be better remembered than the other destinations.	Primacy and/or Recency effect-partial serial position effect	
H_2	H_{2a}	In a multi-destination trip, the destination at the beginning is likely to be better evaluated than the destinations at the beginning and in the middle respectively.	Exact serial position effect in evaluation	
	H_{2b}	In a multi-destination trip, the destination at the beginning and/or the end is likely to be better evaluated than the other destinations.	Primacy and/or Recency effect-partial serial position effect	
H_3		The first recalled destination will most likely be the most favoured.	Memory-based judgment	
H_4		The power of the position effects will be more apparent when the destinations in the itinerary are rated by external criteria as more similar.	Moderating effect of destination value	**Study three** (moderating effects)
H_5		The increase in the number of days in a single trip will reduce the primacy effect and increase the recency effect.	Moderating effect of the trip length	

Chapter Three

Methodological Overview and Research Design Requirements

Chapter 3 contents

3.1 Chapter outline

The main purpose of this chapter is to review the paradigm in which the research has been conducted and to introduce the context, methods, and the design that have been employed in this study. The topics of positivism and post positivism in tourism research, quasi experiments and natural settings, key informants research, quantitative studies and questionnaire-based surveys are all considered in this section.

As the context (Iranian cities) is the same for all the studies in this research, a complete background information about them and the way they have been benchmarked for the current work is also presented in this chapter as the overall design requirements and methods for the studies are outlined. However, more details about the method, design, ethics, data collection and analysis for each study will be discussed in the relevant research study chapters.

3.2 Research paradigm

Every disciplined inquiry needs a guide to make decisions and take actions. Thomas Kuhn was the one who initially proposed the concept of paradigm in 1962 (Kuhn, 1970). The concept refers to a set of common philosophical beliefs, theories and standards to address research problems and findings (Clark, 1998). Besides the paradigm as the overlaying view of how the world works, Proctor (1998), distinguishes between a philosophical understanding of the interrelationship between ontology (what is reality?), epistemology (what and how can reality be known?), theoretical perspective (what approach can be utilized to get to knowledge?) and methodology (what procedure can be used to obtain knowledge?), methods (what tools are required to acquire knowledge) and sources (what data can we collect?). He argues that they are essential parts of research. There are also questions of how knowledge is valued and what type of knowledge is valued; these associated questions are referred to as axiological basis of research (Crotty, 1998; Jennings, 2010; Scotland, 2012).

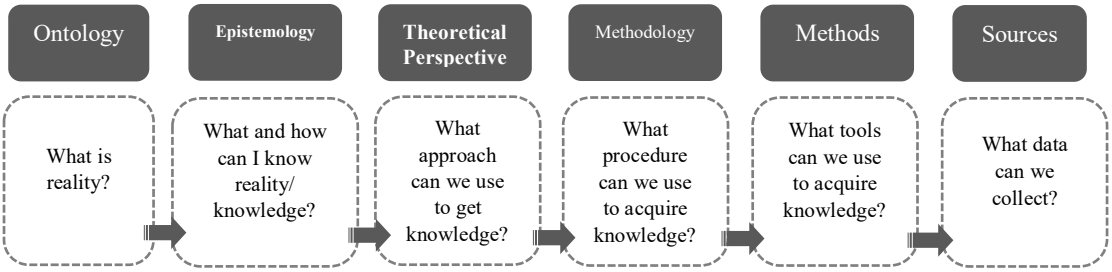


Figure 3.1 Research paradigm interconnections

The two paradigms of positivism and post-positivism have dominated research in the tourism world; however, there are more paradigms informing research in tourism such as interpretive social sciences approach, critical theory, participatory paradigm, pragmatism, critical realism and so on (cf. Jennings, 2010; Tribe, 2001). In the context of this study, the two important paradigms are the positivism and post-positivism therefore an understanding of the differences between them is essential before moving to decisions about methods.

3.2.1 Positivism

Positivist philosophy can be described as the traditional scientific approach to research (Crossan, 2003). The advocates of this paradigm believe that truth and reality is free and independent of the researcher or observer (Guba & Lincoln, 1994). To a positivist investigator the world conforms to a set of permanent and unchanging causes in which the complexity of their relationships could be understood through objective measurements by reductionism (Aliyu, Bello, Kasim & Martin, 2014; Smith, 1998). There hard facts or laws and their relationships are the representation of the only truth. Therefore, social and natural objects can be approached in much the same way.

The individual nature of human experiences in general and tourist experiences in particular can be describe as the main limitation of using a positivist view for tourism research. Post-positivism paradigm, however, can move positivism from a narrow perspective into a broader approach for the examination of real-world problems.

3.2.2 Post-positivism

In post-positivism philosophy, the reality is not rigid; rather it is a product of those researchers' involvement in the research. The composition of reality is influenced by its

context and meaning and social concerns are important, therefore, many approaches to reality are possible (Hughes, 1994; Ryan , 2006). Post-positivism still values the need for rigor, evidence and logical reasoning, but unlike positivism, the reality is not restricted to what can be physically observed (Crossan, 2003). Therefore, as Cook (1985) asserts, multiple perspectives can be adopted to approach the research objectives and methods. In post-positivism, the role of researchers in interpretation of the results and their interactions with the study subjects are acknowledged and allowed (Crossan, 2003; Ryan, 2006).

The philosophical distinctions between positivism and post positivism have traditionally associated quantitative methods with positivism paradigm whereas more often qualitative research has been aligned to post-positivist philosophy (Aliyu et al., 2014; Polit, Beck & Hungler, 2006). According to recent views, however, the separate use or a combination of methods that work and can advance scientific knowledge is common in today's research world (Harrison, 2017).

3.2.3 Post-positivism in tourist experiences research

Samdahl (1999) as well as Stewart and Floyd (2004) observed an ongoing shift to post-positivism as a better tool to represent human behaviours and lived experiences of people in leisure. Henderson (2011) also argued that post-positivism paradigm includes a growing number of the research efforts in leisure studies whether they have used quantitative or qualitative data, or a mix of the both.

Post-positivism, as discussed, accepts the existence of a reality, but also maintains that at best it can only be imperfectly understood. Its epistemology is that objectivity, while desirable, can only be approximated, and thus there exists a dependence upon critical tradition and review (Ryan, 2006). Further, like others, Ryan suggests that the social sciences are often fragmented, and knowledge is not and has never been neutral but most knowledge has values and is socially constructed. He states that multiplicity and complexity are closer to the reality of human experiences rather than dualistic thinking. Post-positivism supports the potential use of mixed methods and the interpretations of meanings, and is therefore more suitable for several concepts of tourist behaviour (Henderson, 2011; Harrison, 2017). The current thesis is framed on a post-positivism philosophy due to the following more specific reasons:

1) Post-positivism encourages the use of natural settings and considers the situational and contextual elements of the data. In this study, different routes in a natural setting of travelling within a country are used as the context. The contextual manipulation of the order in which tourist visit few destinations is going to be studied for its effects on memorability and favourability of those destinations.

2) Post-positivism enables observers to reflect about their position related to a topic that they find compelling. The foundation study (study one) in this thesis makes a case for order effects through the observations and perceptions of professional tour guides. This positionality is accommodated in a post positivist paradigm through the recognition that validation of ideas and findings from personal and others' experience can be used in the work.

3) Direct lived experiences and human behaviours can be better understood using post-positivist reflections (Henderson, 2011; Ryan, 2015). Effects of order on tourists' recall and evaluations of their experiences can be considered as phenomenology in human experiences, therefore, best done by post-positivism.

As mentioned, the contemporary view is that quantitative and qualitative methods or a mix of them can be employed in any paradigm if they fulfil the research objectives. Thus, this thesis is framed in post-positivism paradigm predominately relies on quantitative methods which are explained in the next section.

3.3 Research methods

Beyond the research paradigm, researchers have to consider the nature of the setting being studied or the questions being asked, as well as possible limitations, to be able to find the best methodology (Jennings, 2010; Tribe, 2001). Taking into account these concerns and following the mainstream tradition in psychology research (Todd, Nerlich, Clarke, & McKeown, 2004), quantitative methods are adopted in this study and a deductive approach will be undertaken to test the hypotheses. A quantitative design is more appropriate when attempting to examine a hypothesized relationship. The research design is structured and systematic, the data is presented numerically and data analysis is appropriate for statistical analysis (Jennings, 2010; Veal, 2017).

To outline the methods in this study; a key informant survey was conducted first to establish that there is an observed phenomena called order effects in recalling and

evaluating destinations (Study one). Then, the same hypotheses were expanded and tested directly through documenting tourists' responses to the sequences of visited cities (study two). Finally, moderating effects on the relationships found in previous studies were explored in study three.

3.3.1 Classification of experiments based on random assignment

The degree to which the researcher assigns subjects to conditions and groups distinguishes the type of experimental design. Based on that, experimental designs can be divided into pre-experimental designs, true experimental designs, and quasi-experimental designs. For example, full experiments in psychology are those studies in which the experimenter has manipulated at least one of the independent variables, the selection and assignment of participants are random and the researcher has complete control over the extraneous variables (Campbell, & Stanley, 1963).

3.3.1.1 Quasi-experiments design for research

A quasi-experiment is designed like a true experiment except that in the quasi-experimental approach, the participants are not randomly assigned to experimental groups. In tourism, quasi and true experiments in general are useful for understanding the impacts of such topics as advertising and promotional messages (Woodside, 2010). Campbell and Stanley (1963) first introduced descriptions about and the contributions of applying quasi-experiment design to behavioural sciences. Ever since, various studies associated with tourism have used quasi experiments to understand tourism phenomena (Jennings, 2010). For example, quasi-experimental design using promotional movies as stimulants have been used to measure the destination brand image biases (Tasci, Gartner, & Cavusgil, 2007). Quasi-experimental approaches have also been employed to explore aspects of planning and decision making of self-drive tourists (Becken & Wilson, 2007). In addition, a range of studies have tested the effectives of eco-certificates marketing strategies in tourism through quasi-experimental design (Karlsson & Dolnicar, 2016; Reiser & Simmons, 2005)

The studies in the current thesis are categorized as quasi-experiments as the researcher did not have the opportunity to assign tourists randomly to different combinations of visit orders. In addition, in the case of study one, the tour guides who responded to the designed

survey were from extensive professional contacts of the researcher but they were not selected randomly.

Two classical variations of quasi experimental methods, are after-only and control group design. After-only design has been used in studies of this thesis. In the after-only method, the study population is studied after an intervention has occurred. In the control group method, two groups are involved. One with the experimental intervention and one without, the results are then compared.

A knowledge of the classification of research methods, helps researcher appreciate the limitations of the results. However, taking a broad view, as Shadish, Cook, and Campbell (2002) have stated, there is not an exclusive validity associated with any particular research plan and in every situation researchers should discuss the particulars of their work.

3.3.2 Classification of experiments based on the setting

Another classification of experimental research is based on the setting in which the experiment is conducted. Based on that, there are three types of experiments; 1) Laboratory/controlled experiments 2) Field experiments and 3) Natural Experiments. Laboratory experiments are conducted in a well-controlled environment where accurate measurements are possible. There is a standard procedure involved and participants are randomly allocated to each independent variable group. The strengths of this kind of experiment are that there is a possibility to replicate the study and there is a precision in controlling extraneous variables. The limitation, however, is that the artificial environment may create a behaviour that does not reflect real life. Field experiments, are done in real life settings, and therefore cannot control for extraneous variables. The strength of this kind of experiment is that they reflect the real life situation more closely and, therefore, have a higher ecological validity (Dunning, 2012).

3.3.2.1 Natural experiments

As for natural experiments, they are also done in real life environments; however, the experimenter does not have full control over the manipulation of independent variable as such variability is due to other forces. Naturally, there is less control over all external variables that may bias the results. It is also not easy for another researcher to replicate the study in exactly the same way (DiNardo, 2016; Dunning, 2012).

Tunnell (1977) refers to three dimensions to be injected into psychological research world to make them more reflective of reality. These processes and situations are natural behaviour, natural setting and natural treatment. *Natural behaviour* concerns the dependent variable and it refers to how the researcher seeks responses which are natural and within the normal repertoire of people do. In certain studies, the subjects should not be aware of the observation to preserve the naturalness of their behaviours. In self-report studies, the subjects' behaviours are only natural if the study is the response called for resemble everyday way of reaching to the world. *Natural setting* is considered to be the key criterion for field and natural experiments (Campbell & Stanley, 1963; Cook & Campbell, 1975). A natural setting is defined as any environment besides the laboratory that is not established for the sole reason of conducting research (Cook & Campbell, 1975). Seeking both natural behaviour and working in natural settings adds to the realism level of the research. Finally, the natural treatment refers to a naturally occurring discrete event (called treatment in design vocabulary) to which the subject is exposed. The researcher may or may not be present at the time of treatment, for example a summer camp, a surgery, or a college education. In natural experimental and quasi-experimental designs only a selected subset of subjects receive the treatment (Tunnell, 1977).

Based on the above descriptions and as it will be seen in the following chapters, the studies in this thesis fall into the category of quasi-experiments in a natural setting situation measuring natural behaviours (recall and evaluation) of tourists who although self-reporting do so in a real life situation and immediately after the experience. Tourists do have different travel itineraries and, the manipulation of visit order (the treatment) follows realistic tour patterns operating in the study context.

3.3.3 Key informant studies

One of the first methodological considerations for a study of a novel phenomenon is how to establish that such a phenomenon exists. To meet this requirement, the first step for this study was to explore the reports about order effects from highly experienced key informants. A suite of management studies during the last three decades have directed researchers to build their studies on the tacit knowledge of those who work in the commercial sector (Senge & Scharmer, 2008). The argument, which underlies this direction, is that employees, managers and professionals, or those who are in daily contact with consumers and competitor businesses, can be a rich source of ideas about the

processes and outcomes in any industry (Polanyi, 2009). There is a caveat that such insiders may not know the psychological explanations and the emic views of the consumers in detail, but they can point to consistent observable outcomes which researchers can use to guide further work (Pearce & Packer, 2013).

In the present investigation of order effects, tour guides are excellent insiders with a wealth of information about the responses their tourists give to the experience and evaluations of the cities they visit (cf. Weiler & Black, 2015). Tour guides have been employed as key informants in previous tourism studies. For example, Pizam and Sussmann (1995) suggested behavioural differences among tourists from different nationalities based on an analysis of perceptions of tour guides. In a study, more aligned with the current study, Arnould and Price (1993) sought the meaning of extraordinary tourism experiences from both customer and tour guides' perspectives. Therefore, there is a strong argument that professional tour guides can be the closest observers of tourism phenomena as they are in the front line of operation of a tour. More information about the background of the tour guides employed as the respondents of the first study will be provided in the relevant chapter.

3.3.4 Questionnaire based surveys

In quantitative methodology, a leading methods of data collection is through surveys (questionnaires and structured interviews) (Campbell, 1988; Jennings, 2010; Weber, 2017). Surveys can be designed to collect different types of data including descriptive, explanatory, predictive and evaluative data. Descriptive data gather the information on the "who" and "how" of the study population. Demographic questions of age, gender, education, educational background and income are of this kind. Explanatory surveys are employed to collect data to test a hypothesis and find a pattern (Kaplan, 2004; Saris & Gallhofer, 2014). In this thesis, a mix of descriptive and explanatory questions have been designed for the questionnaires. Descriptive questions provide information about the background of the target population and the explanatory questions provide the pattern of recall and evaluation of destinations from both tour guides (Study one) and tourists (Study two and three) perspectives. An important point of consideration in the case of this research is that the questionnaires are essential part of the quasi-experimental design. That is, the natural manipulation of the independent variable is captured through the careful

design of the questions. This point will be elaborated in the questionnaire design section of each study.

Furthermore, e-questionnaires are one of the common ways of collecting data in the 21th century. The questionnaires may be designed through a software and the generated link will be distributed to potential respondents in an online email contact list, social media, blog or forum (Couper, 2008; Jennings, 2010). In the first study of the current work, Qualtrics Software was used for the e-questionnaire and the access link was sent to the professional contact list of the researcher. The advantage of e-questionnaires are the scope and speed of contact (Couper, 2008). In study two and three, an on-site paper survey was used to collect data. On-site surveys are the most used way of collecting data in tourism studies (Jennings, 2010). The advantages of self-completed self-administered questionnaires on-site are the reasonably high respondent rate, and clarification of item meaning by the researchers if they are present at the time of survey (Veal, 2017).

There are multiple ways to collect responses through various questions types. Checklists, ranking scales, Likert scales, semantic differential scales, scenarios and open-ended questions are a few types of response formats (Kaplan, 2004; Jennings, 2010; Veal, 2017). In the first study, tour guides were given different travel order itinerary scenarios by the researcher to understand their views about tourists' responses when taking such combinations. The choice of scenarios was to assist tour guides putting themselves in the actual scenario situations that they have experienced many times before. In study two and three, the hypotheses were tested through open-ended questions that required one to three cities names as the response data. The demographic questions in all questionnaires followed a common structure for these kinds of questions, which is "tick the relevant box" for a group of items. More questionnaires design details will follow in relevant chapters.

3.4 Research design; components and context

The design of this study follows the standard principles of experimental research in consumer behaviour but it had to be new and innovative in several areas. For example, to be able to provide as much control as possible in the study environment and test the hypotheses, the following requirements had to be fulfilled:

1) A setting where the natural manipulation of the independent variable (the order of visiting the same sets of destinations) was possible. In the chosen context of this study,

the order of visiting three major targeted cities of Shiraz, Isfahan and Yazd in Iran are naturally varied by various tour operators. As discussed earlier, there is a high credibility and ecological validity in conducting such research in a real world context (**First pillar-Travel itineraries**).

2) A setting where tourists mostly take packaged tours because in that case the standard and same level services provided for them can control for the effects of (dis)satisfaction with the utilitarian aspect of their experience on the memory and evaluation of destinations (**Second pillar- Package tours**).

3) A setting where first time visitors were available so that recall and evaluation can be measured without the reactivity effects of previous trips (**Third pillar- First time visitors**).

4) A setting where the targeted cities (destinations) were from the same category or product type. The effect of visit order cannot be easily examined if the nature of destinations, sites, activities and overall atmosphere of the cities are strikingly diverse. For example, if tourists travel to a coastal city with much time spent on beach and water activities, then visit a historical city with mainly cultural sites and activities the comparison of the memories of these two different types of destinations is not easily undertaken. It is valuable (to the study) that the quality of destinations is of the same type. The Iranian cities with their relative homogeneity as cultural and historical destinations with parallel richness in history, architecture and art and similarity in tourists' activities suit this study purpose (**Fourth pillar- Uniform destinations**).

Therefore, it can be said that the design in this study has four pillars, each of which will be explained in more detail in the following sections.

3.4.1 First Pillar-Travel itineraries

A travel itinerary is defined as a route with one or more stops that a traveller takes (Lew & McKercher, 2002). Travel itineraries and the stop points that tourists pass thorough, can be viewed as lines (routes) and points (destinations) (Van der Knaap, 1999). On the surface, travel itinerates and routes seem to be easy to understand. However, these concepts have rarely been critically and empirically understood, especially for their roles in the design and management of tourist destinations and tour packages (Lew & McKercher, 2002).

Previous research has offered models of travel itineraries (Gunn, 1972; Mings & McHugh, 1992; Oppermann, 1995; Lew & McKercher, 2002; Lue, Crompton & Fesenmaier, 1993). Each model of the travel itinerary requires specific marketing and management plans by communities and tourism organizations (Gunn, 1972). The position of each destination in the overall trip itinerary, then, has a significance in providing the functional tourism and hospitality service requirements (Lew & McKercher, 2002).

From the methodological point of view, most travel itinerary data are collected by the number of international arrivals to a country from another country. Detailed information about the number of stopovers and destinations visited en-route are less available. The great variation of paths that tourists can take in any region make accessing such information quite difficult. The same destination with different routes may have varying significance to the marketers and planners. Therefore, understanding destinations based on the role they play and consequently the importance they have for the overall itinerary is key (Lew & McKercher, 2002).

The purpose of the present research is to know more about the relative role of certain destinations compared to the other destinations in a travel route in regard to the memory they engender. For such investigation, the established roles of destination and the itinerary types by previous studies will be first discussed in the following sub-headings. A map of the context country (Iran), including the geographical position of the cities in a classic tour of the country (the places tourists typically visit on their first trip to Iran) is presented in the Figure 3.2 for better visualization of the information that will be highlighted from this point onwards.

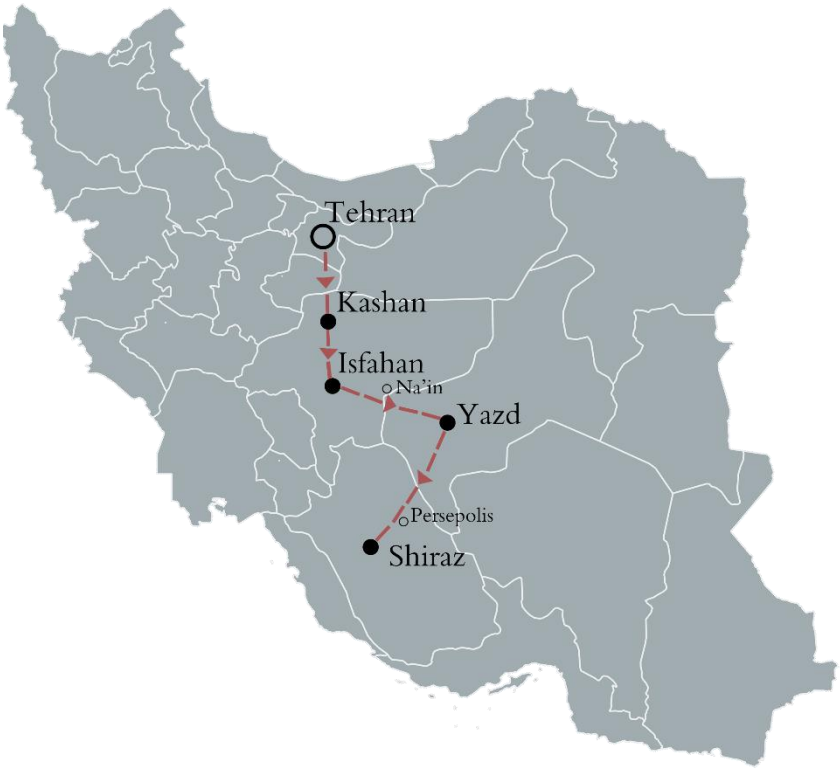


Figure 3.2 Iran's main cultural cities in a classic tour itinerary.

3.4.1.1 Destinations roles in a travel itinerary

Based on a mega study of travel itineraries of international travellers to Hong Kong, Lew and McKercher (2002) classified destinations as having one or more characteristics of one of the five following overall trip itineraries: *single destination, gateway destination, egress destination, touring destination, or hub destination*. The temporal position of a target destination (when in the itinerary a city is visited) in relation to the rest of the itinerary defines the type of destination it is and the role that it has.

The single destination itinerary is when the trip includes only one main destination from the point of origin. The main destination in this pattern usually has a great drawing and holding power (Pearce, Morrison & Rutledge, 1998). That means the destination most probably offers a great variety of activities and sites of interests to the visitors who choose to stay there (Gunn, 1997). The primacy or recency effect for these destinations are irrelevant because there is no secondary destination to require attention and challenge memory processes (Lew & McKercher, 2002).

The title of Gateway is given to a destination that is at the beginning of a multi-destination trip and it has the potential to influence the rest of the itinerary (Gunn, 1997). Egress destinations are on the opposite side of gateways as they are last places visited before tourists travel home. They provide tourists with an opportunity of closure for the whole trip. Typically, gateways and egress destinations have efficient transportation systems and services (Lew & McKercher, 2002). Therefore, it is intuitively possible to associate some primacy effects for the gateways and recency effects with the egress destination.

A hub destination concept is defined as a transit point that is usually any place visited twice or more in a multi-destination itinerary. Gateway, Egress and Touring Destinations can also be Hub Destinations. Normally it can be assumed that due to the repeat stay in such destination, there would be a stronger memory of this place compared to other destinations in the itinerary that have been visited only once.

Finally, a more complex pattern in the travel itinerary mix is touring destination. If a place is after the first destination and before the last stop point of interest, it is called a touring destination. Obviously, this happens on multi-destination visits with at least three overnight stopovers. Naturally, a middle (position) effect may be assumed for the memory of such destination, however, it is the topic of the current investigation to work on exactly these types of travel itineraries and identify outcomes.

An important reminder is that the role for a destination is not fixed but the same destination may have a different role based on at what point in the trip, it has been visited in any specific combination of multi-destinations trip. In Lew and McKercher (2002)'s model, as explained above, unique characteristics of destinations such as geographical location, available transportation and services as well as the order in which the places are visited define the roles. In the context of this study, destinations attributes and locations still contribute to the roles considered for all places but these roles are not fixed and each targeted destination can take almost any of the defined roles in any given combination of visits. This is aligned with the research aim of providing evidence that by changing the position of destinations in an itinerary, their importance, memory and evaluations change. Tehran as the capital of Iran is where the most international flights arrive and departs; therefore, it has the role of the biggest hub in the country. The city of Shiraz in the south plays a similar role as Tehran due to its geographical location, although Shiraz airport does not offer as many international flights as Tehran's airport. The cities of Isfahan and

Yazd, are located in the centre of country, and fit the touring destinations' roles and they less likely be hubs, gateways or egress destinations due to their geography. Table 3.1 summarizes the definitions and discussions presented about the destinations' roles for the Iranian cities of interest.

Table 3.1 Iranian cities destinations' roles in a typical itinerary

City	Destinations' roles in typical itineraries	Hypothesized or expected position effects merely based on the role in the itinerary
Tehran	Main Hub/ gateway / egress	Strong position effects/ Primacy/ Recency
Isfahan	Touring destination	Middle position effects
Shiraz	Southern Hub/ gateway/ egress	Strong position effects/ Primacy/ Recency
Yazd	Touring destination	Middle position effects

3.4.1.2 Travel Itinerary variations

As mentioned previously, many researchers have proposed models of travel itineraries. A particular model by Lue et al., (1993) argued that there are at least five different spatial configurations for travel itineraries. These patterns are displayed in Figure 3.3.

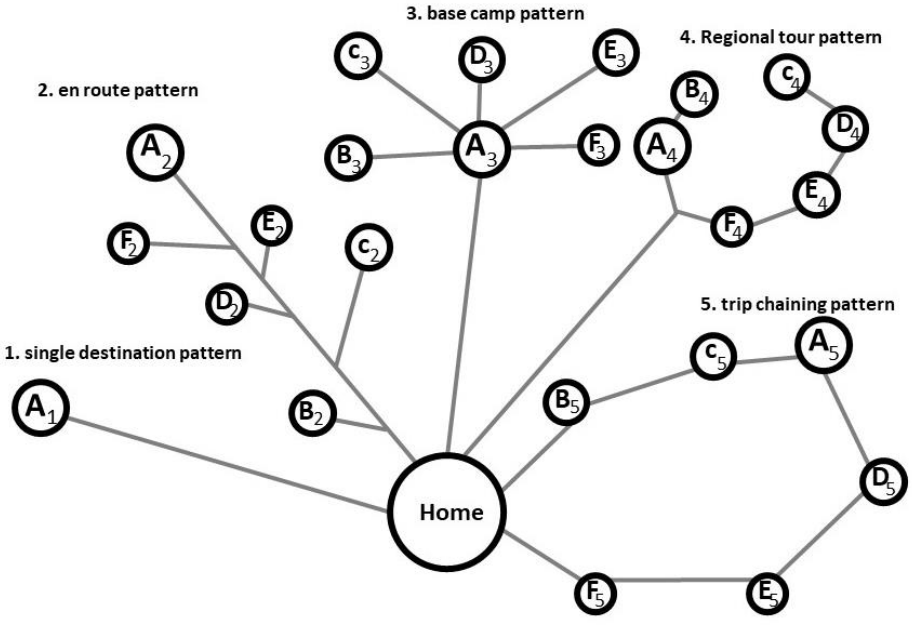


Figure 3.3 Spatial patterns of pleasure vacation trips. Adapted from Lu, Crompton and Fesenmaier, 1993.

As can be seen, there is one single destination pattern and four multi-destination itineraries. Route A_2 and route A_5 are the closest to the common itineraries for visiting Iranian cities by international tourists. Alternative two A_2 is called an en-route pattern whereby few destinations are visited on the way between two major destinations. In the current research, such patterns are called *one-way* trips and they usually start in Tehran and end in Shiraz or vice versa and include a few cities in the middle. The size of the destinations in the middle, however, is not necessarily smaller than the two major places at the beginning and the end.

Alternative 5 is called "trip-chaining" in the Lu et al. (1993) model and represents a touring vacation that includes a number of destinations. Tourist move from one destination to another in a circle and this pattern will be entitled *round trips* in the context of this work. All the round trips studied in this thesis are from/to Tehran. Examples of these two common patterns of travelling in Iran are provided below Figure 3.4 for easier visualization of the above concepts. A final remark about these itinerary types is that the transportation between cities can be by any means. In Iran, one-way tours are usually all by road and the round trips are by road for one way (north to the south or vice versa) as well as a flight to return from south to the north (or vice versa).

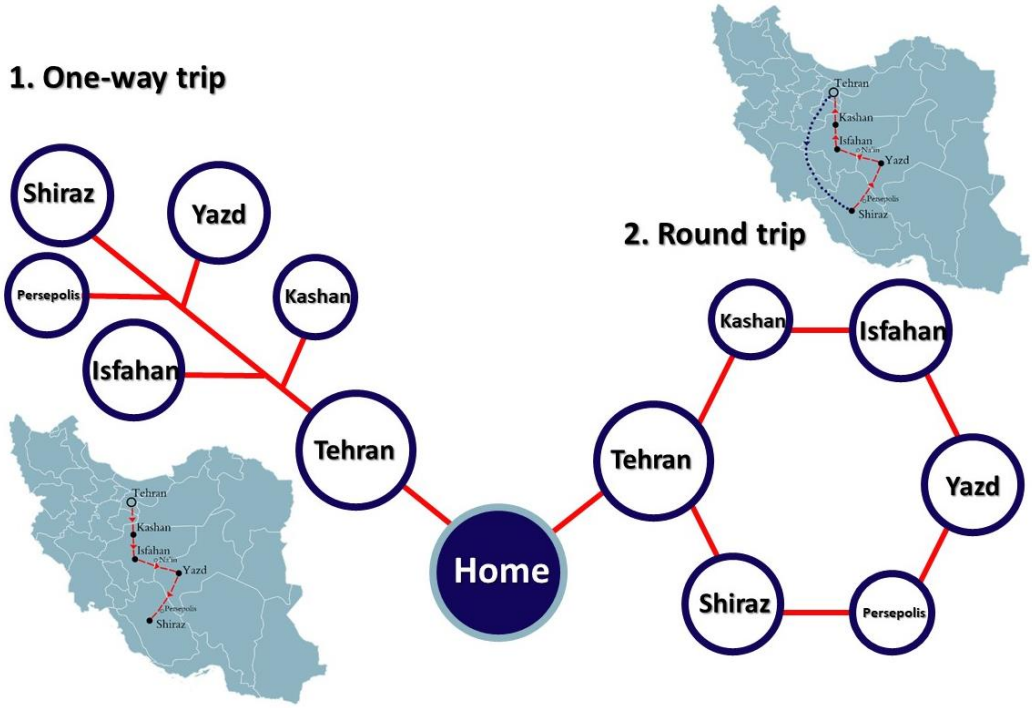


Figure 3.4 Iran's classic tour itinerary types.

3.4.2 Second Pillar-Tour packages

Vacation package tours are the most comprehensive form of tourism offerings. They include all the components of a tourism experience such as sights, activities, events, accommodation, food and guides (Zare & Pearce, 2018). The experiences of those who buy such packages are somewhat similar in terms of the time they spend in destinations and in the order of the places visited. Those who design travel itineraries usually arrange the destinations to suit points of entry and exit, means of transportation, and the length of trip. For the present research purposes, potentially important factors affecting recall such as destination attributes, level of interaction with the local people, and differences in the service experience can be seen as somewhat standardized by choosing guided packaged tours. In a guided packaged tour, every tourist follows the same path, stays in the same level of accommodation, undertakes the same activities and has almost the same level of interaction with the destination or its local residents because a tour guide directs the daily plan. In Iran, the group package tours tend to be homogeneous in terms of services and cultural experiences presented to international tourists. For example, there are no internationally recognized or established hotel chains in Iran, so there is less potential interference with tourists' memories due to staying in very different classes of hotels. Nevertheless, choosing tour packages as the context for this research is considered as one of the best but not the perfect way to control for the extraneous factors affecting memory. Some internal validity would be always compromised for the higher external validity of conducting a study in real life situations.

Package tours have been a predominant way of traveling in Europe before but the need for more personalized and diversified packages has changed the trend to co-creating experiences (Caru & Cova, 2007; Räikkönen & Honkanen, 2013). Currently with many growing economies, package tours are becoming more popular in Asia (Chen & Hsu, 2012, Wong & Wang, 2009). Package tours may include intense level of interaction between a large group of people and their tour leader. However, package tours of Iran, usually include a smaller number of tourists led by a tour guide who is flexible to the needs and wants of travellers. Generally, people choose package tours because they are convenient and it is possible to visit more places in a given amount of time in compare to independent travelling. (Cohen, 1972a; Hsieh, O'Leary, & Morrison, 1992; Räikkönen & Honkanen, 2013; Wong & Kwong 2003). The feeling of safety, the ease of meeting and

getting to know other people, as well as being first-time international travellers are among the reasons for buying package tours (Wong & Lau, 2001; Lai & Graefe, 2000).

In Iran, multi destination packaged tours are the most popular way of travelling for international tourists (Butler, O'Gorman & Prentice, 2012) probably because of the following reasons. First, the way that Iran has been mostly pictured in international media politically may create a sense of unease and uncertainty about other aspects of the country including its tourism. Therefore, international visitors prefer to avoid this uncertainty as much as they can through travelling by packaged tours. Second, international tourists visiting Iran are often seniors (mean of 61 years old in the current study) and that naturally adds to the demand for convenient package tours rather than other types of travelling such as independent travel and backpacking. Besides rare small scale studies such as the one by Butler et al. (2012), there is little data available on the numbers taking the tour packages compared to other travel types for international visitors of Iran.

Iranian inbound tour operators either market and sell their own customized tour packages directly through their website or they act as local operators for larger international wholesaler tour operators such as G adventure tours, Intrepid travel and so on (Figure 3.5).

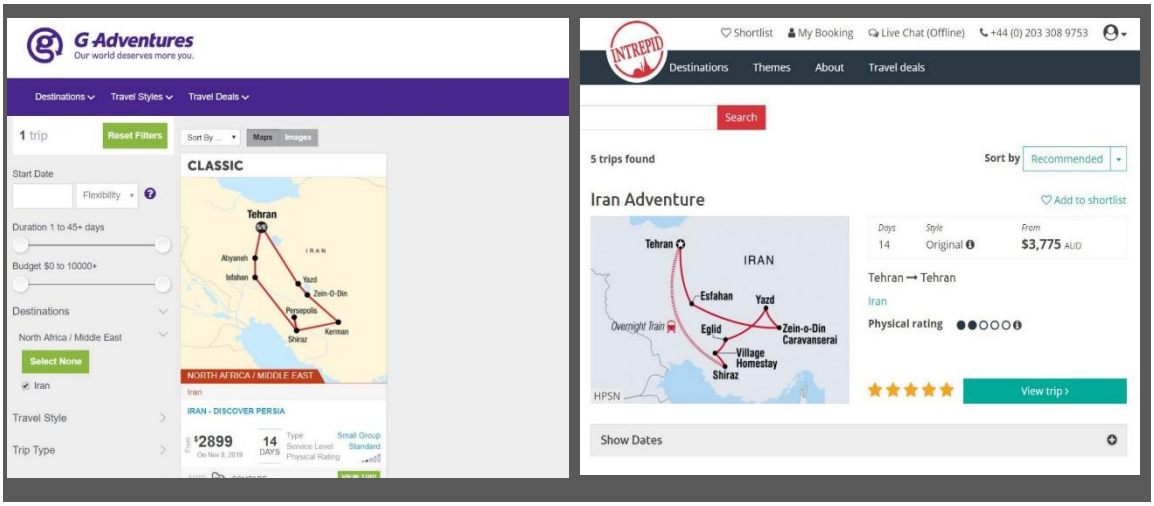


Figure 3.5 Iran's classic tour itinerary prices.

3.4.3 Third pillar- First time visitors

The selection of respondents was particularly important in this study. The central purpose of the present work is to build the case that position effects in tourism experiences matter and that destinations that are experienced in a different order may gain certain memory

and evaluation advantages from the position in which they are visited. Tourists who had been on previous visits to a city would arguably have previous memories and experiences that could influence their judgment in different ways. By choosing Iran where tourists are mostly first-timers, the effects of familiarity are eliminated. Previous literature has provided evidence that first-timers' behaviours are in some ways different from repeaters (Li, Cheng, Kim & Petrick, 2008; Crompton, 1979). For example, first time visitors, participate in a variety of activities, visit more iconic attractions, stay for shorter periods at each destination and have a more complex image of destination than the repeat visitors (Lau & McKercher, 2004). For the design of this study, it was important to survey only first-time visitors who were not familiar with the destination and did not have a strong existing image that could affect their evaluation or recall. To know more about the background of the tourists who participated in this study, descriptive tables of respondents' demographic information are placed in the result sections of the relevant chapters. However, some general information about them is provided below.

Due to Iran not having a tourism satellite account (TSA) reporting system, it is hard to have any exact statistics about tourists who visit this country and their background. At Iranian borders, the immigration police count every foreign entry and for that, the latest number is near 5 million (4,868,000) per year based on World Bank collection of development indicators, compiled from officially recognized sources (World Bank, 2017). However, not all those international visitors fall into the cultural tourist category, which is the target segment in this thesis. From available statistics, it is known that the first 10 countries sending tourists to Iran are mostly the neighbouring countries, then India and China. Based on local knowledge such groups of people are mostly coming to Iran for pilgrimage, health care and work. The European, North American, Australian, New Zealanders, Japanese and Hong Kong travellers who actually visit the cultural and heritage sites of Iran and shape its cultural tourism market were last stated to be near 500,000 for a period of 7 months in 2018 (ISNA, 2018). That is the closest accurate number that the author could find for this group. The sample population for the studies in this thesis are all from the latter market and the concept inbound tourist here refers to this segment. These cultural tourists mostly visit the iconic cities and sites through package tours when they travel to Iran for the first time (Butler et al., 2012). As a reminder, a classic cultural tour of Iran, include cities such as Isfahan, Shiraz, Yazd, and Tehran as well as few smaller towns such as Kashan that are on a relatively straight line in the centre

of the country stretched from north (Tehran) to the south (Shiraz)- (Maps in Figures 3.4 and 3.5 represent these cultural tours.)

3.4.4 Fourth pillar- Uniform destinations

The interest in this study is with how cities with similar levels of attractiveness are recalled and evaluated when visited in a sequence. Therefore, destinations are the main research foci here. Tourists seek to fulfil their needs through complex patterns of using services and interacting with destinations (Prebensen et al., 2014; Pearce & Zare, 2017). The actual concept of a destination can vary in its scale. At times, tourism researchers use it to encompass whole regions, even countries, and on other occasions the term can refer to a specific city, site or attraction (Crouch & Ritchie, 2005; Dolnicar & Grun, 2016; Jovicic, 2016). In the context of this study, destinations are cities visited within a country (in this case, Iran).

In a multi-destination trip such as a tour within one country, cities with all their attributes including sights, events, and services encountered, do represent memory units for recall and evaluation. The reason is that although humans are thinking and feeling at every moment of the experiencing the world, they are not able to process these many small occasions; rather they need to summarize experiences into larger memory units for cognitive operations such as recall and evaluations (Zacks & Swallow, 2007). Furthermore, Marschall (2012) has suggested that memories from previous trips create an involuntary comparative context against which any specific journey is (mostly subconsciously) measured. Therefore, benchmarking and comparison processes are important for comparing the memory units of destinations visited in a trip. The present study is interested principally in the effects of the position in which cities are visited in these comparison and benchmarking processes. For that, the most important consideration of the research design is to find a context with relatively uniform destinations within it so that comparison would be fair and meaningful and the effect of order can be measured in isolation.

Narrowing the recall of tourism experiences down to the memorability of cities provides a focus on the critical role of places and their attributes in delivering memorable tourist experiences (Dwyer & Kim, 2003; Crouch & Ritchie, 2005; Kim, 2014). As it was stated in the previous chapter, Kim (2014) identified ten key destination attributes - local culture, the variety of activities, hospitality, infrastructure, environment management,

accessibility, quality of service, physiography, place attachment, and superstructure - that destination mangers can manipulate to deliver more memorable tourism experiences. Nevertheless, links between recall and experiencing a destination extend beyond destination attributes. In fact, memorability based on destination attributes is not a primary concern for this study whereas the overall recall and evaluation of cities based on the psychological processes of remembering and judgment is at the centre of attention.

3.5 Benchmarking destinations

Benchmarking is defined as a "standard by which something can be measured or judged" (Camp 1989, p. 248). Benchmarking use in tourism is still in its infancy and it has been mostly conducted for businesses and rarely for destinations. Most previous studies about benchmarking in tourism have focused on customer satisfaction or the demand side of a business/destination to measure their performances qualitatively while another group of studies have concentrated on the supply side through quantitative measures such as tourist arrivals , cost, revenues, occupancy rates, and capital investment (Kozak, 2002; Kozak & Nield, 2008).

From the demand side, tourists' feedback can be used to compare one destination's performance against another (Kotler, 1994). Homogeneity of customers is another important factor to consider in benchmarking destinations. For example, it is not reasonable to consider tourists visiting Egypt and visiting Iran to be the same. However, internal benchmarking of cities within one country can provide a homogeneous sample population for research (Kozak & Nield, 2008). It is also emphasized that every organization, business or destination has its own structure, culture, and objectives, therefore, it is important to find methods for benchmarking strategies specific to each unit. In destination benchmarking, feedback from the visitors of that destination and local population are the most reliable data. As a result, the best benchmarking practices differ from one region, country or city to another and there is no single best practice.

In the absence of statistical data about the supply side of destination benchmarking in Iran, the focus of this study is on the demand side information, through descriptive secondary data about each city and using the study's own benchmarking data presented in section (3.5.2).

3.5.1 Benchmarking Iranian cities based on secondary data

Tourism destinations have multiple characteristics and various components. This is one of the first challenges in benchmarking them. Major destination benchmarking studies have identified the following components to measure attractiveness of destinations: accommodation local transport services, facilities and activities, hospitality, services, and customer care, language communication, destination airport, hygiene, prices, and sanitation and cleanliness (Kozak, 2002; Kozak & Nield, 2008; Li & Petrick, 2007).

Butler et al. (2012) in their study of applying a destination appraisal matrix to the context of Iran, discussed how some destinations compete based on standardized offerings. While others may distinguish themselves through differentiation by identifying, their unique, or at least unusual selling points (USPs). These selling points may be divided into those describing utilities, those describing symbols and those describing experiences. The utility aspect of a destination may include: explicit tourism facilities, Built heritage attractions, Transport, Hospitality facilities, Sports, Natural heritage, Entertainment, Retailing, Health and welfare. Such aspects are highly uniform in Iranian cities. The symbolic side of destinations is associated with built heritage, natural identity, heritage and religion that again may differ only marginally for Iranian destinations. However, the final aspect which is the experiential dimension and is related to memorability, sincerity, authenticity, variety, beauty, satisfaction and security felt in a destination is more variable in each city and will be the focus in this study's benchmarking. In other words, the favourability and recall questions in the current work seek to measure the experiential aspects of Iranian cities. However, the author acknowledges the possibility of tourists' use of a combination of attributes when they compare destinations and the overall evaluation process, they operated in their mind remains uncertain.

Iranian destinations and inbound tourism overview

Based on UNWTO's classification of countries and regions, Iran is located in south Asia though culturally it has more similarity with its eastern neighbours than the Arab cluster. It is, however, mostly considered in political terms as part of the Middle East region. Iran is 1,648,195 square kilometres in size and around 82 million in population with a unique place in the world tourism map, however, its international tourism potential has not been fully exploited due to political reasons (Worldometer, 2019). Iran has extensive wealth of natural and cultural assets including 23 historical and natural locations recognised by

United Nations Educational, Scientific and Cultural Organization (UNESCO) as World Heritage Sites. It is therefore, ranked as the 11th country in the world for the number of UNESCO recognised sites (UNESCO world heritage convention, 2019). Cultural heritage sites range from the Elamite civilization (around 2700 BC) to the great Persian empires (600 BC), extend back some 10,000 years. The most well-known pre-Islamic asset is the ancient city of Persepolis near Shiraz. The Islamic era starts from Arab invasions in 7th century and there is an abundance of historic and religious sites throughout the country, representing the combined influences of both internal ruling dynasties and external invasion. Iran's natural heritage includes deserts, mountains and coasts across climatic zones from Mediterranean temperate to sub-tropical (O'Gorman, McLellan, & Baum, 2007). The modern-day Iran is an attractive destination to visit for many for a combination of reasons from unique interpretations of Islam to political, religious, cultural, historical and social environments and the everyday lives of citizens. The following section continues with benchmarking the major tourism destinations in Iran and provides a background about them to provide a better view of the research context. Four cities of Shiraz, Isfahan, Yazd and Tehran are specifically reviewed because they are in the highest number of itineraries, hence targeted in the position effects studies of this thesis.

Isfahan

Once one of the largest cities in the world, Isfahan is an ancient metropolis that sits across timeless trade routes. It became the glittering capital of Iran's greatest dynasty (during the post Islam period), the Safavids, during the 16th century. Shah Abbas I (1587–1629) in particular transformed it into a city rich in art, cultural wonders, and architecture unique in form and surface decoration. The city's population is about 1.6 million and it is the third largest city of Iran after Tehran and Mashhad (World cities population, 2019). Most attractions in this city are from the glorious Safavid era and they include a combination of Persian and Islamic architecture, grand boulevards, covered bridges, palaces, bazaars, mosques and minarets. This city has an international airport and a metro line. Isfahan is situated at the foot of Zagros Mountains in the Plain of Zayandehroud River with a

pleasant climate. In a classic 10-day tour of Iran, tourists usually stay between two to three nights in this city.

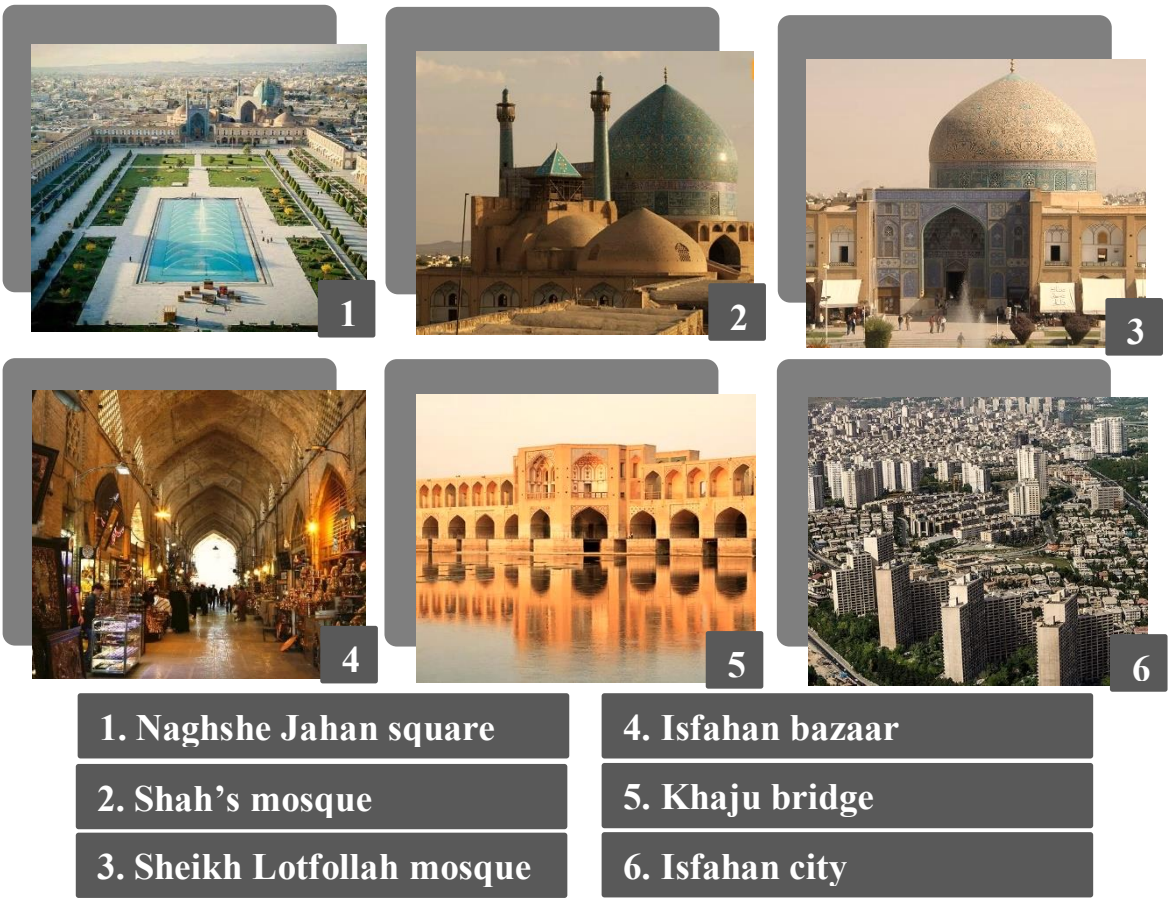


Figure 3.6 Isfahan attractions

Shiraz

Shiraz has many tourist attractions from the two different periods-before and after Islam. Shiraz is the capital of Fars province where the pre-Islam history of Iran starts. The Greeks called this area Persia, from which came the national language, Farsi, from the name of this province. Shiraz is situated in the south-western region of Iran, about 200 km from the Persian Gulf, at an elevation of 1800 meters above sea level. It has a moderate climate and has been a regional trade center for more than a thousand years.

While visits to pre-Islam monuments include nearby ancient cities, tombs and bas-reliefs of Achaemenid and Sasanid dynasties (559 BC to 651 AD), there are also palaces, gardens and bazaars from the second time that Shiraz was chosen as the capital of Iran later in 18th century during the rule of the Zand dynasty (1762). Shiraz has an international airport and serves as the southern hub/gateway for visiting Iran in one-way package tours itineraries. It means a visit to the country may start from Tehran and end in Shiraz or the reverse may

apply. This city is located at the foot of Zagros Mountains and has a relatively mild climate. There is a population of over 1.2 million people living in Shiraz as the fifth largest city of Iran. In a classic 10-day tour of Iran, tourists usually spend two or three nights in this city.

Figure 3.7 Shiraz attractions

Yazd

Yazd is the capital of Yazd province, the 15th largest city of Iran with a population of over 500,000 people. Since 2017, the historical part of the city has been recognized as UNESCO world cultural heritage site. This city has a long history of adaptation to its desert surroundings therefore famous for unique architectural elements such as wind catchers, Qanats, icehouses, and water reservoirs. Due to the difficulty of access, Yazd has remained rather immune to the major historical invasions to the country. The city served as the capital of the country for a short period in 14th century. Due to its geographical location in the center of country, Yazd is usually visited in the middle of the itinerary. Tourists usually spend two nights in this city.

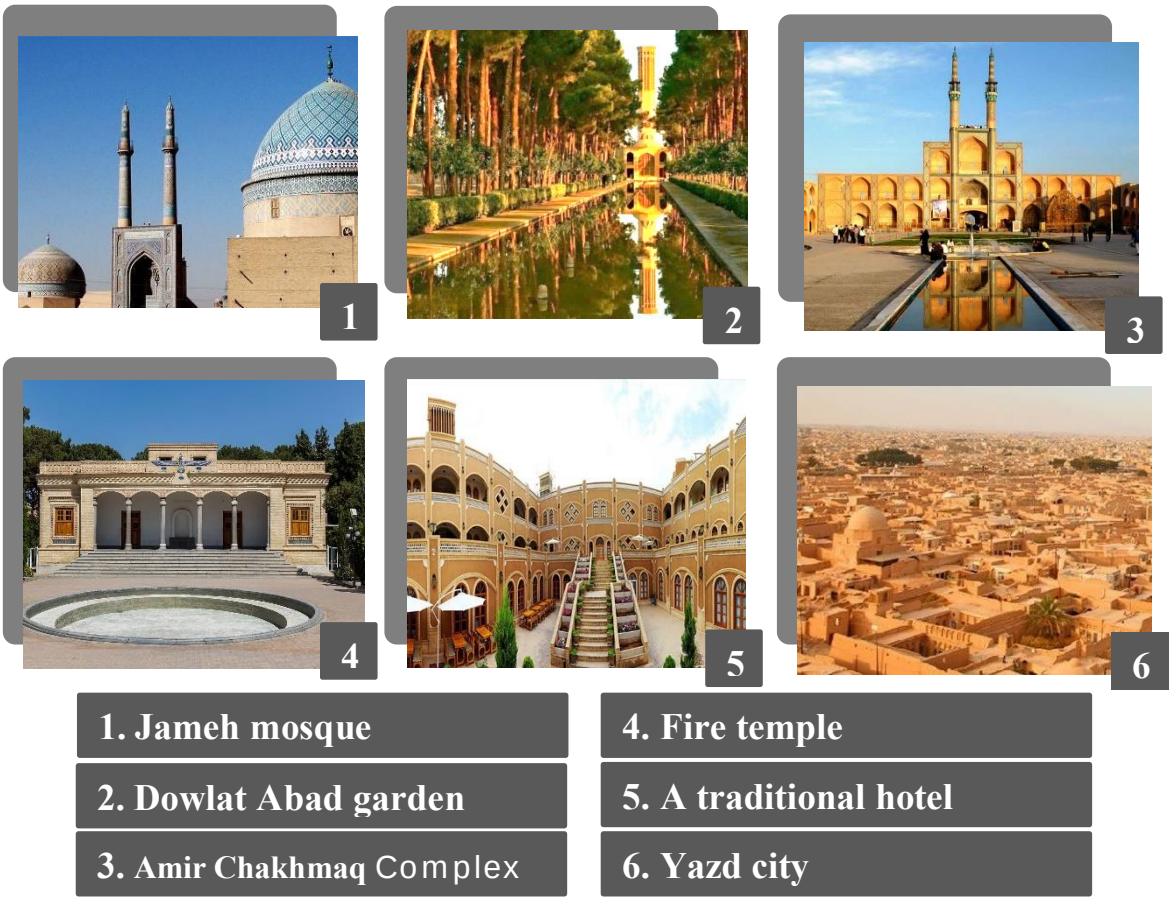


Figure 3.8 Yazd's attractions

Tehran

Tehran is the capital of Iran and the capital of Tehran province. It is the most populated city of Iran and one of the most populated cities in west Asia with about 13 million people (IRIB news agency, 2018). Tehran was first chosen to be the capital of Iran in the late 18th century (1796) by the founder of Qajar Dynasty. The city remained as the capital of Iran ever since, therefore, most historical collections in this city are royal palaces and complexes from Qajar rule in 19th century and Pahlavi period (1925-1979). Tehran has an international and a domestic airport and is considered to be the main hub from/to the country. It is also home to the central railway station, Tehran Metro and a large network of highways. The city is located in the foot of the Alborz Mountains and has both the characteristics of a Mediterranean and continental climate.

Standard package tours usually allocate a day or two at the beginning and/or the end of the trip. Due to the city being large with a lot of traffic and other issues for tour operations,

tourists are not usually willing to spend more time there. Most historical attractions are located in the centre and tourists are able to visit almost all of them in two days. Tehran is only considered for the analysis in this study to show the significant difference that its memory and evaluation has compared to the other three cities (Isfahan, Shiraz and Yazd) which fall into the same category in many ways and they are always compared to each other by the tourists.

Figure 3.9 Tehran's attractions

3.5.2 Benchmarking Iranian cities based on primary data

The lack of benchmarking statistics about the Iranian cities prompts the need for further information about them based on primary data. As part of the third study of this thesis, data were collected from international visitors of Iran (total of 164 valid responses) about the major cities in the travel itineraries, Tehran, Isfahan, Shiraz and Yazd. A standard Likert scale question was designed to gather information about these destinations after a trip was completed. The question was "how much did you like each of the destinations below"? and the respondents were expected to tick the boxes in front of each of these four

cities and rate them from "I have not visited this city in my trip", " I did not like it at all" , "I did not like it", "neutral about it" to " I liked it" and I liked it very much". The values were later given to each answer from 0 to 5 for "I have not visited this city in my trip" to "I liked it very much" respectively. Then the descriptive analysis was run on the collected data and the result is presented in Table 3.2 below.

Table 3.2 Iranian cities benchmarking result

	Tehran (N=164)	Yazd (N=162)	Shiraz (N=164)	Isfahan (N=164)
Mean	3.60	4.68	4.70	4.90
Median	4	5	5	5
Mode	4	5	5	5
Std. deviation	0.849	0.530	0.472	0.306

The close mean for all the four cities and the higher frequencies (modes) of only two answers (I liked it (4) and I liked it very much (5)) provide evidence about the relative equality of these four cities attractiveness. Then within the group, the distance of Tehran to the other three cities is well shown with the lower mean of rating (3.60). The standard deviation marks also support the conclusion that Isfahan, Shiraz, Yazd and then Tehran ranked in this order. To learn about the significance of the differences in the attractiveness of destinations in compare to each other, a repeated measure ANOVA test was run. The result is presented in Table 3.3 below.

Table 3.3 Iranian destination values based on repeated measure ANOVA[1]

	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
City value	Pillai's Trace	.700	123.811[b]	3.000	159.000	.000	.700
	Wilks' Lambda	.300	123.811[b]	3.000	159.000	.000	.700
	Hotelling's Trace	2.336	123.811[b]	3.000	159.000	.000	.700
	Roy's Largest Root	2.336	123.811[b]	3.000	159.000	.000	.700

[1] a. Design: intercept
within subjects design: City value
b. Exact statistic

Table 3.3 (especially Wilks' Lambda value) reveals that there is a statistically significant effect based on the city value and the Partial Eta Squared (0.700) shows the effect to be very large (more than 0.14).

Repeated measure ANOVA in Figure 3.10 further displays that out of four cities of Yazd, Shiraz, Isfahan and Tehran, the first three have closer mean scores (therefore comparable) while Tehran has a considerably lower mean. The overall benchmarking with primary data supports the assumptions built on the secondary data about the attractiveness of the targeted destinations to from a close enough group of cities to be compared but with significant differences in their favourability.

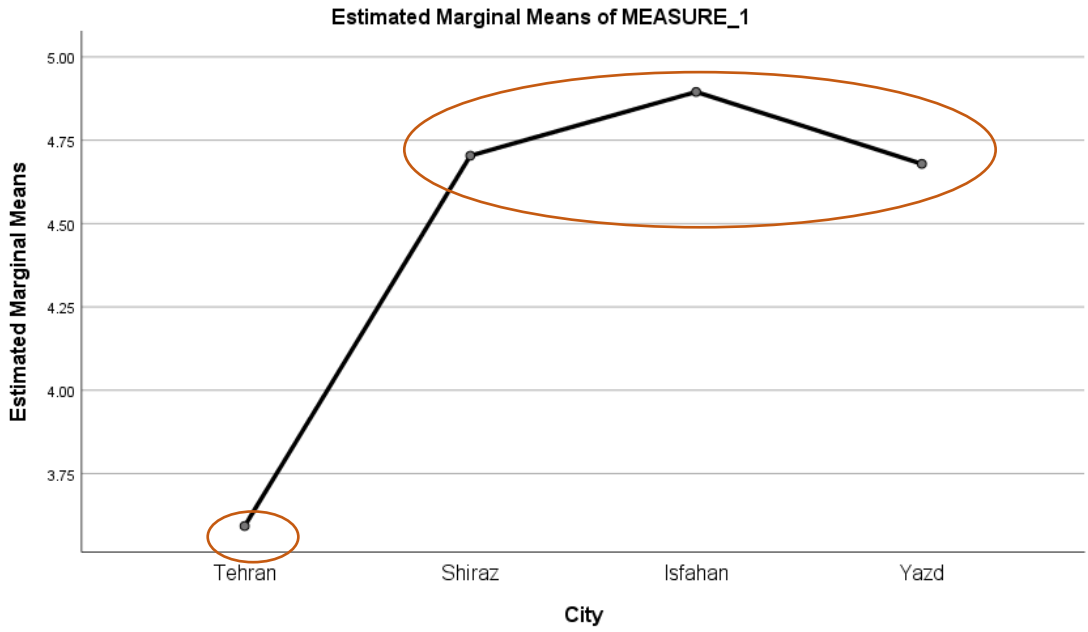


Figure 3.10 Comparisons of favourability means for major Iranian cities

3.6 Ethical consideration for the study

The studies were carried out with the approval of the Human Ethics committee at James Cook University. These ethical approval numbers were H6631 (first study) and H6858 (second study) and H7231 (third study). A core requirement for such approval included ensuring 1) anonymity 2) opportunities to refuse to participate and 3) any harm or negative consequences to participants.

3.7 Chapter Summary

Table 3.4 summarizes and offers an overview of the research methods, used in this thesis. The next chapter, chapter four reports on the first study of the thesis.

Table 3.4 Research methods summary and matrix

	Research question	Research design	Data collection method	Respondents	Paradigm	Methodology	Analysis
Study 1	Existence of Serial position effect phenomena in Recall and evaluation from tour guide's perspectives	Quasi-experiments	Questionnaire surveys	Professional tour guides	Post Positivism	Quantitative	Descriptive analysis, percentages, logit regression
Study 2	Existence of Serial position effect phenomena in Recall and evaluation from tourists surveys	Quasi-experiments	Questionnaire surveys	International tourists	Post Positivism	Quantitative	Descriptive analysis, percentages, logit regression
Study 3	Moderating effects on the order effects in recall and evaluation	Quasi-experiments	Questionnaire surveys	International tourists	Post Positivism	Quantitative	Descriptive analysis, percentages, logit regression

Chapter Four

Order Effects and Multi-City Visits;

Tour Guides' Perspectives

Chapter Four Contents

4.1 Chapter outline

This chapter reports on the first study done in the thesis. The study explores the effects of order on recall and evaluation of the destinations from tour guides' perspectives. The result of this study has been published as a paper in the International Journal of Tourism Cities. The paper as it is constitutes 40% of this chapter. The remaining 60% has been changed for the flow of the thesis and to prevent repetition.

Zare, S., & Pearce, P. (2018). Order effects and multi-city visits: tour guides' perspectives. *International Journal of Tourism Cities*, *4*(2), 194-206.

4.2 Introduction

Previously, in chapter two, a table of hypotheses in all the three studies of the thesis was displayed. Each study is designed and builds on the foundation of the previous one to formulate hypotheses of the interest. Naturally, designing questions and hypotheses was more challenging for the first study considering that there was limited previous work. However, the researcher had two clear goals to start. One to establish if visit order effects on remembering and evaluating destinations exists as an observable strong phenomenon worth studying. Next, to collect data about variation and patterns of the position effects from the closest observers to this phenomenon (tour guides) and using real travel situations. The reviewed literature on the key informant studies established the valuable role of tour guides as credible observers of position effects. Experienced tour guides can be independent commentators on the operation of position effects, particularly if they have experiences of a setting where the tour itineraries conform to a naturalistic variation of order effects. The results of this study were important in later formulation of hypotheses for the subsequent studies with the tourists and for further comparison between the etic and the emic points of views.

The first study in this thesis was developed to adopt to what is called pre-science. Pre-science is "a process of discerning or anticipating what we need to know" (Corley & Gioia, 2011, P. 13). Before prematurely presuming that a phenomenon exists, an informed understanding of the existence and nature of that issue leads to establishing a valid case. Study one is also about the often-missing link between the industry (practice) and the academia (theory). In the side notes and communications after the data collection, it was noted that tour guides were intuitively aware of the effects of a destination position in the

itinerary and the topic being investigated was not surprising or confusing to them rather they were cooperating because it was interesting to them to find out how the hypotheses would hold. As will be discussed later, the implication for understanding position effect is valuable in various level of designing and operating tourism, hospitality and event products.

4.3 Research objectives and hypotheses

The specific objectives in this initial study were to explore perspectives of the tour guides about the existence and intensity of position effects on recall (objective 1) and favourability evaluation of the tourists (objective 2). In addition, the researcher sought to understand how the tour guides may perceive the position effects in relation to a hypothesis for each of the three theories of serial position effect, memory-based judgment and moderating influences on position effects. The idea was to start acquiring knowledge about these basic theories and be directed to the sub-hypotheses and deeper learnings of the phenomenon by the tourists' views in later studies. All the foundation theories for the formation of the hypotheses in this study have been referred to in detail in previous chapters and for convenience they are presented again in the Table 4.1.

Table 4.1 Hypotheses in study one

Research questions	**Question 1:** Do positions of destinations in the itinerary have effects on their recall and to what extent?	
	Question 2: Do positions of destinations in the itinerary have effects on destination favourability (through recall) and to what extent?	
Hypotheses	**H_1:** In a multi-destination trip, the destination at the end is likely to be seen as better remembered than the destinations at the beginning and in the middle.	This hypothesis examines the applicability of the position effects theory (Ebbinghaus, 1902) in tourism destinations context.
	H_2: The first recalled destination will be the most likely to be favoured.	Based on the theory that the first input into the judgment operator has a greater influence on the evaluation (Tversky and Kahneman, 1973; Lichtenstein and Srull, 1985; Hastie & Park, 1986)
	H_3: The more attractive a destination is the less its position on the itinerary matters in favourability evaluation.	Based on common sense, direct on-site experiences and conversations with tour guides, it is proposed that the qualities of real destinations may interact with or modify the value of position as a heuristic.

4.4 Study design and methods

4.4.1 Study context

The context for this study as well as the following work has been explained in detail in chapter three. As a reminder, the key requirements for an ideal setting were a place with 1) a standardized style of tourism experience (group tours) with 2) the existing itineraries offering a natural manipulation of the order in which destinations are experienced, with 3) relatively uniform cities for comparison, and 4) a setting where there are many first-time visitors to control familiarity. All of the above requirements were met in the context of cultural tours in Iran. Mostly first-time international tourists visit several relatively uniform cities within Iran in different travel itineraries offered by tour companies. The variety of tour packages and international visitors from all over the world randomly choosing these vacation offers provided the suitable setting for collecting data in this study. Consequently, the professional tour guides in this country have been observing a large number of "study subjects" or tourists in the naturally existing "lab" of the real world. The researcher would like to emphasize the unique opportunity of accessing such a special context to conduct a quasi-experimental study.

4.4.2 Data collection

Building on the approach of working with high quality, well-positioned informants, 40 respondents/tour guides were contacted and participated in an online survey. Typically, key informant studies use modest numbers of respondents (Gomm, Hammersley & Foster 2000). It is the characteristics of those who provide knowledge that matters most (cf. Cooper, 2006). All the respondents were inbound tour guides handling international tourists (mostly first-time visitors). Tour guides had an average age of 37.6 years (Mode = 32) as well as a mean of 11.1 years of work experience (Mode = 10). Sixty percent of the respondents were male. Every professional tour guide is handling at least six groups (average of 15 people in each group) every year, which means they have been observing almost 1000 tourists in their professional life. The sampling of the key informants was based on researcher's extensive professional contacts and it was done online during two weeks of November 2016. Qualtrics software was used to design the online questionnaire. The link to the questionnaire was sent to 46 tour guides' email addresses randomly selected from the author's professional contacts. Forty correctly completed responses

were returned. Human ethics approval was obtained for this study under the following number H6631.

4.4.3 Online Questionnaire

The two objectives and the suggested relationships in the three hypotheses in Table 4.1 were explored using a single survey questionnaire with a combination of binary and Likert response scales (Appendix I). Three highly visited tourist cities of Isfahan, Shiraz and Yazd were targeted to test the hypotheses. The online questionnaire contained five main questions as well as five demographic and content evaluation questions. The respondents were asked to express their professional opinions on the existence of position effects (Yes/No question), the strength of position effects (5-point Likert scale), the existence of such effects on judgment (Yes/No question), and the strength of position effect on judgment (5-point Likert scale).

A quasi-experimental question was also designed to identify the destination, which was most likely to be seen as preferred from six orders of combinations of the cities (chosen by the tourists from tour guides' perspective). The target independent factor was the "position in the itinerary" with a natural manipulation of dependent variable (recall as a favourite city) in each real scenario (variation of travel itineraries with different orders). Therefore, three major tourist cities- Shiraz, Isfahan and Yazd- were introduced in six different sequences as representing multi–destination itineraries for Iran. The choices were presented through a drop-down menu with this question: "Please consider the below combinations of these three cities; Shiraz, Isfahan, Yazd and tell us which city would, most probably, be more memorable than the other two, for the tourists?"

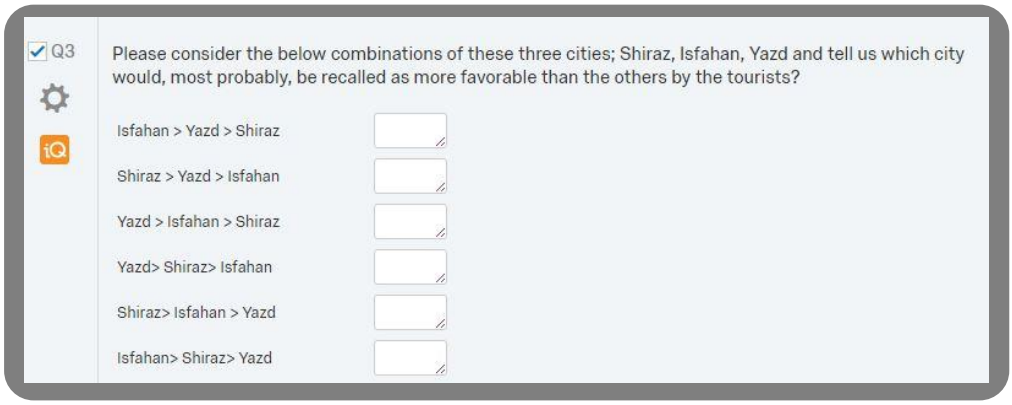


Figure 4.1 Quasi-experiment question with tour guides

The fact that these three commonly visited cities are already arranged in these six ways in the actual travel itineraries of Iran by the tour companies effectively mirrors real cases for the tour guides. The only difference with the real-world cases lies in the fact that more cities are often incorporated into the actual travel itineraries by the tour operators in response to market demands. However, those cities are smaller, and less attractive, and tourists usually do not stay overnight in them, and therefore not compared to the major cities. The justification to focus on only three cities is that the examination of serial position effects is directly assessed by considering the three positions of first, middle, and last visited. A three-city set up can elegantly represent each of these positions and possible combinations. Furthermore, as discussed in the benchmarking heading in chapter three, these specific three cities (Isfahan, Shiraz and Yazd) are most visited and from the same category with relatively same value to both the tourists and external assessors, making them suitable for comparison.

As outlined in Table 4.2, each destination appeared once in each of the six possible positions. Each participant was asked to make a prediction by identifying the name of one city as the most likely to be remembered for every one of the six conditions. The format of Table 4.2 also shows how the data were later coded into excel and SPSS files for logit regression analysis.

Table 4.2 The order of the cities for each of the 6 travel itineraries

City	Itinerary A	Itinerary B	Itinerary C	Itinerary D	Itinerary E	Itinerary F
Shiraz (S)	1	2	3	2	1	3
Isfahan (I)	2	1	2	3	3	1
Yazd (Y)	3	3	1	1	2	2

An important of point of acknowledgment is that tourists' behaviours (recall and evaluation) are indirectly measured from professional tour guides' observations. In addition, the researcher was aware that the first study may not be considered as a full quasi-experiment because the tour guides were already broadly informed about the purpose of the survey. At the beginning of the questionnaire, it was mentioned that they are invited to participate in a study that explores their observations and opinions on visit

order effects on the recall and favourability evaluation of the destinations in a classic tour of Iran. However, the serial position effect and the hypotheses were not mentioned to them. Therefore, there was an opportunity to design a single quasi-experimental question in order to put their minds into the real-world situations they always encounter and then ask them to respond based on each scenario. There is no exact labelling for the name of this approach, rather this study collected data about position effects on tourists' views of destinations indirectly through key informants (tour guides) and by means of a survey.

4.5 Research analysis and results

The responses to the four questions of this study about the existence and strength of visit order on recall and judgment is presented through descriptive analysis. A logistic regression analysis however was used to analyse the quasi-experimental question.

4.5.1 Existence and strength of position effects

All forty respondents agreed that the position of the destination in tours affected overall memorability. For the power of the effect, 89% of the tour guides ranked the effect to be either strong or very strong, and only 11% estimated a modest effect for the importance of the destination position in the itinerary in shaping recall. The responses for these two questions fulfilled the initial objective of the study to establish that there are position effects in the recall of destinations as revealed by the opinion of the key informants. Eighty percent of the respondents also believed that the position of the destinations in a visit would affect their favourability judgment. In addition, 86% of tour guides predicted that this effect would be either strong or very strong. This result satisfied the second objective of the study, that is the position has effects on favourability judgment (refer to Table 4.1). Figure 4.2 displays the results visually.

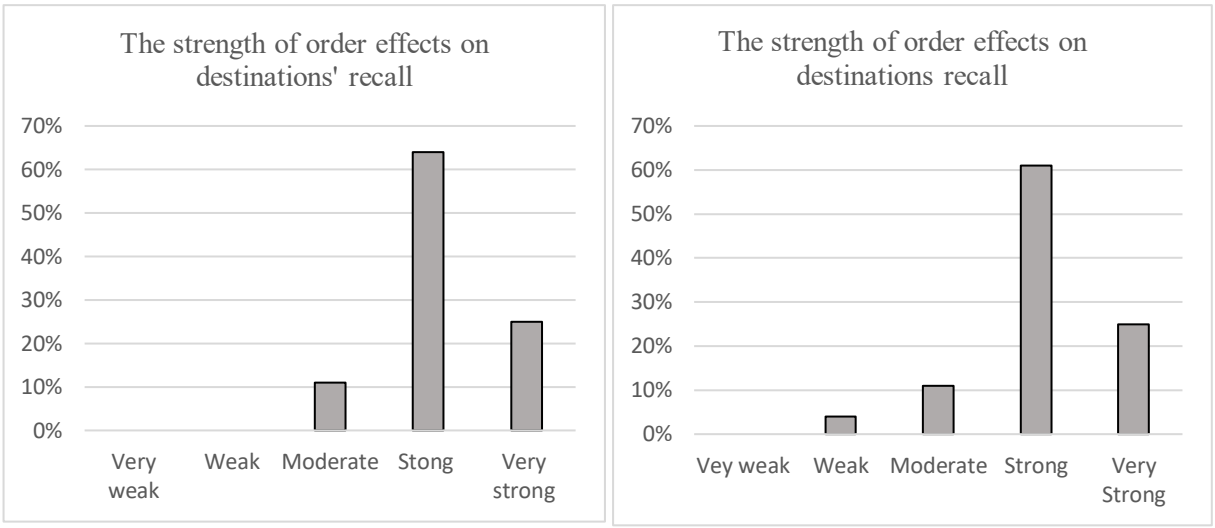


Figure 4.2 The strength of order effects on destinations' recall (chart on the left), the strength of order effects on destinations favourability evaluations (chart on the right); tour guides' perspectives

4.5.2. Hypotheses testing and discrete choice analysis

The application of discrete choice models has been applied to tourism and leisure studies since the 1970s (Stynes & Peterson, 1984; Luzar, et al., 1998; Riddington et al., 2000; De La Vi˜na & Ford, 2001). Not only traditional demographic variables but also attitudinal and psychological variables, such as recall, can be incorporated into the discrete choice models. This feature makes the logit model the right fit for this study because the appearance of a city means the absence of other cities and these responses can be converted as the binary codes (0/1). Stated differently, a binomial logistic regression enables the assessment of the quantification of perceptions in the form of a set of conditional probabilities (Seddighi & Theocharous, 2002).

Explanatory variables in the quasi-experimental question were the position of the city in the itinerary, when in the trip the city is visited (variable one), destination favourability/memorability (variable two) and destination value that is embodied in the cities (variable three). The various combinations of the independent variables (i.e. three cities in all the possible positions of first, middle and last in a single itinerary) generated six conditions for examination of the recall (dependent variable). Every city featured twice as the first, middle and last city in the design (cf Table 4.2). Table 4.3 shows the major variables in the study one.

Table 4.3 Major variables in study one

	Variable name	Variable retrieved from	Variable type
Variable One	The city's position in the itinerary	Travel itineraries (Table 4.2)	Categorical
Variable two	The city selected as the most memorable	Tour guides' responses	Categorical
Variable three	Destination value	City identity	Categorical

4.5.3 Hypothesis one

For the first hypothesis, it was proposed that the destinations at the end of a tour were likely to be better remembered than the destinations at the beginning and in the middle. Different analyses partially supported this first hypothesis. The tour guides predicted position effects but not in the exact format of last, first, the middle for all cities.

Figure 4.3 identifies the position effects for the specific cities through frequency analysis. The Y axis in Figure 4.3 indicates the proportion of responses for recalling a city first when it appeared in the relevant position indicated on the X axis. For example, when Isfahan was first in one of the itineraries, it was seen to be recalled first 0.38 (38%) of the time by all respondents, whereas when it was third (last) in the city order it was seen as likely to be recalled first 0.90 (90%) of the time. From Figure 4.3 it is apparent that the overall proportion of the frequencies for Isfahan as the choice of first remembered destination in all the given positions is higher than for Shiraz and Yazd. Comparison of individual cities established that Isfahan achieved significantly better recall ratings than either Yazd ($t= -8.5$ $p <.001$) and Shiraz ($t=-4.84$ $p<.001$). This finding is consistent with the benchmarking study presented in chapter three. Overall, the tour guides perceived the last visited city as significantly more likely to be remembered when compared to cities visited first or in the middle of the tour ($t=7.71$, $p<.001$). This result confirms that the tour guides predict the position effects to be in the form of recency influences.

The expected U shape serial position curve was achieved for one of the three cities; Yazd. For the other two cities of Isfahan and Shiraz, recency, middle effect and then primacy was predicted to work in that order. The reason for this prediction by the tour guides probably relates to the two cities of Isfahan and Shiraz as being known to be relatively

equal in their attractiveness therefore, every time one was picked as the most recalled one, the other one had an advantage over Yazd to be the second most recalled city regardless of its middle position.

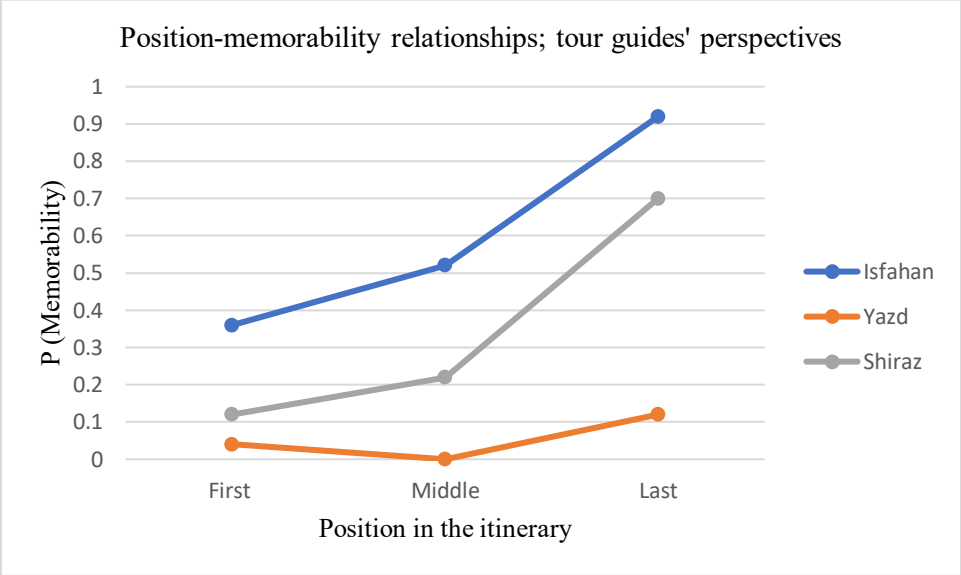


Figure 4.3 The relationship between perceived memorability of cities and the order in which they are visited.

The analysis of deviance in the logit regression shows the discrepancy between the current model and the full model. In this study the two independent variables of city favourability and the order of visit (position), were significant with no interaction effect: City favourability: $\chi 2$ [df=6, N = 40] = 91.57, $p < 0.0001$ and Visit order: $\chi 2$ [df=4, N = 40] = 4.76, $p < 0.0001$.

4.5.4 Hypothesis two

The second hypothesis investigated whether or not the first recalled destination was also perceived as the most favoured, that is evaluated the most positively. A direct question to the respondents assessing this issue supported this hypothesis. For this question about the possible effect of recall (therefore position) on the choice of favourite destination, 80% of respondents believed that this effect exists. Using a simple binomial test this effect was significant, p= 0.0005.

4.5.5 Hypothesis three

The third hypothesis of the study suggested that the power of the position effects will be more apparent when the cities in the itinerary are benchmarked as more similar. As was discussed, in the background information in chapter three, the cities of Shiraz and Isfahan are larger with more tourist attractions and overall have higher visitor numbers than the central Iranian city of Yazd. Therefore, it was noted in Figure 4.1 that the position effects for these two somewhat equivalent cities follow a similar trend.

The logistic regression model specifies that the influence of the city value is significant overall ($\chi 2$ [df=6, N = 40] = 91.57, $p < 0.0001$) and there is not a significant interaction with the order effect. There is therefore some support for the third hypothesis in that the two of the cities which are externally benchmarked as similar conform to a recency effect but the somewhat dissimilar city (Yazd) in the trio of destinations assessed conforms to a full serial position effect. Stated differently, the power of destination moderates its position effects. The more destinations are powerful (attractive) the less important it is, where they sit in the itinerary. Less promoted or well-known destinations are more susceptible to be lost to memory if they are in the middle rather than at the end or the beginning of the tour.

4.6 Discussion

The central purpose of this study, as expressed in two research questions and three hypotheses guiding the work, was to build the case that the position in which a destination is visited affects recall and judgments. An indirect but nevertheless powerful way to assess this likely influence on recall was to seek the opinions of tour guides who have experienced these kinds of positional influences as manifested in the varying orders of destinations employed in the tours they have conducted. The explicit rationale for using these respondents was built on the view that they are the closest observers of the order effects on the tourists' recall and judgment as they frequently operate tours with variations of the itineraries. In investigating a phenomenon for the first time, the tacit knowledge of key observers represents a valuable starting point. The Iranian tour guides studied in this research had substantial work experience of guiding about a thousand tourists each during their career.

The results of a questionnaire to these experienced guides in Iran provided strong evidence for all three hypotheses in the study. First, there was the overall perception that the position of cities as destinations in tours affected the recall of those destinations. Second, it was established that the tour guides perceived that the position of a destination (through the first recalled destination) affects the memorability of a destination over the others (if a destination is recalled first it is likely that the same city would be selected as the most favourite). The logit regression analysis as well as the direct responses to questions about order effects confirmed these two hypotheses from the tour guides' perspectives.

Although the overall position effect was confirmed, the serial position effect curves of the individual cities in figure 4.3 provided the evidence that the memorability of all cities did not conform to the exact serial position effect (the last, the first then the middle). For the two stronger destinations, Shiraz and Isfahan, the last position was considered as more memorable, while their middle positions received a higher rating than the first. As explained, this is most likely due to the similar value of these two destinations and slightly less powerful attraction value of Yazd.

4.6.1 Implications for subsequent studies

The learning from this initial study provided important pathways for the study two and three. The first implication of this study for the further studies is to consider the order effects on recall and judgment in two separate hypotheses. In the current study, there was a hypothesis about the order effects (Variable 1) on recall (Variable 2) and there was another one about the effects of order (Variable 1) on judgment (Variable 3) through recall (Variable 2). Less certainty by tour guides was shown about whether or not the first recalled city would be the most favourite one, therefore, in the next study with the tourists' respondents, the effects of order on the two processes of recall and judgment will be considered separately (Figure 4.4) and then a possible relationship between recall and judgments will be explored. As mentioned in the literature, although the original studies in SPE were on free recall of items, the subsequent studies established that SPE operates in other cognitive processes such as impression formation, choice and judgment (Haugtvedt & Wegener, 1994; Kardes & Herr, 1990; Murphy, Hofacker, & Mizerski, 2006; Walls et al., 2011: Unkelbach & Memmert, 2014). The next questionnaire in the

study will prompt recall and judgment answers separately through inserting two keywords.

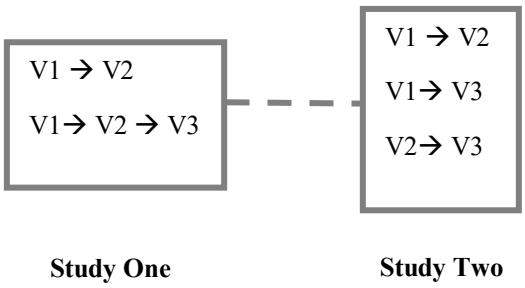


Figure 4.4 An implication from study one for study two

Similarly, the second implication is to consider having a separate hypothesis for the partial position effect (primacy and/or recency effects). In the current study, there was only one hypothesis that was exploring the exact serial position effect (expecting the last destination, then the first and the middle destination is recalled in this order). However, it was predicted by the tour guides that the position effects would most of the time be in the form of recency and primacy but some middle effects may also be seen for the more attractive destinations depending on the how attractive are the other cities in the set (in this case, Shiraz and Isfahan showed middle effects). Again, this makes sense because except in the words free recall experiments, position effects rarely occur in full format in the other contexts (Haugtvedt & Wegener, 1994; Kardes & Herr, 1990; Dayan & Bar-Hillel, 2011; Ert & Fleischer, 2014).

Third, the moderating effect of destination value proved to be perceived as influential by the tour guides. Therefore, the following studies not only retain this hypothesis, but also consider another factor that might be moderating the order effects and recall/judgment relationships that is the duration of the trip (travel length).

Finally, this study found credible evidence that the tour guides observe and consider the position of a destination in the itinerary to be a strong effect in recall and judgments of those settings. They specifically rated recency to be the most common effect in memorability of the destinations. The core aim of the study, to build the case those position effects have been underappreciated in tourist destinations context, can now be seen as fulfilled. The tour guides used their experiences to reflect on a phenomenon important for the tourist experience designers and destination planners. Next, the studies

with tourists are required to also confirm the existence of the order effects from an emic perspective.

Chapter Five

Order Effects and Multi-City Visits;

Tourists' Perspectives

Chapter Five Contents

5.1 Chapter outline

The purpose of study one in chapter four was to make a case for the existence of order effects in the context of visiting tourist destinations by investigating tour guides' observations and opinions. The purpose of this chapter is to investigate the same sets of relationships among visit orders, recall and favourability of cities from the tourists' perspectives. Study two, also offers a more sophisticated empirical investigation into the order effects through more hypotheses and sub-hypotheses (shown in Table 5.1). These hypotheses are directly related to the reviewed literature in previous chapters and are built on serial position effects and memory-based judgments. Lessons learnt from study one are applied to the formation of hypotheses and to the study design. A comparison between the result of study one and two concludes this chapter.

5.2 Introduction

The hypotheses in this study explore the relationship between the visit order (destinations' position in the itinerary), the recall and the favourability evaluation of destinations. As concluded at the end of chapter four, the tour guides predicted that there are some position effects in recall and evaluation. The tour guides also anticipated a relationship between the first destinations recalled to be the most favourite city. In this chapter, the same hypotheses will be tested with actual tourists and the results will be compared with the tour guides' views. From study one it was learnt that the order-recall relationship (H_1), the order-judgment relationship (H_2) and the recall and judgment relationship (H_3) should be hypothesized separately. It was also decided to consider the possibility of a full serial position effect (H_{1a} and H_{2a}) as well as partial serial position effect in form of primacy and/or recency (H_{1b} and H_{2b}).

All the five hypotheses in this study (Table 5.1) are explored through a single questionnaire survey that will be explained in detail in the following sections. Descriptive data analysis, cross-tabulation and binomial tests SPSS will be used to analyse the data.

Table 5.1 Summary of research hypotheses in study two

Study	Hypothesis	Sub hypothesis	Statement
Study 2	H_1	H_{1a}	In a multi-destination trip, the destination at the end is likely to be better **remembered** than the destinations at the beginning and in the middle respectively. (Applicability of the exact serial position effect in recall of destinations)
		H_{1b}	In a multi-destination trip, the destination at the beginning and/or the end is likely to be better **remembered** than the other destinations. (Primacy and/or Recency effect- partial serial position effect)
	H_2	H_{2a}	In a multi-destination trip, the destination at the end is likely to be better **evaluated** than the destinations at the beginning and in the middle respectively. (Applicability of the exact serial position effect in evaluation of destinations)
		H_{2b}	In a multi-destination trip, the destination at the beginning and/or the end is likely to be better **evaluated** than the other destinations. (Primacy and/or Recency effect)
	H_3		The first recalled destination will most likely be the most favoured. (Applicability of memory-based judgment theory)

5.2.1 Research components

Figure 5.1 displays a visual overview of the research process. A detailed explanation of the steps in the research process for study two is provided as follows.

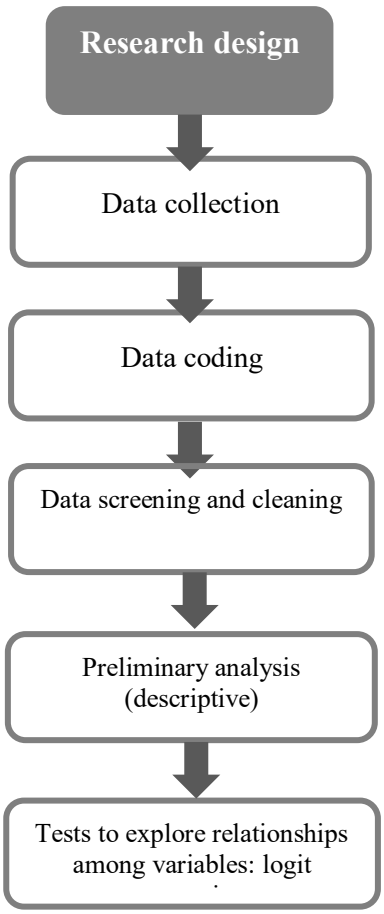


Figure 5.1 Study two: research process

5.2.2 Research context and requirement

The four design requirements for study two are the same as for study one. As explained in detail in chapter three, the study setting had to offer a standardized style of tourism experience (group tours) and the manipulation of independent variable had to occur naturally (variation in visiting the same cities in different orders). In addition, the targeted cities had to be relatively uniform and first-time visitors were required to control familiarity effects on memory and judgment. International visitors taking the classic group tours of heritage cities in Iran met such requirements.

5.2.3 Questionnaire survey

This section illustrates the implementation of the design rational into the content of the questionnaire used to collect data for study two (Appendix II).

5.2.3.1 Survey conditions

The tour guides received the questionnaires before the start of their tours and they were asked to keep the questionnaires until the last day and conduct the survey of the tourists only by then. The survey had to be done on the last day after the final visits so the tourists can compare all the cities that they have visited. The questionnaire content was brief and in plain, simply worded English. The questions were carefully designed and worded to be clear and yield the highest response rate among a broad range of respondents from different backgrounds. Tourists were not supposed to be aware that they would be surveyed at the end of their trip. The expectation could change the memory-based evaluation process to online (on the spot) evaluation for each destination. The importance of these conditions was explained to the tour guides verbally and in written format in Persian at the end of the questionnaires as a reminder.

5.2.3.2 Questions for the tourists (English)

The questionnaire consisted of two parts; first, it was the English section with the key questions for the tourists. The tourists were provided with an information box on the top of the questionnaire to learn about the primary investigator and her affiliation, the topic (Iranian tourists' destinations) and the purpose of the study (to fulfil a PhD degree requirement). They were assured that participation in the study was completely voluntary and no identifying information would be collected (participation in the study was taken as implicit consent).

The first section of the questionnaire included five demographic questions. They were about age (fill in the blank), nationality (fill in the blank), gender (tick Female/Male boxes), and travel experience (scaled items with low defined as (1-5 international trips), Medium (6-20 international trips) and high (more than 20 international trips) followed by a Yes/No question about being a first time or repeat visitor to the country. The next part of the questionnaire consisted of three questions also in the form of filling in the blank. The first question was on the first page and the next two questions were intentionally located on the back of the page. The reason for this design was to prevent tourists skimming and scanning all questions at once. These three questions were:

Question 1: What cities did you visit in this trip? (Name at least three) – Three blank space were left in front of this question. This question was designed to explore the

relationship between the visit order and the recall, H_1. The blank spaces left were to minimize the chances of the respondents stating that they liked two cities equally.

Question 2: Which city did you like the best? (Name only one). A blank space was left in front of the question. This question was designed to explore the relationship between the visit order and the evaluation, H_2.

Question 3: What would be your second and third most liked cities (name two respectively). Two blank space were left after this question (H_2).

The reason to ask the question of "which three cities did you like the best?" in two phases was to make sure that the most favourite city is first thought of and answered, then the rest of cities are compared. In that process, it was hoped that the tourists would understand that making specific judgments about individual cities by ranking them is important and they do not express equal opinions such as "I liked them all". At the end of the questionnaire, a check item was created to collect the date of completing the questionnaire and to ensure that the questionnaire was completed on the last day of the trip (through cross-referencing between the date mentioned by the respondents with the date mentioned by the tour guides).

5.2.3.3 Instructions for the tour guides (Persian)

The second part of the questionnaire in Persian explained the conditions and pre-requisites of doing the survey for the Iranian tour guides. As mentioned, this section served as a reminder on the earlier briefing of the tour guides about the importance of specific instructions for collecting the details of the trip. The section was designed in Persian and was placed at the back of the paper so that only the tour guides could read it. The tour guides were asked to ensure that the following conditions were met before they distributed the questionnaires to the tourists:

1) The group tour's itinerary based on the exact visit order (bold and larger font emphasized the word "order" to the tour guides). They were also asked to provide the number of overnight stays in each city as well as the start/end dates for each tour. An example of the correct response was provided for the tour guides.

2) It was explained to the tour guides that the tourists expecting the questionnaires from the beginning of the trip will change the result, therefore, they are required not to mention the survey until the last day.

3) It was also emphasized to the tour guides that the questionnaire had to be completed only in the last destination (after the last site visit) to enable tourists to make a fair comparison between all the cities they have visited.

4) It was further stressed that the questionnaire was designed only for the foreign tourists who were visiting Iran for the first time and who were travelling as part of a guided package tour (Independent or backpacker tourists are excluded).

5) The guides were asked to write their name and contact information in the space provided for cross-referencing and follow up questions and they were thanked for their important role in the study.

It is important to note that the tour guides who cooperated with the researcher for the data collection in study two are not the same guides as in the study one, and therefore not aware of the exact purpose of the study. Both the tour guides and the tourists were informed that the study is about the tourists' destinations in Iran. The reason for the researcher to afford using a new set of tour guides for this study is that she has worked in tourism industry of Iran for seven years and has an extensive industry network.

5.2.4 Data collection

One of the most challenging steps of this study was to find a large number of tour guides having near future tour assignments during the limited period of the study and who would agree to cooperate with the researcher given the complicated nature of the study. The next concern for the researcher was to make sure that the tour guides who agreed to hand out the questionnaires to their tourists would remember to do so on the last day of the tour. Naturally, there was a few weeks between the initial briefing of the tour guides and the time that the tour was performed and ended. Therefore, the researcher sent several reminders along the way, usually at the first and the last days of the tour. In spite of these efforts, a few tour guides, forgot about the questionnaires altogether or about the conditions they had to provide in more than several cases. Even when the survey was conducted correctly, some guides forgot to write the travel itinerary on the back of the questionnaire. Therefore, the researcher had to make more follow up calls and/or meeting with the guides. At the end, out of nearly 60 expert tour guides contacted and followed up during a period of three months, 34 tour guides conducted the survey correctly, and then collected and returned the responses of their tourists. The process took three months

during the peak travel season in Iran- between April to June 2017. The researcher was present on site for a large part of the data collection in Shiraz. The rest of completed paper questionnaires were sent to her from other cities where the tours ended. In total, 334 correctly completed responses from 34 groups with different itineraries and order of visits for the targeted cities of the study (Isfahan, Shiraz, and Yazd) were achieved. James Cook University human ethics committee issued an approval for this study under the following number: H6858.

5.3 Preliminary analysis

It is easiest to follow the data analysis for study two if it is emphasized that the basis for all the analyses is built on the comparison of what the tourist actually did (the actual visit itinerary as given to the researcher by the tour guides) and what the tourists recalled they did (the recalled order and evaluation in the questionnaire responses). Therefore, there are two sections of the data in play. The tourists' responses and the cross-referencing data from the tour guides.

5.3.1 Cross-referencing data

Key information about the tours was collected through the Persian section of the questionnaire answered by the tour guides. This information included the actual travel itinerary, the order and the name of the destinations visited, travel length based on the overnight stay in each city, as well as the beginning and the end date of the tour. All this information was directly or indirectly required for hypothesis testing and checking the requirements of the study.

5.3.1.1 Visit orders

The first component of the cross-referencing data was the actual travel itineraries of the tourists provided by the tour guides. Table 5.2 shows the variation of itineraries including the four cities of Shiraz, Tehran, Yazd and Isfahan in which tourists visited Iran. As the study's target cities are Isfahan, Shiraz and Yazd, the four combinations presenting the variation of visiting these destinations in different orders were taken into consideration for most analyses. These combinations are highlighted in the Table 5.2. It should be mentioned that tourists in these tours may have also visited Tehran. In the absence of one of the three major cities, Tehran becomes the third main city for investigation of position

effects. The full itineraries may also consist of smaller towns that are not presented in the Table 5.2 because they could not compete with the main cities for memorability and favourability. Table 5.3 documents the natural manipulation found in the destination positions in the itineraries under study.

Table 5.2 Travel itineraries

	Visit order for the target cities	Frequency (N=334)	Percent
Actual travel itineraries	Isfahan-Yazd-Shiraz	107	32
	Shiraz-Yazd-Isfahan	89	26.6
	Yazd-Shiraz-Isfahan	62	18.6
	Shiraz-Isfahan-Yazd	21	6.3
	Shiraz-Isfahan-Tehran	35	10.5
	Tehran-Isfahan-Shiraz	8	2.4
	Shiraz-Isfahan-Kashan	1	0.3
	Tehran-Yazd-Shiraz	11	3.3

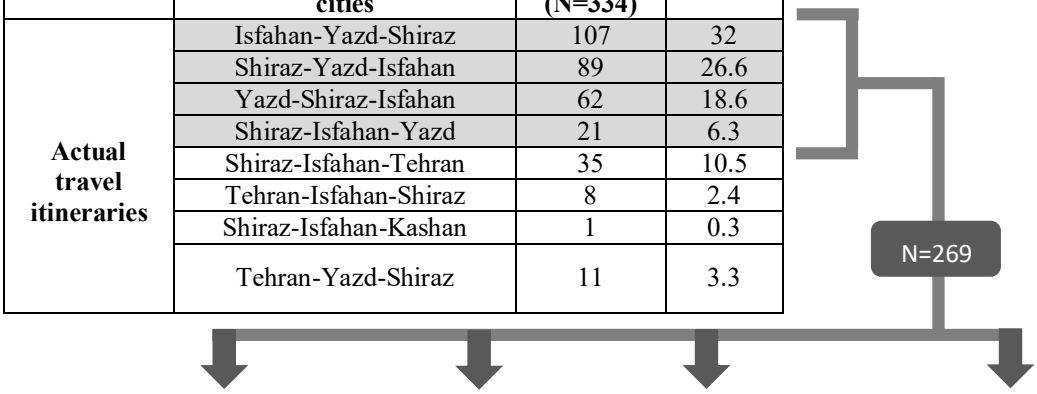
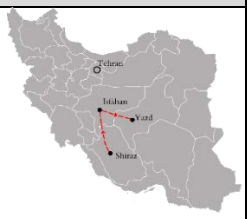


Table 5.3 Major cities of the study in different positions

N=269	Itinerary F*	Itinerary D	Itinerary A	Itinerary B
Itinerary on the map				
Isfahan's position	1	3	2	3
Shiraz's position	3	2	1	1
Yazd's position	2	1	3	2

*The letters introducing the name of the itineraries are matched with Table 4.2

5.3.1.2 Itinerary type

The full itineraries report by the tour guides also revealed a second set of information that is the type of itineraries. As discussed in chapter three, there are two common types of travel itineraries for the operation of the package tours in Iran; one way tours and round trips. One-way itineraries usually start in Tehran (north) and end in Shiraz (south) or vice

versa and many round trips are from Tehran to Tehran. In the 279 cases of this study, the tourists who participated in the one-way tours were 183 and those who performed a round trip (Tehran to Tehran) were 96.

5.3.1.3 Travel length

The travel itineraries provided the total length of stay in Iran as well as the number of overnight stays in each city. The total number of nights in the country ranged from 6 to 15 nights while the number of overnight stays in each major city was between 2 to 3 nights. For subsequent analysis about the length of stay influence on the position effect in chapter six, these tours will be divided to two groups of short stay (if tourists stayed 6-10 nights in total), and long stay (if they stayed 10, 11, 13 and 15 nights). At this stage, it was important to be able to check that the number of overnight stays in the targeted cities are almost equal in all cases, and accordingly, to control for another factor that could affect the memory of a destination.

5.3.3 Tourists data

In this section, the tourists' responses to the demographic questions and some initial assessment of their responses to the destination recall and favourability questions will be presented.

5.3.3.1 Demographic background

Through the demographic questions, information was collected about tourists' nationality, age, travel experience and whether they are first time visitors to Iran. These data are presented in Table 5.4. Previous research has shown no evidence of a significant difference between demographic background (such as gender, age, nationality or travel experience) and adult memories in a relevant sense to the context of this study. Therefore, no hypothesis was designed to measure or explore such relationships in this thesis. As noted previously, the total number of 334 respondents was reduced to 279 after removing the less frequent itineraries. The demographic background for this group (N= 279) is displayed in Table 5.4.

Table 5.4 Tourists' demographic background in Study two

Demographic variables		Frequency (N= 279)	Valid Percent
Nationality/regional grouping	Europeans Asians Africans Canadians Australians	202 30 20 7 20	72.4 10.8 7.2 2.5 7.2
Travel Experience	Low Medium High Missing value	19 103 153 4	6.9 37.5 55.6
Gender	Female Male Missing value	153 120 6	56.0 44.0
First time visitors	Yes No	269 10	96.4 3.6
Age	Mean Median Mode Minimum Maximum Missing value	60.85 (Yrs.) 65 70 22 83 11	

5.4 Hypotheses testing in one-way tours

First steps towards data analysis were to clean the data, make decision rules and define the new variables. After excluding the repeat visitors (10) and splitting the data in two groups of one-way tours (179 respondents) and round trips (90) the new working total is 269. In the following sections, all hypotheses are first tested once for one-way tours, and once for the round trips. Only the exact serial position effects in recall and evaluation (H_{1a} and H_{2a}) will be explored with the total number of respondents (N=269).

5.4.1 Hypothesis One

The first hypothesis (H_1) explores the relationships between the position of the destinations and the recall of them. It has two sub-hypotheses (H_{1a} and H_{1b}). The first hypothesis, H_{1a} is tested to answer whether the recall of destinations follows the exact serial position effect order: the last, the first then the middle destinations. H_{1b}, however,

tests the possibility of serial position effects occurring partially, that is in the form of primacy and/or recency.

5.4.1.1 Exact Serial position effect in recall (H_{1a})

To test H_{1a} all the eight combinations of visits orders previously extracted from the total number of responses were coded from one to eight. Subsequently, the combination of exact serial position effects for each of these itineraries were identified and coded from 9 to 16. Finally, the number of matches between the codes were counted.

Table 5.5 Coding for the analysis of H_{1a}

Combinations of visits orders as they occurred in tours	Codes	Serial position order of the original combinations	Codes
Isfahan-Yazd-Shiraz	1	Shiraz- Isfahan- Yazd	9
Shiraz-Yazd-Isfahan	2	Isfahan-Shiraz-Yazd	10
Shiraz-Isfahan-Yazd	3	Yazd-Shiraz- Isfahan	11
Yazd-Shiraz-Isfahan	4	Isfahan-Shiraz-Yazd	12
Shiraz-Isfahan-Tehran	5	Tehran-Shiraz-Isfahan	13
Tehran-Isfahan-Shiraz	6	Shiraz-Tehran-Isfahan	14
Shiraz-Isfahan-Kashan	7	Kashan-Shiraz-Isfahan	15
Tehran-Yazd-Shiraz	8	Shiraz-Tehran-Yazd	16

The procedure used can be explained in more details as follows. Suppose that the first tourist had a visit with the following order; Shiraz- Yazd- Isfahan. The code for this combination is 2. The serial position effect code for number 2 is number 10. Now if the tourist recalled and wrote this combination (number 10) in the questionnaire, code 1 should be given to this individual's row in SPSS file. However, if she/he recalled the trip order in any other way, code 0 must be assigned.

A decision rule was made for this analysis to treat round trips like one-way tours by ignoring Tehran. The city of Tehran was at the beginning and the end of all-round trips. Removing this city made it possible to track the order of other main cities of Isfahan, Shiraz and Yazd as the focus of the study. In the less frequent one-way itineraries (Table 5.2), Tehran was considered as the third main destination if any of the three-targeted destinations of Isfahan, Shiraz and Yazd were not visited. There was one itinerary in which neither Yazd nor Tehran were visited; instead, the three major cities were Shiraz, Isfahan and Kashan.

After identifying three main destinations in each itinerary (see Table 5.2), the itineraries were coded as explained in Table 5.5. Then, the total number of times a visit code matched with a recall code exactly based on serial position effects was counted. This number was 11 times. In N=269, this number adds up to only about 4% of the time. Therefore, the exact SPE in recall did not appear to be a considerable effect. The 1-tailed binomial test for such a low percentage of matches turns to be significant (p=.000). The alternative hypothesis is that the recall based on the exact SPE is less than 17%. However, such p value is obtained because the probability for the selection of the three major cities of Isfahan, Shiraz and Yazd (or any three first major cities) based on the exact serial position effect was significantly lower than the chance (about 17%). The hypotheses could be accepted with a significant p value that shows a probability higher than the chance alone not lower. Therefore, H_{1a} is rejected.

To help explain and elaborate on the 17% chance, Table 5.6 is designed. When tourists visit any first three major cities, there are six ways to recall them in different orders (shown in Table 5.6). Therefore, there is about 17% (100/6) equal chance of being recalled/selected for each combination. Thus, the revealed 4% match compared to the expected 17% is significantly lower than would be expected. In summary, this outcome means the exact serial position effect in recall of destinations is not significant in the expected direction.

H_{1a}: Rejected. There is no exact serial position effect in recalling destinations.

Table 5.6 All variations of recalling three destinations

Actual visit order	Variations to the recall of three destinations
A, B then C are visited in this order	A-B-C
	C-B-A
	A-C-B
	B-C-A
	B-A-C
	C-A-B

5.4.1.2 Primacy and/or recency effects in recall (partial serial position effect) H_{1b}

H_{1b} states that in a multi-destination trip, the destination at the beginning and/or the end is/are likely to be better remembered than the other destinations. Stated differently, the hypothesis tests the primacy and/or recency or partial serial position effects. To test H_{1b}, four major variables in this study are defined first in Table 5.7.

Table 5.7 Major variables in study two

	Variable name	Variable retrieved from	Variable type
Variable One	First destination visited	Travel itineraries provided by the tour guides	Categorical (a city's name)
Variable two	Last destination visited	Travel itineraries provided by the tour guides	Categorical (a city's name)
Variable three	First destination recalled	Tourists responses	Categorical (a city's name)
Variable four	Most favourite destination	Tourists responses	Categorical (a city's name)

For such categorical data, cross-tabulation and binomial tests are seen as appropriate analyses (Pallant, 2013). Therefore, IBM SPSS statistics 24 was used to first perform descriptive analysis and then other statistical tests were undertaken.

Primacy in recall

H_{1b} aims to test the two effects of primacy and recency in the recall. For the primacy in recall, the first step was to find the percentage scores for the matches between the first destination visited (variable one) and the first destination recalled (variable three). This information is provided through a cross tabulation between variables one and three and is presented in Table 5.8.

Table 5.8 A cross tabulation of first destination visited compared to the First destination recalled, Cross-tabulation

		First destination recalled				
First destination visited		Isfahan	Shiraz	Yazd	Tehran	Total
	Isfahan	3	0	0	0	3
	Shiraz	1	24	1	1	27
	Yazd	0	0	5	0	5
	Tehran	22	15	4	86	127
	Total	26	39	10	87	162

The exact counts linking the first city visited and the first city recalled (the primacy effect) are shown in Table 5.8. For example, the total number of times that Tehran has been visited first in a tour is 127, out of which this city has been recalled first 86 times. Similarly, Shiraz has been visited first 27 times and recalled first 24 times. The focus of this Table is therefore, on the highlighted diagonal line. In Table 5.8, and similar Tables that follow, the number of times a city other than the major cities of (Isfahan, Shiraz, Yazd and Tehran) has been in the first position or has been recalled, as the first destination is negligible therefore such cities have been removed from the Table.

From the diagonal line, another Table is produced to reveal the counts and percentages of the match between first visit and first recall directly. A binomial test was performed to see if the relationship between the first destination visited and the first destination recalled was significant. To create a dummy variable for the binomial test, the value of 1 was given to the match between first destination visited and first destination recalled while 0 was assigned to the non-match cases. The result of this test is displayed in Table 5.9.

Table 5.9 Primacy effect in recall

		First destination recalled N (%)			
		Yes	No	Total	*p*-value
First destination visited	**Shiraz**	24 (90)	3 (10)	27	0.000
	Isfahan	3 (100)	0	3	0.016
	Yazd	5 (100)	0	5	0.001
	Tehran	86 (68)	41 (32)	127	0.059
	Total	118 (73)	44 (27)	162	

As there are four possible options to choose from (Tehran, Shiraz, Yazd and Isfahan), a recall due to the chance alone equals 25% (100/4 = 25%). Through the binomial test, each city's actual selection rate was compared against the chance (25%) and all the p values were found to be significant expect for Tehran where arguably this is a trend in the data ($0.05 < p < 0.10$). Therefore, Table 5.9 shows a clear primacy effect, whereby all the major cities that were visited first are being recalled first at a rate greater than chance alone (25%). It can also be seen that the first city visited is also the first to be recalled approximately 68-100% of the time.

Recency in recall

The recency effect in the destinations recall is tested through the second part of H_{1b}. The exact same procedure was undertaken to test if the destination at the end of a trip is likely to be recalled better than the others. The number of counts linking the last city visited and the first city recalled are shown in Table 5.10.

Table 5.10 A cross tabulation of last destination visited compared to the first destination recalled

		First destination recalled				
		Isfahan	**Shiraz**	**Yazd**	**Tehran**	**Total**
Last destination visited	**Isfahan**	11	17	4	21	53
	Shiraz	12	6	2	60	80
	Yazd	2	2	2	0	6
	Tehran	0	8	1	1	10
	Total	25	33	9	82	149

Using exactly the same process as explained for Table 5.9, the rate of recall selection is compared to the chance rate of 25% when the last destination visited and the first destination recalled are compared. The results are presented in Table 5.11.

Table 5.11 Recency effect in recall

		First destination recalled N (%)			
		Yes	**No**	**Total**	***p*-value**
Last destination visited	**Shiraz**	6 (8)	74 (92)	80	0.000
	Isfahan	11 (21)	42 (79)	53	0.296
	Yazd	2 (33)	4 (67)	6	0.466
	Tehran	1 (10)	9 (90)	10	0.244

The results for recall (Table 5.11) do not show a clear recency effect, as all the p values (expect for Shiraz) are not significant and all cities that were visited last are being recalled

at a rate similar to the chance alone (25%). The logic here is as follows. If the p-value is found to be less than 0.05, then the pattern of responding should not equal 25% but be at a rate lower/greater than 25%. If the p value is less than 0.05 and the selection rate is greater than the chance, that means the city position (or the order of the visit) and the recall has a significant relationship. However, if the p value is less than 0.05 but the selection rate is also less than the chance, it means that the small p value has occurred because of a dramatically low selection rate. Therefore, the significant p value for Shiraz is a good example of the logic used; results for this city have a p value less than 0.05 as well as a less than chance selection rate. The high selection rate for Yazd also does not convey any significant meaning due to small numbers. Therefore, this Table does not suggest a clear or strong recency effect in the recall.

H_{1b}: Partially accepted. Synthesizing the results from Table 5.9 and Table 5.11, it is proposed that serial position effects in recall occurs in the form of primacy only.

5.4.2 Hypothesis Two

5.4.2.1 Exact Serial position effect in Judgment (H_{2a})

The exact order of serial position effects was explored next for judgment using the same approach as for recall. Both the actual itineraries and their SPE versions were coded, and then the matches between the two columns were counted (similar coding as in Table 5.5). The same decision rules were applied.

The total number of times visit combination codes matched exactly their SPE codes were 36 times for N=269 which is about 13% of the time. This rate is less than chance alone (about 17%). The binomial test shows the p value of 0.001 that is statistically significant however; this does not translate to being significant in a sense that the hypothesis should be accepted because the selection rate of 11% is still below the chance alone (17%).

H_{2a}: Rejected. There is no exact serial position effect in evaluating destinations.

5.4.2.2 Primacy and/or recency effects in Judgment (H_{2b})

H_{2b} seeks to test if in a multi-destination trip, the destination/s at the beginning and/or the end is/are likely to be better evaluated (liked) than the other destinations. (Primacy and/or Recency effect)

Primacy effect in judgment

To test the first part of H_{2b}, the data for the two variables of first destination visited (Variable 1) and the favourite destination (Variable 4) were cross-tabulated. The result is presented in Table 5.12.

Table 5.12 A cross tabulation of first destinations visited compared to favourite destinations.

		Favourite destination				
First destination visited		Isfahan	Shiraz	Yazd	Tehran	Total
	Isfahan	0	1	2	0	3
	Shiraz	13	8	4	0	25
	Yazd	2	1	2	0	5
	Tehran	97	28	4	3	132
	Total	112	38	12	3	165

Table 5.12 then leads to Table 5.13 showing the numbers and percentages of the matches between variable one and four.

Table 5.13 Primacy in judgment

		Favourite destination N (%)			
		Yes	**No**	**Total**	***p*-value**
First destination visited	**Shiraz**	8 (32)	17 (68)	25	0.273
	Isfahan	0 (0)	3 (100)	3	0.016
	Yazd	2 (40)	3 (60)	5	0.367
	Tehran	3 (2)	129 (98)	132	0.000

The Table of primacy in judgment (Table 5.13) suggests that overall there is no clear or strong primacy effect for each of the four destinations above. Two significant p values for Tehran and Isfahan reveal interesting information. The selection rate by chance is 25% for each city. Results involving these two cities of Isfahan and Tehran have produced significant p values but due to a much lower selection rate compared to chance (0% for Isfahan and 2% for Tehran); such p value outcomes do not account for a meaningful relationship. For Isfahan, given that it has never been the beginning of the tours this is not a surprising result. However, for Tehran the opposite holds true. Tehran has been a first destination visited a dramatically higher number of times (97 times) compared to all the

other three destinations. This city however has been chosen infrequently as being the favourite one compared to the others (three out of 97 times).

Recency in judgment

The second part of H_{2b} hypothesis is proposing that in a multi-destination trip, the destination that is visited last is likely to be evaluated as the favourite one. The match between the two variables of last visited (Variable two) and the most favourite destination (Variable four) was cross-tabulated to find the recency effect. The binomial tests were also conducted to identify the significance of the relationships (Table 5.14).

Table 5.14 A cross tabulation of last destination visited compared to the most favourite destination.

		The most favourite destination				
		Isfahan	**Shiraz**	**Yazd**	**Tehran**	**Total**
The last destination visited	**Isfahan**	53	4	2	0	59
	Shiraz	46	28	3	3	80
	Yazd	0	0	6	0	6
	Tehran	7	2	0	0	9
	Total	106	34	11	3	154

Following Table 5.14, the next Table 5.15 was generated to present findings about the recency effects in judgments of the destinations.

Table 5.15 Recency effect in judgment

		Favourite destination N (%)			
		Yes	**No**	**Total**	**p-value**
Last destination visited	**Shiraz**	28 (35)	52 (65)	80	0.029
	Isfahan	53 (90)	6 (10)	59	0.000
	Yazd	6 (100)	0	6	0.000
	Tehran	0 (0)	9 (100)	9	0.000

The above Table suggests that part of H_{1b} should be accepted, as there is clear evidence for recency effects in favourability evaluation of the destinations. We have significant results for Shiraz, Isfahan and Yazd, all of which appear to be selected at a rate greater than chance (greater than 25%). In the case of Tehran, although there is a significant p value, this city has not been selected as the most favourite city when it has been at the end of the trip. Therefore, the significant p value in this case, is to be interpreted only because of the small numbers in the cell (much lower selection rate than the chance). As before, the binomial test indicates a reverse result for Tehran as the pattern in the columns is opposite that hypothesized.

H_{2b}: Partially accepted. Considering findings from Table 5.13 and 5.15, primacy effects in judgment is not confirmed while the existence of recency effects in favourability evaluations of destinations are supported with statistical evidence.

5.4.3 Hypothesis Three

Hypothesis three, which is based on the memory-based judgment theory, predicts that the first recalled destination will most likely be the most favoured. Therefore, the percentage likelihood of a destination being recalled first and being evaluated as the most favourite destination was calculated. Prominent differences existed between matching percentages for the key cities. For example, Isfahan was recalled first and evaluated as the most favourite 72% of the time (18/25). The scores for the other cities were Yazd, 30% (3/10), Tehran nearly 4 % (3/84) and Shiraz about 28% (10/36). This variability suggests that moderating effects might be creating the differences in the percentages for the targeted cities. For example, the attraction power of the destination can be a factor on recall-judgment evaluation. Table 5.16 provides the city-by-city data linking primacy and favourability evaluation through a cross tabulation of variable three and four.

Table 5.16 A cross tabulation of the first destination recalled compared to the most favourite destination.

		Most favourite destination				
		Isfahan	**Shiraz**	**Yazd**	**Tehran**	**Total**
First destination recalled	**Isfahan**	18	5	2	0	25
	Shiraz	22	10	4	0	36
	Yazd	6	1	3	0	10
	Tehran	58	20	3	3	84
	Total	104	36	12	3	155

Similar to the approaches for H_{1b} and H_{2b}, another Table (5.17) was created out of the cross-tabulation Table to present the binomial test results.

Table 5.17 Recall and judgment relationships in one-way tours

		Favourite destination N (%)			
		Yes	**No**	**Total**	**p-value**
First destination recalled	**Shiraz**	10 (27)	26 (73)	39	0.524
	Isfahan	18 (72)	7 (28)	25	0.000
	Yazd	3(30)	7 (70)	10	0.474
	Tehran	3 (4)	81 (96)	84	0.000

There are mixed results in Table 5.17 about the relationship between first recalled and favourite destination. There are significant results for Isfahan and Tehran. However, in the case of Tehran, the significant p value indicates that this city has been chosen significantly less than the chance rate. Isfahan is the only city that has been selected at a rate higher than the chance. Shiraz and Yazd have been both selected at a rate close to the chance only (25%). Therefore, it appears that recall-judgment relationship for most cities may be dependent on other factors than order.

H_3: Rejected. The order of recall and judgment of destinations are not related.

Table 5.18 shows a summary of all the hypotheses tested in one-way tour sample.

Table 5.18 Summary of H_1 to H_3 for one-way tours.

	Research approach to test the hypothesis	**Statistical test**	**Level of significance**	**Match between the two variables (%) All cities**
$H1_a$	Match between the actual itineraries codes and their SPE codes	*Binomial test	Not Significant	3.6
$H1_b$ The relationship between Visit order and recall	Variable 1 on Variable 3 → Primacy effect in Recall	Binomial test	Significant	67
	Variable 2 on Variable 3→ Recency effect in Recall	Binomial test	Not Significant	11.7
H_{2a}	Match between the actual itineraries codes and their SPE codes	*Binomial test	Not significant	11
H_{2b} The relationship between Visit order and favourability evaluation	Variable 1 on Variable 4→ Primacy effect in favourability evaluation	Binomial test	Not Significant	7.8
	Variable 2 on Variable 4→Recency effect in favourability evaluation	Binomial test	Significant	49.7
H_3 Recall and favourability evaluation	Variable 3 on Variable 4→ A direct relationship between recall and favourability evaluation	Binomial test	Not Significant	19.6

*For H_{1a} and H_{2a}, N=269 (one way + round trips), for the rest of hypotheses N=179 (one-way tours only)

5.5 Hypotheses testing in round trips

For this set of analysis, the aim is to see if there are any meaningful differences between the patterns of order effects in one-way tours and in round trips. The main source of difference here is that in the round trips, the first destination visited and the last destination visited are the same. Therefore, how this repetition of one destination at the beginning and the end may moderate the order effect is of interest. In the case of data in this study, all the round trips started from and finished in Tehran. This means Variable

1=Variable 2= Tehran. Therefore, the position effects for the city Tehran were explored among the total number of round trip respondents (N=90). Following the same approach as in the analysis of one-way tours, recall and favourability responses were cross-tabulated once each with variable last/first destination visited which is Tehran in all cases.

5.5.1 Hypothesis H_{1b}:

H_{1b} explores primacy and/or recency effects in recall. Therefore, the recall of Tehran in all round trip cases was examined through Table 5.19.

Table 5.19 First/last destination visited compared to first destination recalled, cross tabulation (round trips)

First/last destination visited	First destination recalled N (%)						
		Isfahan	**Shiraz**	**Yazd**	**Tehran**	**Other cities**	**Total**
	Tehran	10	14	11	42	7	84

Then a binomial test was performed to learn about the significance of the relationship between Tehran and its recall.

Table 5.20 Primacy and recency effects in recall for city Tehran in round trips

First/Last destination recalled (Tehran)	First destination recalled N (%)				
		Yes	**No**	**Total**	***p*-value**
	Tehran	42(47)	48 (53)	90	0.000

Table 5.20 identifies Tehran as both first and last destination visited for N=90 times. Tehran has been recalled correctly 42 times, that is about 47% of the total time (six missing values are given 0 as a value). The selection rate of Tehran is considerably higher than the chance (47% in compare to 25% chance), therefore, the relationship between destination position and recall in round trips is significant (p= 0.000).

H_{1b} and H_{2b} in round trips are accepted.

5.5.1.1 Comparison of the result (H_{1b}) with the one-way counterpart

If we compare the primacy of Tehran in one-way tours 68%, (86 recall out of 127 times - refer to Table 5.9), with 47% primacy/recency of this city in round trip, the recall has decreased in the round tours. Normally it is assumed that the effect of visiting a city twice

in a short time reinforces the memorability of that place. This result however shows that the position effect can be moderated by the destination attraction power. Arguably, if another city was in First/Last positions the result could differ. When a less popular destination is visited at both the beginning of and the end of a trip, the double visitation effect may not increase its recall and favourability due to the competition from more attractive destinations in the middle of the itinerary. Therefore, the decreasing trend found about Tehran in this study should not be generalized to all destinations. Instead, a basis for a hypothesis showing the moderation effect of destination value is suggested by this result; this implication from the present work will be studied in the next chapter.

5.5.1.2 Overall conclusion for H_1

For all tours, there was no exact serial position effect in the recall. Primacy in recall for one-way tours and primacy/recency for round trips were found.

5.5.2 Hypothesis H_{2b}

H_{2b} is exploring primacy and/or recency in judgment in round trips. Table 5.21 reveals that out of 90 times that Tehran has been at the beginning and the end of a trip, it has never been chosen as the favourite destination.

Table 5.21 A cross tabulation of first/last destination visited compared to the most favourite destination for round trips

First/last destination visited	Most favourite destination N (%)						
		Isfahan	**Shiraz**	**Yazd**	**Tehran**	**Other cities**	**Total**
	Tehran	56	8	9	0	5	78

Table 5.22 Primacy and recency effects in judgment for city Tehran in round trips

First/last destination visited	Favourite destination N (%)				
		Yes	No	Total	p-value
	Tehran	0	90 (100)	90	0.000

From this Table it is clear that Tehran as a destination visited twice both at the beginning and the end does not improve its favourability compared to when it is visited once at the start or the end of tours in one-way group. The interpretation of the *p* value produced by the binomial test is indicating a significant result for a lack of relationship not the other way round.

5.5.2.1 Comparison of the result (H_{2b}) with the one-way counterpart

If we compare the recency of Tehran in one-way tours 3%, (Table 5.16), with 0% primacy/recency of this city in round trip, a very low favourability is present for this case in the round tours. Again, this result is due to the fact that Tehran was arguably compared with other attractive destinations.

5.5.2.2 Overall conclusion for H_2

No exact serial position effect in judgment was found. Recency in destination evaluation in one-way tours and no position effect for judgment of Tehran in round trips were revealed.

5.5.3 Hypothesis H_3

Hypothesis 3 explores the relationship between recall and judgment; therefore, it compares the variable first destination recalled (variable 3) to the most favourite destination (variable 4). Similar approaches as before were taken for finding an answer about this relationship; first a cross tabulation between the two variables, then a binomial test. The following Tables display the findings.

Table 5.23 A cross tabulation of first destination recalled compared to the most favourite destination

		Most favourite destination				
		Isfahan	**Shiraz**	**Yazd**	**Other cities**	**Total**
First destination recalled	**Isfahan**	7	0	1	1	9
	Shiraz	7	1	1	0	9
	Yazd	10	0	1	0	11
	Tehran	29	5	3	2	39
	Other cities	0	2	3	2	7
	Total	53	6	6	0	75

Table 5.24 Recall and judgment relationship in round trips

	Favourite destination N (%)				
		Yes	**No**	**Total**	**p-value**
First destination recalled	**Shiraz**	1 (11)	8 (89)	9	0.300
	Isfahan	7 (91)	1(9)	8	0.000
	Yazd	1(9)	10 (91)	11	0.244
	Tehran	0	37 (100)	37	0.000

The Table above shows that there is not any significant relationship between the recall and favourability judgment for all cities except Isfahan. The significant p value of Tehran

is related to 0% selection for this city as the favourite destination compares to the chance rate of 25%.

5.5.3.1 Comparison of the result (H_3) with the one-way counterpart

Comparing Table 5.24 with Table 5.17 reveals a consistent trend in the results. The favourability percentages of all cities in round trips compared to their percentage in one-way tours have declined except for Isfahan where it has increased (from 72% to 91%). The significance p value for Isfahan is likely due to the moderating effect of its higher attraction power.

5.5.3.2 Overall conclusion for H_3

Overall, it is concluded that the recall and judgment are independent of each other in the context of the destinations visited. Table 5.25 highlights a summary of the overall results for all hypotheses.

Table 5.25 Summary table comparing all hypotheses in both groups (one-way and round trips)

Hypothesis	Prediction	Result in one way tours	Result in round trips
H_{1a}	Existence of Exact serial position effect in recall	Rejected	Rejected (all destinations)
H_{1b}	Primacy and/or Recency in recall	**Primacy**	Primacy=Recency (Tehran only)
H_{2a}	Exact serial position effect in judgment	Rejected	Rejected (all destinations)
H_{2b}	Primacy and/or Recency in judgment	**Recency**	N/A (Tehran wasn't selected at all)
H_3	Existence of a relationship between Recall and favourability evaluation based on position effect	Rejected	Rejected (all destinations)

5.6 Destinations' serial position effect curves

An important implication of the current thesis is to establish basis for devising tools that can predict and inform position effects for destinations and-in the next stage- any sequenced tourism and hospitality product. The serial position effect curve in free recall of words and the probability of the first recall (PFR) have been used as valuable tools in memory and behavioural studies (Howard, 2004; Sederberg, Howard, & Kahana, 2008;

Laming, 1999; Unsworth, & Spillers, 2010). In this thesis and not with quite the same technical definitions, models and probabilities of recall and evaluation of destinations based on their positions can be initially discussed. In chapter four, the tour guides predicted the first recall and the most favourite destination in the given scenarios. There is a serial position effect curve expectation for any combination of destinations. The comparison of the predicted curve with the actual curve offers potential for different analyses. The way the expected and the observed figures differ from each other and converge or diverge from the original U shape curve of serial position effect can provide a valuable understanding about destinations and the itineraries in which they are visited. Learnings from the current study can follow these initial examples.

Figures 5.2 places the prediction of the tour guides about the memorability next to the actual recall selection by the tour guides. The Y-axis represents the cumulative proportion of times a destination was recalled first while the X-axis displays the position of the destination in the itinerary. The right graph is the single figure drawn based on the tour guides prediction (Table 4.2), and the left graph is based on the destinations' first recall by the tourists. As discussed, in chapter four (study one) the memorability concept was considered as the recall of the most favourite choice by the tourists (implicit recall-favourability relationship) but in study two recall and evaluation were separated and investigated independently. Therefore, it is possible to produce another Figure (5.3) for the comparison of the tour guides perceptions with the tourists' evaluations.

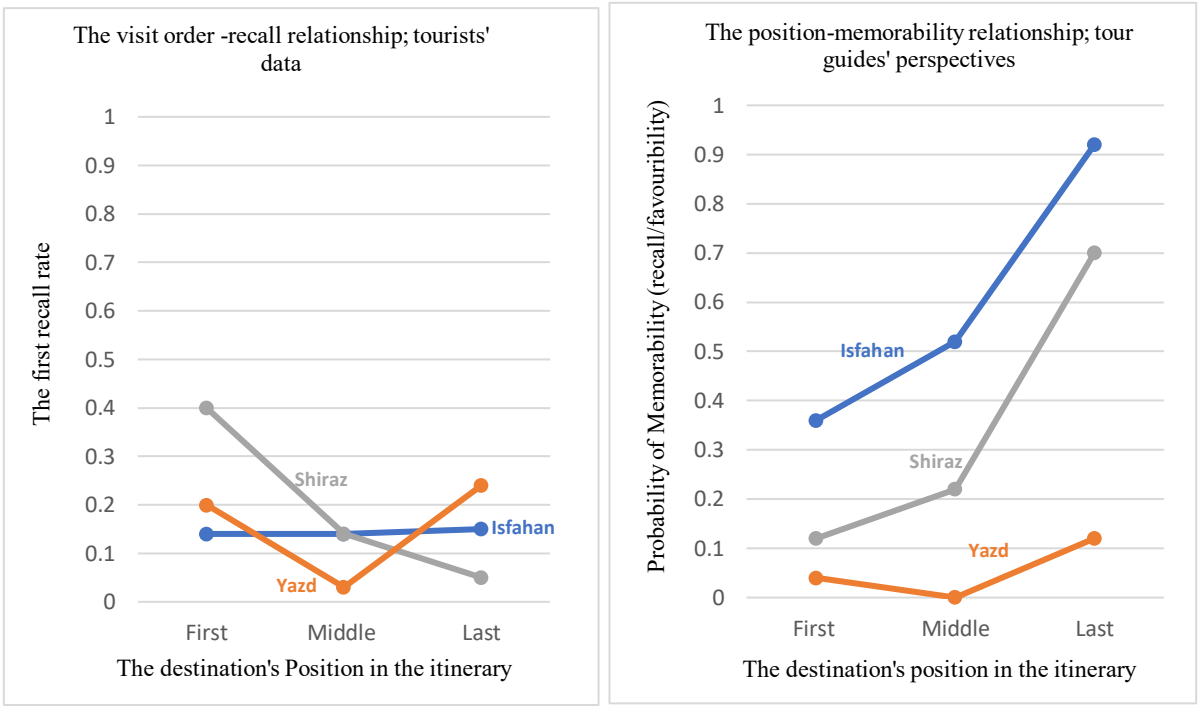


Figure 5.2 recall based on position curves; tour guides and tourists data comparison

As seen in Figure 5.2 the tour guides (the right graph) predicted that the two cities of Isfahan and Shiraz in the trio would perform better in memorability ratings regardless of their positions. The city of Yazd would inevitably be the last in compare to these two cities. They predicted, however, that Yazd would gain in memorability if it is placed at the end, then at the beginning and finally at the middle of the itinerary (fully conform to serial position effect curve). This prediction held true based on the actual recall rating of Yazd by the tourists (The left graph). The Isfahan curve by the tourists is almost linear which means that the memorability of this city is less dependent on its position. A finding that was predicted by the tour guides too. In case of Shiraz, however, the tourists' recall of this city at the beginning was higher than when it was at the end, a trend opposite that which the tour guides predicted. This finding is interpreted as a confirmation that the tourists' tried to accurately answer the question of recall based on the order of visit although they were not instructed to do so. The different paths the tourists seem to take to respond to the two questions of "what destination did you visit?" and "which city did you like the best?" will be reviewed further in the discussion section.

Figure 5.3 Favourability based on position curves; tour guides and tourists data comparison

In Figure 5.3, the right graph by the tour guides is the same in Figure 5.2. The left graph represents the data for the favourability ratings by the tourists. Interestingly enough, the serial position curves of Isfahan and Shiraz for the favourability evaluation conforms to the full serial position effect curve (U or V shape with recency effect being higher than primacy). Yazd's favourability curve doesn't follow the exact serial position effect unlike its recall and that's another fascinating result.

The general ideas drawn from the comparison of the actual recall and evaluation ratings by the tourists with the original SPE curve or with the curves that the tour guides predicted reveals at least two important points. First, we should be aware of how memorability of destinations is measured and the terms used. It seems that memorability as a general undefined concept may prompt cognitive processing paths difficult to track but if we make a distinction between recall and favourability evaluation the results are clearer. Thus, the dependency of these processes on the position effect always need to be carefully explored. Second, after independently conducting surveys about recall and evaluation, it seems that evaluation results show a higher tendency to the position effect compared to the recall responses. That is, when tourists are asked about "which city among multiple

destinations they liked the best?" they are more prone to respond based on availability heuristic models of memory and judgment. However, in recall question, it seems that they still consider the order of visit in their responses no matter whether or not they asked to do so.

5.7 Discussion

The existence of order effects from the etic point of view through the perspectives of the tour guides was established in the previous chapter (four). In chapter five the order effects were explored directly through tourists' responses (an emic point of view). The existence of order effects once again was confirmed. The hypotheses in study two explored two main relationships between visit order and recall as well as order and judgment of destinations. There was however, a hypothetical third relationship between the order of recall and the order of judgment that applied positively and significantly to only one destination. The achieved results and their connection to the literature are discussed under the following subheadings:

5.7.1 Existence of position effects in visiting destinations

The intuition about the order effects on visiting multiple cities was first confirmed through tour guides' experiences of observing such effects in study one (Zare & Pearce, 2018) and in this part of the thesis through statistical analyses in study two. To the author's knowledge, research about order effects in visiting multiple destinations has never been conducted before; therefore, previous literature can only indirectly support or challenge the current result.

The first finding of study two, states that order effects do occur in the context of multi-destination visits but do not follow the full format of serial position effects. As a reminder, serial position effect is occurring when respondents begin recalling items presented to them in a sequence with the end of the list, the beginning and then the middle (Ebbinghaus, 1902). The order of recall and favourability of the destinations visited in Iran did not follow the order of last, first, then the middle for majority of the cases.

Respondents, however, recalled the first destination visited correctly 68% of the time (primacy effect), and liked the last destination 47% of the time (recency effect). Having not full but partial position effects (primacy and/or recency) for the recall and evaluation of destinations was not a surprising result given similar findings in most consumer

behaviour studies (Einhorn & Hogarth 1987; Jones & Goethals 1972; Kardes & Herr, 1990; Murphy, et al., 2006; Lichtenstein & Srull 1987). The researcher formulated and tested a hypothesis based on exact serial position effect so that the full possibilities of order effects were examined; for the researcher, the partial serial position effect (primacy and/or recency) seemed more probable from the beginning.

5.7.2 Partial position effects (primacy and/or recency) in visiting destinations

Through hypotheses one in this study, it was found that the first destination in recall experiments and the last one in evaluation surveys have benefited by their positions. Stated in other words, the main and novel finding of the study two is that primacy in recall of destinations and recency in evaluations of them were confirmed statistically. As mentioned, there is no exact study in destination visit post-trip recall and evaluation context to directly support or challenge the current study's result. Evidence of position effects do however exist in previous studies that have found primacy and/or recency in other tourism and hospitality contexts. For example, the double effects of primacy and recency were revealed in top and bottom items in hotel booking lists, meal menus and website links in decision-making processes (e.g. Dayan & Bar-Hillel, 2011; Ert & Fleischer, 2014; Murphey et al., 2006; Pan, Hembrooke, Joachims, Lorigo, Gay & Granka, 2007; Pan, Zhang, & Law, 2013). These studies presented findings in decision-making and choice while the current study investigated memorability in the form of recall and evaluation behaviours.

The researcher suggests that the effect of order is likely to be subliminal as the tourists were not aware of the exact reason behind the experimental surveys (they were informed that the study is simply about the destinations). Following the traditions existing in previous position effect studies, suggestions can be made about the possible mechanisms behind the discovered order effects. There is, though, an important consideration that neither this thesis nor most of previous studies were designed to find such mechanisms but to only confirm the existence and nature of the order effects. Full exploration of the possible explanations for order effects requires separate studies. Nonetheless, the discussion and explanations offered below are consistent with results from the data analyses.

5.7.2.1 Recall and primacy

Some primacy effects in product choice have been suggested to be associated with the satisficing principles (Simon, 1957). The fact that some people are satisficers by personality and they prefer to quickly and readily pick the first good enough option rather than the optimal choice explains their behaviour (Ert & Fleischer, 2014). However, this reasoning is not sensible regarding destinations recall because tourists were not given a list of destinations to choose from, rather, they visited multiple cities one by one.

A second set of reasons behind primacy effects mentioned in the free recall literature relates to first items being in the long-term memory by the time of recall task (Rundus, 1971; Wyer & Srull , 1986). This idea although it seems to be plausible, makes better sense for free recall of words when subjects can rehearse the words as they receive them and send them into the long-term memory. In this study, multi-destination visits included two to three overnight stays in each city and the whole sequence of presenting destinations unfolded over a week or two. Therefore, all the destinations had more or less the same advantage of already being in the long-term memory by the time of recall task at the end of the trip.

The more compelling reason behind the first destinations of multi-city tours being recalled first correctly seems to stem from the nature of recall task itself. Tourists were asked "which destinations did you visit?". To respond, it seems that they mindfully tried to recall the sequence of visits based on the actual itinerary although they were not instructed to do so. The recall task created an involvement in thinking and remembering the first destination as it was visited.

It was also noticed that the recall question created more apparent mindfulness compared to the evaluation task. This observation is supported with stronger patterns of order effects found in evaluation hypotheses compared to recall counterparts. High primacy in recall translates to higher correct answers by the respondents and somewhat less position-dependent choices. By way of contrast, recency effects show higher position-dependent selections. Therefore, recall compared to evaluation seems to be less susceptible to the heuristic bias of order/position.

The point about different cognitive processes engaging participants with different levels of involvement has been addressed in the literature before (Miller & Krosnick, 1998; Tse

& Lee, 2001; Sirakaya & Woodside, 2005). Involvement is defined, as "individual's perceived risk with the decision" (Arnould et al., 2004). When consumers are purchasing a tourism product, there is complexity and risk (financial, time and energy) involved with the purchase whereas when tourists are recalling or evaluating a trip as good or bad, it is completed and there is less involvement in the task and consequently more heuristic biases. Previous research with media has also shown evidence for primacy and recency effects often being mediated by the individual's involvement or motivation to think (Murphy et al., 2006). For example, television viewing is a low-involvement activity; therefore, recency effects are common in remembering advertisements (Duncan & Murdock, 2000; Krugman, 1965; Tse & Lee, 2001)

5.7.2.2 Judgment and recency

Forty seven percent of the tourists in this study chose the last destination as their favourite destination. This recency in evaluation may be well explained by the availability heuristic model (Tversky & Kahneman, 1973). Based on the model of Hastie and Park (1986) of online versus memory-based judgments, the evaluations in this study are considered as memory-based. Such judgments are formed at a later point in time when all information has been presented to the participants. In this study, tourists did not know about the survey until the end of their tours. Therefore, they generated memory-based judgments about destinations. The effect of initial processing goal and awareness on the level of involvement and on position effects have been established before (Alba & Hutchinson 1987; Petty & Cacioppo 1986; Kahnman et al. 1982, Nisbett & Ross 1980). When the instruction for the subjects is to wait to make a decision after being exposed to all information, memory based end-of-the-process judgment takes place and recency effects are likely to occur (Kashima & Kerekes, 1994).

Recency in judgment can also be justified by the evaluation task. Previous studies have reported different results for order effects in impression sets, choice sets and memory sets. Primacy is common in impression tasks. Choice tasks have not revealed a clear pattern of order effects, probably because they involve complex integration and differentiation analysis whereas memory sets have often shown recency effects (Asch, 1946; Haugtvedt & Wegener, 1994; Kardes & Herr, 1990). As the questions in this study were memory tasks, the recency effects found in destinations context conforms to this classification.

5.7.3 Independence of recall and evaluations of destinations

Several points can be developed from the results of testing the third hypothesis about recall and judgment relationship. The theories in chapter two hypothesized that the relationship between judgment and memory will depend on the order of retrieved information; if recall-order input and judgment-order outputs match, a strong relationship is confirmed, whereas if the input and output order differ, a weak relationship is implicated (Hastie & Park, 1986; Lichtenstein & Srull, 1985,1987). In this study, only the first destination recalled and the first destination liked were considered for testing if they matched or they differed. Except in case of Isfahan, the other cities (Shiraz, Yazd, and Tehran) did not show a significant relationship between being recalled and being liked first. Therefore, referring back to Table 2.1 in chapter two, it seems that recall and judgment had a strong relationship in the case of one destination and a weak or no relationship for other cities. For the cities where these links were not apparent, destination value could have mediated the recall-judgment relationship. It can also be the case that finding this relationship requires more sensitive measures (Chattopadhyay & Alba, 1988). For the setting in this study, the researcher suggests that the likely explanation for recall and judgment not being correlated is again the result of different level of involvement created by recall and evaluation questions. Tourists most likely did not use the memory input from recall to make an evaluation. They answered each of the two questions of "which cities did you visit?" and "which cities did you like the best?" independently.

Finally, the comparative studies between one-way and round trips did not show increased position effects as expected. Early studies on serial position effect found that if the participants have more time in between presentation of words to rehearse them, the primacy effect is greater (Glenberg et al., 1980; Marshall & Werder, 1972; Rundus, 1971). Round trips with the same city at the beginning and the end of the tour being visited twice normally creates expectations of showing the same result; higher primacy/recency. However, this hypothesis was not confirmed by this study, most likely because the destination value mediated the position effects. From this study, visiting a destination twice does not increase its chance of being recalled or liked more, although this finding is limited because it is built on results about one city only.

5.8 Summary and links to the next chapter

Chapter five provided evidence for the existence and nature of position effects in visiting destinations. The unexpected results for some hypotheses as well as previous research about moderating factors on position effects resulted in the formulation of two more hypotheses to explore in the next chapter. As mentioned, it is likely that destination attractiveness level and the length of stay moderate and further explain the position effects for destinations. Chapter six explores these two factors.

Chapter Six

Order Effects and Multi-City Visits;

Moderating Factors

Chapter Six Contents

6.1 Chapter outline

After collecting evidence about the existence and directions of position effects for the multi-destination visit context in chapters four and five, chapter six covers a study exploring the possible moderating influences on the position effects. Two such effects are hypothesized to be the destination value and the travel length. This chapter explains the study's design and the step-by-step data analysis and finally reports on the results.

6.2 Introduction

As discussed so far, the studies in this thesis combine the external validity of tracking the behaviour of actual tourists, with the internal validity of using data about tour package itineraries. The relatively similar experiences tour packages offer help to control for between tour variations. Conducting quasi-experiments, however, comes with some limitations when attempting to control for multiple extraneous factors (Campbell & Stanley, 1963). A careful design and attention to the control methods as best as possible can address the threats to the validity issues and no experimental research project is perfect or free of validity threats after all (Shadish et al., 2002). The limitations of the present research will be considered later in this chapter.

In chapter two, some of the influences on memory were discussed. Attention and mindfulness, emotions, motivations and prior processing goals are among such influences (Cohen, 1989; Craik, et al., 2000; Gotoh, 2012). In this thesis, however, the focus was on isolating the visit order/ temporal position effects in multi-destinations visit and exploring tourists' memory manifested in their recall and evaluation of destinations. The novelty of this exploration draws attention to some tourism context-specific external factors that may influence the position-recall or the position-evaluation relationships. Some of these specific factors on tourists' memory such as the reactivity effect of prior visits or the differences in services received during the trip were controlled through the study design. Other than those effects, the foundation for hypothesizing about the strongest factor on the recall-position and evaluation-position started to be built from tour guides' study (study one) and was confirmed by tourists' data in study two. That effect is called destination value/attractiveness in this thesis. The second effect for the further examination is length of tourists holiday time in Iran.

To explore the potential effects of other independent variables on dependent variables of recall and evaluation in this study, it is important to start with specifying the differences between moderating and mediating effects as recognizing this distinction has theoretical and practical implications especially in experimental design. Based on Baron and Kenny (1986) who introduced the properties of a moderator and a mediator in social psychology, a moderator variable may be quantitative or qualitative and it can affect the direction and/or the strength of relationship between the independent and dependent variables. In statistical terms, a relationship between two variables is significant under one level of the moderator and non-significant under the other level of the moderator.

A mediator variable, on the other hand, specifies how or why a particular effect or relationship occurs. It is suggested that mediators are the dynamic properties of individuals (e.g., their emotions or beliefs) and they describe the psychological process that occurs to create the relationship. Statistically, mediation is displayed when the relationship between the focal independent variable and the dependent variable is non-significant after controlling for the effect of the mediator (Agler & De Boeck, 2017).

In the first hypothesis of this chapter (H_4), the variable "position" is the main independent variable and it will be explored once for its relationship with the recall and once with the evaluation as dependent variables in separate procedures. The effect of destination value (or destination attractiveness) is considered as a potential moderator on position-recall and position-evaluation relationships. Ideally, the destination value should have no interaction with the main independent variable (position) but it may be strongly related to the dependent variables (recall or evaluation). This assumption was tested and confirmed in previous studies. In H_5 the same sets of relationships will be examined for the moderating effect of travel length. These hypotheses will be tested for the total number of N=179 participants of the one-way tours.

6.3 Hypothesis four: The moderating effect of destination value

Hypotheses one to three in chapter five provided evidence about the visit order effects in the form of primacy in recall and recency in evaluation and any relationship between recall and favourability judgment. The fourth hypothesis in tourists' studies is designed to test if the destination attractiveness/value is moderating the order effects. In study two,

it was observed that results were significantly different for Isfahan compared to the other cities. As almost every aspect of the tours within each destination were equal, it is sometimes likely that only the difference in the attraction power of the targeted cities explains stronger position effects for Isfahan. Therefore, a hypothesis was designed to explore this possibility.

Although there is no full consensus about the definition of destination attractiveness or a universal method for measuring it, it is commonly agreed that pull factors are important in the discussions of destination attractiveness (Formica & Uysal, 2006; Kim & Perdue, 2011). Some scholars have considered the overall satisfaction scores as the measure of destination attractiveness (Hu & Ritchie, 1993) and some have conceptualized the notion as the specific benefits by a destination that tourists perceive to receive after the visit (Mayo & Jarvis, 1981).

Based on Lew (1987), there are three major approaches to determine the attractiveness of a destination. The first one is called ideographic, and it relates to the destination attributes. The second approach is labelled as organizational, in that, the spatial and temporal relationships between sites determine the attractiveness. Finally, there is the cognitive approach that is based on the experiential characteristics associated with the destinations. In this study, the cognitive approach to destination attractiveness is considered because this approach deals with the tourists' direct experiences of the destinations and their memories. The opinions of tourism experts as well as tourists' direct responses about their overall evaluation of destinations were used as the reference for benchmarking destinations attractiveness.

Considering the above discussion, it is hypothesized that the destination attractiveness moderates the position-recall and position-evaluation relationships. Table 6.1 displays the sub-hypotheses.

Table 6.1 Hypothesis 4 in study three

Study	Hypotheses	Statement
H4	H_{4a}	The destination recall based on its position in the itinerary will be moderated by the destination value/attractiveness.
	H_{4b}	The destination favourability evaluation based on its position in the itinerary will be moderated by the destination value/attractiveness.

6.3.1 Moderating effects of destination value in recall

The moderating effect of destination value on the primacy effect in recall-position relationship is the first part of the exploration. The dependent variable of interest is "recall". Recall is a categorical variable in the form of city names: Isfahan, Shiraz, Yazd, and Tehran. Cities each receive a value from one to four. Independent variables are "position" and "destination attractiveness". They are also categorical. The position for the city at the beginning of the itinerary is coded as first (1), all the cities that are not at the end or the beginning are labelled as middle (2) and the city at the end is coded as last (3). Having one categorical dependent and two categorical independent variables suggest that the binary logistic regression will be the best model to test the hypothesis (Pallant, 2013). However, to do this test, the dependent variable or the predictor (recall) needed to be converted into a binary form (recalled =1 or not recalled=0). There are also some assumptions to be checked before conducting the test:

1) *Sample size*. For binary logit regression, it is assumed that there is not a small sample size with large number of predictors. The data in this study met such a requirement with the total number of 179 responses and one predictor (recall) only.

2) *Multicollinearity:* Ideally, the predictor variables (position and city value) should be strongly related to the dependent variable (Recall) but not to each other. This requirement was also met.

3) Outliers. The data in this study did not have outlier values.

Coding for SPSS: The four major cities of Isfahan (1), Shiraz (2), Yazd (3) and Tehran (4) were allocated numeric codes. Other smaller cities in the itineraries were also coded as 5 if they appeared in the recall and favourability evaluations. However, there were only a very little number of them in the total responses; therefore, they were excluded from the analysis. One of the challenges for this study was to find the right arrangements of the data for the logit regression test. To convert the recall to a binary variable, a lengthy procedure was followed as the question in the survey did not simply ask if the respondent recalled a certain destination or not (Yes/No); rather it was asked what destinations they recalled. For each of these four cities (Isfahan, Shiraz, Yazd and Tehran) in all the three possible positions (First, Middle and last), the answer could be a Yes or a No. Therefore,

four sets of 179 rows (4*179= 716) with three positions within each 179 rows were produced in SPSS. Then, each of the cities in every position was checked for the recall response to receive a 1 (recalled) or 0 (not recalled). Table 6.2 visualizes this procedure.

Table 6.2 SPSS coding for logit regression analysis in H_4

Variable City	Variable Position	Variable Recall
Isfahan 179 rows	First position Middle position Last position	Yes/No
Shiraz 179 rows	First position Middle position Last position	Yes/No
Yazd 179 rows	First position Middle position Last position	Yes/No
Tehran 179 rows	First position Middle position Last position	Yes/No

Test procedure: Using the analysis menu of SPSS, the binary logistic regression window was opened and the dependent variable (recall) was dragged into the dependent box while the other two variables of position and city value was located in the covariate box. The categorical nature of these two variables were specified through another window. In the current window (defining variables for logistic regression), the reference variable for both position and city were chosen to be the first variable. This means that the first defined variable in each category will be the reference for comparing the rest of values. For example, the first variable in position category was the first position; therefore, values of the middle and the last positions are compared against the first position. In the city value category, the first variable defined was city of Isfahan, so this city is compared with each one of other cities. The reason for this decision is that a primacy in recall was found previously, so it made sense that the comparison of the positions occur against the first position. Further, Isfahan was rated highest in attractiveness by both internal and external ratings; therefore, this city could be a better point of reference for comparisons.

Result: Direct logistic regression was performed to assess the impact of position as well as destination value on the likelihood that respondents would remember some cities more

than the others. The model contained one dependent variable (Recall) and two independent variables (position and destination value). The full model containing all predictors was statistically significant, $\chi 2$ (5, N=716) = 252.29, p <.001. The model as a whole explained between 29.7% (Cox and Snell R square) and 45% (Nagelkerke R square) of the variance in recall and correctly classified 85.2% of the cases.

The reference value for the destinations category is Isfahan and the reference value for the position category is the first position. Based on Table 6.3, it can be seen that the city value of Yazd and Tehran is significantly contributing to the model. Compared to Isfahan, the city of Shiraz does not have a significantly different recall while Yazd and Tehran (both in comparison with Isfahan) have significantly lower recall rates. In other words, the model predicts that the likelihood of the city of Shiraz being recalled is only 1.45 times less than Isfahan (1/ .685 = 1.45), while city of Yazd is 2.84 times and the city of Tehran 7.51 times less likely than Isfahan when controlling for all factors in the model.

For position, the first position in the itinerary (reference position) has 90.90 (1/.011) times higher likelihood of recall compared to the middle position. The first position also has 62.5 (1/.016) times higher chance compared to the last position to be remembered if controlling for all factors in the model.

Table 6.3 Logistic regression predicting the likelihood of recall of a destination based on its position in the itinerary and the destination attractiveness

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Predictors	**Destinations**			15.862	3	0.001			
	Shiraz	-0.378	0.347	1.188	1	0.276	0.685	0.347	1.352
	Yazd	-1.043	0.428	5.944	1	0.015	0.352	0.152	0.815
	Tehran	-2.019	0.565	12.775	1	0.000	0.133	0.044	0.402
	Positions			74.178	2	0.000			
	Middle position	-4.481	0.529	71.633	1	0.000	0.011	0.004	0.032
	Last position	-4.166	0.539	59.751	1	0.000	0.016	0.005	0.045
	Constant	2.474	0.548	20.367	1	0.000	11.871		

a. Variable(s) entered on step 1: Destinations, positions.

The Hosmer and Lemshow test is stated by SPSS to be the most reliable test for goodness of fit of a model (Pallant, 2013). This test is part of the logistic regression result. The interpretation of this test is different from an omnibus test where a significance value is desired. In the Hosmer and Lemshow test, a value greater than 0.05 supports the model, which is exactly what, Table 6.4 is representing for this study.

Table 6.4 Hosmer and Lemshow test, logit regression in recall

Hosmer and Lemeshow Test			
Step	**Chi-square**	**df**	**Sig.**
1	9.194	6	0.163

Based on the overall result H_{4a} is accepted. The destination recall based on its position in the itinerary is moderated by the destination attractiveness. The more attractive a destination is, the more unexpected position effect patterns are observed. The primacy in recall found through the other analysis in chapter five is also doubly confirmed with logistic regression.

6.3.2 Moderating effects of destination value on evaluation

The same coding and preparation steps were followed to examine the effect of destination value on the favourability-position relationship. The only difference in this hypothesis testing is that the values for the recall will be replaced with the values for the favourability evaluations.

Test procedure: The dependent variable (judgment) was dragged into the dependent box while the other two variables of position and city value were put in the covariate box. In the "defining variables for logistic regression" window, the reference variable for the position was chosen to be the last variable (last position) and the reference for city variable was selected to be the first variable (Isfahan city). Such choices are justified based on finding recency effects in judgment and Isfahan being the most attractive city as noted in chapter three.

Result: To learn about the likelihood of respondents choosing some cities more than the others direct logistic regression test was conducted. Again, the model included one dependent variable (judgment) and two independent variables (Position and destination value). The full model containing all predictors was statistically significant, $\chi 2$ (5, N=716)

= 278.136, p <.001. The model as a whole explained between 32.2% (Cox and Snell R square) and 48.3% (Nagelkerke R square) of the variance in recall and correctly classified 81.7% of the cases.

The reference value for the destinations category is Isfahan and the reference value for the position category is the last position. Based on Table 6.5, all the city values and the middle position are significantly contributing to the model. The first position, however, does not have a significant difference to the last position (P= 0.0246).

The model predicts that the likelihood of the city of Shiraz being favourite is 12.04 times less than Isfahan (1/.083), City of Yazd is 13.51 times less than Isfahan and the city of Tehran is 200 times less than Isfahan when controlling for all factors in the model.

For position effect, the last position in the itinerary (reference position) has 1.63 times higher likelihood of favourability compared to the first position which is not a significant difference (p= 0.246). Finally, the last position has 6.94 times higher chance of being recalled when compared to the middle position if controlling for all factors in the model and that is a significant difference.

Table 6.5 Logistic regression moderating effect of destination attractiveness on position-judgment relationship

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Predictors	**Destinations**			123.390	3	.000			
	Shiraz	-2.494	0.310	64.594	1	.000	0.083	0.045	0.152
	Yazd	-2.601	0.331	61.813	1	.000	0.074	0.039	0.142
	Tehran	-5.368	0.711	57.009	1	.000	0.005	0.001	0.019
	Position			41.948	2	.000			
	First position	-0.491	0.423	1.347	1	.246	0.612	0.267	1.403
	Middle position	-1.935	0.299	41.787	1	.000	0.144	0.080	0.260
	Constant	1.869	0.288	42.065	1	.000	6.481		
a. Variable(s) entered on step 1: Destinations, Position.									

A non-significant value for Hosmer and Lemeshow test will ideally show the goodness of it for this logistic regression test in judgment. This result is presented in Table 6.6.

Table 6.6 Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	**Chi-square**	**df**	**Sig.**
1	11.026	7	0.137

H_{4b} is accepted. The destination value/attractiveness moderates the destination favourability evaluation based on its position in the itinerary. The recency effect in judgment revealed through cross-tabulation analysis in chapter five is also supported once again by logistic regression in this study. In addition, the overall analysis for H_4 endorsed the benchmarking analysis in chapter three, as Isfahan was again found as the city with strongest attractiveness, Shiraz as the second most attractive city has no statistically significant difference with Isfahan. Yazd and Tehran followed these two cities respectively.

6.4 Hypothesis five: Moderating effect of travel length

Hypothesis five states that in the recall and evaluation of destinations based on their position in an itinerary there is a difference between short and long trips. In other words, travel length and the time spent on destinations moderates recall-position relationship. This hypothesis is based on the destination-specific factors affecting recall and evaluation but also supported by the early studies of serial position effect in which changing the length of the word list resulted in different position effects (an increase in the word list lead to less primacy and more recency in the recall) (Murdock, 1962; Murdock & Metcalf, 1978). The length of word list manipulation can be considered analogous to be the number of destinations in a trip and it can be argued that if more destinations are visited, less primacy and more recency in recall and evaluation will occur. Hypothesis five is, therefore, formulated based on these ideas. Table 6.7 shows the two sub-hypotheses of H_5.

Table 6.7 H_5 in study three

Study	Hypotheses	Statement
H_5	H_{5a}	In the recall of destinations based on their position in an itinerary, there is a difference between short and long trips. Travel length moderates recall-position relationship.
	H_{5b}	In the evaluation of destinations based on their position in an itinerary, there is a difference between short and long trips. Travel length moderates evaluation-position relationship.

6.4.1 Moderating effect of travel length in recall

To examine the effect of travel length on the relationship between position-recall, travel itineraries were divided to two groups- short and long- based on the total number of overnights spent in Iran. If the tourists stayed 6, 7, 8, 9 and 10 nights their trip was considered as short stay (N= 84) while the trips with 11, 12, 13 and 15 (N=95) nights were considered as long stay. The reason not to divide the length in three or more categories is that the differences between each tour with another is mostly one night only and the distribution of respondents to the two groups are almost even when divided into two groups only. Table 6.8 presents the breakdown of respondents in each category.

Table 6.8 Travel length

	Number of nights	Frequency	Percent
Short stay	6	1	0.6
	7	7	3.9
	8	29	16.2
	9	45	25.1
	10	2	1.1
Long stay	11	46	25.7
	12	10	5.6
	13	32	17.9
	15	7	3.9
	Total	179	100.0

Logit regression test: Following the same path as for H_4, the effect of travel length on position and recall relationship was tested through logit regression test. The categorical nature of all variables informs this choice. The dependent variable is "recall" and independent variables are "position" and the "length of stay".

Coding: The same coding applied to recall and position while the two categories of short and long stay were coded as 1 and 2 respectively. These codes are presented in Table 6.9 below.

Table 6.9 Length of trip analysis coding for SPSS

	Codes
Position	First position= 1 Middle position= 2 Last position=3
Recall	Recalled=1 Not recalled=0
Length of stay	Short stay=1 (6-10 nights) Long stay=2 (11-15 nights)

Test procedure: New cross tabulation tests between destinations' positions and their recall were run to produce a new data set based on the length of trip to enter into SPSS. The result is shown in Table 6.10.

Table 6.10 Logit regression coding for H_5

Position	**Length (short/long)**	**Recall (0/1)**
1 (179 times)	Short (84 times)	58 times recalled = 1 26 times not recalled =0
	Long (95 times)	60 times recalled= 1 35 times not recalled= 0
2 (179 (times)	Short (84 times)	17 times recalled= 1 67 times not recalled= 0
	Long (95 times)	24 times recalled=1 71 times not recalled=0
3 (179 times)	Short (84 times)	9 times recalled= 1 75 times not recalled=0
	Long (95 times)	11 times recalled =1 84 times not recalled =0

Test procedure: Using the analyse menu of SPSS, and the binary logistic regression window, "recall" was dragged into the dependent box while the other two variables of position and travel length were located in the covariate box. The reference variables for both position and travel length were chosen to be the first variable. Therefore, the first defined variable in position category is the first position; similarly, short trips will be the reference category for the travel length.

Result: Direct logistic regression was performed to assess the impact of position as well as length of stay on the likelihood that respondents would recall some cities more than the others. The model contained one dependent variable (recall) and two independent variables (position and travel length). The full model containing all predictors was statistically significant, $\chi 2$ (3, N= 537) = 135.984, p <.001. The model as a whole

explained between 22.4% (Cox and Snell R square) and 31.1% (Nagelkerke R square) of the variance in recall and correctly classified 77.3% of the cases.

Table 6.11 highlights the logit regression test result. Both middle and last positions are significantly contributing to the model, however, there were no significant difference for short trips compared to long trips. In comparison with the first position (reference variable), the middle position has about 6.5 (1/0.154) times and last destination has 15.38 (1/0.065) times less likelihood of being recalled. As the p value for the long trips is exactly equal to 1, therefore, there is no significant difference in the likelihood of recall between the two groups of short and long-term trips.

Table 6.11 Logit regression result for moderating effects of recall in one-way tours

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Predictors	**Positions**			113.992	2	.000			
	Middle destination	-1.873	.238	62.118	1	.000	.154	.096	.245
	Last destination	-2.733	.285	92.034	1	.000	.065	.037	.114
	Long stay	.000	.212	.000	1	1.000	1.000	.660	1.514
	Constant	.660	.194	11.612	1	.001	1.934		
a. Variable(s) entered on step 1: Positions, Length of stay.									

H_{4a} is rejected. There is no significant difference in the in the recall of destinations based on their position in an itinerary between the two groups of short and long trips. Travel length in this study did not moderate the recall-position relationship.

6.4.2 Moderating effect of travel length in judgment

The second part of hypothesis five (H_{5b}) is testing for possible moderating effects of travel length on the relationship between position and judgment. Following the same procedure as in H_{4a}, a cross tabulation of first destination visited and the most favourite destination as well as last destination visited and the most favourite destination were conducted.

Test procedure: Binary logistic regression analysis was performed once again for exploring the effects of travel length on position-judgment relationship. The dependent variable is favorability judgment and the independent variables are travel lengths and positions. The reference variable for the position was chosen to be the last position and for the travel length, the first variable, short stay, was selected as the reference.

Result: Direct logistic regression was performed to assess the impact of position as well as travel length on the likelihood that respondents would like some cities more than the others. The model contained one dependent variable (judgment) and two independent variables (Position and travel length). The full model containing all predictors was statistically significant, $\chi 2$ (3, N= 537) = 87.919, p <.001. The model as a whole explained between 15.1% (Cox and Snell R square) and 21% (Nagelkerke R square) of the variance in recall and correctly classified 66.5 % of the cases.

The logit regression result shown in Table 6.12 provides further details. As seen, the middle position is significantly contributing to the model while the first position's difference with the last position is not significant. This result is consistent with the result from Table 6.5 confirming recency and (to a lesser extent) primacy effects in judgment. Long trips compared to short trips produce no significant differences.

Table 6.12 Logit regression result for moderation effects of judgment in one-way tours

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Predictors	**Positions**			59.569	2	0.000			
	Middle destination	-2.201	0.309	50.840	1	0.000	0.111	0.060	0.203
	First destination	0.067	0.212	0.101	1	0.750	1.070	0.706	1.621
	Long stay	-0.021	0.198	0.011	1	0.916	0.979	0.665	1.443
	Constant	-0.180	0.183	0.961	1	0.327	0.836		
a. Variable(s) entered on step 1: Positions, Length of stay.									

In addition to the above Table, the test for goodness of fit of the model by Hosmer and Lemeshow provides a non-significant value, p = 0.064, that is desirable in this case.

H_{5b} is rejected. There is no significant difference in the favourability of destinations based on their positions in the two groups of short and long stay.

Combining all results for H_5, there is no evidence to show that travel length is a significant factor either on the recall or favourability judgment of the destinations based on their positions.

6.5 Discussion

Table 6.12 summarizes all the results in study three of this thesis. Besides providing evidence for the destination attractiveness as a moderating factor on recall-position and evaluation-position relationships as well as rejecting travel length as an influential factor on the same relationships, the analysis in this study reconfirmed most results from study two. Possible explanations for the achieved results will be discussed as follows.

Table 6.13 Moderating effect of destination value and length of stay H_4 & H_5

H_4 Moderating effect of destination attractiveness	Recall	Accepted
	Judgment	
H_5 Moderating effect of travel length	Recall	Rejected
	Judgment	

6.5.1 Moderating effects

Hypothesis four and five were formulated about the potential moderating effects on recall-position and judgment-position relationships and they were tested through logit regression analyses. Hypothesis four explored the possibility of destinations attractiveness to be an important player in the strength and patterns of position effects for the cities. It was observed that Isfahan, Shiraz and Yazd had similar primacy effect in recall compared to Tehran, and all cities had a significantly lower favourability likelihood compared to Isfahan. The comparison within the four major cities revealed that Shiraz compared to Isfahan is not significantly unattractive, a point that is also supported by the data in chapter three. Similarly, the attractiveness of Yazd and then Tehran being significantly different from Isfahan was achieved as a result both in this study and in chapter three through the benchmarking data. To simplify the interpretation, it is suggested that the destinations that are highly attractive create more memorable experiences (they are recalled and liked better). This finding although it may seem obvious, is now statistically supported by this study. Previous directions about the role of destination attractiveness in decision-making may now potentially turn to further exploration of the relationship between recall and destination attractiveness. The path to

understand certain destination attributes that can increase favourable encoding and retrieval of destination memories may be used in design science for memorable tourist destinations.

As for hypothesis five in this study, it was found that there is no significant difference between the long and short trips for how destinations are recalled and evaluated according to their positions in the itinerary. The rejection of travel length as an influential factor on destinations' memorability is in line with the duration neglect theory of heuristic models by Fredrickson and Kahneman (1993). As elaborated before, it is suggested through different experiments that individuals' overall evaluation of experiences have little to do with the duration of those experiences. This can especially be the case when it comes to comparison of events within long-term memory, such as the recall and evaluation of multiple destinations in a trip. Other research also supports no relationship between the duration of the vacation and the subsequent happiness evaluations of a trip (Kemp, Burt, & Furneaux, 2008).

6.5.2 Reconfirmation of previous results

- ***Primacy in recall.*** Through logistic regression analysis in study three, it was found that the recall of first destination is higher than the last and then the middle cities. All positions compared to the first position had a significantly lower recall. This is another confirmation for the primacy effects found in study two through cross tabulation and binomial testing.
- ***Primacy and recency in judgment.*** The summary Table 6.12 highlights the confirmation of both primacy and recency effects in judgment, which is consistent with the result from study two. The middle position when compared to the last position had a significantly lower chance of receiving a favourability judgment while the first position compared to the last one did not show a statistically different likelihood of selection. In study two, only recency in judgment could be revealed through the cross tabulation analysis. However, in study three the logistic regression provided an opportunity of discovering the primacy effect in judgment to be insignificantly different from the recency effect. Therefore, the overall conclusions of these two studies lies in concluding that there is a double effect for both primacy and recency in judgment.

- ***Evaluation shows stronger position effects than the recall.*** The result for the two sub-hypotheses of H_4 highlights higher overall position effects for the judgment compared to the recall. This finding provides further evidence about how the cognitive process of evaluating a destination is suggested to be more susceptible to the position biases in comparison to the recall process. A proposition made at the end of study two has now been supported by the results of both study two and three.

6.6 Summary

Chapter six reported on study three of the current thesis about moderating influences on position effects. One such influence is the destination attractiveness that it was shown to affect on position-recall and position-evaluation relationships. The other factor, travel length, however, was not significantly important in this study. The study also reconfirmed the position effects found in previous studies. In chapter seven which is the last chapter of the thesis, the findings from previous studies will be integrated to form an overall conclusion. Recommendations and further research avenues will also be highlighted in chapter seven.

Chapter Seven

Synthesis, Implications and Conclusion

Chapter 7 Contents

7.1 Chapter outline

The purpose of this chapter is to present a research synthesis, which integrates the findings and pursues the implications from all three studies of this research. After recapturing the key findings of each study, theoretical and practical contributions of the research are highlighted. The limitations of this research are addressed and subsequent recommendations for future studies are made.

7.2 Recapturing the findings of each study

This thesis aim was to build a strong evidence-based foundation for the studies of temporal position effects in the tourism context. More specifically, this research was designed to examine such effects in visiting multiple destinations in a trip. Three studies were carried out to start a discussion about temporal position (order) effects and their implications in general, and specifically in the tourist destination context. The key findings are recaptured in the following sections.

7.2.1 Study one- The effects of order and multi-destination visits; tour guides' perspectives

By direct questions to the tour guides, and by analysing the responses to varied patterns of the order of presentation of city destinations as scenarios to the tour guides, this study found credible evidence for the position effect from the tour guides' perspectives. The core aim of the first study, which was to build the case that position effects have been observed and mattered to the industry personnel, was conducted and provided a credible platform for further work.

Three hypotheses about order effects on recall and judgment of the destinations were examined and confirmed for the first time through the perceptions of the tour guides. These key informants perceived that the order effects in recall and judgment of destinations exist and they are rather strong influences. The tour guides also predicted that the destination attractiveness compared to the other cities in the set would play an important role in the recall and judgment of that destination based on its temporal position.

The implications of the first study helped clarify the operationalization of memorability and the ways to hypothesize and measure it previously. The favourability evaluation was

assumed to be related to memory of the destination through recall. However, it was learnt that recall-order as well as judgment-order should be also explored and these relationships tested separately. Second, this study also inspired the sub-hypotheses separating partial and the full position effects for study two. The tour guides' responses showed that serial position effect has been observed in the real world scenarios, predominantly in the form of primacy and recency influences rather than the exact SPE (last, first then the middle).

7.2.2 Study two- The effects of order and multi-destination visits; tourists' perspectives

The second study of this thesis provided direct empirical evidence about the effects of different orders in visiting multiple destinations from the tourists' point of view. The findings confirmed the existence of position effects and supported findings in the previous study. Through study two, it was found that position effects in the tourist destination context were most likely to occur as primacy and/or recency effects rather than in the form of the full serial position effect. For example, 68% of the respondents were shown to be under the primacy influence when answering the recall question. This percentage was 47 for recency effects in the favourability judgment question.

Another interesting finding in study two was about the evidence revealing higher position-dependent effects in evaluation compared to the recall process. The recall question possibly involved the respondents in a higher level of thinking. Tourists responded to the recall question based on the order of visit although the participants were not instructed to do so. Consideration of order in the thinking processes for the evaluation question, however, seemed to disappear. Therefore, it was suggested that the evaluation process might be more prone to heuristic biases than the recall due to the reduced involvement that the task requires.

A third hypothesis with sound theoretical foundation was suggested: that there is a relationship between the first recalled destination and the one that is judged as the most favourite city. This hypothesis did not hold for the recall and judgment choices in this study expect for one city. Therefore, it is believed that a weak or no relationship might exist between recall and evaluation of destinations but the result may not be generalized until further investigations take place in other settings.

In the comparison of one-way and round trips, the fact that the tourists stayed twice at the same destination in the beginning and the end of the trip did not improve the memorability of that city, most probably because the repeated city in study was a less attractive city in the mix compared to the other destinations (Tehran was the start/end city for all the round trips).

7.2.3 Study three- Moderating influences on order effects

Advanced statistical tests in study three supported the results of previous studies and extended the depth of analysis. The main purpose of study three was to bring to the equation the moderating effects that may influence the recall-order and judgment-order relationships. In addition, this study tested, confirmed and extended the previously revealed patterns of position effects.

Hypothesis four in study three was designed to explore the effects of destination attractiveness on recall and judgments of destinations in an itinerary based on their position. The findings confirmed that destination value interacts with position effects. Logit regression analysis provided results indicating that three targeted cities of Shiraz, Isfahan and Yazd were similar while the city of Tehran was different from the others in attractiveness level.

Primacy in recall was re-confirmed for all cities and recency in judgment was confirmed for all cities except Tehran. This result itself is evidence confirming the strong effect of attractiveness of a city on its favourability based on the position compared to the other destinations in the trip. Besides recency in judgment, which was first found through study two, in study three and with the logit regression analysis primacy effects in judgment were again identified. Therefore, it is concluded that both primacy and recency were in effect for judgment of destinations based on their positions.

The study found no significant difference between short trips (6-10 nights) and long trips (11-15). The rejection of travel length as an influential factor on recall and evaluation of destinations based on their position was explained based on the “duration neglect” rule noted by Fredrickson and Kahneman (1993). Further studies with longer overnight gaps between the two groups of short and long stay may be needed to draw a general conclusion about this interaction.

7.3 Implications of this research

This thesis makes theoretical and practical contributions by advancing and stimulating research in the areas of memorable tourism experience design, position effect and memory-based judgments in the tourism context. A major theoretical contribution lies in seizing the opportunity to apply serial position effect as an established psychological theory in the context of tourist's destinations for the first time. Perhaps, one of the most important implications of this work is providing a suggestion for recasting the definition of memorable tourism experiences. Through this thesis, it was found that the word "memorable" should be defined clearly based on the cognitive processes that it may include. These ideas are developed more fully in the following section.

The practical contribution of this research especially advances the memorable tourist's destinations experiences. Further contributions lie in highlighting the importance of the retrieval phase of memory in post-travel surveys and the link between tourist's memory and evaluation of experiences. These connections may stimulate more research about post-travel behaviours. In addition, the original quasi-experimental design of this study involving actual tourists and actual behaviours potentially has substantial implications for the future research in this domain. Useful tips for travel itinerary writers, tour package designers, destination managers and those who are involved in the design of sequenced services and products are among other practical contributions of this research.

7.3.1 Theoretical implications

In the early service literature, it was believed that providing consistent performance during a service encounter contributes to the overall satisfactory evaluation of an experience (Verhoef, Antonides& de Hoog, 2004; Zeithmal & Binter, 1996). This idea was later challenged by psychological studies that highlighted the importance of peak and end events for a memorable experience. In other words, it was found that the time and the order in which a sequence of events occur during the course of an experience matters in the overall outcome of that experience (Kahneman, Wakker & Sarin, 1997; Loewenstein & Prelec, 1993). Previous theories such as peak and end rule have been concerned with the overall evaluation of experiences. This thesis however applied some of the established theories about the order effects in the tourism context concerning the individual evaluation of each event (in this case, each destination). In the current work, a sequence

of destinations visited over a short period of time (one to two weeks) were explored for the temporal position effects of each destination on the overall evaluation for the same destination. Supported by contemporary literature, the present thesis considered the evaluation in terms of memorability rather than satisfaction. It is argued by this author that measuring outcomes of experiences based on memorability may yield results closer to the reality and determine future behaviours more accurately. As only a decade-old field of research, memorability of tourist experiences needs further exploration and research for its definitions, meaning and measurement methods.

One of the first and most important contributions of the current work is to operationalize memorability into the two cognitive processes of recall and favourability evaluation. Key implications result from making a distinction between these two cognitive behaviours. The researcher was following the tradition of previous studies when using the term memorability/memorable in conducting her survey with the tour guides in study one when she noticed that the use of such terms are quite vague and one cannot be sure what cognitive process is exactly measured in those cases. Meanwhile, the memory and consumer behaviour literature offers a plethora of research about each of these two processes (recall and evaluation) and advocates that they be accessed separately depending on the study context (Lichtenstein & Srull, 1987; Hastie & Park, 1986). Further, a consideration of real questions in the post-travel surveys conducted by different stakeholders often refers to these processes separately. Therefore, memorability was reconceptualized as the combination of recall and favourability judgment in this research. By this operationalization of the term memorability, position effects could be measured clearly and the result were well supported by the established theories in psychology (serial position effect and memory-based judgments). Defining memorability based on recall and favourability evaluation can arguably have important implications in the design and outcome of memorable tourism experience studies. Foundation MTE work such as Tung and Ritchie, (2011a) as well as Kim, Ritchie, and McCormick (2012) and consequently many studies that followed (Chandralal & Valenzuela, 2013; de Freitas Coelho, et al., 2018; Kim 2014; Kim & Chen, 2018; Park & Santos, 2017; Servidio & Ruffolo, 2016) asked their respondents to remember one of their most memorable travel experiences and explain the reasons why they think this specific memory is special. Acknowledging the advances in our knowledge owed to these studies, it might be time to define the word

memorable more clearly for the tourists and track, more accurately, the cognitive processes that are used to respond to the evaluation task.

One of the first implications of clarifying memorability for the respondents is that then the researchers would be also aware of the possible biases related to the specific cognitive task they are measuring. Consequently, tourism scholars may not over generalize the result and the industry practitioners may not over emphasize all survey outcomes but look at the questions asked. As discussed before, the fact that more complex cognitive processes such as decision-making are more susceptible to heuristic shortcuts is already confirmed by literature (Kahneman et. al., 1982; Nisbett & Ross 1980; Tetlock, 1989). The new finding in this thesis is that favourability evaluations of destinations seem to be prone to heuristic biases (temporal position effect) more than the recall process. The hidden consideration of order in answering the recall question by tourists versus the absence of such consideration in the favourability evaluation question helped uncover this important distinction between recall and evaluation.

The second theoretical implication is for the design of tourism and hospitality experiences within the paradigm of the "consumer's journey" over time (Baxendale, Macdonald, & Wilson, 2015; Lemon & Verhoef, 2016). There are different types of touch points designed for the consumers to interact in various phases of the experience (before, during and after). Creating these touch points has become increasingly more complex and multidimensional. In this thesis, the sequence of events or more specifically the order of visiting destinations over time was conceptualized as an important way to manage touch points and have a better understanding of their arrangements. Through staging and tracking the micro events (in the case of this study destinations) over time, temporal boundaries and effects within different experience contexts are recognized and used smartly in the design of touchpoints. Therefore, this study directly links to the design principles, particularly those related to the temporal structure of the experiences (Pearce & Zare, 2017; Tussyadiah, 2014; Ye, Tussyadiah, & Fesenmaier, 2009). Through deconstructing an experience in general, a better understanding of the touchpoints, their sequences and associated backstage processes will be revealed to help uncover the reality of experience process and how to improve it (Hwang, Xiang, Gretzel & Fesenmaier, 2009; Schneider & Stickdorn, 2011; Stienmetz & Fesenmaier, 2017).

At a broader scale, the methods in this work contribute to the research in holistic experience design through the adaptation of integrative research as a valuable tool. The exploratory and evaluative approaches examined an often-overlooked phenomenon (order effects) in a naturalistic setting, with actual tourists as respondents and a quasi-experimental design to understand tourists' post-trip behaviours (recall and heuristic evaluations). The work well fits within Tussyadiah (2014)'s "tourism experience design framework" (Figure 2.2) while it supports and extends several concepts from Fesenmaier and Xiang (2017)'s "design science in tourism" book. For example, in chapter four, Kim and Fesenmaier (2017; p 31) emphasize how experiences have a temporal and psychological nature and they "should be conceptualized as a series of micro-events". They further assert that the external factors shaping tourist experiences (such as physical and social environment) should be taken into consideration as much as the internal factors (e.g. motivations and prior experiences). In this thesis, the order of presentation was introduced as one such understudied external and contextual influence and the implications of considering this effect was brought into attention.

Previous studies also drew attention to the need for more post-trip research about tourist experiences (Kim & Fesenmaier, 2017; Kim & Jang, 2016; Zare & Pearce, 2017). The studies about the after trip behaviours such as recollection and evaluation of experiences are less frequent than pre-travel behaviours such as decision-making (Verhoef et al., 2004; Tung & Ritchie, 2011b). More specifically, when it comes to memory in the tourism context, most of the previous studies have focused on the encoding phase and retrieval has been rarely the subject of investigation (Kim & Jang, 2016; Tung et al., 2017). The current thesis was an attempt to fill such gaps. The outcomes from the research process, context and method in this work may add more pieces to solve the puzzles in the area of memory retrieval and the ways to apply that in designing and managing tourist experiences.

As discussed in the literature review, cueing can be used as a valuable technique in retrieving favourable memories, and hence play a role in the design of tourist experience (Kim & Jang, 2016; Zare & Pearce, 2017). The position of destinations in an itinerary were tested as psychological cues for retrieving stronger and desirable memories about destinations in this thesis. Tourism planners may now consider the effects of manipulating the order (or temporal position) along with other external modalities (Kim & Jang, 2016)

such as words, images, scents, music and mementos to enhance and retrieve desirable memories.

The focus of the current study on the contextual cue of order of presentation also provides insights about the relation between processes and outcomes. The processes targeted in this research were recall and evaluations. Questioning tourists to recall and form judgments about destinations they have visited may not be as complex as pre-trip decision-making processes in which financial, time and energy loss are involved (Sirakaya & Woodside, 2005). This means that the result of post-trip evaluations are potentially more prone to the biases due to lower involvement within the cognitive process. The chance of using cognitive shortcuts and simplifiers are increased in the case of evaluating destinations more than other individual tourism and hospitality services because destinations are complex experiences with multiple attributes (Payne, Bettman & Johnson, 1993). The findings of this thesis confirm that the complexity involved in the holistic nature of visiting destinations facilitates heuristic thinking and therefore prompts temporal position biases.

Finally, the quasi-experimental design of this thesis attempts to bridge the gap between attitudes and behaviours. Although, measuring attitudes, opinions or preferences is not as simple as asking a question, if measured correctly, more credible correlations between these processes and the actual behaviours can be shown (Plous, 1993). Through natural experiments, it is also possible to understand better and explore the mechanisms behind the discrepancy between attitude and behaviours. For example, in this thesis, the availability heuristic was suggested to be central to probability and frequency of judgment based on position (Plous, 1993; Tversky & Kahneman, 1973). The methods and the study design of this thesis also respond to the need for further application of experimental and quasi-experimental design in tourism (Dolnicar & Ring, 2014). Measuring actual behaviours also contributes to valid measurements in tourism marketing research (Dolnicar, 2013, Rossiter, 2011). As was the case with the destination evaluation tasks in this thesis, people are not always aware of the reasons behind their behaviours, rather they may create responses on the spot if they are asked to explain them. Measuring actual behaviours is, therefore, the best way of understanding these biases (Dolnicar & Ring, 2014).

Overall and based on the tourism marketing knowledge forms by Dolnicar and Ring (2014), the contributions in this work, may be seen as providing second-order knowledge through empirical generalization. In second-order knowledge, the researcher tries to make sense of observation of a new phenomenon, generate hypotheses and explore associations.

7.3.2 Practical implications

The importance of position effect work in tourism and hospitality experience design stretches beyond demonstrating the novelty of an established research finding in psychological and social science studies to tourism. Substantial implications specific to the context of this investigation (destinations) and in general emerged from the current thesis that are discussed as follows.

7.3.2.1 Destination-specific implications of order effects in practice

1. As reviewed in chapter two, there is an increasing consensus about how customer experience has become a decisive factor in the success of tourism destinations and businesses (Barnes, et al., 2016; Kim, 2018; Kim, et al., 2012; Marschall, 2012; Zhang, et al., 2018). The creation of these experiences should not be left to the chance, rather a systematic approach to analyse the components of experiences should improve the design of such experiences in a more creative and memorable way. The design of tour packages, most of which include multi-city itineraries is an important task for travel agencies and tour operators. Armed with the knowledge of position effects, a tour itinerary designer may want to place an already popular city at the beginning or the end of a tour, thus generating a powerful positive feedback for the destinations and for the overall experience. A comprehensive consideration of the order effects, the value of the destinations in a set, travel length, customers' visit history and other background information can further suggest ways in which the optimum positive result in terms of memorability is achieved for the overall trip and individual destinations.

2. At a larger scale and as it was discussed in chapter three, the role/function of a destination in an itinerary is, most of the time, determined by the point in time in which that destination is visited (Lew & McKercher, 2002). For example,

combining the order effect and destinations' role knowledge, managers and planners may choose to boost the recall and evaluation given to a moderately known city (that is usually a touring destination in the middle of itinerary) by facilitating opportunities for that destination to become a gateway hub, therefore to be visited at the beginning or the end of the tours. In other words, planning and marketing strategies based on temporal position might ensure more even recall and evaluation for destinations across the span of the tourists' holiday. Such decisions and strategies might work as remedial and competitive tools for the perceived success of the destinations.

3. Besides ordering and structuring the destination experience itself, the implications from this thesis provide guidance for the design of customer surveys. Travel businesses and destination management organizations may consider the use of recall and favourability related keywords to measure memorability of destinations. Different wording in surveys results in various cognitive processes, therefore, customer service agents and managers should be aware of this point and only consider and plan their inquiries based on the specifically targeted behaviour of their interests by careful wording and framing of survey questions (e.g. recall, evaluation, satisfaction, etc.).

4. Extensive further studies are required to conceptualize the serial position effect curves for destinations into a valuable and reliable itinerary design tool. However, this thesis initially displayed how such a tool may contribute to predicting the probability and frequency of recall and favourability evaluations by the tourists. At this stage, there are of course conditions and assumptions for successful application of the SPE curve as a tool. For example, the length of stay in compared destinations, the attractions' type, and the weight of destinations should be the same for accurate comparisons of memories that they leave behind. Provided these conditions are in place, the probability of the first recall and the most favourite city may be measured by recommender systems based on standardized models of SPE curves. The outcome would be a curve for each combination of cities based on the best order in which those cities may be visited. Ideally, through the filtering options, the operator should be able to attain realistic recommendations based on other factors such as accessibility, and logistics. Such a tool bridges the contextual-retrieval to the

strategic-encoding processes of memory that can be of actual practical use in the design.

7.3.2.2 General implications of understanding order effects in practice

The general practical implication for the existence of order effects in different tourism and hospitality services and products relates to smart design and management. To consider the effects of order as a contextual factor influencing memory is to manage tourist experiences through design. There are at least two levels in which the notion of sequenced services and events may be implicated in the evaluation of tourist experiences and thus their design. The first level is when the macro services such as destinations, attractions, hotels or restaurants in a visit are compared to their counterparts in the same trip. The current study falls into this category. Previous macro service comparisons suggested that, for example the hotels on the top and bottom of online booking lists (Ert & Fleischer 2014) or the meals on the top and bottom of the menu (Dayan & Bar-Hillel, 2011) have memory advantages for decision making. Although the type of comparison in these studies was the same as in the current study, the comparison phase was different. The current thesis was concerned with post-trip evaluations while the mentioned research studies were about decision-making. Therefore, opportunities exist for the recall and evaluation comparisons of hotels, restaurants, and other facilities within a visit.

The second level is the evaluation of micro sequenced services and events from different nature within an experience. The sequenced service experiences are abundant in tourism and hospitality context (Verhoef et al., 2004). For example, a dining experience starts by arriving at the restaurant, being seated, ordering meals, eating, paying and leaving. As mentioned, consistency throughout the service encounter was recommended by early service studies. However, later studies challenged by other disciplines eventually changed the focus to creating a strong start (Bolton & Drew, 1992) and ending (Chase & Dasu, 2001) for service encounters.

Overall, for both levels, the way that encounters are staged to come one after another can be an important factor shaping the overall or individual service evaluations and influencing customers' memory. (Pearce & Zare, 2017; Stickdorn & Schneider, 2011; Fesenmaier & Xiang, 2017). Therefore, the researchers may investigate other common post-trip evaluations such as when tourists think about which attraction, museum or theme park was their favourite among several that they have visited. Such context-specific

research then advances the design knowledge for desired involuntary or intentional memory comparisons and evaluations of the services within a trip. The variable role of order in which tourism and hospitality services are presented, consumed or visited also offers opportunities for managing larger consequences of experience such as satisfaction, recommendation and revisit.

7.4 Limitation:

The limitations of any study offer pathways for improvement as well as providing important caveats about the generalizability and value of the work. Some of the main limitations to the current work and its results are summarized as follows.

7.4.1 Limitations by the study design

Conducting quasi-experiments to collect data, although is appreciated for its high external validity (Gribbons & Herman, 1997), comes with compromises in randomization and internal validity. Since the levels of variable are pre-existing it is not possible to randomly assign participants to the groups in quasi-experiments. In this thesis, the researcher did not assign tourists to the different group tours and the manipulation of the visit order was also out of her control. This lack of control means that the design cannot easily demonstrate causality (Christensen, Johnson, Turner & Christensen, 2011). The consistency found in the patterns of position effects (stability of the results) and the relatively large magnitude of them, however, addresses some of the internal validity concerns related to the randomness (Campbell, & Stanley, 1963).

There is no doubt that designing and implementing natural experiments measuring natural behaviours in natural settings are more difficult than the other types of research design (Dolnicar & Ring, 2014). In this thesis, tourists were not aware of the memory test underpinning the survey to control for their natural behaviour in recalling and evaluating destinations. Package tours with standard level of services were also selected as controlled settings. These measures minimized the effects of other influences on memorability and favourability of the destinations, however, the possibility of those factors still playing a role cannot be ruled out.

This work has been conducted in one setting, and the diversity inherent in the phenomenon of tourism demands that replications in other countries and for other kinds of tourism cities needs to be pursued.

7.4.2 Limitations by respondents

In study one, the highly professional tour guides were selected as key informants. The selection of this group of people was not random as they had previous professional contact with the researcher. The sampling bias could have also happened by the fact that the tour guides were contacted through a link sent to an online group. Therefore, a subset of professionals more comfortable with online technologies may have participated in the survey. The key informant study could yield more depth and opportunities for probing information if the researcher could conduct interviews rather than a survey. However, due to the distance and expenses of travelling, it was decided to conduct a survey. The unanimity of opinions about the order effects addresses this limitation to a large extent and validates the results. Future studies, however, may include other informants involved in the observation of position effects such as travel and tour agents and itinerary writers.

7.4.3 Limitations by sample Size

While it is acknowledged that due to the quasi-experimental nature of the study, the respondents assignment of the respondents to different group tours was not on a random basis, it can be argued that the sample was sufficiently large and diverse in terms of gender, age groups and nationalities to offer an important set of results providing evidence about the position effects and its patterns.

A larger number of participants in each group tour could be useful for conducting some within groups and between group analyses of the order effects. However, it is not unfortunately easy to find naturally large enough group tours for experimental research as package tours are moving towards customization and getting smaller all around the world (Travel market report, 2014).

7.4.4 Limitations by questionnaire design

The questionnaire in this research was designed in English. Although the questions were very short, clear and in plain English, there is always a certain degree of respondent bias that cannot be ruled out as most of the respondents were familiar with but often non-English speakers.

7.4.5 Limitations to the generalization the results

Caution should be taken in generalization of the patterns of order effects. As mentioned, this study has only initiated research about position effects in the tourism context and larger sample sizes in various settings are required for comparisons of the results. Previous position effects studies in other disciplines are unanimous about the existence and strength of position effects on shaping attitudes, but they have stated that the patterns of these effects could be context-specific (Kardes & Herr, 1990; Unsworth, Brewer, & Spillers, 2011). It has also been established that the moderating influences on primacy may be different from the ones on recency effects (Craik & Birtwistle, 1971; Glanzer & Cunitz, 1966; Murdock, 1962). Further studies are, therefore, required to understand the position effect patterns in specific tourism and hospitality settings.

7.4.6 Limitations to interpretation of the results

As emphasized on different occasions, this study was not designed to find the mechanisms behind the position effects, rather the explanations offered were tentative and based on the use of theories possibly involved in the cognitive processes of recall and evaluation. In addition, self-report measures are by nature subject to different biases (Wilhelm & Grossman, 2010) and one cannot be certain of the exact cognitive process the respondents took to answer the questions. As a major contribution, this study was aware of and potentially stimulated different thinking processes by using specific keywords ("recall" and "like"). Future studies may go further by combining neuroscience techniques with self-report measures to help overcome the ambiguity of cognitive processes under investigation. Additional controlled laboratory studies may be useful in developing the distinctions drawn in this study.

Serial position effects studies and memory-based judgment are the result of strictly controlled psychological experiments that this study did not have the resources or intention to replicate. The estimates such as "probability of the first recall" and "the serial position effect curves" are technical terms generated with exact models in laboratory studies while in this thesis the applied adaptation of such concepts in a natural setting of tourist destinations was usefully developed.

7.5 Further studies

7.5.1 Position effects in other contexts

Future research can expand position effect studies in the context of tourism and hospitality experiences in at least two main ways. One stream is through further investigation within the same context as in this thesis (destination position and travel itineraries). That could include some important missing areas of attention that the current study had limited resources to pursue. For instance, there is a concept called negative time preference in the literature, which refers to the sequences that end with the most preferred outcomes (Verhoef et al., 2004). In multi-destination itineraries, this concept can be translated into the preference for the itineraries that start with the least attractive destination and move into more and more attractive cities by time. The present thesis focused on individual destinations and their position in the itinerary whereas future studies can consider the attractiveness slope of the overall itinerary to find the preferred trend. Several conversations that the researcher had with the tourists after surveys, proposed that a preference for the improvement of destinations over time might also be the tourists' choice in visiting destinations. However, empirical studies are needed to support this proposition.

Another fascinating topic is the possible connection between tourist's expectation and destination memories. Even if tourists have not visited a destination before, as was the case in this thesis, they may have heard from third parties or read about that destination, and therefore, be influenced by such expectations during their evaluation. Tung and Ritchie (2011a) found expectations to be one of the four major dimensions of memorability of the experiences. They regarded prior expectations as important for experimental outcomes of experiences. The researcher sees another possibility in which expectations may play a major role in the memorability of experiences. To elaborate on this opportunity the following examples (derived from professional experiences of the author) may be useful. Consider consecutive trips to the two commonly compared destinations of Malaysia and Thailand. The order in which these two places are visited affects the expectations for the second destination and therefore the overall outcome of the trip could be different depending on which destination is visited first. These two countries have relatively similar nature and resources and may have similar perceived image by the tourists but in reality, they offer two different types of tourism. Another

example is when the historical temples of Angkor in Cambodia and Borobudur in Indonesia are visited in a sequence. While to many they are each magnificent options for separate trips, the order in which they are visited may affect the outcome of the combined experiences in a single trip. The Angkor complex is considerably larger than (163 ha) Borobudur (2500 m^2). When Angkor temples are visited first, the overwhelming size and detail of the monuments may cause satiation in visiting attractions of this type by the time tourists arrive to Indonesia. Now if a visit to Myanmar is added to the trip, it becomes even more difficult for the tourists to make a fully position-independent unbiased evaluation between visits to Bagan and Angkor.

A glance at travel social media (and google search history) reveal numerous examples of tourists sharing their experiences or requesting others' recommendations about destinations, sites, accommodation's brands, theme parks and museums with the same nature for structuring their plans. The current study's idea was ignited by one of these common comparisons between Isfahan and Shiraz in Iran. Other examples are Sydney or Melbourne, Vienna or Prague, Venice or Florence, Moscow or Saint Petersburg, Disney land or Universal studios, Hyatt or Hilton, Vatican or Colosseum, Pergamon or Neues museums in Berlin and Moma or the Met art museums in New York. Tourists may pose these questions to guides or receive guidance for decision-making, evaluating, or recommending products and services to each other.

Among the above components, perhaps museum design literature has been a pioneer in considering the importance of the visit structure, the route, and the touchpoints (Bitgood, 2009; Davey, 2005; Melton, 1935; Porter, 1938). Porter (1938) built on the work by Melton (1935) to track the patterns of behaviours in museum visitors for when and where they stopped the overall length of their visit and their attention span. The studies of museum satiation (when the interest in art is fully satisfied) and museum fatigue (when the messages are no longer processed at the same mental level as before) led to a range of explorations for the environmental, plus structural and cognitive explanations for such phenomena (Redden, 2015; Antón, Camarero, & Garrido, 2018). Some of these studies found that the museum satiation can be prevented or managed by the routes that visitors take as well as how they discover the content (Antón et al., 2018). A comparison between the visitors who take ordered routes versus free routes first revealed that those who follow a recommended and logically ordered route are less likely to be satiated and more engaged

compared to those who explore the museum in random free routes (Redden, 2008). Later studies such as Antón et al. (2018), however, suggested that the free route could minimize the satiation, as the visitors are more in control of managing their time based on their mental and physical energy. There are clear overlaps between the studies of order effects in various tourism and hospitality context and the museum design literature and the current thesis can offer novel explorations.

7.5.2 Explanations for position effects

Throughout this thesis, peak and rule theory by Fredrickson & Kahneman, (1993) was referred to on different occasions. However, this thesis in a way tested the opposite of peak and end rule by controlling for the influences that create peak events and asked a question about the position effects in a rather standard experience for consistent events. In the future, however, it would be worth testing peak and end rule for the destinations in a visit and compare the result with that of the current thesis. Although, it has been an established theory in psychology, economics and the consumer behaviour literature, the theory of peak and end rule has not yet been explored adequately for its application in in the tourism context, especially tourist destination evaluations. A study of how emotions change over the course of a trip considered peak and end theory in measuring happiness and found no clear peak for happiness and the positive feelings started to decline near the end of the trip (Nawijn, Mitas, Lin & Kerstetter, 2013). Other vacation studies also confirmed the duration neglect theory but the peak and end rule was not an outstandingly good predictor of the affective state of happiness in that research (Kemp, Burt, & Furneaux, 2008). Therefore, there are opportunities for researchers to compare and combine the relationships between the orders of events (stages of a trip) with other evaluation types and extend the available literature.

Thorough investigation of serial position effects, memory-based judgments and the other heuristic models as the mechanisms behind remembering and evaluating sequenced experiences still opportunities for researchers.

7.5.3 Moderating influences

7.5.3.1 Demographic elements and position effects

Recall based on age has been the subject of extensive investigations in tourism-related contexts (Falk & Dierking, 1990; Hamond & Fivush,1991; Hultsch & Dixon, 1984;

Pearce, 1981; Smith & MacKay, 2001; Tung & Ritchie, 2011b). And, as was discussed in chapter two, the current literature about age and memory does not suggest evidence that age may be an influential factor on the recall of destinations in the context of this study. However, as most participants in this thesis were older adults (mean of 61 years and mode of 70 years), it might be worth conducting further studies with a mixed group of respondents from both younger and older adults and compare the position effect and recall relationship in the two age groups.

Similarly, the literature about the evaluation of destinations based on tourists' country of origin may be able to build foundation for investigating if and how the nationality of the tourists can be a moderating effect on position-destination evaluation relationship. In this thesis, 72% of the tourists were Europeans from a broad range of countries and no two groups of respondents were large enough for between groups testing of the country of origin effect.

The literature suggest that the social context of the memory task may play a role in memory performance. That is, when the memory task is required in a familiar and comfortable social setting relevant to the participants, they may be motived to encode the information better and retrieve it better (Adams, Smith, Nyquist, & Perlmutter, 1997; Blanchard-Fields & Abeles, 1996). The opposite scenario may hold true as well. The unfamiliarity and confusion of beginning days in a new destination far from the individuals' usual environment may affect information processing especially encoding and retrieval (Adams et al. 1997). Therefore, future studies may also consider conducting memorability surveys when tourists are back to their countries and they are able to answer from the comfort of their home. Longitudinal studies are also important for recollection and memory-based behaviours such as judgment in order be able to generalize the result and it examines its lasting effect.

Position effects have been shown to matter the most to the first-time visitors in this study, however future studies (in other contexts) may find implications in understanding the order, recall and evaluation relationships based on the memory reactivity effects. A large experimental group with repeat visitors and a control group with first-time visitors may show significant moderating influences on position effects between these two categories.

7.5.3.2 Further influences on recall

Based on experimental studies in free recall, latency, the number of items presented and the speed of presentation could be moderating the outcome of serial position recall (Anderson, Bothell, Lebiere, & Matessa, 1998; Dosher, 1984; Hilgard et al., 1967). These effects in a context such as the in the current study could be translated into the time interval that it took for the tourists to recall the cities they have visited, the time spent in each destination, and the number of destinations visited in each tour respectively. The importance of latency in free recall experiments of working memory is appreciated. However, for the natural setting of the current quasi-experiment that factor was not a concern. The researcher also controlled for the effect of time spent in each destination by targeting cities that tourists stayed in for relatively the same length of time (plus or minus a day). The effect of overall travel length on the recall (long versus short trips) was hypothesized to have effects on recall and evaluations of the destinations. However this hypothesis was rejected for this study's context. Therefore, future experiments may be designed to specifically explore the effects of the mentioned factors on recall of sequences services or products from the same nature.

7.5.3.3 Further influences on judgment

The review of literature about the contextual effects on judgment revealed that there might be important influences mediating or moderating the relationship between the position-judgment, which offer opportunities for designing research in tourism and hospitality context. (Buda & Zhang, 2000; Haugtvedt & Wegener, 1994; Murphy et al., 2006). The level of involvement with the evaluation task, the type of question and response set, and the advance awareness about the evaluation can lead to different evaluation results (refer to section 2.6.3.3 in chapter two).

Involvement level. The evaluations in the current study may be considered as low-involvement tasks because they were in the form of simply worded post-trip evaluations. However, future studies could manipulate the involvement level through more creative design of the questionnaires. The result would be an experiment in which it is tested whether the increase in level of involvement causes a decrease in the serial order effects (Bergus, Levin, & Elstein, 2002; Haugtvedt & Wegener,1994; Miller & Krosnick, 1998; Tse & Lee, 2001). While tourists in the control group are asked about their choice of the most favoured destination based on a simple question of "overall, which destination did

you like the best?", tourists in the experimental group may be questioned in the following way: Closing your eyes and remembering the cities you visited for 15 seconds, please tell us which city did you like the best overall? The narrative of this question is devised to raise involvement in the task. Based on Mehrabian and Russel (1974) some initial immersive visual thinking helps people to engage more with questions. The manipulation is expected to show the effect of involvement on order effects, the higher the involvement with the evaluation task the lesser likely are primacy and recency effects in the judgment of destinations.

Information processing mode. Extensive research shows how initial processing goals through affecting the level of involvement influence the position/order effects (Alba & Hutchinson, 1987; Petty & Cacioppo 1986; Kahnman et al. 1982, Nisbett & Ross 1980). Experiments could be designed showing how the expectation of an evaluation affects the evaluation process. (Hogarth & Einhorn, 1992; Kashima & Kerekes, 1994; Kardes & Herr, 1990; Unkelbach & Memmert, 2014). Consider a similar context to this study where the experiment could be conducted as follows. The tourists in the control group are not informed about a destination survey until the survey time while tour guides right at the beginning of the tour will inform the tourists in an experimental group about the survey. This experiment allows a comparison between the effects of online (on the spot) versus memory-based judgments. Questionnaires for both groups would be the same.

Evaluation task type. The literature suggest that different evaluation tasks can cause different position effects. In the context of this study, the questions were simply in the format of writing in the blank spaces as responses to the questions. However, a future study could be designed to ask the question once in the in same format (control group) and once in the format of multiple-choice questions (experimental group). Due to the multiple-choice tasks being more complicated cognitively, it would then be hypothesized that the order effects would disappear/ be less in the experimental group (Jones & Goethals, 1972; Nisbett & Ross 1980; Kahneman, Slovic, & Tversky 1982; Kardes & Herr, 1990).

7.6 Concluding remarks

This thesis set out to gain some initial understanding about the biases potentially caused by temporal position effects in recalling and evaluating memorable destination experiences. To this end, defining tourist experience as episodic memory chunks and the distinction between the actual experiences with the remembered one provided an initial framework. A common multi-episode, real-life event that is travelling to multiple destinations in a cultural tour created the context for this investigation. Tour guides (etic) and tourists' (emic) points of views were explored. The empirical results were explained with the support of psychology theories. Implications for tourist experience design especially structuring and sequencing these events across time were brought into focus.

The idea for the study was born from researcher's years of observations about the order effects on customers' feedback on visited destinations. However, when it was put into a research proposal, the ubiquitous observations of position effects across other contexts and memory tasks as well as theoretical analyses of serial position functions over many decades embedded the intuitively derived research question in a rich psychology literature. Yet, it was surprising that tourism researchers have perhaps underestimated or ignored the importance of order effects in design and management of tourist experiences. Further investigation of position effects for other contexts besides destinations can offer prospects for new and valuable research. Tourism researchers can be now challenged to pursue the fundamental question inspiring this study even further: How much does changing the order of product and service encounters within tourism and hospitality experiences affect recall about the individual elements and influence the overall evaluation of these units?

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Appendix I: Online questionnaire for the tour guides

Dear participants,

Having the below assumptions in mind, please answer the questions based on your professional experience of tourists' feedback on the destinations at the end of their trips:

Assumption 1: Suppose that the destinations are equally rich in almost all aspects and the tourists stay as long in each of them.

1) Do you think that position of a destination in an itinerary have effects on its recall?

Yes □ No □

2) If yes, how strong do you think this effect is?

Very Strong□ Strong □ Average □ weak □ Very weak □

3) Please consider the below combinations of these three cities; Shiraz, Isfahan, Yazd and tell us which city would, most probably, be more memorable than the other two, for the tourists?

Tour A: Isfahan → Yazd→ Shiraz

The most memorable city is: Isfahan□ Yazd□ Shiraz□

Tour B: Shiraz → Yazd → Isfahan

The most memorable city is: Isfahan□ Yazd□ Shiraz□

Tour C: Yazd → Isfahan → Shiraz

The most memorable city is: Isfahan□ Yazd□ Shiraz□

Tour D: Yazd→ Shiraz→ Isfahan

The most memorable city is: Isfahan□ Yazd□ Shiraz□

Tour E: Shiraz→ Isfahan → Yazd

The most memorable city is: Isfahan□ Yazd□ Shiraz□

Tour F: Isfahan→ Shiraz →Yazd

The most memorable city is: Isfahan□ Yazd□ Shiraz□

4) At the end of their trips, do you think that most tourists would choose their favourite destination based on the most recalled destination? Yes□ No□

5) If yes, how strong do you think the relationship between picking the same city for "which city was your favourite?" and "which city do you remember the most" would be?
Very Strong □ Strong □ Moderate □ weak □ Very weak □

6) Gender: Male □ Female □

7) Age: _____

8) Tour Guiding experience in years: _____

9) How clear the content of this questionnaire is for you?
Very clear □ clear□ average □ not clear □ not clear at all □

10) Please explain which sections were unclear or less clear, if any?

_____

Thank You,

Samira Zare

Appendix II: Online questionnaire for the tourists

Dear respondent,

You are invited to take part in a research project about the ***Iranian tourist destinations (cities)*** conducted by **Samira Zare** which will contribute to a **thesis** for a **PhD degree in Tourism** at **James Cook University of Australia.**

If you agree to be involved in the study, please kindly complete the questionnaire, which should only take **5 minutes** to complete. Taking part in this study is completely **voluntary** and no identifying information is required.

Age: _____ **Nationality:** _____

Gender: Female □ Male □

Travel experience:

Low (1-5 international trips) □

Medium (6-20 international trips) □

High (More than 20 international trips) □

Is this your first time in Iran? Yes □ No □

Q1) What cities did you visit in this trip? (Name at least 3 of them)

_____ and _____ and _____

Please turn over the page for more questions at the back.

Q2) **Which city did you like the best? (Name only one):** _____

Q3) **What would be your second and third most liked cities? (Name two)**
_____ and _____

Please put the date that you have completed this questionnaire in here: ___ /____ /____

Thank you.

همکار عزیز سرکار خانم/آقای _____

۱.لطفا برنامه ی بازدید مسافران این گروه را به **ترتیبی** که انجام شده بیان کنید و **تعداد شب اقامت** در هرشهر **و همچنین تاریخ اولین و آخرین روز تور** رو بنویسید.

مثال : تهران (۲)← شیراز(۲) ← اصفهان (۳) ← تهران (۱) ← طول تور ۸ شب- از تاریخ ۱ تا ۸ اسفند ۹۵

۲.با توجه به اینکه انتظار ارزیابی نتیجه ی ارزیابی را تحت تاثیر قرار میدهد، مسافران تا روز آخر سفرشان **نباید** از وجود این پرسشنامه آگاه باشند.

۳.این پرسشنامه باید در **شهر آخر مورد بازدید** به مسافران داده شود تا امکان مقایسه ی صحیح برای آنها وجود داشته باشد.

۴. این پرسشنامه فقط برای مسافران **خارجی** است که برای **اولین بار** از ایران دیدن میکنند و این سفر را درغالب **تور**و همراه با **راهنما** انجام میدهند.

لطفا در صورت امکان شماره تماس یا ایمیل خود را در اینجا بگذارید_____

با سپاس فراوان از رعایت نکات بالا که در صحت نتایج بسیار مهم هستند.

سمیرا زارع

Appendix III: Benchmarking Iranian Destinations questionnaire

Dear respondent,

You are invited to take part in a research project about the ***Iranian tourist destinations (cities)*** conducted by **Samira Zare** which will contribute to a **thesis** for a **PhD degree in Tourism** at **James Cook University of Australia.**

If you agree to be involved in the study, please kindly complete the questionnaire, which should only take **5 minutes** to complete. Taking part in this study is completely **voluntary** and no identifying information is required.

1) Age: _____

Gender: Female □ Male □

2) Nationality: _____

3) Is this your first time visiting Iran? Yes □ No □

4) Travel experience level:

1-5 International travel □

5-10 international travel □

More than 10 international travel □

5) How much did you like each of the destinations below? (Please tick)

	I have not visited this city in my trip	I did not like it at all	I did not like it	Neutral	I liked it	I liked it very much
Tehran						
Shiraz						
Isfahan						
Yazd						

Appendix IV: Information sheet for the tour guides' survey

INFORMATION SHEET

You are invited to take part in a research project about the recalling and evaluating tourists' destinations. The study is being conducted by Samira Zare and will contribute to a PhD in Tourism at James Cook University.

The attached questionnaire is voluntary and completely anonymous. We do not require any of your personal details in this survey which should take approximately 10 minutes to complete.

The data from the study will be used in research publications such as academic journals and/or books. You will not be identified in any way in these publications.

Thank you for your time,

Samira Zare

Principal Investigator:
Samira Zare
College of Law, Business and governance
James Cook University
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If you have any concerns regarding the ethical conduct of the study, please contact:
Human Ethics, Research Office
James Cook University, Townsville, Qld, 4811
Phone: (07) 4781 5011 (ethics@jcu.edu.au)

Appendix V: Information sheet for the tourists' survey

JAMES COOK UNIVERSITY AUSTRALIA

INFORMATION SHEET

You are invited to take part in a research project about the Iranian tourist's destinations (cities). The study is being conducted by Samira Zare and will contribute to a PhD in Tourism at James Cook University.

The attached questionnaire is voluntary and completely anonymous. We do not require any of your personal details in this survey which should take approximately 10 minutes to complete.

The data from the study will be used in research publications such as academic journals and/or books. You will not be identified in any way in these publications.

Thank you for your time,

Samira Zare

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If you have any concerns regarding the ethical conduct of the study, please contact:
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