

# **Consuming the Mundane and Extraordinary: Hospitality Facilities and Transport in the Spatiotemporal Behaviour of Theme Park Visitors**

**Kate Mingjie Ji, Ying Zhao, Jiaming Wang & Xiaoting Huang**

Based on the literature regarding the mundane and the extraordinary, this study aims to understand the importance of the mundane in visitor experience. Mixed methods, namely, GPS tracking and questionnaires, were used. The results from a time usage analysis reveal that visitors spend nearly 26% of their time engaged in mundane activities (hospitality facility and transport activities). Based on a sequence alignment analysis, three behaviour patterns are identified: behaviour patterns in hospitality facilities, in attractions, and in a combination of both. These patterns reflect the visitors' different levels of spatial engagement with the park, and this engagement subsequently contributes to the visitors' evaluation of the park layout, visitor crowds, facilities and waiting times.

**Keywords:** Theme park, GPS, Sequence alignment analysis, Ocean Park Hong Kong

## INTRODUCTION

Recent theoretical developments in tourism show the importance of the mundane as well as the extraordinary in creating tourist experiences. The concept of mundane has been widely considered in the academic literature and has predominantly been analysed in the context of performativity (Edensor, 2000) and embodiment (Edensor, 2006; Ji and King, 2018). The extant studies commonly highlight the resourcefulness of the mundane that permeates the tourist experience and interacts with the extraordinary to constitute what we refer to as an experience.

‘Mundane’, which is a word sometimes referred to as meaning ‘everyday’ or ‘daily’, in this study is defined as those activities of a daily nature that provide physiological necessities, such as eating, shopping and transport. ‘Extraordinary’ (a word sometimes referred to as meaning ‘spectacular’) refers to the heightened and emotionally laden tourist experience episodes reflecting the main purpose of a tour (Quan and Wang, 2004) and forming a major contrast with daily life and an escape from it (Urry and Larsen, 2011).

However, the existing studies are anecdotal, and the present study is the first to use a quantitative approach in revealing the interactions between the mundane and the extraordinary along a flow of experience. This approach only becomes possible now thanks to the development of GPS tracking technology (Ahas *et al.*, 2007; Ahas *et al.*, 2008; De Cantis *et al.*, 2016; Shoval *et al.*, 2011).

GPS tracking data are essential to decode a flow of tourist experience. In particular, the mundane is secondary in the visitors’ motivation; therefore, unlike extraordinary experiences that are more memorable, the mundane is usually taken for granted, or visitors find it difficult to recall what, when and where mundane experiences occurred. The advantage of using GPS data is that recording visitors’ behaviour at high resolution allows such interaction to be captured in a flow of sequences (Shoval and Isaacson, 2007a). This can be further developed into any spatiotemporal pattern. The present study employs a follow-up survey that acquires insights into perceived satisfaction (Kwan, 2004; Shoval *et al.*, 2018) to supplement the spatiotemporal data.

The present study aims to investigate how mundane and extraordinary experiences interact with each other to create new experiences. Specifically, the following questions are addressed: (1) How do visitors engage with the different levels of the mundane and the extraordinary? (2) How and to what extent is the mundane reflected in the sequence of the visitors’ trajectories? (3) Are there any aggregated spatiotemporal patterns generated that are based on the behavioural sequence? (4) How do the identified spatiotemporal patterns affect satisfaction and dissatisfaction?

The mundane and the extraordinary are explored in the extreme context of a theme park. Theme parks have long been conceptualized as being primarily extraordinary space, including a bewildering range of attractions, architectural eclecticism and entertainment opportunities. In fact, theme parks also contain facilities, such as restaurants, cafes, retails and transport, used for mundane consumption. Theme parks are commercially operated enterprises that offer rides, shows, merchandise, food services and other forms of entertainment in a themed environment (Milman, 2009). Furthermore, theme parks are ideal for collecting spatiotemporal behaviour data. The environment is highly regulated, with a single exit/entry point and a relatively brief visiting time within which behaviour tracking can occur (Ferrante *et al.*, 2018).

The contribution of this study is threefold. First, based on the visitors' spatial-temporal behaviour exploration, it produces an alternative theoretical perspective of the interaction between the extraordinary and the mundane. Second, the use of GPS data advances the scope of methodologies, such as photos/images (Pearce *et al.*, 2015), interviews (Larsen, 2008) and audio diaries (Lynch, 2017), currently used in the research on the mundane and the extraordinary. The present research is the first to take a numerical approach to answering the longstanding question: how everyday life permeates tourism consumption and especially how 'tourist escapes' are informed by everyday performances (Larsen, 2008). Third, the present study enriches the growing literature on theme parks by revealing the sequence in visitor trajectories and the associated, aggregated demographic features. Note that with only countable exceptions, such as Birenboim *et al.* (2013), this area of research tends to focus on attractions or the 'peak' experience (Chang and Pang, 2017; Erb and Ong, 2017; Kao *et al.*, 2008; Ong and Jin, 2017; Zhang *et al.*, 2017; Zhang *et al.*, 2017). Practical implications are also discussed in this study.

## LITERATURE REVIEW

### *The Mundane versus Extraordinary*

It has been relatively accepted that the tourists' experiences are intertwined with everyday practices, ordinary places and sociality with significant others. This falls into Lefebvre and Goonewardena's (2008) idea that all aspects of social life are infused with elements of everyday life: no practices escape 'everydayness'. Quan and Wang (2004) systematically classified a tourist experience into peak and supporting components. The former constitutes the major motivation in tourism; the latter comprise the experiences of gratifying on the journey basic needs, such as sleeping, eating and transport (Crouch, 2003).

The mundane also refers to unreflective habits, as Edensor (2001) mentioned that "the everyday can partly be captured by unreflective habit, inscribed on the body, a normative unquestioned way of being in the world... the repetition of daily, weekly and annual routines... how to eat, wash, move, work and play, constitutes a realm of 'common sense'...". Furthermore, "these shared habits strengthen affective and cognitive links, constitute a habitus consisting of acquired skills which minimize unmercenary reflection every time a decision is required". Similarly, the mundane informs the 'tactics' that individuals employ to manipulate officially inscribed signs, objects and places (De Certeau, 1984). Such norms, conventions and dispositions are attached to the tourists' sociocultural and political backgrounds, informing what should be seen and done, how to travel and which actions are inappropriate to their identity. The 'performative turn' (Edensor, 2007) further developed the mundane concept by stressing the following: the ontology of acting and doing; the corporality of tourist bodies, including the senses, such as sound, smell, touch, and taste (Dann and Jacobsen, 2003); and the "flow of perceptions, purposeful thoughts, fragmentary images, distant recollections, bodily sensations, emotions, plans, wishes, and impossible fantasies" (Singer and Pope, 1978). Larsen (2008) added that the everyday perspective also involves the consumption of sociality and social relations with significant others.

In this study, the mundane is defined as activities of a daily nature, such as dining, shopping and transportation, within a theme park (more in the next section). These activities are classified as mundane for the following reasons. First, they are

secondary to the primary motivation of visiting the theme parks (Birenboim *et al.*, 2013). Second, they satisfy more of the physical needs for food, rest or restoration. Third, they are available and have a similar presence in everyday life outside this context, i.e., outside the theme park. Transport may arguably be classified as peak experience, but its primary function is to connect and overcome the capacity constraints that visitors have of walking too far. The mundane and extraordinary constitute what we call an experience.

There is limited specific discussion on the role of the mundane or the interaction between the mundane and the extraordinary. Mundanity can be a source of comfort, relaxation, ease and security (Giddens, 1984). Edensor (2007) proposed that the mundane facilitates the comfortable enactment of touristic conventions. The technologies of conformable mobility can insulate tourists from the potential epistemological and physical discomfort of the outside world. With these concerns eased, tourists are able to adopt dispositions to relax and look out onto the world, and they are obliged to comport themselves in a 'suitable' fashion (Edensor, 2007). Through examining the tactics people use every day to manipulate official signs, objects and places, De Certeau (1984) suggested that the mundane has the potential for creativity, subversion and resistance. To geographers, the mundane can impose constraints that "circumscribe activity participation by demanding that large chunks of time be allocated to physiological necessities such as sleeping, eating and personal care; and by limiting the distance an individual can cover within a given time-span in accordance with the transportation technology available" (Pred, 1977, p.209). Furthermore, it is agreed that the mundane and the extraordinary should not be equated or replaced by each other (Larsen, 2008; Lynch, 2017; Pearce *et al.*, 2015). They contribute to satisfaction differently. The mundane provides supporting experiences that cannot predict satisfaction, but their absence can generate dissatisfaction (Ryne, 1994). Ultimately, the total experience depends on the mutual support and reinforcement between the mundane and the extraordinary (Quan and Wang, 2004).

### *The Spatiotemporal Feature of Tourist Experience*

As experience involves a continuous flow of activities (either mundane or extraordinary), its associated spatial and temporal features should also be captured (Pred, 1977). As widely discussed, tracking technology has clear advantages in capturing with precision and wide geographic coverage continuous, spatial and temporal movement (Shoval, 2018; Shoval and Ahas, 2016; Shoval and Isaacson, 2007b). Traditional methods (e.g., interviews and observations) provide detailed but static, fragmented or general (as measured by 'overall satisfaction') information regarding the tourist experience. These traditional methods are retrospective and dependent on one's ability to recall, but only emotionally charged peak episodes tend to be remembered. In remote destinations in which local language is different, recalling becomes even more difficult.

The use of tracking technologies, such as GPS portable devices, mobile positioning, Bluetooth tracking, geocoded social media and photo databases, has been expanding in tourism research (Shoval and Ahas, 2016). However, the majority of the current research, such as mapping and point densities, is considered descriptive instead of inferential (Ferrante *et al.*, 2018). Prior studies have used geographical information systems to measure people-based paths or prisms in physical and social environments (Kwan, 2004; Miller, 2005). Shoval and Ahas (2016) identified that tourism research using tracking data can be grouped into three generations: research

identifying the potential of tracking data; studies exploring new aspects of tourism; and analyses of specific tourism or consumption questions. Ahas *et al.* (2008) evaluated the applicability of mobile positioning data to study tourists' movement in Estonia, as well as the seasonality of the tourists' space consumption in relation to their country of origin (Ahas *et al.*, 2007). Versichele *et al.* (2014) explored the application of Bluetooth tracking techniques in studying the tourists' behavioural patterns in Ghent, Belgium. Tchetchik *et al.* (2009) combined GPS tracking data and questionnaires to segment visitors in the same case area. Orellana *et al.* (2012) focused on two types of tourists' movements: movement suspension patterns and generalized sequential patterns. Zakrisson and Zillinger (2012) categorized the tourists' movement patterns into events and destinations in Switzerland. McKercher *et al.* (2015) used a questionnaire survey and GPS data to evaluate the effects of weather on the tourists' travel patterns in Hong Kong. De Cantis *et al.* (2016) studied cruise passengers' behaviour at stopover destinations. Shoval *et al.* (2011) used GPS tracking devices to investigate the effects of hotel location on subsequent tourist behaviour. Furthermore, Shoval *et al.* (2017) combined spatiotemporal data with physiological measures of emotion (electrodermal activity) and semantic contextual information to examine the tourists' experience. Following this, Shoval *et al.* (2018) mapped the emotional characteristics of a large-scale urban environment by using subjective self-reported and physiological measures of emotions.

Recent studies have investigated the sequence of activities in space and time by using sequence alignment analysis (Shoval and Isaacson, 2007a; Wilson, 2008). This analysis enables researchers to understand an additional integral dimension of activity and to recognize patterns that exist within this dimension. Shoval and Isaacson (2007) applied sequence alignment analysis to examine the visitors' spatiotemporal patterns in the Old City of Acre, Israel. Shoval *et al.* (2015) further applied the same analysis for identifying the tourists' typologies in Hong Kong. The present research applied the analysis to examine how two experience constituents, namely, the mundane and the extraordinary, interact with each other and formulate new experiences.

### *Theme Parks*

The research questions are explored in the context of the theme park. While amusement parks provide whimsical architecture and rides, theme parks still incorporate these but add themes either to an entire park or to areas within a park. Today, the form of theme parks is more sophisticated, and successful theme parks include Legoland, Disneyland, Wildwater, Seaworld, and Universal Studios; other themes include Rocky Mountains with waterfalls, space and oceans, all of which comprise theme areas around which attractions and rides are built. These extraordinary experiences are related to physical thrills that are delivered by heights and dropping mechanisms, such as roller coasters and drop rides, and through virtual reality, simulator rides and created environments, such as Jurassic World, Star Wars, Dinosaur Park, Mountains and Mines, that can be experienced either indoors or outdoors. They also include children's and amusement rides. These tend to be the simplest and least scary and include swings, roundabouts, mini cars and trains. The extraordinary can also include real-world extraordinary phenomena, such as aquaria, tropical animals, insect worlds or even a simulated Antarctic experience.

Commonly overlooked is the fact that theme parks also encompass a number of outlets that satisfy the everyday needs of visitors. Such a holistic view of theme park offerings is represented in the concept of 'total landscape' proposed by

Mitrasinovic (2006). 'Land' means nature, while 'scape' means either a picture representing a view of natural scenery or the art of depicting such scenery. The word 'landscape' denotes an embedded duality between the notion of pristine nature and that of its framing or the fabrication of the views. The term total landscape highlights a complex, spatial arrangement of comprehensive components, including transportation and information networks. It signifies harmonious connections between the elements within the system.

Consistent with the total landscape concept, a typical theme park is defined as an area that contains a range of physical objects, including architecture, landscape, rides, shows, food services, and retail shops (Ho and AP, 2009). Similarly, Milman (2009) defines theme parks as commercially operated enterprises that offer rides, shows, merchandise, food services and other forms of entertainment in a themed environment. Swarbrooke (2002) highlighted three levels of theme park products, namely, core, supporting and facilitating. The core involves the visitors' motivations and hedonic values. The supporting products included rides, shows, catering facilities, souvenir shops, staff and park design. The facility products relate to transport, opening hours, weather and location. In addition, architecture, literature, presentation techniques, transportation circulation and spatial movement can all highlight the complex constituents of theme parks (Wylson, 1980).

Building on the above literature, this study classifies the theme park landscape into the mundane and the extraordinary. Consistent with its definition as detailed earlier, the extraordinary comprises attractions that deliver physical thrills by rides, entertainment shows and exhibitions, augmented reality and theatrical effects. The mundane comprises hospitality facilities that include the following: retailing; food, drink and accommodation (Bell, 2009); and transport, which carries visitors from outside public areas or car parks to the theme park or to locations within the park. It facilitates pedestrian movement, either separated by different levels (e.g., cable car and monorail) or by a separate route (e.g., train and boat).

Despite the recent proliferation of the global theme park industry, the existing research is limited (Milman, 2009), with the majority of this research modelling visitor experience. To measure the visitor experience, Milman (2009) developed a scale that included the following: entertainment variety and quality; courtesy, cleanliness, safety and security; food variety and value for money; quality of theming and design; availability and variety of family-oriented activities; quality and variety of rides and attractions; and pricing and value for money. The scales were perceived differently among tourists (including domestic and international) and residents (Milman 2009). Johns and Gyimothy (2002) drew attention to the hedonic nature of theme park experiences rather than the commercial aspects of the experience, claiming that the visitor experience would extend beyond the physical offerings of a park. Other studies considered the emotions generated in the theme park; notably, in their research, Bigné *et al.* (2005) modelled the visitor experience and studied pleasure and arousal. Moreover, Cheng *et al.* (2016) studied factors, such as visitor variety seeking, satisfaction, switching cost towards other brands, perceived value, competitor attractions, theme park image and visitor involvement, that impacted the visitors' brand-switching decisions. Jung *et al.* (2015) investigated the impact of augmented reality technology on visitors' satisfaction and behavioural intention.

The other line of research, which is rather limited, focuses on the visitors' movement in the park. Long waiting times are a major source of dissatisfaction (Brown *et al.*, 2013); visitors typically spend only 20% of their time on attractions, and most of their time is spent queuing (Lith, 2000). According to McClung's (1991)

survey of the heads of households from top metropolitan areas in the US, after climate, park type, children's desire to visit and cost, crowding was ranked as the fifth most important factor affecting attendance. Pikkemaat and Schuckert (2007) highlighted that capacity and queue management were important to success. Zhang *et al.* (2017) studied the visitors' satisfaction and behavioural intention through examining the visitors' perceived and expected experiences on a non-busy, busy or extremely busy day. The expected experience includes the anticipated attraction experience, the value of that experience and the anticipated wait times. Zhang *et al.* (2017) identified that park visitor movement is determined by the attributes of attractions and the spatial layout. The attraction attributes include the visitors' perceived value from rides and shows (including expected thrill and excitement), the attraction capacity, the size of the floor area, the popularity of the attractions and the availability of indoor and outdoor facilities. The attributes of the spatial layouts included the distance between individual attractions, the path network, the entrance location and the features of attraction clusters. Brown *et al.* (2013) evaluated the effectiveness of incentives and information delivered via mobile devices in influencing travel patterns to less crowded areas.

The existing literature on theme parks has only focused on the extraordinary experience or the description of the visitor flows. Little attention has been given to the mundane experience and its interaction with the extraordinary. An answer to this question advances our current understanding of experience and the possibility of utilizing the mundane to create new experiences.

## METHODS

### *Ocean Park Hong Kong*

This empirical study was conducted in Ocean Park Hong Kong (OPHK), one of the most visited theme parks in Asia. As a well-known Hong Kong brand since 1977, OPHK received 5.78 million visitors in 2018 (Statista, 2019). It combines eight themed areas, including a marine mammal area, oceanarium, zoos and a fairground in over 91.5 hectares (or 226 acres). It contains over 80 attractions, hospitality outlets and transport facilities (Figure 1). The extraordinary elements were classified by the Board of Management of OPHK. The mundane, i.e., hospitality outlets and transport were distinguished by the research team with reference to the park map and were approved by the Board of Management. The classification of transport is compared with that of the attractions in terms of the nature and the degree to which the two activities have enhanced the tourist experience (Lumsdon & Stephen, 2004). In comparison, the essential nature of the cable car is to connect places, and in this case, its purpose in the ocean park is to connect two parts that are blocked by the hill. Without taking the cable car, visitors cannot reach the far side of the park. The experience was made interesting by playing videos and by using illumination flash lights on board to encourage visitors to get to the far side of the park. Furthermore, the time spent on the cable car for individual visitors was marginal compared with the total time visitors spent on the attractions. Table 1 provides detailed accounts of the classification of all the facilities in the OPHK.

Table 1. Mundane and extraordinary facilities in OPHK

Type	Sub-type	Name of Attraction or Facility
Extraordinary facilities	Exhibitions	The Grand Aquarium, Aqua City Lagoon, Sichuan Treasures, The Secret Lives of Sea horses, Old Hong Kong, Panda Village, Gator Marsh, Amazing Bird Theatre, Emerald Trail, Goldfish Treasures, Whiskers Theatre, Pinniped House, South Pole Spectacular, North Pole Encounter, Arctic Fox Den, Expedition Trail, Rain forest Why Zone, Sea Jelly Spectacular, Chinese Sturgeon Aquarium, Ocean Theatre, Pacific Pier, Veterinary Centre, Marine Mammal Breeding and Research Center
	Rides	Toto The Loco, Bouncer House, Frog Hopper, Balloons-Up-Up-And-Away, Clown A Round, Merry-Go-Round, Sea Life Carousel, Whirly Bird, Bumper Blaster, Bungee Trampoline, The Flash, Rev Booster, Hair Raiser, Flying Swing, Ferris Wheel, Ocean Park Tower, The Dragon, Crazy Galleon, The Abyss, Eagle, Mine Train, Space Wheel, Raging River, The Rapids, Arctic Blast
Mundane facilities (Hospitality Outlets)	Restaurants and Cafés	Aqua City Bakery, Neptune's Restaurant, Panda Café, Tuxedos Restaurant, The Bayview Restaurant, The Terrace Café, Café Ocean, McDonald's Restaurant
	Food Stalls	Lakeside Snakes, Panda Café Food To Go, Cockatoo Express, Clown's Snakes, Mei Lam Kee, Ah Sau Dessert, Ma Chai Dessert, Malay Foods, Happy Snakes, Ice Cream Express, Chan's Noodles, Herbal Tea House, Clown Corner, Refill Station, Rainforest Snakes, Pizza Place, Ice-cream Delight, Golden Fried Chicken, Dive into a Float, Boardwalk Café, Mine Train Hot Dog, Raging River Fast Food, Raging River Squid
	Shops	Souvenirs: Waterfront Gifts, Celebrities Store, Aqua City Crafts, Ocean's Charms, Ocean Potions, Deep Sea Traders, Sichuan Treasures, Waterfront Express Shop, Panda Kingdom Shop, Wing Shun Gifts, Wing Cheong Gifts, Fung Cheong Shing, Sheung Hing Leong, KeeWah Bakery, Rainforest Gift Shop, Rainforest Bazaar, Mystique Treasures, Ocean Paradise, Pacific Pier, Pacific Chandlers, The Lodge; Photo: Drop Shop, Shutters, Ocean Express Photo, Rainforest Photo, Jelly Fish Photo, Cable Car Photo, Shark Mystique Photo, Raging River Photo, Mine Train Photo, Slick Picks Photo, Arctic Photo.
Mundane facilities (Transports)		Ocean Express (Train), Cable Car, Escalator



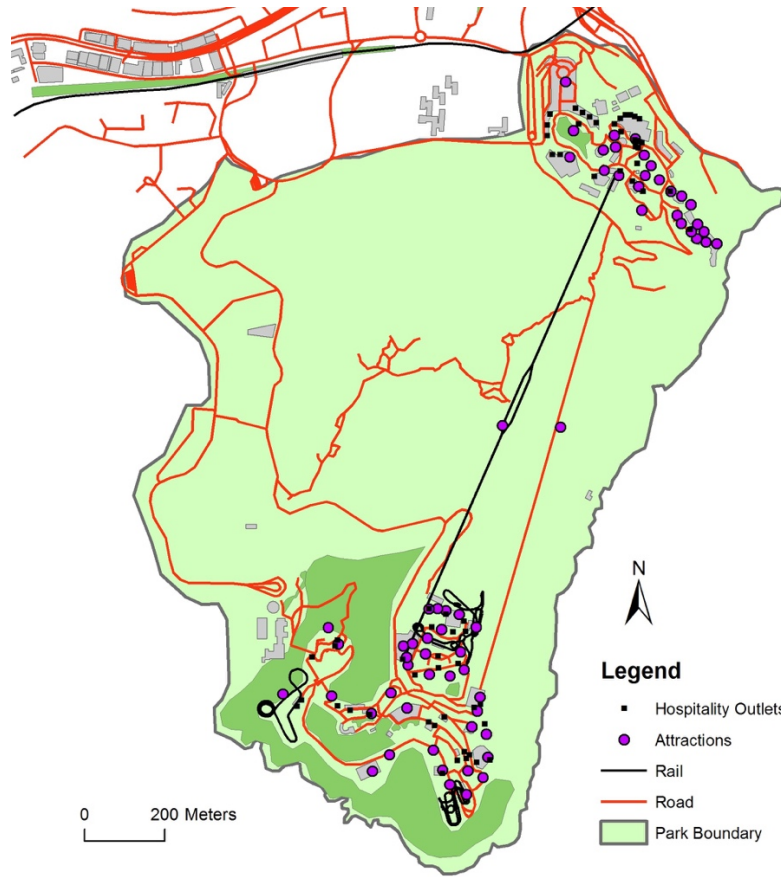


Figure 1. Geographic map of OPHK



Figure 2. User map of OPHK

## *Mixed Methods*

### 1) Spatiotemporal data

Mixed methods, namely, GPS carrying devices and a follow-up questionnaire, were employed at OPHK during the five-day period from Sunday 6th July–Thursday, 10th July in 2014. The GPS devices were dispensed at the park's main entrance and were collected at the main exit. With the permission of OPHK, a total of 10 trained research assistants managed the data collection. The GPS was utilized to collect the participants' spatial information, including their travel sequences and time use of the mundane and extraordinary facilities. The GPS positioning technology logged the space-time coordinates of each participant every 30 seconds and uploaded the data to a network server every 5 minutes. The spatial accuracy of GPS logging is generally 3 to 10 metres. In the open air inside the OPHK, the accuracy can basically be less than 3 metres.

Survey participants were recruited with reasonable random sampling. The research assistants approached visitors at the entrance of OPHK to gather willing participants. The research purpose, consent form, data collection methods and instructions were explained. An incentive of a token gift worth \$50 was given to the participants who completed both data collection methods. The participants had to be at least 16 years old to have the capacity to make decisions on visiting behaviour and to understand the survey.

### 2) Questionnaire

The questionnaire was self-administered and conducted as soon as the participants returned the GPS devices. This application of mixed methods captured both space-time diaries and the intrinsic values of the visitors, thereby complementing the limitations of using either as a single method. The questionnaire contained two parts. Part 1 measured the motivation to visit the park and satisfaction. Part 2 contained sociodemographic questions regarding the visitors' gender, age, educational background, profession, income and nationality.

To ensure the validity of all measurements, the scales used in the questionnaire were based on the existing literature and on extensive discussions among the research team and with the Board of Management of OPHK. The satisfaction scale was based on service quality (Rust and Oliver, 1993; Tsang *et al.*, 2012) and was then modified to measure the mundane and extraordinary facilities (detailed in Table 1 and Ocean Park Hong Kong section). To understand the visitors' satisfaction and dissatisfaction, the respondents were asked to tick a list of relevant items that measured the service/product quality of the mundane (i.e., hospitality facilities and transport) and of the extraordinary facilities (i.e., various rides and attractions).

## *Data Analysis Methods*

A total of 520 visitors participated in the GPS tracking survey; however, not all visitors completed the questionnaire. After eliminating unpaired data sets in which due to a loss of power or a satellite searching failure (a common technical challenge), the data from the questionnaires or the GPS devices was completely or partially missing, 354 valid GPS data sets and their corresponding questionnaires were retained for analysis. This sample size is considered high when compared with the sample size of other research using the same method. For example, Shoval *et al.* (2007) used only 139 valid samples in mixed methods of GPS data and questionnaires in the context of

a tourist city. Birenboim *et al.* (2013) used 276 valid GPS tracking samples in a theme park. The largest sample size of the existing published literature is 363 (Shoval *et al.*, 2012), which was used in a city-wide study. As the present study relates solely to a theme park, it represents a reasonable proportion of the total visitors at each location.

Table 2 shows that among 354 samples, 41.2% were male, and 58.8% were female. University degree, high school and vocational school were the main educational backgrounds, accounting for 39.2%, 24.7% and 16%, respectively, of the visitors' education levels. The visitors were relatively young, with less than 3.8% of visitors over 50 years old, representing overall the general age profile of theme park visitors. A total of 65.1% of the visitors were from Mainland China, 19.8% were Hong Kong residents, and the remainder were foreign visitors.

Table 2. Demographics of participants

Personal characteristics		Frequency	Percentage
Age	16-20	107	30.2%
	20-30	94	26.5%
	31-40	109	30.8%
	41-50	31	8.7%
	51-60	8	2.3%
	61-70	3	0.9%
	More than 70	2	0.6%
Gender	Male	146	41.2%
	Female	208	58.8%
Educational Background	Primary	18	5.1%
	Junior	23	6.3%
	High school	87	24.7%
	Vocational school	57	16.0%
	BA	139	39.2%
	MA	23	6.6%
	PHD and above	7	1.8%
Monthly Income (HKD)	Under 1000	162	45.6%
	1000-3000	28	7.8%
	3001-5000	54	15.3%
	5001-7000	39	11.1%
	7001-10000	26	7.2%
	10001-20000	24	6.9%
	More than 20001	21	6.1%
Nationality	HK	70	19.8%
	Macau	1	0.3%
	Taiwan	7	2.0%
	Mainland China	230	65.1%
	Foreign	45	12.8%

### 1) Spatial analysis




In total, over 400,000 positional points were collected. A GIS system, ArcGIS desktop 10.4, was utilised to conduct the spatial analysis. Three steps were involved, as illustrated in Figure 3. The first step involved marking all geographical areas that contained the extraordinary and the mundane. The second step was to set the buffer areas that specified the geographical boundaries of the mundane and the extraordinary. Buffering analysis is defined as marking the bounding regions in a set of points or lines with a specified maximum distance from an object. It is useful for proximity or accessibility analysis. Distances ranging from a 5 to a 20 m radius were applied in the buffer analysis, distinguishing the different geographical areas of the mundane and the extraordinary facilities (Table 3). The third step was to map 400,000 positional points corresponding to the longitudinal and latitudinal data. Then, the map overlay was applied to identify the utilisation of the mundane and the extraordinary. The

spatial join module in ArcToolbox in ArcGIS was employed to sum the participants' time and duration spent at each location. Given that GPS plotting points were recorded in fixed-time periods, that is, every thirty seconds, a frequency analysis of the GPS plotting points was used to calculate both time rhythm and time use. The more plotting points there were, the longer the period the participants stayed at any given location.

## 2) Sequence alignment analysis

Sequence alignment was originally applied in a DNA sequence analysis in the field of molecular biology. In geography, the behavioural sequence shows the individuals' movements and their utilization of mundane and extraordinary facilities. Using Python, for each individual, every sixty seconds, we generated a letter, which consequently formed a behavioural sequence. 'A' denotes the location point at which visitors spent time at an attraction, 'T' denotes visitors at a transport location point, and 'H' denotes visitors at a location point at a hospitality facility. For example, a behaviour sequence of a respondent can be represented as 'AAAAAATTAAAAHHHHHAA'. Then, these identified sequences were grouped based on the similarity between sequences by using ClustalX (Wilson, 2008). The higher the similarity between the sequences is, the more similar the movements of these visitors, and vice versa.

Table 3. Buffering criterion of different facilities

Facility type	Examples picture	Buffer radius
Food stalls		5 meters
Shops		10 meters
Restaurant and cafés		20 meters

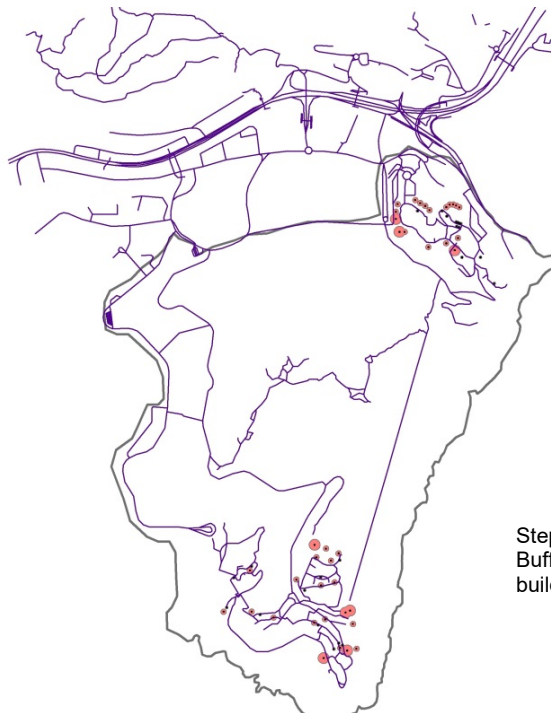
Transports



10 meters along the trail and the exact boundary of the station



Step I  
Geographical  
map with  
attractions  
and facilities



Step II  
Buffering  
building



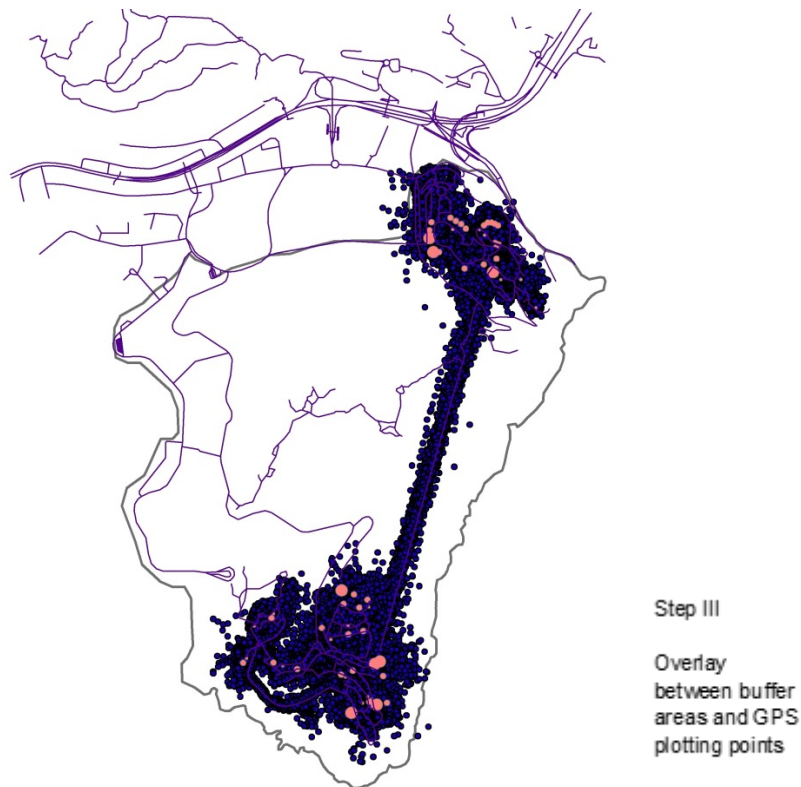


Figure 3. Spatial data analysis steps

## RESULTS

### *Utilisation of the mundane and the extraordinary*

Figure 4 shows a breakdown of the visitors' total time spent on the extraordinary (i.e., various rides and attractions) and on the mundane (i.e., hospitality outlets and transport) over the data collection periods. Of the respondents' total time in the park, 74% was spent on the extraordinary and 26% on the mundane, comprising 12% in hospitality and 14% on transport. This finding highlights a significant amount of visitors' time spent on the extraordinary, but 26% of the visitors' time spent on the mundane is still high and deserves more attention from park management.

Figures 5, 6 and 7 thoroughly investigate the visitors' time spent on attractions and rides, hospitality outlets and transport, respectively. A 'point frequency' value was used on the vertical axis to measure the traffic in each activity during the park's opening hours. As discussed in the Methods section, the point frequency is counted by the number of corresponding location points collected at a specified time. For example, in a given one-minute period (i.e., 2 plots, 30 seconds apart) at 10:31, 100 participants were located in attractions, and this situation is represented by the GPS plotting and marked by the point frequency of 200; however, in this given period, only five participants stayed in the transport area, and this experience is marked by the point frequency of approximately 10. Comparing these two frequency numbers enables the research to obtain the general pattern of time use of the mundane and the extraordinary. After arraying these time sequence periods, the time use rhythm pattern can be generated.

Figure 5 shows the usage of hospitality facilities with a maximum frequency of 180. The peak time for hospitality facilities was from 12:15 to 13:30. This time

period matches the typical lunch hours for Chinese visitors. After 13:30, the usage of hospitality facilities dropped continuously until 21:00 and disappeared completely thereafter. A small peak emerged from 15:00–16:30. This result might be due to the use of afternoon tea as a break before visitors left the park or might represent a visit to the shops (this peak matches the drop in the usage of attractions, as discussed in the later section). Another sudden but subtler increase was at approximately 20:30, which again might have been caused by last-minute souvenir purchases made before the park closed.

Figure 6 illustrates the time usage of transport during the park's opening hours. The usage began with a steady increase from 10:30–12:30, with a peak at 12:30, at which time nearly 200 location points in transport were recorded. Subsequently, the usage declined continuously to 15:30, followed by a subtle increase until 18:30. Moreover, a sudden but gentler increase at 20:30 occurred, which might relate to the use of transport to return to the exit. Overall, as shown by the frequency on the vertical axis, transport usage (average frequency 100) was less frequent than that of hospitality facilities (average frequency 120). However, both usage patterns were similar.

Figure 7 illustrates the time use of attractions and rides during the park's opening hours. According to the range of the vertical axis, attraction frequencies were recorded at approximately 400 at 11:00; this frequency was substantially higher than that for transport and hospitality. The maximum usage was five times the hospitality frequency and four times the transport frequency. The high frequencies caused the overall pattern of extraordinary usage to appear smoother compared with that for hospitality and transport. The usage of the attractions began at 10:00 following the opening hours of the park. It continued to grow rapidly until 12:00, followed by steady growth until 13:30, after which it then settled at a frequency of over 700. A short slowdown from 13:00 to 14:00 followed. The peak appeared between 14:00–15:00, with a frequency of nearly 800. After 15:00, a sharp decline appeared and continued steadily until 20:30, when a very gentle increase in usage appeared.

Making a comparison regarding the relative importance of the three activities taken by visitors at any given time of a day is also useful. From this comparison, we can also draw a reference to the distribution of visitors at different times. This distribution can be analysed by comparing the corresponding number of location points collected at any given time. Figure 8 shows a distribution from 9:30 to 21:30. The percentage on the vertical axis indicates the location points of each of the three activities. For example, 100% of the location points collected at 10:00 were on the attractions. The distribution of tourists on the attractions (the red area) is the highest throughout the day, but transport (blue area) and hospitality (green area) make a small presence in comparison. This finding reinforced the result shown in Figure 4.

Furthermore, the usage of the hospitality and transport appears to surge during two time periods: 9:30–11:00 and 20:00–21:30. There appeared to be roughly a 30-minute delay at 10:30 in embarking on the mundane from the extraordinary. This result was anticipated because visitors tend to use hospitality facilities after playing on attractions or rides. Hospitality facilities, including cafes and souvenir shops, are often located close to the exit of various attractions. Up to 11:00, the usage distribution of hospitality and transport slowly increases as visitors take transport (cable car) to the other side of the park. However, this distribution picks up abruptly after 20:00, reflecting the emergence of a rush hour. This finding matches earlier discussions on the gentle increase in Figures 5–7.

Compared to the usage distribution of hospitality facilities, the usage

distribution of transport is slightly more clarified. The transport distribution started with a slow and smooth increase after 9:30, when 20% of the location points were plotted as transport. This was followed by a slight drop and remained constantly low at 10% between 14:00 and 15:00. The number of transport location points picked up again after 19:30, with the occurrence of a peak in which 50% of the location points were found on transport. This finding shows that the morning and lunchtime usage of the transport was more intensive than that in the afternoon. A likely explanation is the time planning of the visitors: they seemed to plan to spend a shorter time in the first side of the park but longer on the other side. As the transport connects the two sides of the park, visitors seemed to be keen on taking the transport as early as possible to reach the other side. By contrast, the distribution of hospitality usage shows a subtle peak at approximately 11:30–2:30 at 20% and another unexpectedly small increase at approximately 20:00–20:30 and 21:30, when nearly 40% of the location points were found there.

Remarkably, the ‘peak distribution’ mentioned in Figure 8 was relative in the sense that we compared three activities of a given total number of location points collected at corresponding times. In other words, after 20:00, the usage of transport and hospitality facilities is intensive compared to the usage of attractions. This occurrence does not mean that transport and hospitality facilities at this time period were busy or crowded.

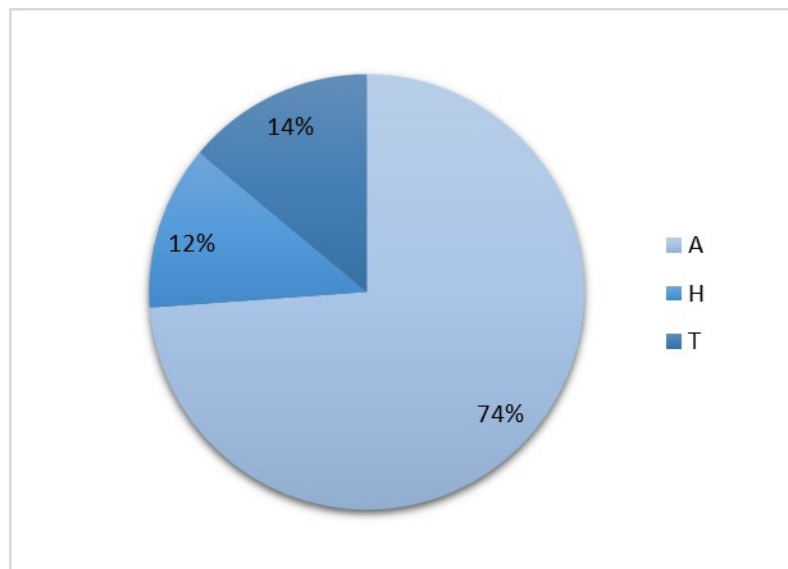


Figure 4. Time use sharing among the extraordinary (attraction) and mundane (hospitality and transport)



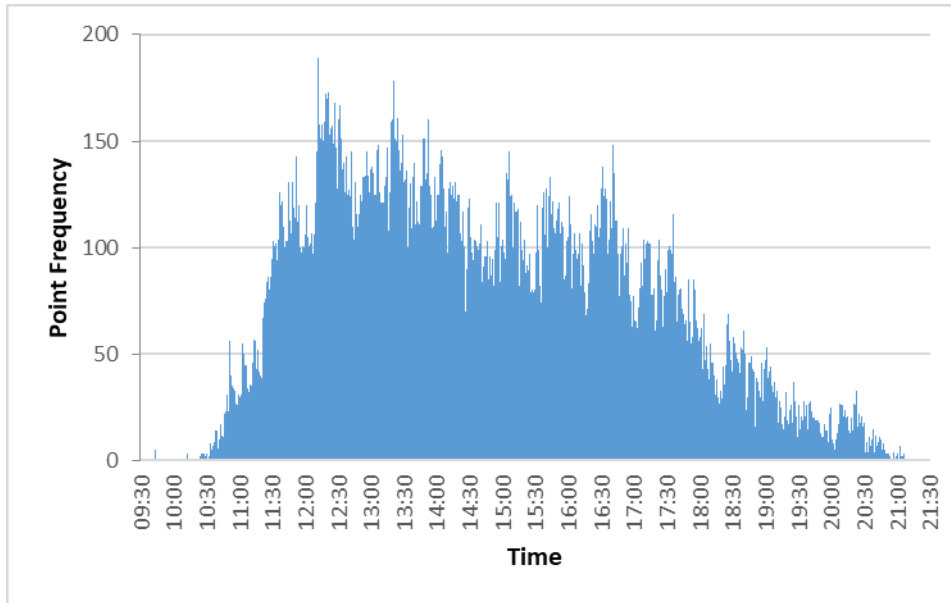


Figure 5. Time use rhythm of hospitality outlets

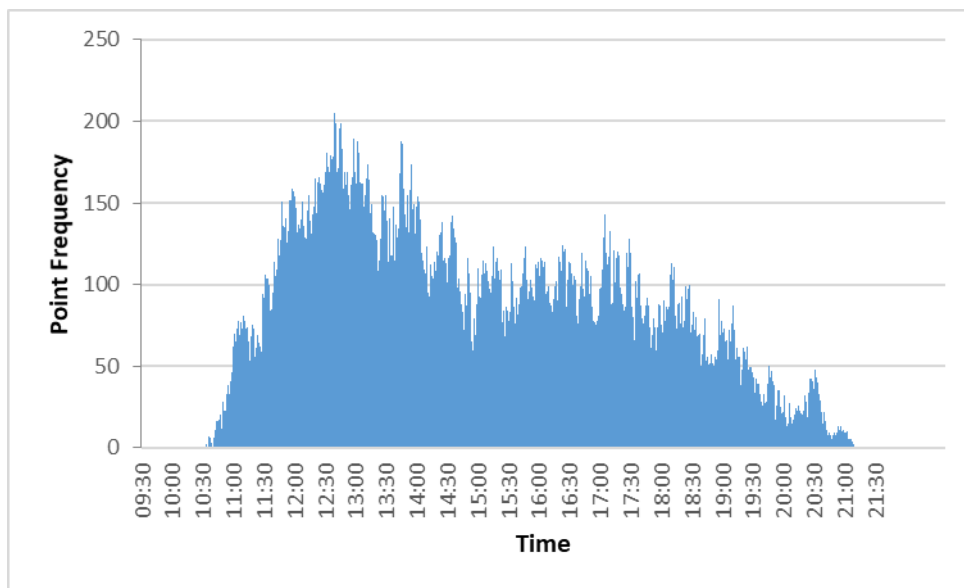


Figure 6. Time use rhythm of transport

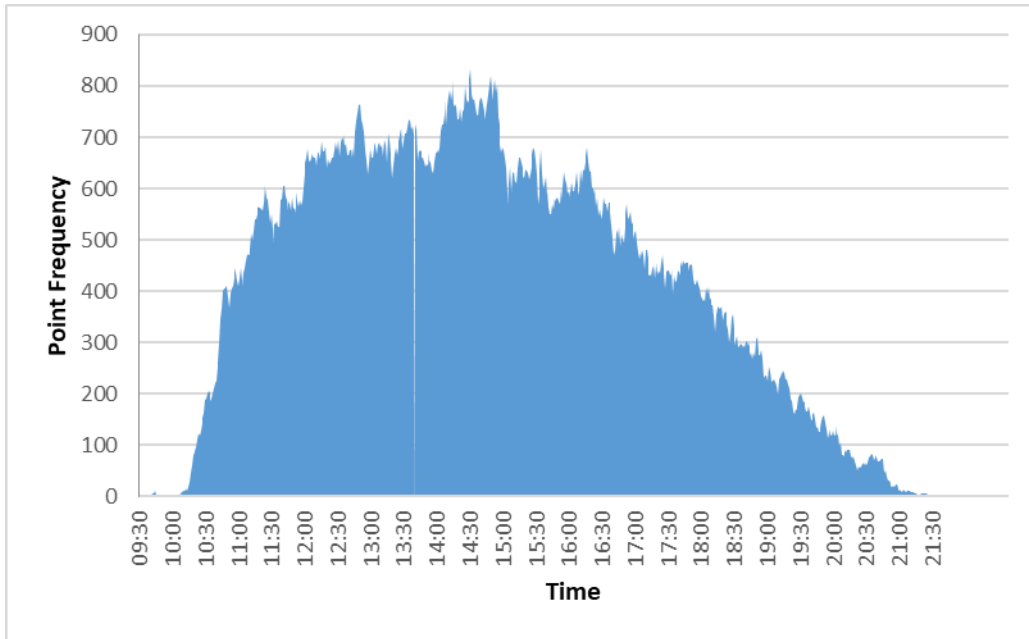


Figure 7. Time use rhythm of the extraordinary

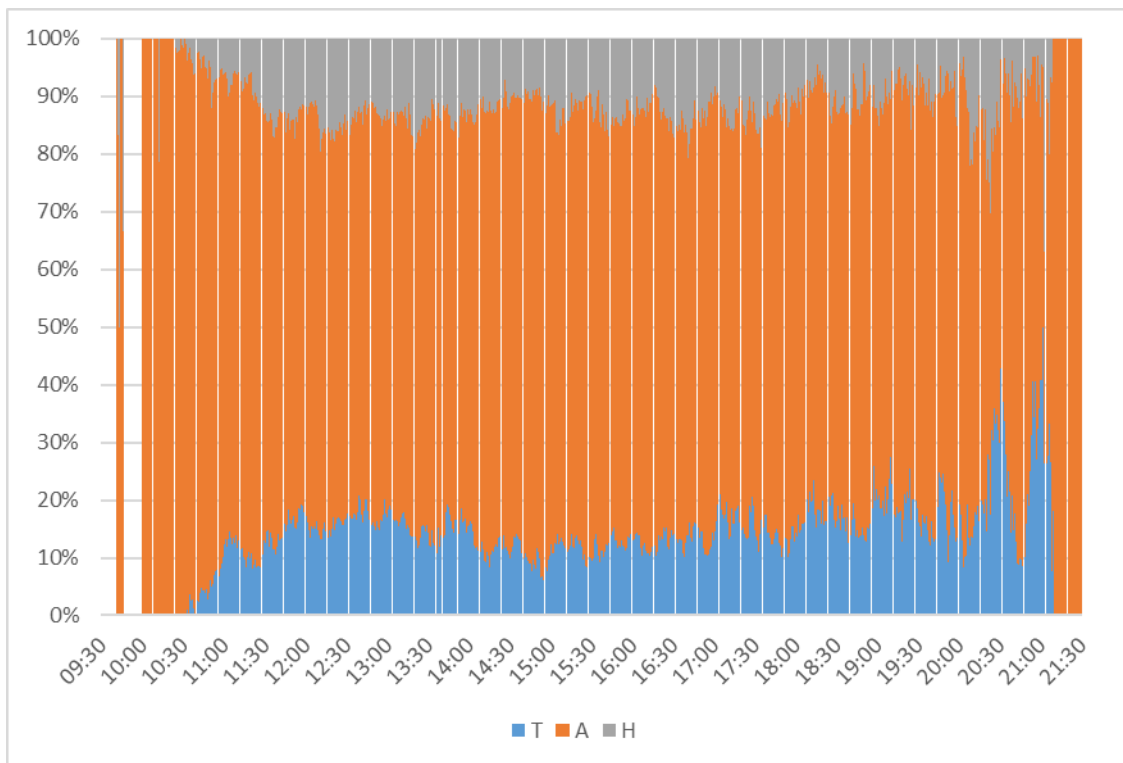


Figure 8. Time use proportion among the extraordinary (attraction) and mundane (hospitality and transport)

*Travel sequences and associated patterns*

Further analysis was conducted by using ClustalX sequence alignment software. By comparing the similarity of sequences at the individual level, the software can generate a taxonomic tree, as shown in Figure 9. This tree shows three facility utilisation groups individually holding 35.4%, 43.5% and 21.1% of the total sample. Each group is aligned separately to identify the highest scoring positions, as

shown in Table 4. These positions are called the alignments' 'backbone' (Shoval and Isaacson, 2007), which helps to characterise the sample group as a whole.

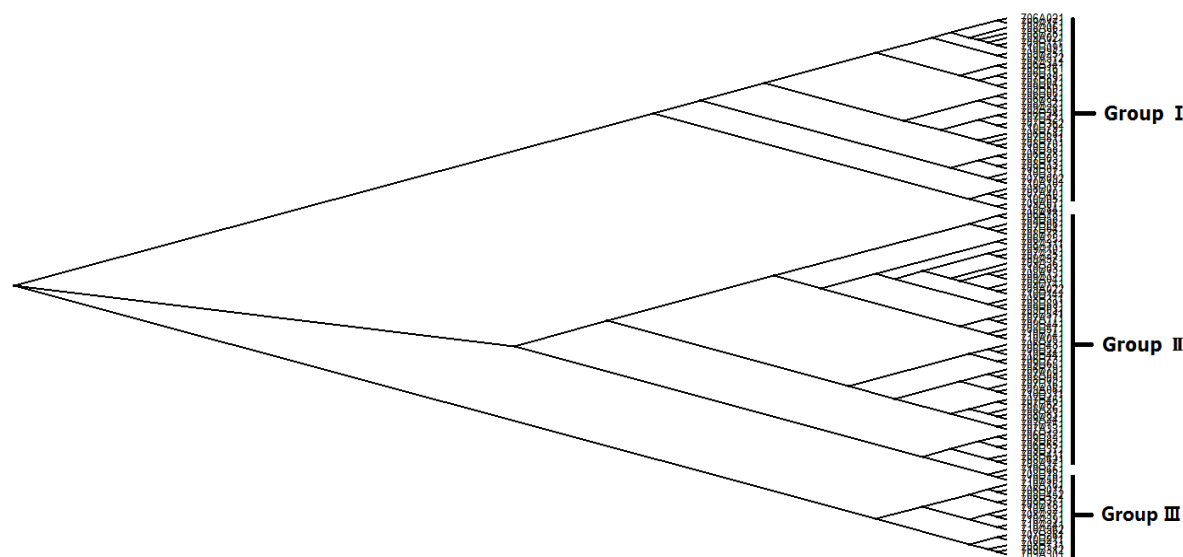


Figure 9. Taxonomic tree describing groups of visitors

The first sequence group is termed the 'Comprehensive Pattern', as shown in Table 4, and comprises 35.4% of the total respondents. It is termed 'Comprehensive' because these visitors seem to have planned to complete as many activities/facilities as possible in the park. Their visit sequence is an amalgamation of attractions, hospitality and transport. The visitors in this pattern intensively focused on visits to attractions in the first part of the visit, followed by taking transport. Their usage of hospitality facilities occurred largely in the second half of their visit, during which attractions were scarcely used. The transport appeared to facilitate the connection between attractions, hospitality facilities and the park exit. As shown in Table 5, Group I (Comprehensive Pattern) featured mostly 31- to 40-year-old individuals who were clerical staff, and had a high school or bachelor's degree; in addition, a high percentage of these individuals were repeat visitors. Among Group I, 43.5% of the visitors were from Hong Kong. They had relatively better knowledge of the layout and landscape of the park; therefore, their visit trajectories were more spread out throughout the attractions and hospitality facilities in the park.

The second group is termed the 'Hospitality-Concentration Pattern', and it accounts for a large proportion of the total sample—43.5%. As Table 4 shows, this pattern features a more frequent use of the hospitality facilities than do the other patterns. This group's use of attractions and transport also appeared to be minimal in backbone positions. This pattern's visitors seemed to prefer engaging themselves with recreation or leisure opportunities in hospitality facilities rather than experiencing thrills from attractions. This finding is in contrast with the common belief that experiencing the extraordinary is the most important objective for theme park visitors. It highlights the existence and importance of hospitality users and shows how the existing studies have largely overlooked the profile of these visitors. Group II featured 21- to 30-year-olds with a vocational school educational background. Fifty percent of visitors from Group II were foreign visitors who tended to appreciate the utility of

hospitality facilities more than did Chinese visitors. Apart from this, no other sociodemographic patterns were identified.

The third group is termed the ‘Attraction-Concentration Pattern’, and they only represent 21.1% of all respondents. Distinctive to this group is that these visitors spent nearly all their time in attractions, and their usage of transport occurred primarily at the beginning and at the end of their visit. The only time that this group of visitors used hospitality facilities was around lunchtime. It could be argued that transport and hospitality facilities were used only to supply the basic needs of these visitors; therefore, this group formed a sharp contrast with the hospitality-concentration group. The student profile was prominent in Group III, and most individuals in this group were under 20 years old. Most of them were low income and were inclined to be price sensitive. Their trajectories in the park revealed an intense ambition to concentrate on attractions, and they were the least interested in using other facilities. They might be tempted to save time by not using other facilities or avoiding unnecessary spending.

Table 4. Travel sequences for three groups

Travel sequence of Group I (Comprehensive Pattern)	AATAAATHHTAHT AATTAATHTHHTT AATHAATHHTAHT AAAAAATHTHATT AAATAATHHTHHT AAHAATHTHATT
Travel sequence of Group II (Hospitality-Concentration Pattern)	HHAHHHAHHHHA HAHHHTAHHHTA HTAHHHAHHHHA HHHHHTAHHHHA HAHHHAHHHTA HTAHHHTHAHHHHA
Travel sequence of Group III (Attraction-Concentration Pattern)	TAATAAHAAAHT TAATAAHAAAATT

Table 5 Demographics of three group

Socio-demographics	Frequency			Percentage			
	G I	G II	G III	G I	G II	G III	
Gender	Male	53	61	28	37.3%	43.0%	19.7%
	Female	70	87	46	34.5%	42.9%	22.7%
Age	16-20	34	42	26	33.3%	41.2%	25.5%
	21-30	30	44	16	33.3%	48.9%	17.8%
	31-40	44	44	17	41.9%	41.9%	16.2%
	41-50	10	11	9	33.3%	36.7%	30.0%
	51-60	2	4	2	25.0%	50.0%	25.0%
	61-70	2	1	0	66.7%	33.3%	0.0%
	70+	0	1	1	0.0%	50.0%	50.0%

	Primary	5	7	5	29.4%	41.2%	29.4%
	Junior	3	9	9	14.3%	42.9%	42.9%
	High school	35	31	15	43.2%	38.3%	18.5%
	Vocational school	17	27	9	32.1%	50.9%	17.0%
	BA	48	55	26	37.2%	42.6%	20.2%
	MA	8	11	3	36.4%	50.0%	13.6%
Education	PhD	3	3	0	50.0%	50.0%	0.0%
	Student	45	55	33	33.8%	41.4%	24.8%
	Teacher	12	15	5	37.5%	46.9%	15.6%
	Blue-collar	3	6	3	25.0%	50.0%	25.0%
	Farmer	0	1	0	0.0%	100.0%	0.0%
	Civil servant	6	6	7	31.6%	31.6%	36.8%
	Retired	1	3	0	25.0%	75.0%	0.0%
	Businessman	9	10	6	36.0%	40.0%	24.0%
	Technician	9	9	2	45.0%	45.0%	10.0%
	Enterprise staff	21	21	10	40.4%	40.4%	19.2%
	Unemployed	2	3	1	33.3%	50.0%	16.7%
Profession	Else	12	17	4	36.4%	51.5%	12.1%
	1K-	53	60	38	35.1%	39.7%	25.2%
	1K-3K	8	10	7	32.0%	40.0%	28.0%
	3K-5K	14	23	14	27.5%	45.1%	27.5%
	5K-7K	15	19	3	40.5%	51.4%	8.1%
	7K-10K	10	10	4	41.7%	41.7%	16.7%
	10K-20K	11	9	3	47.8%	39.1%	13.0%
Monthly income (HKD)	20K+	8	10	1	42.1%	52.6%	5.3%
	HK	30	29	10	43.5%	42.0%	14.5%
	Mainland China	68	84	46	34.3%	42.4%	23.2%
	Foreign	11	20	8	28.9%	50.0%	21.1%
Nationality	Macau or Taiwan	3	2	2	42.8%	28.6%	28.6%
	First	47	67	28	33.1%	47.2%	19.7%
First time to OPHK	Repeat	26	24	16	39.4%	36.4%	24.2%

### *Relationship between behavioural pattern and satisfaction*

To explore the satisfaction/dissatisfaction levels of the three behaviour groups and possible reasons for their responses, the questionnaires provide insight. An ANOVA was employed to compare the mean differences in the satisfaction and dissatisfaction factors, as shown in Tables 6 and 7.

In terms of the satisfaction factors, only one factor, 'Reasonable layout', was revealed to be significant among the three groups ( $F = 5.397$ ,  $p = 0.005$ ). Thirty-two percent of Group I, the 'Comprehensive Visitors', believed that a reasonable park layout contributed significantly to their satisfaction. They participated in or viewed a

substantially wider range of attractions and facilities. Hence, they developed a better sense of park layout than the other groups. Fourteen percent of Group II, the Hospitality-Concentration visitors, and 19% of Group III, the Attraction-Concentration visitors, regarded 'Reasonable layout' as a significant source of satisfaction; both of these percentages were less than that of Group I. This finding might be due to these two groups' relatively narrow contact with either attractions or facilities. As such, these two groups of visitors failed to develop an overall understanding of the park layout. Apart from a reasonable layout, other factors were not observed as significant; the latter included distinctive themes, the diversity of the facilities, interesting activities, a reasonable price, personal emotions and friendly service.

Significant dissatisfaction factors among the three groups were concentrated in three areas: 'Too many visitors', 'Outdated facilities' and 'Long waiting times' (Table 7). Fifty-three percent of Group II, the Hospitality-Concentration visitors, considered 'Too many visitors' as an important issue. The outdated facilities factor was observed to be relatively low for all three groups ( $F = 3.199$ ,  $p = 0.042$ ). Fourteen percent of Group I believed that the facilities in the park were outdated and impaired their satisfaction. This response could probably be explained by their high engagement compared with that of other groups, with attractions, hospitality and transport facilities and their better awareness of their overall condition. The dissatisfaction level of long waiting has received high recognition, with all three groups scoring over 50%. Seventy-two percent of Group III thought this factor contributed to their dissatisfaction. This finding may be because this group of visitors spent most of their time on attractions, which were the main areas that produced most of the crowds. Although priority access was available, the utilisation of the service was rather sparse. Other factors were insignificant among the groups; these factors included poor sanitation, poor service and an uninteresting design of activities or expensiveness.

Table 6. ANOVA on satisfaction among three groups

Satisfaction Scale based on Service Quality	Explicit reasons	Mean			Std.Dev.			F	Sig.
		G I	G II	G III	G I	G II	G III		
Service Product	A1-Sharp theme	0.5	0.5	0.43	0.502	0.502	0.525	0.478	0.62
	A2-Facilities variety	0.57	0.58	0.5	0.497	0.494	0.503	0.755	0.472
	<b>A3-Reasonable layout</b>	<b>0.32</b>	<b>0.14</b>	<b>0.19</b>	<b>0.468</b>	<b>0.354</b>	<b>0.391</b>	<b>5.397</b>	<b>0.005</b>
Service Delivery	B1-Interesting activities	0.37	0.34	0.3	0.484	0.477	0.462	0.445	0.641
	B2-Friendly service	0.28	0.25	0.26	0.451	0.432	0.443	0.088	0.915
	B3-Personal emotion	0.2	0.15	0.12	0.402	0.357	0.327	0.217	0.805
Price Element	C1-Reasonable price	0.14	0.1	0.07	0.353	0.305	0.25	1.263	0.284

Table 7. ANOVA on dissatisfaction factors among three groups

Dissatisfaction Scale based on Service Quality	Explicit reasons	Mean			Std.Dev.			F	Sig.
		G I	G II	G III	G I	G II	G III		
Service Product	A1-Poor sanitation	0.02	0.03	0.03	0.154	0.177	0.161	0.083	0.92
	A2-Uninteresting activities	0.03	0.05	0.08	0.177	0.221	0.271	1.088	0.338
	<b>A3-Outdated facilities</b>	<b>0.14</b>	<b>0.07</b>	<b>0.03</b>	<b>0.197</b>	<b>0.159</b>	<b>0.161</b>	<b>2.786</b>	<b>0.063</b>
Service Delivery	B1-Bad service	0.06	0.03	0.03	0.231	0.177	0.162	0.725	0.485
	<b>B2-Too many visitors</b>	<b>0.4</b>	<b>0.53</b>	<b>0.31</b>	<b>0.502</b>	<b>0.501</b>	<b>0.495</b>	<b>3.199</b>	<b>0.042</b>
	<b>B3-Long waits</b>	<b>0.49</b>	<b>0.59</b>	<b>0.72</b>	<b>0.502</b>	<b>0.493</b>	<b>0.45</b>	<b>5.55</b>	<b>0.004</b>
Price Element	C1-High price	0.22	0.22	0.13	0.419	0.419	0.342	1.499	0.225

## DISCUSSIONS

The present study shows that the visitors' different levels of engagement with the mundane and the extraordinary can create three spatiotemporal patterns, indicating the different values that a mundane experience can provide. The most important group among the three patterns is Group II (Hospitality Concentration). Research shows that the members of this group spend the longest time and use mundane facilities most intensely. As this group has the largest concentration of foreign visitors, the mundane is important to this group of people. This is consistent with the existing literature revealing that visitors with little knowledge of the local area tend to first attend to the mundane because these activities appear familiar to them (Larsen, 2008) and offer a comfort zone (Pearce *et al.*, 2015). Consuming the mundane is the visitors' stepping stones that help them build the confidence of stepping into 'the different' (Edensor, 2007). Furthermore, the social benefits from interacting with their travel companions and associated with experiencing the mundane further enhance the pursuit of comfort and familiarity (Larsen, 2008). In contrast, for Group III (Attraction Concentration), the experience of the mundane is minimal or is almost ignored (Quan and Wang, 2004). For Group I (Comprehensive), the experience of the mundane interacts with the extraordinary and spreads throughout spatiotemporal patterns but is focused in the afternoon. As such, the mundane primarily fulfils the visitors' pursuit for functionality and provides them the opportunity to take a break before taking on more extraordinary experiences. This represents the concept of 'cooperative co-production' (Torres *et al.*, 2018), in which a co-created experience with the mundane, in this context, does not require creative processes or result in a radical transformation of the servicescape.

As evidenced by the present study, the impact of the mundane blending with other experiences is threefold: spontaneous, routine and interruptive. The mundane permeates all spatiotemporal patterns (despite in some cases being rather brief) and is consumed spontaneously whenever such opportunities as well as needs arise. Furthermore, the use of hospitality facilities can be routinised, as shown in concentrated periods around lunch, late afternoon and times before park closure. Consequently, experiencing the mundane can be interruptive or even an intervention in the visitors' spatiotemporal patterns. For example, taking transport to the other side of the park brings an additional intervention. Likely due to 'the farther the better' mentality, visitors are encouraged to take transport to the other side of the park early to avoid missing anything.

The level of engagement with the mundane contributes to the visitors' overall spatial knowledge (Larsen, 2008) and makes them consequently more aware of their satisfying and dissatisfying experiences in the park. Group I travelled most intensively throughout the park and was more responsive to the question on the 'reasonable layout of the park' and the problem with 'too many visitors'. To conclude, the mundane is a major factor in value creation, and it is these different values that create three different experiences.

## CONCLUSION

Based on the literature regarding the mundane and the extraordinary, through the lens of the tourists' spatiotemporal behaviour, this study aimed to understand the value of the mundane in visitor experience. It has answered the following questions: How do visitors engage with the different levels of the mundane and the extraordinary? How and to what extent is the mundane reflected in the sequence of the visitors' trajectories? Are there any aggregated spatiotemporal patterns generated that are based on the behavioural sequence? How do the identified spatiotemporal patterns affect satisfaction and dissatisfaction? This study contributes to the following aspects of knowledge.

First, the present study adds the value of the mundane to the visitor experience literature. Based on the time, sequence and frequency of occurrence of the mundane in visitor behaviour, three groups of visitors are identified: visitors concentrating on hospitality facilities; visitors concentrating on attractions; and visitors concentrating on a combination of both. The mundane provides the value of functionality, comfort and familiarity. These values can progress from serving the most basic needs to providing a familiar and even a peak experience. These are in line with the existing propositions and observations (Edensor, 2007; Giddens, 1984; Ji *et al.*, 2018; Larsen, 2008; Pearce *et al.*, 2015; Quan and Wang, 2004). The present study advances that the mundane (as shown by supporting experience) not only permeates all trajectories but also comprises a significant length of time, i.e., 26% of the total visit time. Furthermore, the mundane is routinised but can be interruptive and intervening in the visitors' spatiotemporal patterns. Second, the present study enriches the growing literature on theme parks by being the first to investigate the sequence in visitor trajectories and the associated, aggregated patterns. Furthermore, with only countable exceptions such as Birenboim *et al.* (2013), who nonetheless embarked on a different research agenda, note that this area of research has focused on the attractions or the 'peak' experience (Bigné *et al.*, 2005; Brown *et al.*, 2013; Chang and Pang, 2017; Erb and Ong, 2017; Johns and Gyimothy, 2002; Jung *et al.*, 2015; Kao *et al.*, 2008; Ong and Jin, 2017; Pikkemaat and Schuckert, 2007; Zhang *et al.*, 2017; Zhang *et al.*, 2017). Third, the present study is the first to apply GPS to the research on the mundane and the extraordinary. GPS data make it possible to identify the spatial-temporal use and distribution and consequently to formulate different behavioural patterns (Shoval, 2018; Shoval and Isaacson, 2007a).

From a practical perspective, management may need to pay attention to the following aspects. First, management needs to be convinced of the value of the mundane (specifically hospitality facilities and transport). The mundane not only contributes to park revenues but also supports the visitors' engagement with the extraordinary. The management could provide vouchers for the hospitality facilities to encourage visitors to have a break or to restore familiarity and comfort, alleviating the otherness visitors may encounter. Furthermore, the mundane also offers opportunities



to create new experiences. Management, for instance, could thematize park areas by utilising different engagements with the mundane. Hospitality facilities should also be in good condition throughout the park.

Second, the detailed time use of the mundane and the extraordinary enable management to better manage crowds and staffing. For example, relatively conspicuous busy and less busy times were found for transport, whereas hospitality facilities tended to be consistently busy. The two hours before the park's closing time merit special attention. The visitors' anxiety regarding leaving the park on time and the business opportunity for last-minute shopping could be explored. Equally identified was a time lag in the starting use of the attractions, hospitality facilities and transport. The initial delay in using transport could significantly alter the time use of attractions on the far side of the park. However, the spontaneous, routine and interruptive nature of utilizing mundane facilities can impose a limit on the potential to alter visitor behaviour.

Third, management needs to recognize the connection between the visitors' spatial awareness resulting from spatial engagement of the park and their (dis)satisfaction factors. The visitors' evaluation tends to focus on that with which they have engaged. The more spatial awareness is developed, the more locations and related facilities can be evaluated.

This research is limited in that data were collected within the period of a week in a rather busy season for Hong Kong tourism. Therefore, inferring the results to a less busy period was impossible. The GPS behaviour data were collected in 2014, but there have been some subsequent Ocean Park HK events, such as the opening of the Marriot Hotel. The following study with updated data might be valuable for understanding the visitors' spatiotemporal behaviour. The method used to identify the utilisation of different facilities is based on an overlay of GPS plotting points on the facility buffers. The buffering areas are radii set by empirical judgement rather than representations of the actual facility boundaries. This method might be improved in the future via new data sources (CCTV, WiFi, etc.) or through a spatial joint module applied in multi-floor situations.

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