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**FROM GREENWAY TO SUSTAINABLE TOURISM:  
EXPERIENTIAL LEARNING**

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**PhD**

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School of Hotel and Tourism Management

**From Greenway to Sustainable Tourism:  
Experiential Learning**

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A thesis submitted in partial fulfilment of the requirements for the degree of  
Doctor of Philosophy

July 2019

## **CERTIFICATE OF ORIGINALITY**

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**Shiqin (Shirley) Zhang**



## ABSTRACT

Tourism is becoming a lifestyle leisure worldwide. The sustainable tourism was challenged on mass basis, in urban areas and by visitors' initiatives. This study adopted an experiential learning epistemology to explore the potential of greenway experience to promote sustainable tourism so as to address those challenges. A two-step empirical investigation including on-site and follow-up interviews was then conducted to explore the overtime interactions between visitors and greenways, as well as the visitors' afterwards behavioral changes. Besides, photography techniques were employed to reveal the underlying value exchanges of greenway visitors. Thematic analysis, semiotic analysis regarding photos, and the system dynamic analysis were used to answer the four specific research questions: (1) what is the main experience for visitors on greenways? (2) How do visitors conceptualize the experience of greenways? (3) How does the greenway experience change their behavioral patterns? (4) How could greenway tourism promote sustainable tourism systematically?

The experience on greenways is identified as a process to achieve existential authenticity through self-immersed activities, existential feelings and optimistic emotions. People enjoyed themselves and concerned their connections with the outside world so as to strengthen the human-environment affinity. Overall, greenway experience lies between traditional mass tourism and daily leisure.

Over the authentic greenway experience, people conceptualized their appreciations of the holistic environment and their concerns with the living environment into social, self-concept and environmental aspects. Specifically, people constructed new lifestyle visions through greenway experience, including work-life balance, bucolic living environment, physical and psychological health, and slow tourism. Moreover, visitors experienced longitudinal and recursive exchanges of environmental values, beliefs and norms over repeated greenway visits.

A series of behavioral changes in self, travel patterns and human-environmental interactions upon greenway experience were identified both on greenways and in daily life. Based upon the identifications of human nature and possible constraints, three logics for pro-environmental behaviors on greenways were concluded as appreciation logic, needs logic and environmental logic. Most importantly, the system dynamic model of people's pro-environmental

behavioral changes in daily life was constructed. People changed to be eco-friendly through three experiential learning feedback loops: repetitive learning to strengthen the learning effects, pseudo learning with environmental concern changes at conscious level, and silent transformations based on environment awareness improvement at the unconscious level.

Finally, a systematic model with five positive feedbacks was constructed to illustrate the systematic changes from greenway experience to sustainable tourism. Visitors learnt the human-based land ethic, the individual-based public access, the home-based ecology literacy, the place-based human ecology, and the travel-based green economy through repeated and self-immersed greenway experience to promoted value-based sustainable tourism.

This exploratory study resides in but is not limited to China's context. It sheds light on the visitor education from an experiential learning perspective and systematic changes from greenway experience towards sustainable tourism. Substantial theoretical contributions and practical implications were discussed regarding related topics. Creative methods like photography and system dynamic analysis were introduced. In addition, abundant theoretical propositions were proposed for further numeric verifications.

Keywords: greenway experience; sustainable tourism; experiential learning; visitor education; systematic value changes; behavioral changes

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## Chapter 1 Introduction

### 1.1 Chapter introduction

This chapter proposes and justifies the research question based on the theoretical and practical background described. It also specifies research objectives based on the problem statement. In addition, the theoretical and practical significance of this study is addressed, along with its structure.

### 1.2 Background

#### *The growth of urban trips: Travel pattern changes and challenges*

World travel figures show the constant increase of urban trips, which implies the travel pattern changes and imposes challenges to sustainable tourism, particularly in urban areas. Urban trip means the travel motivated by the enjoyment of a city atmosphere, shopping, dining out, sightseeing, and visiting cultural attractions. It had grown four times between 2007 and 2017 (ITB, 2019)<sup>1</sup>. This growth trend continued in 2018, making urban trips the fastest growing segment of the market (ITB, 2019). Notably, this rapid growth is not restricted to mature markets, such as Europe and North America, but is also evident in emerging markets, such as the Asia-Pacific area, where urban trips accounted for about 25% of all holiday trips in 2014 (ITB, 2015). This trend demonstrates the globally growing need for lifestyle leisure activities rather than only extraordinary spots, and it implies a need for changes to the tourist product supply (Lee, Jan, & Huang, 2015; Wu & Chen, 2016). Moreover, it challenges the potential for alternative tourism markets (e.g., nature-based tourism, eco-tourism, and rural tourism) to promote sustainability, especially in urban areas (Keith, 2016). The dynamic and complex urban environment and fragmented tourism resources have resulted in the long-standing omission of urban areas from the discussion around sustainable tourism despite their great importance (Hinch, 1998). With the growth in urban trips, the significant role of urban areas in promoting sustainable tourism must be appreciated. In line with Clarke's (1997) framework, mass tourism like urban trips, is increasingly found to be an important aspect of sustainable tourism rather than its opposite (Maxim, 2016).

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<sup>1</sup> The Internationale Tourismus-Börse Berlin (ITB) is the world's largest tourism trade fair.

China, which ranked first in the outbound tourism market (140 million) in 2018, contributing 5.68 billion tourists in total, is undoubtedly the major driving force for changes in travel patterns in Asia and even in the world as a whole (China Tourism Academy, 2017). *The 2015/2016 Annual China Tourism Report* argued that China is stepping into the popular leisure tourism stage, with travel becoming part of the public's lifestyle (China Tourism Academy, 2016). "*The Thirteenth Five-year Tourism Development Planning*," announced on December 7, 2016, stresses this trend as well (State Council, 2016b). Given the change in travel patterns, the state government proposed the concept of "*Comprehensive Tourism*" (*Quan Yu Lv You*) and a series of corresponding product development strategies. For instance, "*Tourism Urbanization*," which refers to constructing a number of tourism towns to generate regional destinations for urban trips, has largely been promoted. As the plan points out, the success of this strategy relies on construction of urban greenways, cycling parks, and slow systems to expand and connect urban leisure spaces (State Council, 2016b). Completing the greenway system was a key point to improve the urban tourism services and was addressed with a five-year goal of setting up 20 interregional greenways of up to 5,000 km in total. Furthermore, national tourism cities would each have at least one cycling route. The plan illustrated the importance of greenway construction and development not only for connections but also as tourism product in itself (State Council, 2016b). Clearly, the state government intends to promote a nationwide tourism pattern based on greenway networks to meet the constantly growing needs for urban trips and sustainability. With many greenways constructed in recent years, the era of greenway tourism<sup>2</sup>, defined as trips along greenway network mainly for recreation, is underway in China (Liu, Siu, Gong, Gao, & Lu, 2016; Wu & Xie, 2012).

### ***Greenway tourism: A potential sustainable approach***

The modern concept of a greenway in China was imported from the West in the last decade (Jongman & Pungetti, 2004). However, green open spaces have been planned and designed as strategies for landscape ecology and urban sprawl control in developed

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<sup>2</sup> Greenway tourism is also referred to as greenway travel (greenway visits) in later discussions to differentiate from traditional mass tourism. Thus, greenway travel and greenway tourism have the same meanings in this study.

countries for about one and half centuries. Greenways were initially proposed early in the 19<sup>th</sup> century to tackle the spatial alienation and fragmentation resulting from modernization and urbanization (Foucault, 1986; Harvey, 1989; Lefebvre, 1991). Specifically, the landscaped axes and boulevards in Europe and the parkway systems in the US were the early greenways weaving their way through cities (Searns, 1995) to emphasize two primary functions: protection and connection (Hellmund & Smith, 2013). By linking isolated natural patches, cultural sites, and parks, the greenways were assumed to achieve a sustainable balance between nature conservation and urban growth (Fabos, 1995; Mundet & Coenders, 2010). Substantial positive effects, such as improving the urban ecological environment, protecting cultural heritage, and providing recreational opportunities (Imam, 2006) have been addressed and facilitated the greenway construction boom worldwide since the 1990s (Huang, 2011). Greenway networks were regarded as a comprehensive and sustainable strategy for urban land use (Conine, Xiang, Young, & Whitley, 2004; Rouse & Bunster-Ossa, 2013).

The meaning and functionality of greenways have expanded from protection to tourism over the past decades. The Olmsted's park system (i.e., Boston's Emerald Necklace), which is arguably the original greenway, was primarily designed in 1867 for recreational use (Fabos & Ryan, 2004). Indeed, it serves a range of leisure activities, such as walking, bicycling, jogging, and cross-country skiing (Gobster, 1995). Moreover, practices in Western countries demonstrate the great tourism potential of greenways for cities and communities with collections of natural and cultural resources (Deenihan, Caulfield, & O'Dwyer, 2013). The East Coast Greenway of the US, which stretches approximately 4,500 kilometers and connects important states, university campuses, national parks, and historic and cultural sites across 15 states, 23 cities, and 122 towns, at a total cost of about \$300 million, was estimated to bring in \$16.6 billion in tourist income for the states along the greenway (Li, 2011). However, the public refocused on the tourism function of greenways only in the last decade owing to the growth of urban trips (Chancellor, Norman, Farmer, & Coe, 2011). Greenway tourism, which includes different types of leisure activities within greenway networks, such as cycling tours (Liu, 2011), is becoming increasingly popular (Guo, 2012b; McGehee et al., 2013). Moreover, greenway

tourism is theoretically argued as an ideal sustainable tourism approach (Chancellor et al., 2011; Mundet & Coenders, 2010).

The potential for sustainability in greenway tourism has been noted and discussed from different perspectives. First, as “a route which is good from an environmental point of view” (Turner, 1995, p. 269), greenways are important not only for urban development and landscape ecology but also for the migration of animals (Bryant, 2006). Socio-cultural scholars have considered the high frequency of greenways in Western countries and have found that greenways are actually public products that promote community interaction and healthy lifestyles (Hellmund & Smith, 2013). Psychologists argue that greenways can simultaneously protect national cultural heritages through well-organized scenic routes and provoke patriotism and express their values to the users (Bischoff, 1995; George, Ottignon, & Goldstein, 2015). Additionally, greenway networks, as slow systems, can satisfy visitors’ recreation and leisure needs without temporal and spatial barriers (Mundet & Coenders, 2010; Peterson, Gyllin, Haaland, & Larsson, 2010). Moreover, greenways, separated from motorized paths, are seen as promoting eco-friendly transportation patterns (Lumsdon, 2000; Miller, Merrilees, & Coghlan, 2014). Although the literature has implied that greenway provides a potential for sustainable tourism from different perspectives, however, few studies have comprehensively explored the actual effects of greenway development on sustainable tourism (McGehee et al., 2013).

### ***Practices in China: Theoretical and practical gaps***

China has witnessed a boom of greenway construction over the last decade. In 2010, *Pearl River Delta Regional Greenway Network Planning* in Guangdong province initiated the greenway movement in China (Zhang, 2008; Zhu, 2013), followed by many programs in other areas, such as Shanghai, Jiangsu, Zhejiang, and Shandong. By 2019, Guangzhou had set up greenways spanning 18,019 km in total. Shanghai also achieved its goal of 670 km of greenways, and will extend it to 1,000 km by 2020 (Ping & Wu, 2013). Although enjoying the same construction boom as in the West, greenway practices in China have a distinct theoretical base that emphasized the tourism function rather than landscape ecology from the outset (Chen, Adimo, & Bao, 2009; Wu & Xiao, 2011). For instance, greenway tourism activities, such as the “happy greenway tour,” “Pearl River Delta greenway bicycling,” greenway walking in Shenzhen, and the first greenway bicycling charity in



Zhuhai, were vigorously promoted (Feng, 2012). Moreover, greenway routes were largely promoted and constructed as practices for the “transport + tourism” approach in Guizhou, Neimenggu, and Wuhan (Cheyoutianxia, 2017). Whether this tourism-oriented greenway construction will realize its sustainable potential in China is up for debate.

A few studies have identified the benefits of greenway construction in polishing urban images and promoting tourism-related industries (Liu et al., 2016; Liu, Wang, & Wu, 2015; Sun & Chai, 2013; Zhao & Pan, 2013; Zheng & Jiang, 2014). For example, greenways in Guangzhou not only brought the city the international Sustainable Transportation Prize, China Residential Environmental Model Prize, and National Fitness Walkway Demonstration Project but also attracted many local and non-local visitors coming for recreation activities (Wu & Xie, 2012). Specifically, “more than 30,000 visitors took trips to “farmhouses” monthly in 2011 along the 71 km greenways, resulting in tourism revenue increase by 128% for Zengcheng, an area in Guangzhou” (Wu & Xu, 2013, p. 368). However, as time passed, the use and management of greenways received mixed feedback. On the one hand, the usage frequency of greenway facilities was relatively low. It was reported that the number of visitors travelling to Zengcheng’s greenways decreased by 30% in 2013 (Wu, 2014b). On the other hand, some visitors gathered on the greenways to gamble (Wu & Xie, 2012) and set up informal business stalls, exerting negative impacts on the leisure environment (Wu, 2014b; Wu & Xu, 2013; Zheng & Jiang, 2014). Given the growing passion for greenway planning and construction in China, the actual effects of greenways for promoting urban trips and sustainable tourism merit comprehensive, longitudinal attention (Mundet & Coenders, 2010).

### ***Greenway visitors<sup>3</sup>: Absence in literature and weak awareness***

In a broader sense, sustainability refers to a special pattern of resource use based on the definition (Bramwell, 2015) “to meet the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 43). Thus, the implementation of sustainable tourism largely depends on the users of resources and their behaviors and awareness (Gossling, Scott, Hall, Ceron, & Dubois, 2012; Juvan &

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<sup>3</sup> In this study, the words “visitor,” “user,” and “tourist” are not used interchangeably. “Users” are people on greenways in general. “Tourists” are those who stay away from home for 24 or more hours, as is the common definition. “Visitors” include those taking both day and overnight trips, which include tourists.

Dolnicar, 2014). As Weeden (2014) pointed out, “being a tourist remains the domain of an individual’s free choice” (p.17). In other words, the complex and multi-faceted nature of human beings is the ultimate challenge in sustainable tourism. Although greenways have been extensively promoted as an approach for sustainable tourism, previous greenway research has mainly dealt with ecological planning issues (Seydewitz Munizaga, 2016), with little investigation of visitors (Hellmund & Smith, 2013). Some early studies discuss the expectations of governments, planners and landowners to build simple links between people and greenways (Bischoff, 1995; Burel & Baudry, 1995). Till 2004, increasing studies focus on the perception and facility usage of visitors on greenways in Western countries (Zhou, Yu, & Huang, 2006). Nevertheless, the discussion still took the planners’ rather than users’ perspective (George et al., 2015). Furthermore, although greenways were constructed for tourism purposes, academics in China followed Western theory and experience (Cai, 2013) rather than visitors’ perspectives regarding the implementation of sustainable greenway tourism (Liang & Liu, 2012), partly because of the late start of the practice in China.

Additionally, over the last decade, visitors’ unfriendly behaviors in China have been criticized not only on greenways but also all over the world (Weaver, 2012). Weak public awareness and human-oriented environmental values are noted as the main causes for criticism (Weeden, 2014). As Callicott (1987, p. 158) argues, “historically, many more of our conservation and preservation decisions have been motivated by beauty rather than by duty” (cited from Schrader, 1995, p. 388). To change public attitudes toward the environment and facilitate the responsible behavior of individuals requires a continuous exchange of value systems between people and all aspects of the environment (Hellmund & Smith, 2013; Kurdoglu, Yalcinalp, & Var, 2010). Considering greenways as vehicles for “education” and “expression” (Bischoff, 1995), one of the most noteworthy goals of greenways in China was arousing individuals’ awareness of sustainability and promoting eco-friendly lifestyles (Cheng, Lv, Zhan, Su, & Cao, 2015; Jim & Shan, 2013; Zhao & Pan, 2013). However, whether the visitor education goal of greenway development can be achieved to support sustainable tourism is still under examination (George et al., 2015).

### ***Visitor education: Experiential learning and lifestyle changes***

Educational programs provided by nature-based destinations and museum-like organizations have increased over the last decade (Frost, 2011), but little progress has been made in achieving sustainability for society in general (Miller et al., 2014; Wu & Chen, 2016). A vast amount of academic research and scholars' reflections point to three main reasons. The first is the limited ability of niche markets to guide the industry as a whole (Hall & Lew, 1998b; Mundet & Coenders, 2010). The second is the low efficiency of knowledge transfer programs. As Hellmund and Smith (2013, p. XII) highlight, "sophisticated techniques and scientific understanding are only meaningful with serious regards for values, ethics, and matters of the heart." Thus, education in terms of awareness and subjective experiences makes more sense than that in terms of knowledge; this notion is simply the epistemological base of experiential learning theory. This epistemology challenged the traditional behavioral and cognitive learning theories that built on a rational, idealist epistemology (Kolb, 1984). Experiential learning theory, as the intellectual work of Dewey, Lewin, and Piaget, was originally suggested as a holistic perspective on learning that integrated experience, perception, cognition, value, and behavior (Beard & Wilson, 2013; Kolb & Kolb, 2012; Kolb, 1984). In this regard, learning that could be built into values and actual behaviors were created through the transformation of experience, whereas the literature on visitor education largely lacks such a basic model for obtaining fruitful insights.

The third reason is the instantaneity of educational effects owing to the liminality of tourism (Dann & Cohen, 1991), particularly in terms of educational activities within unusual contexts. Greenways, however, bring nature close to home and provide visitors with lifestyle experience and, thus, insert pro-environmental values into visitors' daily lives rather than providing them at special sites or others' spaces (Goh, Ritchie, & Wang, 2017; Hellmund & Smith, 2013). The regulated and legitimized human uses of the landscapes on greenways may motivate people to rethink the relationships between human and nature (Jongman, Külvik, & Kristiansen, 2004). For instance, eight percent of visitors on Guangzhou greenways had purposes of "criticizing" and "leading" (Jim & Shan, 2013). They chose greenway activities to promote the low-carbon concept, criticize the behavior of uncontrolled carbon emissions, and lead more environmentally sound lifestyles (Chen,

Song, Li, & Li, 2012), demonstrating the potential of greenway tourism for solving the problems of natural and social fragmentation and approaching sustainability in a more systematic and holistic way (Juvan & Dolnicar, 2016; Lee et al., 2015; McGehee et al., 2013; Mundet & Coenders, 2010; Wu & Chen, 2016). However, in-depth empirical investigations regarding this great theoretical potential are missing from the literature.

### **1.3 Problem statement**

As discussed above, three main research gaps or trends can be identified. First, sustainable tourism should focus more on mass markets. When mass tourism was criticized for its associated large negative economic and socio-cultural impacts (Waitt, 2003), “sustainable tourism” was initially proposed as an alternative (Wheeller, 1993). The past decades not only saw the limitation of these alternatives in promoting sustainability owing to their inabilities to alter the industry as a whole but also shattered the myth of alternative tourism as “small is beautiful” (Hardy, Beeton, & Pearson, 2002) because niche tourism markets eventually grew larger, resulting in negative impacts (Hardy & Beeton, 2001). The recognition that all tourism should be sustainable may be an unachievable ideal in theory, but it demonstrates that the sustainability of mass tourism at least tends to be more meaningful for the whole industry. With regards to the growth of urban trips, including day tours and weekend travels, greenways were identified as a promising opportunity to meet the travel pattern changes in bulk and entailed great potential for sustainable tourism development worldwide (Guo, 2012b; Hellmund & Smith, 2013; Willard & Beeton, 2012). However, the mechanisms to achieve the potential require further examination.

The second gap to be addressed is the necessity of shifting the research focus from ecological issues to social aspects of greenways. Although studies have addressed multiple values underpinning greenway development from the outset, most studies center on greenway planning in both Western countries and China (Conine et al., 2004; Toccolini, Fumagalli, & Senes, 2006). The need for a “critical turn” in sustainable tourism (Ho, Liao, Huang, & Chen, 2015; Mundet & Coenders, 2010) is also applicable for greenway research (Bramwell & Lane, 2014). In other words, sociological examinations are required. For one thing, the sustainability of tourism relies on the whole society’s value system, which is comprised of individuals’ values (Bramwell & Lane, 2005; Liburd & Edwards, 2010; Weaver & Jin, 2016). For another thing, human society is not simply the main driver of

environmental change but is also an organism that can reflect on its own behaviors related to the environment (Hellmund & Smith, 2013). Thus, the sustainable potential of greenway tourism relies on its “education” and “expression” functions to influence visitors’ attitudes toward nature and further the social-ecological relationship (Bischoff, 1995; Pippi, 2014; Rigolon, 2013). Although the focus seems to have shifted from nature to users since 2004, greenway studies mainly focus on the satisfaction and usage of visitors based on statistics (Dorwart, 2015; Price, Reed, & Muthukrishnan, 2012; West & Shores, 2015; Yang & Liu, 2012). At present, a comprehensive and in-depth understanding of the interaction between humans and the greenway environment is rather limited (Hellmund & Smith, 2013; Manton, Hynes, & Clifford, 2016).

Third, previous visitor education efforts have mostly been made based on museum-like or nature-based tourism activities, which required visitors to leave their usual environments (Leinhardt, Crowley, & Knutson, 2003; Moscardo, 1998). The low frequency of such activities and the liminality of tourism weaken these educational effects after tourists return home (Frost, 2011; Schultz & Joordens, 2014). On the contrary, greenways bring nature close to people’s homes with better accessibility in daily life (Lindsey, Maraj, & Kuan, 2001; Quayle, 1995), facilitating lifestyle-like day and weekend tours. As both the frequency increases and the liminality decreases, the education function of greenway tourism is supposed to be much more influential than contextual educational programs (MacLeod, 2016). However, if greenways can really have these types of effects, the means to achieve the goal deserve more attention and practical surveys. Furthermore, although the epistemology of the traditional knowledge-based education approach has been challenged by experiential learning theory (Kolb & Kolb, 2012), the adoption of the theory to visitor education has lagged behind its theoretical importance.

Thus, as perspectives shift from alternative tourism to the mass market (urban tourism) and from contextual education to lifestyle changes, the promotion of sustainability within the entire industry though mass visitors’ learning is called for (Miller et al., 2014). Research into the social aspects of greenways based on an experiential learning view should facilitate this goal. Although greenways originated in Western countries (Hellmund & Smith, 2013), this information may be much easier to gather in China because China’s tourism market is at a stage of growth and development. Not only does China’s tourist

market greatly influence the whole world given its large scale, but it is also becoming more mature and pro-environmental. As argued by Lin, Gan, Wei, and Zhang (2012), a lack of environmental awareness is the deeply rooted reason for the undesired use rate of greenways in China, thus providing practical space for change. In addition, previous greenway research in China was mostly based on theoretical hypotheses. Specifically, the resources and data for analysis primarily came from greenway plans rather than from practices owing to their late development (Wang, 2012; Zheng & Jiang, 2014). Updated empirical research on their implementation in the last decade and the Chinese context is currently necessary.

#### **1.4 Research question and objectives**

To bridge these research gaps, the study aims to probe into the interactions between visitors and greenways to interpret the underlying potential to promote sustainable tourism through the greenway experience. In other words, the research question can be framed as understanding **if and how greenways can educate visitors through the greenway experience to promote sustainable tourism**. To interpret the research question, definitions of key terms in this thesis are clarified here:

Greenway tourism is technically defined as trips involving a minimum distance of 40 kilometers from a person's home or a minimum four-hour stay on greenways, involving active or passive participation for holiday, recreation, leisure, and/or competition purposes (Lamont, 2009).

Sustainable tourism in this study is defined as a dynamic tourism development **ethic** that concerns both growth needs of different stakeholders and the continuity of the environment from different perspectives (Zhang & Chan, 2019).

Experiential learning means a holistic perspective on learning that integrated experience, perception, cognition, value, and behavior. In this regard, learning that could be built into values and actual behaviors was created through the transformation of experience (Kolb, 1984).

Notably, this research intends to concern the value changes and hence actual behavioral changes of visitors through greenways experience. However, due to the difficulties in recognizing actual behavioral changes in an objective way, behavioral

changes in the study refer to the self-reported actual behavioral changes of visitors after they return home from greenway trips.

By answering this question, the study intends to meet the following research objectives:

**Objective 1: to examine visitors' greenway experiences, which include both visitors' behaviors and their interactions with the whole environment, in mainland China.**

This study aims to understand visitors' specific greenway experiences, including the actual behavior of visitors to greenways, as well as the interaction process between visitors and the whole environment to better understand the relationships between people and the environment, the difference between people's greenway experiences and traditional tourism, and the role of greenways in their lives. The actual behaviors investigated include visitors' frequency, transport, activities, behaviors, preferred areas, and psychological aspects, such as feeling and impressive things. Interactions with the environment mainly refer to visitors' communications with their partners, other visitors, and local people as well as nature and the facilities. In other words, the detailed experiences of visitors to greenways include visitors' use of greenways and their reactions to the environment in terms of both the physical setting and the social environment.

**Objective 2: to explore the influence of greenways on visitors' values**

This objective involves further examining the mental behaviors of visitors regarding their greenway experiences to understand whether greenway experiences change people's ideas or inner values regarding nature and sustainability. In other words, this study aims to understand whether visitors reflect on themselves and the environment through their interactions and experiences.

**Objective 3: to trace the routes of greenways' educational effects on visitors**

Furthermore, this study intends to follow the changes made by visitors and depict the main logic behind greenways' educational effects. Specifically, the study aims to discover the mechanisms underpinning the relationship between greenway experiences and behavioral changes from an experiential learning perspective. Doing so requires understanding the deep rationales for visitors' behavioral changes after their trips.

#### **Objective 4: to identify the potential for greenways to promote sustainable tourism**

This comprehensive objective involves discussing the relationship between greenway trips and sustainable tourism based on values and behavioral changes driven by the educational effects of greenways. This potential includes systematic changes towards sustainability.

#### **1.5 Significance of the study**

Although greenways have enjoyed a construction boom and a shift in utility in past decades, the research on greenways is limited to planning issues and biological aspects (Sturzaker & Mell, 2016; Wolff-Hughes, Fitzhugh, Bassett, & Cherry, 2014). Despite its focus on China, this study intends to contribute to the literature on greenway tourism by considering the social ecology aspect of greenways. Previous studies have also focused on the urban landscape and planners' perspective, with little attention to users' inner thoughts. Adopting a visitor's perspective, this study looks into the multifunctional nature of greenways and, thus, contributes to the understanding of sustainable tourism from a demand side rather than a supply side view.

Additionally, sustainable tourism relies on massive and systematic changes (Bramwell, Higham, Lane, & Miller, 2017) beyond traditional alternative tourism. As an approach for meeting the growing lifestyle leisure needs at both the community and regional levels, greenway research could contribute to mass sustainable tourism. Moreover, by simultaneously taking values and behavioral changes into account, this study can offer a systematic perspective to sustainable tourism.

Visitor education has been recognized as playing a vital role in sustainable tourism development by promoting systematic change, whereas previous research was limited to knowledge-based interpretations and contextual experiences (Ballantyne & Packer, 2016; Doucette & Cole, 1993; Guo, Smith, Moore, & Schultz, 2017). As an attitude-behavior gap has been identified in pro-environmental behavior, the efficiency of taking a rational and cognitive education approach has been challenged. This study adopts experiential learning theory to contribute to visitor education research by investigating the values that determine actual behavior changes.



Furthermore, in China, the dominant tourism market globally, greenways are undergoing rapid tourism-oriented growth without sufficient empirical investigation (Lu, Yu, & Lu, 2013). By taking China's context into consideration, this study can contribute to research on greenways in developing countries.

Finally, most studies on greenway users have adopted quantitative approaches with macro-level measurements of satisfaction and physical activities. In-depth interpretations and analyses are rare. This study takes a qualitative approach using multiple techniques to explore the underpinning interaction process and generate comprehensive insights.

Practically speaking, this study explores greenway practices in China from a visitor education view, thus providing implications for greenway practices and “transport + tourism” development in China. By identifying the underlying interaction process and the educational potential of greenway visits, from value changes to pro-environmental behaviors, this study can shed light on the meanings of greenways for sustainable tourism in China and offer more global insights regarding sustainable tourism development. Overall, this study is also expected to bridge the gap between theory and practice in terms of sustainable tourism development.

## **1.6 Structure of the thesis**

This thesis includes nine chapters in total. Each chapter has a chapter introduction at the beginning and a chapter summary at the end.

Chapter one, as presented above, proposes and justifies the research question based on the identification of research gaps. The chapter also specifies the research objectives and the significance of this study.

Chapter two provides a literature review for two main purposes. The first is to trace the origins, concepts, research trends, and theoretical bases for the main topics of this thesis. The second is to specify the research questions and construct the overall conceptual framework for this study. The main topics include sustainable development, sustainable tourism, greenway tourism, responsible tourists' behaviors, and visitor education as well as research in China. A theoretical self-reflection is presented after the conceptual model.

Chapter three specifically introduces the research context, which includes the macro context, tourism trends, sustainable tourism development, and greenway movements in China, to better situate the study.

Chapter four describes the methodology for the study. It includes the research design within the research paradigm, research approach, detailed methods and techniques, study cases, data collection, data analysis, and ethical issues of the process.

Chapters five through eight provide findings and discussions related to the four research questions. Chapter five provides the results for question one, describing the visitors' greenway experiences, including their interactions with the environment. Chapter six focuses on question two, reporting the value exchanges between visitors and the greenway environment. Chapter seven addresses question three regarding behavioral changes and the experiential learning process underpinning the changes. Chapter eight targets question four to provide a comprehensive discussion of systematic changes from greenway experiences to sustainable tourism. Discussions regarding the main topics in the literature, including sustainable tourism, greenway travels, experiential learning, the context of China, and systematic and interdisciplinary methods are also included based on the empirical findings.

Chapter nine concludes the thesis starting with an overview of the main findings. Conclusions regarding theoretical and practical contributions and implications for China follow. Additionally, limitations and future research directions are described before the concluding remarks.

## **Chapter 2 Literature Review**

### **2.1 Chapter introduction**

This chapter starts with a brief introduction of the literature on sustainable development, emphasizing its essence and, most importantly, its relationship with tourism. Sustainable tourism is then reviewed, including its evolution and theoretical basis and paradigm shifts in recent research. An overview of studies on greenways and greenway tourism follows. The purpose of this study is to provide an in-depth understanding of the interactions between visitors and greenways in terms of promoting sustainable tourism, and, thus, a review of the literature on responsible tourist behavior is also necessary. After some related theories about visitor education are introduced, a conceptual framework based on experiential learning is constructed to guide and motivate this research.

### **2.2 Sustainable development: A dynamic concept over the century**

*“The challenge of the future is to choose a course that satisfies the market requirements for growth, maintains the natural balance that sustains our economies, and meets the needs and rights of global communities awakening to new dreams of health, prosperity, and peace.” -Jonathan Lash, President, World Resources Institute*

*(Harris, Griffin, & Williams, 2002, p. XV)*

Undoubtedly, sustainable development is a globally popular label or term for a vision of a promising future (Hardy et al., 2002). Interestingly, all fields are passionate in calling for sustainability or using the “sustainability” brand, but they face challenges in defining the concept. Whereas academics and practitioners enjoy the myth of that vision, their increasing efforts to approach the essence of sustainability have advanced incrementally or circularly at best during the past three decades. The concept of sustainability becomes increasingly confused and blurred with broad meanings. However, the idea still has potential and a backward trajectory is required for better understanding.

#### **2.2.1 Context: Economic capitalism to ecological capitalism**

The concept of sustainable development resulted from two societal evolutions: attitudes toward nature and development views. In other words, interplay between the social value system and capitalism facilitated the appearance of this ideal approach.

Historically, people respected and appreciated nature long before modernization's encroachment (Butler, 1991). However, as civilization developed, people's attitudes toward nature have changed from materialism (Pepper, 1996), romantic appreciation, and progressive preservation to the current dominant conservation vision (Hall, 1998; Hardy et al., 2002), as described by Figure 2-1. This process involved increasing environmental awareness and resulted in the official proposition of eco-development, the latest antecedent to sustainable development (Colby & Sagasti, 1992), at the Stockholm Conference on Humans and the Environment in 1972 (Gössling, Hall, & Weaver, 2009; Liburd & Edwards, 2010; Mowforth, 2009).


Vision	Materialism vision	Romantic vision	Preservation vision	Conservation vision
Attitude to nature	Nature is wilderness to be conquered and cultivated so that to acquire its value (Hall, 1998)	Nature is of spiritual values and moral supremacy (Swarbrooke, 1998)	"Wise use" of natural resources for economic rather than aesthetic motives (Marsh, 1965; Worster, 1994)	Recognition of multiple values of nature, such as recreation, spiritual renewal, health, and ecology (Hall, 1992)
Period	Agricultural society	Late 18C - Early 19C	Middle 19C - Late 19C	Late 1920s - 
Relation to sustainable development	A fever for rural idyll (Jefferson, 1861, cited from Hall & Lew, 1998b)	Led to the growing environmental concern (Briassoulis & Straaten, 1992)	The finiteness of natural resources is recognized (Clark & Munn, 1986)	<b>Eco-development</b> was officially illustrated (Van den Bergh, 1996)

Figure 2-1. The evolution of people's attitudes to nature (Source: author)

Economic concern is inherent in the evolution of people's attitudes toward nature (Meadows, Meadows, Randers, & Behrens, 1972), indicating another driving force underpinning sustainable development: the capitalist system (Chancellor et al., 2011; Hall & Lew, 1998b). Sustainable development is also the current end-point of the development view continuum that evolved from anthropocentric and economic growth-based modernization and dependency theory to the neo-classical economic model and more eco-centric and nature-based alternative perspectives (Sharpley, 2000) (Figure 2-2).


Relation to sustainable development	Economic capitalism (Bramwell & Lane, 2014)	Ecological degradation and limits to growth were realized (Meadows, et al. 1972)	Balanced development (Guyette, 1996)	Ecological capitalism and eco-development (Bramwell & Lane, 2013)
Period	Late 18C-Late 19C	Late 1960s-1970s	1980s	Late 1980s - 
Main content	Highlighted economic growth and its potential for all societies to advance to modern mass consumption (Scott, 1995)	Economic models in colonized developing countries to alleviate poverty (Scott, 1995)	Promoted liberal international trade and reduced state intervene (Toye, 1993)	Eco-centric and nature-based development view (van den Bergh, 1996)
Development view	Modernization theory	Dependency theory	Neo-classic economic model	Alternative development

Figure 2-2. The evolution of development perspectives (Source: author)

As can be seen from the two figures, the historical convergence of the conservation attitude toward nature and alternative development view resulted in the concept of sustainable development (Brundtland, 1987). This reflection provides three main insights into some present-day debates. First, sustainable development is the optimal choice on the historical evolution path, and, thus, it cannot simply be regarded as a meaningless marketing label (Steer & Wade-Gery, 1993) but rather has potential for at least the near future. Second, the core of sustainable development can be the integration of growth and continuity. On one hand, sustainable development was proposed with the hope of breaking through growth limits and maintaining continuity to profit from the environment both inter- and intra-generationally. This continuity, on the other hand, relies on the continuity of the natural environment as well as that of the social and cultural environments. Capitalism, rather than environmental conservation, is the “main melody” of this concept. After all, “political reality [or growth reality], rather than ecological reality, has been the order of the day” (Hall, 1998, p. 23). Sustainable development is only a shift from economic to ecological capitalism to maintain continuity (Chancellor et al., 2011). Third, it is not easy to reach a consensus on a balanced or wise use of natural resources, as this use level varies on the social value system, namely, the value placed on continuity and growth (Purvis & Grainger, 2004).

### 2.2.2 What is sustainable development?

Although more than 70 different definitions for sustainable development have been proposed (Sharpley, 2000), the concept is still criticized for being ambiguous (Heinen, 1994). On an ontological basis, there are three main views regarding definitions:

*modernism*, which prefers clear meanings with the essences of concepts, *postmodernism*, which claims that the meanings of concepts vary across contexts, and *nihilism*, which involves no sense of concepts (Lai & Li, 2015). Most previous definitions take a postmodernism view, and some even take a nihilism stance (Cole, 2004). Given the difficulties in implementation with vagueness, a modernism stance is called for but rarely taken.

This study intends to define the concept based on a modernism-based etymological definition technique (Lai & Li, 2015). According to this technique, the semantic source should also be traced to achieve the essence of the concept apart from the aforementioned contextual source. The semantic view is rarely discussed within the large literature on sustainable development, while the definitions in the Oxford Dictionary (2017), which describes sustainable development as a noun referring to “economic development that is conducted without depletion of natural resources,” and at Dictionary.com (2017), which describes it as a phrase meaning “development balancing near-term interests with the protection of the interests of future generations,” are very close to the widely used definition in the Brundtland Report (1987) based on the above contextual etymology (section 2.2.1).

It is the Brundtland Report titled *Our Common Future* that firstly brought the term “sustainable development” into the political arena (Joppe, 1996; Wall, 1997) and defined it as a development process “to meet the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 8). Notably, the key term “needs” is quite broad, resulting in criticism regarding its uncertainty and operation (Hall & Lew, 1998b). Many discussions intended to clarify its extensional and intentional meanings (Butler, 1999; Milne, 1998).

Among many others, arguments on its dynamic nature, defined scope, and scale are the most dominant. Its dynamic nature is undoubtedly true owing to three facts. The first is dynamics over time, embodied as the needs of both the present and future generations. Specifically, it emphasizes intra- and inter-generational equity in access to resources (Bramwell & Lane, 2008). The second fact is the dynamics in needs. According to Maslow’s (1971) hierarchy of needs, people’s needs move to higher levels as lower ones are met. The third fact is the dynamics in the balanced or wise use of resources for

measuring sustainability. Sustainable development is not a single optimum but an ethical proposition to incorporate economic growth and environmental stability. Different societies in different stages of development can lie at different points on the environment-development continuum (Lu & Nepal, 2009). For instance, Hunter (1997) proposed a simplified four-type sustainable development spectrum from very weak sustainability to very strong sustainability. In short, sustainable development can be interpreted distinctly in every society owing to its dynamic nature over these three dimensions.

The *Brundtland Report* did not provide explicit guidelines for implementation owing to the flexibility in scope (Butler, 1998), although it did address less material and more equitable growth to alleviate poverty; maintain ecological capital; improve income justice; enhance the resilience of economic systems; meet the essential needs for jobs, food, energy, sanitation, and water; and ensure a certain quality of life with sustainable population growth (Brundtland, 1987). Sustainable development in this regard not only refers to eco-sustainability, but also includes many other dimensions (Agyeman & Evans, 2004; Bramwell & Lane, 2008). Most research separates sustainability into economic, socio-cultural, and environmental aspects (Elkington, 1997; UNEP & UNWTO, 2005), and some studies add an institutional dimension (Shen, Hughey, & Simmons, 2008; Spangenberg, 2002). Different societies face different scopes of growth and continuity (Lélé, 1991). Nevertheless, the philosophy of sustainable development lies in the juxtaposition of these two separate objectives or processes (Sharpley, 2000).

The final debate relates to scale of geographical context. The *Brundtland Report* (1987) clearly addressed an integrated and holistic standpoint rather than a sectoral view for sustainable development. According to Boulding's notion of "spaceship earth," the earth is a closed system (Boulding, 1966). In this regard, the global environment represents the only complete discrete system (Hall & Lew, 1998a). Thus, the context for defining sustainable development must relate to global environmental ethics and the needs of all people, especially those in poverty, to realize justice and a better quality of life worldwide in the globalized 21<sup>st</sup> century (Mowforth, 2009), just as Jonathan Lash, the president of World Resources Institute, described in the quote at the beginning of this section.

Consequently, sustainable development can be interpreted as a dynamic development ethic that involves both growth and continuity (Figure 2-3). More specifically,

it is a universal development view that incorporates environmental ethics in the development process up to context (Butler, 1998). It is concern-rather than outcome-oriented (Wight, 1998). On one hand, it involves growth to meet all human needs (Brundtland, 1987). On the other hand, it involves continuity, that is, the ideology for futurity (Sharpley, 2000). Moreover, their needs for growth, time frame for continuity, and balanced points vary according to context (Goulet, 1992). For instance, growth has evolved from traditional economic growth to comprehensive societal growth, including quality-of-life improvements for all people, the satisfaction of basic needs, political self-reliance, and endogenous economics (Pearce, Markandya, & Barbier, 1989). Continuity embraces not only physical environmental issues but also issues underpinning the technological, economic, social, and political processes over time (Goodland, 1992).

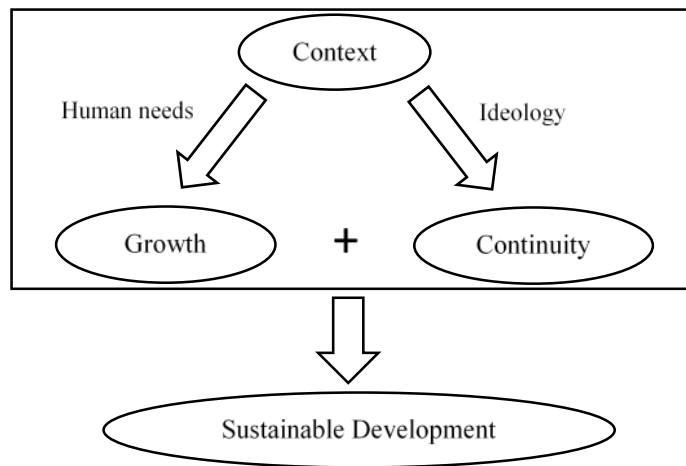


Figure 2-3. An interpretation of sustainable development (Source: author)

### 2.2.3 A goal or a label for tourism?

Although *the Common Future* discussed the application of sustainable principles to a multitude of areas, tourism was not specifically targeted or discussed (Butler, 1998; Sharpley, 2009). However, tourism is now one of the dominant sustainability-promoting industries (Hardy et al., 2002). The Resource Management Act, enacted in 1991 in New Zealand as one of the world's first laws to explicitly enshrine the concept of sustainability in planning law, was directly applied to tourism (Page & Thorn, 1998). Sustainable development seems the parental concept for sustainable tourism (Sharpley, 2000; Swarbrooke, 1998). However, the relationship between sustainable development and tourism is much more complex. The many related debates fall into two main streams.



The first stream views tourism as a strategy for achieving sustainable development (Pobocik & Butalla, 1998). Interestingly, early in the mid-19<sup>th</sup> century, when the romantic view of nature arose, recognition of the aesthetic and economic potential of wilderness was not sufficient for the creation of national parks and reserves (Hall & Lew, 1998a). Instead, tourism was the driving force behind their creation (Hall, 1998). Yosemite State Park, for example, was set up “for public use, resort, and recreation” on June 30, 1864 (Nash, 1963, p. 7). After that, tourism was used to justify reserving natural areas instead of using them for other forms of economic values, such as agriculture, mining, or commercial forestry (Hall, 1998). In addition, tourism provided value to some areas that were useless for other economic activities, such as the Mariposa Big Trees and Yosemite Valley (Ekins, 1993). Tourism, with its seemingly green nature, was initially regarded as a “smokeless industry” and was promoted as a promising mechanism for sustainable development (Hall, 1998).

The second stream regards sustainability as simply a promotional label in the tourism industry (Wight, 1993). When mass tourism was criticized for its large negative economic and socio-cultural impacts since the 1970s, “sustainable tourism,” referring to nearly all alternative forms of mass tourism, was promoted largely to increase public acceptance and achieve economic success.

The sustainability of tourism has been questioned by both academia and the public over the past decades (Belk & Costa, 1995; Milne, 1998). Milne (1998) argued that a theoretical framework embodying the complexity of the industry was needed. Thus, sustainable tourism is not just a subclass of sustainable development but also has its own nature.

### **2.3 Sustainable tourism**

*“Sustainable tourism is like an elephant, hard to describe but you know it when you see one. Effective knowledge transfer therefore remains crucial if the concerns of tourism academics and researchers will be translated in concrete actions by the tourism industry.”*

*(Gössling et al., 2009, p. 304)*

The above discussion proves that sustainable tourism is not, by nature, a single ramification of sustainable development. Instead, the emergence and popularization of sustainable development in late 20th century occurred in parallel with the rapid

development of and changes in tourism since the 1960s, which ultimately led to the concept of sustainable tourism (Swarbrooke, 1998).

### **2.3.1 Is mass tourism to be blamed?**

Tourism increased exponentially over the last half century, and public attitudes regarding tourism involve both love and hate. The entire process of shifting from mass tourism to sustainable tourism includes discussions regarding tourism's impacts and creates a miniature picture of economic restructuring.

Jafari's (1989) platform theory describes the change process undergone by concerns regarding tourism's impacts. Initially as a mechanism for nature conservation early in the 19<sup>th</sup> century, mass tourism quickly arose in Western countries in the 1950s. The substantial economic benefits for host communities made tourism an optimal development approach (Farrell, 1977; Hogan & Mcpheters, 1983), leading to the early "advocacy platform" stage of tourism (Esman, 1984; Graburn, 1984; Smith, 1981). Given the variety of potential impacts of tourism on the environments, cultures, lifestyles, and identities of communities (Doxey, 1975), a number of key books led the process of evolution to tourism's "cautionary platform" stage (Bramwell, 1995; Maccannell, 1984; Smith, 1989; Teye, 1993; Vandenberghe, 1992). Subsequently, the "adaptive platform" view came about in the 1980s and suggested that small-scale, alternative forms of tourism, rather than mass tourism, were sustainable. Nature-based tourism and eco-tourism were largely promoted by governments and related organizations (Yang & Wall, 2009). During the late 20<sup>th</sup> century, a "knowledge-based platform" was proposed to suggest a comprehensive understanding of tourism's impacts and sustainability (Horn & Simmons, 2002; Young, Thyne, & Lawson, 1999).

During the economic restructuring from Fordism to post-Fordism and from mass material consumerism to individualized value-laded consumerism (Perez & Juaneda, 2000), the supply of and demand for tourism changed accordingly (Lane, 1994). Clarke (1997) suggested four main chronological positions regarding sustainable tourism. Initially, it emerged as a totally opposite approach to mass tourism (Honey, 2008). With some small-scale tourism eventually expanding to mass tourism (Cohen, 1987, 1989), a continuum between mass tourism and sustainable tourism was proposed to describe tourism between the two extremes. With the rapid growth of the tourism industry as a whole, the scale of

adaptation was criticized as contradicting the reality, and mass tourism shifted from being the opposite of sustainable tourism to the most visible and sensible candidate for sustainability reform (Clarke, 1997). As Krippendorf urged, “only if we succeed in living with tourism as a mass phenomenon, ....., can we claim to have made a decisive step forward” (Krippendorf, 1982, p. 111). This position of movement was finally replaced by a position of convergence that addresses sustainable tourism as a common goal that all types of tourism should strive to achieve (Clarke, 1997).

Two implications can therefore be derived. First, the minimization of negative impacts while striving to achieve benefits is the key to sustainable tourism (Cole, 2004; Lu & Nepal, 2009). Second, the issue of mass tourism should be addressed because most of the world’s tourism is mass tourism. To make any real progress on achieving sustainable tourism, the problems of mass tourism and its related processes must be examined (Hall & Lew, 1998b). Such an investigation is the real challenge of sustainable tourism, but it has not yet been taken up by industry, government, or the research community (Hinch, 1998).

### **2.3.2 Sustainable tourism: A conceptual framework**

As discussed by Gössling et al. (2009), sustainable tourism is an elephant that is hard to describe, but defining it is essential for effective knowledge transfer and implementation. Although many definitions already exist, no consensus has been achieved. Based on the technique of etymological definitions, sustainable tourism was initially defined as “tourism which meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future” (Bramwell & Lane, 1993, p. 2) in accordance with its parent terminology (Brundtland, 1987). The vagueness inherent in this definition has left it subject to debates (Payne, 1993; van der Straaten, Bramwell, Henry, & Jackson, 1996), among which the different needs and continuities were commonly addressed (Cole, 2004). For instance, a popular definition was established by the World Trade Organization (hereafter as WTO) (Liu, 2003, p. 460):

*Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. Sustainable tourism is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems.*

Providing an overview of all definitions and identifying a consensus definition of sustainable tourism is outside of the scope of this thesis (Hinch, 1998), but it is possible and worthwhile to note the essences of the concept (Hall & Lew, 1998b; Lu & Nepal, 2009) based on the interpretation of sustainable development (Figure 2-3) and tourism's contextual complexities.

Tourism is positioned as the third and the most promising industry, indicating the very sense of growth. However, it is notable that growth is no longer only an economic view (Wall, 1997) but rather is essentially a process for realizing “specific social and economic goals which may call for a stabilization, increase, reduction, change of quality or even removal of existing products, firms, industries, or other elements” (Liu & Jones, 1996, p. 217, cited from Liu, 2003). In other words, growth is meant to satisfy the needs of all people. Thus, the necessity of recognizing the different interests of all tourism stakeholders is considered a key factor differentiating sustainable tourism from mainstream tourism (Hardy & Beeton, 2001). Among many others, six main groups of actors and their major needs were identified (Gössling et al., 2009; Swarbrooke, 1998; Weaver, 2006), as shown in Figure 2-4. These groups can be divided into the macro-control side, including the public sector, voluntary organizations, and the media, which tend to focus more on society's macro growth, and the micro-action side, including tourists, host communities, and the tourism industry, which are the real actors producing and consuming tourism products. To achieve the goal of satisfying all human needs, it is necessary to integrate these actors and offer shared strategies for growth (Albrecht, 2013; Dedeker, 2017; Poudel, Nyaupane, & Budruk, 2014).

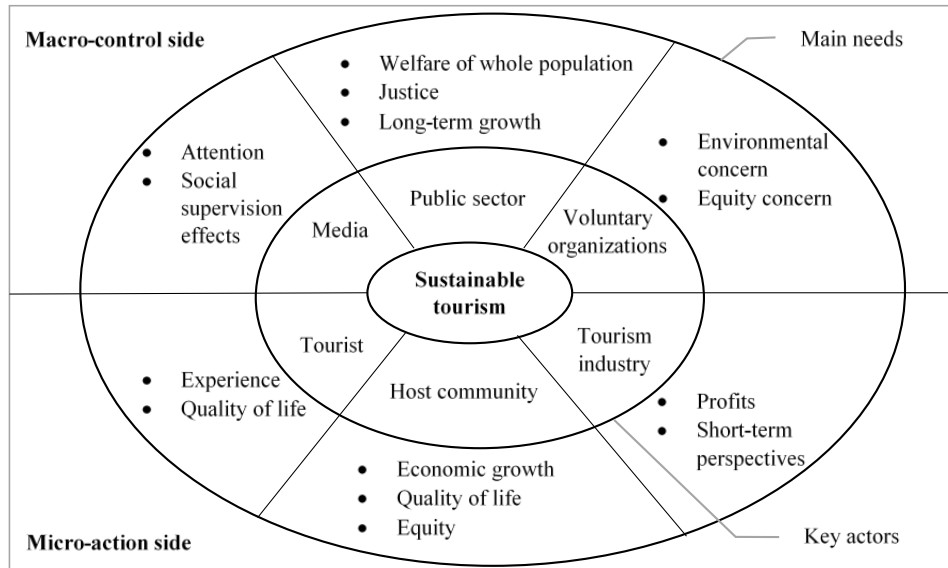


Figure 2-4. Stakeholders in sustainable tourism and their needs (Source: author)

Sustainable tourism also inherits a sense of continuity, which varies based on the present ideology or values (van der Straaten et al., 1996). On one hand, social values determine the degree of effort made by macro-control actors to maintain sustainability rather than market economics (Hinch, 1998). On the other hand, these values are related to the level of responsibility that micro-action individuals intend to take for pro-environmental behaviors. In general, the higher the environmental awareness of the actor communities is, the more credible the promotion of sustainable tourism destinations may be (Saarinen, 2006). In other words, continuity has expanded from physical environmental sustainability to many other dimensions (Scheyvens, 1999), among which three main aspects, namely economic, social and cultural sustainability, were commonly identified (Bansaal, 2005; Bramwell, 2015).

As defined by UNEP and UNWTO (2005, p. 11), physical sustainability is to “make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.” Gössling (2016) specified it as tourism resource efficiency, environmental purity and physical integrity, biological diversity, and environmental experiential learning. Economic sustainability was defined by UNEP and UNWTO (2005, p. 11) as to “ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and

income-earning opportunities and social services to host communities, and contributing to poverty alleviation.” Accordingly, economic viability, prosperity equity, employment quality, and capacity building are key elements (Benckendorff, Sheldon, & Fesenmaier, 2014). Social sustainability means enhancing the quality of life of the community and providing a tourism experience to all visitors (Buckley, 2012), emphasizing inter- and intra-generational equity and social and psychological well-being (Pomeroy, Noble, & Johnson, 2011; Weaver, 2006). Finally, cultural sustainability is defined as maintaining and strengthening the cultural richness of host communities, including the constructed and living cultural heritages and traditional values, and contributing to inter-cultural understanding and tolerance (Gössling, 2016; UNEP & UNWTO, 2005). Thus, cultural integrity, social values systems, and cultural interaction mechanisms are important to sustainable tourism.

In addition, sustainable tourism also varies on context. The dynamic nature of sustainable tourism remains evident in terms of time, needs, and balance. Butler (1999) argued that the time period for determining if people’s needs have been satisfactorily met is not specifically defined. Moreover, although people’s needs were specified as economic, social, and aesthetic needs as well as cultural integrity, essential ecological processes, biological diversity, and life support systems, these needs are always open to change (Ruhanen, 2008). In addition, sustainable tourism is not a definable end point but rather a contextual-based adaptive paradigm to strive for (Hunter, 1997). As can be seen from the evolution process of the sustainable tourism concept, passive and tourism-centric minimization of the negative impacts of tourism on destinations was regarded as the main focus of sustainability in the 1990s (Hunter, 1995). However, the current discussion of sustainable tourism focuses on the environment, namely, climate change and the resilience of the global ecosystem (Farrell & Twining-Ward, 2004; Gössling et al., 2009).

Accordingly, sustainable tourism can be interpreted as a dynamic tourism development ethic that focuses on the satisfaction of all stakeholders’ needs, including the public sector, volunteer organizations, the media, the tourism industry, host communities, and tourists, and, at the same time, takes continuity of the environment, especially the economic, environmental, social, and cultural systems, into consideration to maintain its

capability to satisfy future generations' needs. Both people's needs for growth and ideologies for continuity depend on the development context (Figure 2-5).

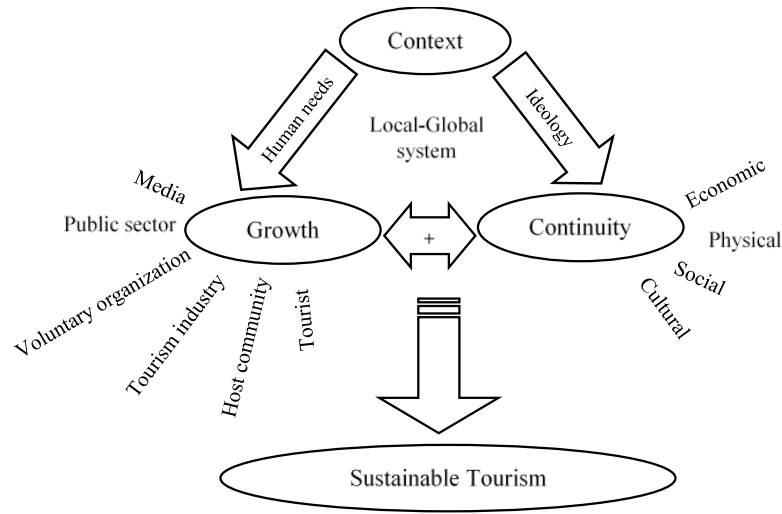


Figure 2-5. The skeleton of sustainable tourism (Source: author)

Two main contradictions are inherent in sustainable tourism. The first is the conflict between tourism's growth nature and its dependence on continuity. The ecological, cultural, economic, and social living systems form the skeleton for supporting growth to satisfy all human needs. However, they are not indestructible. On the contrary, growth always requires the consumption or reconstruction of these systems. Thus, recovery theory, which intends to achieve sustainability by maintaining the resilience of those systems, has recently become popular (Holling & Gunderson, 2002). The resilience of socio-ecological systems is not limited to returning to an initial stage but rather includes a complex adaptive process to change, adapt, and transform accordingly without influencing future growth (Holling, 2001). The difficulty in determining the liminal level of resilience results in uncertainty regarding the optimal balance between concern for growth and continuity. A second contradiction lies in the diverse needs of different stakeholders. Critics argue that it is unrealistic to balance competing interests and, thus, that growth decisions undoubtedly prioritize certain interests (Hunter, 1997; Lu & Nepal, 2009). For instance, Hunter (1997) argued that sustainable tourism may involve trade-offs between competing interests.

In addition, the implementation of sustainable tourism involves dilemmas. Given its reactionary nature and the difficulties in establishing a definition, it is criticized as a simple reactionary rhetoric. Many facets of the tourism industry, from operators to

governments, have made practical attempts, such as spreading tourist activities away from central areas (Bramwell & Lane, 2010; Godfrey, 1998). However, whether these changes are significant or merely cosmetic is debatable (Mowforth & Munt, 1998). As Wheeler (1993) pointed out, we cannot argue that spreading the tourist load spatially is solving the problem when one of the problems is the spatial spread of tourism (Harris et al., 2002).

### **2.3.3 Paradigm shifts: Paving the way to sustainable tourism**

As Garrod and Fyall (1998, p. 200) argue, “unless translated into something that is meaningful in practice, definitions remain at best academic curios, at worst a threat to the achievement of genuinely sustainable tourism.” Considering its nature as a dynamic ethic, tourism can only be expected to become more sustainable (Swarbrooke, 1998). Thus, paradigm shifts in approaches could lead to better philosophies and solutions approaching the ideal (Butler, 1999; Hunter, 1997). In present day, three main paradigm shifts in sustainable tourism implementation can be identified: from scale-related to whole-related implementation, from a supply-side to a demand-side orientation, and from a destination focus to a whole-system focus.

#### ***Scale-related to whole-related implementation***

The early “small is best” philosophy suggests that sustainable tourism was initially scale-related (Hall & Lew, 1998b). Varieties of alternative tourism were promoted to alleviate the tension between tourism activities and environmental degradation (Bramwell & Lane, 1993). However, these attempts appeared to be counterproductive. Although alternative tourism met high capacity control standards, the negative impacts of tourism in general still continue (Wight, 1993), proving that sustainability should be a practical goal of the whole industry rather than of one niche market (Lu & Nepal, 2009).

Earlier suggestions argued that sustainable tourism is attainable at local, regional, national, and global scales (Hardy & Beeton, 2001). However, continuity is figured out as a necessary pursuit on a global basis. Although globalization has brought awareness of environmental scarcity to every corner of the world, the political reality is that tourism development is not implemented beyond the local scale. Developed countries and developing regions, even though being at different points along the development-environmental concern continuum, should take the same goal for sustainability.



Unless the scale of analysis and action can be transformed into a bigger whole picture in terms of both product and space, it is unlikely that tourism will ever become truly sustainable beyond anything more than rhetoric.

### ***Supply-side to demand-side orientation***

When the need for sustainable tourism development was realized in the 1990s, it was initially thought of as the governments' responsibility for macro control. In 1996, the WTO, the Earth Council, and the World Travel & Tourism Council joined together to launch an action plan entitled "Agenda 21 for the Travel & Tourism Industry: Towards Environmentally Sustainable Development" (UNWTO, 2001). The recommendations of Agenda 21 were almost all supply-oriented, emphasizing the responsibilities of public sectors and industries to lead more sustainable forms of tourism (Bramwell & Lane, 2006; Liu, 2003). However, failure was evident in practice, as governments paid lip service to obtain funding and the diffusion and knowledge transfer regarding policies was poor (Bramwell, 2004; Mowforth & Munt, 1998). Moreover, the market forces themselves were found to be incapable of resolving issues related to long-term sustainability (Nelson, 1993). In response, stakeholder collaborations were suggested as prerequisites for tourism growth and the long-term capacity of continuance (Liburd & Edwards, 2010; Weaver, 2006).

It is worth noting that, in the early stage, stakeholder collaboration theory within sustainable tourism did not include tourists but rather focused on the supply side (Vellecco & Mancino, 2010). Recently, however, the inability of manufacturing-biased theories, such as the regulation model, to manage the complex and intangible service industry and the worldwide paradigmatic shift from capitalism to consumerism brought focus to the demand side (Milne, 1998). Aside from the fashionable greening of tourism through supply-side management, it was argued that more attention should be paid to tourists at the micro level (Pomering et al., 2011). Thus, responsible tourism is encouraged for "a closer look at the issues of intra-generational equity and the active involvement of all stakeholders and tourism management to foster meaningful, respectful and enriching experiences for both hosts and guests" (Blackstock, White, McCrum, Scott, & Hunter, 2008, p. 279). To achieve sustainability, the authors argued, tourists' engagement efforts are essential, but no attention has been paid to that issue.

### ***Destination to whole-system concern***

Theories and measures of sustainable tourism initially related to destination management. For instance, Butler's (1980) life cycle model described the destination development process and introduced the concept of "carrying capacity." A wide range of other tools were also developed for comprehensive sustainability assessments, such as limits of acceptable change, visitor preference and experience, destination life cycle, comfort indicators, and visitor impact management (Lu & Nepal, 2009). However, these tools are all limited to the destination level (Schianetz, Kavanagh, & Lockington, 2007), whereas Leiper's (1979) tourism system model suggests that the tourism destination is just one part of the tourism value chain. Recently, considering the sum of cumulative negative impacts (Wight, 1994), scholars introduced a tourism system perspective and advocated for the need for systematic sustainability analyses (Farrell & Twining-Ward, 2004).

Notably, transit has gained increasing attention in response to global climate change. Transport to destinations was estimated to account for between 59% and 97% of tourists' negative carbon footprint and was likely to increase (Dolnicar, Laesser, & Matus, 2010). The major contributor is private automobile and air transport (Stumpf, Sandstrom, & Swanger, 2016). However, sustainable tourism puts less effort on this part and even less on the source market, namely, the pre-travel stage.

### ***Other research gaps***

Sustainable tourism research also has some other research gaps or trends. The first is the "critical turn" to engage more fully in wider social theories suggested by Bramwell and Lane (2014). Past research has focused on case studies or technicalities in methods, resulting in weak theoretical advancements and the neglect of tourism's nature-society interactions (Jafari, 2001; Ryan, 2005). The absence of broad social science perspectives has further resulted in an urgent need to construct theoretically informed frameworks for sustainable tourism in contemporary society (Hunter, 2012). Besides, an interdisciplinary approach involving the "merging of...biological, social, geophysical and technological systems research" (Miller & Twining-Ward, 2005, p. 17) was extensively encouraged owing to the complexity of the tourism system and the broad scope in concept (Farrell & Twining-Ward, 2004). Moreover, there are calls for attention on psychology and systematic change because individual behaviors have become locked into systems of

consumption and provision (Giddens, 2009), whereas the systems of social norms are socially constructed by individual values (Higgins-Desbiolles, 2010). Additionally, urban areas, as one of the “most important type[s] of tourist destination[s]..., have to a large extent been excluded from discussion about sustainable tourism” (Hinch, 1998, p. 185). Greenway tourism fits this pattern, as it concerns both transport and urban areas.

## **2.4 Greenway tourism: Supporting the future of sustainable tourism**

*As communities across the country seek to build sustainable futures, they are mapping in paths of green from spaces like old railway lines, former canal routes, and deteriorating riverfronts. As cities try to work more harmoniously with nature, they are finding greenways not only spruce up the community but represent an investment in a healthy and sustainable future.*

*(Grove, 1990, p. 26)*

The development of greenways, which originated from landscape ecology and urban planning during the late 19th century (Dawson, 1995; Erickson, 2004) were assumed as a comprehensive and sustainable strategy for urban land use and recreation (Deenihan et al., 2013). As Grove (1990) pointed out above, greenways represent a healthy and sustainable pattern for future. Although the “future” is not defined precisely, it is moving toward it every day.

### **2.4.1 Trails and parkways: The antecedents of greenways**

Although the first use of the term “greenway” was credited to William H. Whyte’s (1959) monograph titled *Securing Open Space for Urban America* (Fabos, 2004), the origin of greenways is contentious because of the long history of linear open recreation spaces. Historically, the greenway has not been a product of the tourism industry, but rather, the antecedent of tourism and recreation. The concept evolved from several variants.

#### ***Trails, routes, and pathways***

The first aspect to be made note of is the “trail,” which is still in use in North America and Europe. Various routes and pathways have been created and utilized throughout human history for mobility and recreation purposes, ranging from hunting, gathering, and trading, to migration and more lately, tourism activities (Timothy & Boyd, 2014). Specifically, recreational trails date back to the early “wilderness” exploration experience and the pathways in city parks or the pleasure gardens belonging to European

royalty (Searns, 1995). For instance, the Gibbs Path, the first mountain trail, was cut by a botanist Manasseh Cutler based on a scientific expedition to Mt. Washington in New Hampshire in 1784. Soon after, the first guided trail, the Crawford path, was built to host the growing tourist trades in 1819 by Ethan Crawford between his inns to the summit of Mount Washington (Moore & Shafer, 2001). With the formation of the Appalachian Mountain Club in 1876, hiking trail construction gained prominence and the renowned Appalachian Trail, which runs 2140 miles from Maine to Georgia, was established in 1925 (Yahner, Korostoff, Johnson, Battaglia, & Jones, 1995). Given the historical purposes of movement and leisure, “trail” was defined as “a linear corridor, on land or water, with protected status and public access for recreation or transportation” (American Trails, 1990, p. 2). Regardless of extending the functions to historical and natural preservation in the 21<sup>st</sup> century (Ryan, Flink, & Lagerwey, 1993), they are perceived as more utility-oriented and may have negative impacts on the environment (Baschak & Brown, 1995).

### ***Parkways, park belts, and the park system***

Trails, derived from early wilderness experiences, were mostly defined in rural areas and the natural environment (Axelson et al., 1999) and were thus not always accessible to urban dwellers (Searns, 1995). In contrast, parks and parkways, which originated in America since the latter half of the 19<sup>th</sup> century, functioned as urban recreation spaces. These spaces were created to reduce alienation that resulted from the urban sprawl and the modernization that followed (Brown, Hastings, & Abbett, 1993; Fabos, 1995; Newton, 1971). With the completion of the famous New York’s Bronx River Parkway in 1913 and the Blue Ridge Parkway in 1923, modern parkways for urban recreation and pleasure vehicles as well as landscape protection got popularized (Ryder, 1995). Both parkways and park belts were capable of being reorganized into a closely-linked park system (Turner, 2006). Frederick Law Olmsted’s Emerald Necklace in Boston, which had been prepared since 1867, was the first example of this practice (Crookham, 1989; Grove, 1990; Little, 1990; Rolley, 1993; Searns, 1980). It stretched over around 25km and linked Franklin Park through Arnold Arboretum and Jamaica Park to the Boston Garden and Common (Fabos, 2004). Although Newton (1971) referred to this park system as a parkway, its intention to connect the main open spaces and to link different areas to the Charles River has extended beyond the scope of parkways as leisure transportation routes to parks, as

well as the scope of park belts to serve a town's recreation needs (Turner, 1995, 2006). Later, Charles Eliot developed it into the Metropolitan Park System of Boston, which extended over 600km. This metropolitan park system not only helped provide urban recreation space and ecological protection corridors, but also offered a rudimentary beginning for the greenway networks that developed later (Arendt, 2004; Cardoso & Aguiar, 2014; Zube, 1995).

### ***Ceremonial Avenue, boulevard, and greenbelt***

Inspired by Olmsted's work in the USA and the construction of landscaped axes in Europe, the British began to make efforts toward planning open spaces and designing new towns in the late 1890s. As a main strategy for the "Garden City," Ebenezer Howard (1898) advanced the concept of "greenbelt" based on Germany's royal highways and boulevards. Greenbelt, in contrast to both green trails and parkways as linkage routes, are swaths along the city and town perimeters that intend to control urban sprawl by protecting a ring of undeveloped land, including land that was publicly and privately held (Fabos & Ryan, 2006; Hsieh, Chen, & Lin, 2004; James et al., 2009; Little, 1990; Searns, 1995; Turner, 1995; Walmsley, 1995). After it was applied to various cities both in North America and Britain (Taylor, Paine, & FitzGibbon, 1995), this Garden City approach began to fail in setting limits for city growth and nature began to deteriorate because of the difficulties it encountered in holding its arbitrary boundaries on the ground (Erickson, 2004). Only those that followed the idiosyncrasies of the land, namely the ridges, valleys, and the streams and rivers, worked best. This is precisely what greenways are based on (Whyte, 1968). Among the series of open space plans in the past 60 years in London, Abercrombie's 1943 plan for linking open spaces was the most influential in leading to the greenway approach (Turner, 1995). As London's Green Strategy of 1991 envisioned, overlapping networks following linear features in the landscape with distinctive qualities, namely the early greenways in Britain, not only provided the means to link larger open green spaces with linear green corridors, but also served social interaction, recreational needs and ecological conservation (Briffett, Kong, Yuen, & Sodhi, 1999).

### ***Ecological networks, environmental corridors, and green infrastructure***

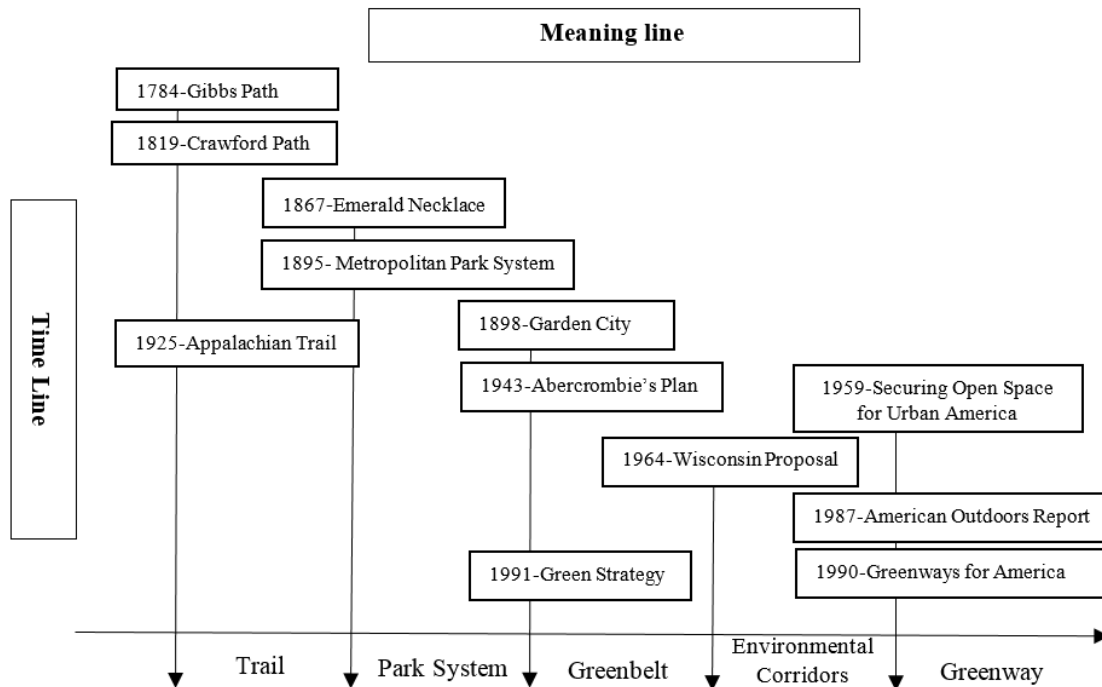
Though varied in terms of form and definition, the linear open space from trails to greenbelts before the mid-19<sup>th</sup> century mainly focused on urban and rural recreation

opportunities. It was not until the 1960s when the environmental movement began and the landscape fragmentation effects increased that the ecological aspects gained prominence in landscape planning (Hosgor & Yigiter, 2011; Linehan, Gross, & Finn, 1995; Milosevic, 2015). The “patch and corridor” spatial form was adopted in various regions but varied in terms of terminologies specific to different landscape issues and planning systems (Smith & Hellmund, 1993). In Europe, these plans were often known as ecological networks, ecological infrastructure, and riparian buffer plans (Bristow, 1991; Smith & Hellmund, 1993), and mainly addressed biotic functions within biological settings. Similarly, in the USA and Canada, habitat networks, wildlife corridors, landscape linkages, and ecological corridors were also commonly used terms (Rolley, 1993). Other than biotic plans, planners found that in urban areas and cultural settings, solely biotic-oriented approaches were not workable and thus proposed some multifunctional choices (Ahern, 1995). For instance, Philip Lewis suggested “environmental corridors” to protect the sensitive areas or river corridors because 90% of the natural and heritage resources were found distributed along these areas (Lewis, 1964, cited from Ahern, 1995). Simultaneously, a multipurpose greenway planning approach was found to be more appropriate especially in megalopolitan settings (Gottman, 1961, cited from Ahern, 1995). Further, “green infrastructure” was proposed in 2002 by Benedict and McMahon towards building a holistic and natural life support system (Walmsley, 2006), including greenways to “support native species, maintain natural ecological processes, sustain air and water resources, and contribute to the health and quality of life of America’s communities and people” (p. 6).

### ***Greenways***

Greenways gained momentum in the 1960s as a result of the convergence of many trends such as the increased enthusiasm for outdoor recreation (Smith & Hellmund, 1993), the upsurge in the interest in urban landscape conservation (Gobster, 1995; Rolley, 1993), the rising need to trace idiosyncratic corridors of land as linkages (Amelar, 1997; D'Agosta, Everett, & Sipes, 1997; Lindhult & Thompson, 1998; Turner, 1995), the boost in the ecological protection movement (Little, 1990; Zube, 1993), and the reduced availability of large open spaces (Ryder, 1995; Zube, 1995). As Whyte (1968) pointed out, “most of the big tracts in our metropolitan areas have already been saved, or they have already been lost. The most pressing need now is to weave together a host of seemingly disparate elements—

an experimental farm, a private golf course, a local park, the spaces of a cluster subdivision, the edge of a new freeway right-of-way,” and thus “linkage is the key” (p. 376). The concept of “greenway” was then proposed to represent a multifunctional and more accessible adaptation, specifically a combination of the green trails, parkways, urban greenbelts, and ecological corridors (Erickson, 2004; Searns, 1995). In other words, greenways represent the latest generation, being “multi-objective” after having evolved through different landscape forms (Ahern, 1995; Searns, 1995). Among many others, the trails, park systems, greenbelts, and environmental corridors are the most leading archetypes. As presented in Figure 2-6, greenways have enjoyed a broader scope, better settings, and more functions.



Source	North America	USA	Britain/Europe	USA	USA
Form	Line	Line	Patch	Patch + Corridor	Network
Setting	Wilderness	Urban	Urban	Natural/cultural	Urban/natural/cultural
Function*	R & T	R & T & S	R & T & C	R&T&P	R&T&S&C&P
Reference person	Cutler (1784) Appalachian Mountain Club	Olmsted (1867) Eliot (1895)	Howard (1898)	Phil Lewis (1964)	Whyte (1959) PCAO (1987) Little (1990)

\*R-Recreation; T-Transportation; S-socialization; C-Control of urban sprawl; P-Protection.

Figure 2-6. The antecedents of greenways (Source: Author)

While these antecedents have also been developed and are still in use, the word “greenway” is commonly accepted in North America, Europe, and Britain as a generalized term to describe a wide range of linear open spaces with certain commons (Tan, 2006),

though they may vary in size, type, and functions (Price et al., 2012). It is vital to identify the intrinsic and extrinsic meanings of greenways in order to put forward worldwide communications and new knowledge production, as well as the planning and implementation of projects.

According to the Oxford Dictionary (2019), “green” means environment-related or support for environment protection, and “way” refers to a route or a path arriving at an area. Hence, from a semantic etymological perspective, “greenway” points to the corridor of protected open spaces that are maintained for conservation and non-motorized transportation. The concept was first officially advocated by the US President’s Commission on American Outdoors (1987) as “a vision for the future: A living network of greenways... to provide people with access to open spaces close to where they live, and to link together the rural and urban spaces in the American landscape... threading through cities and countryside like a giant circulation system” (p. 209). This definition emphasized the forms and functions serving humans and landscapes. Another comprehensive and influential idea toward greenways was provided by Charles Little (1990) in his popular book titled *Greenways for America* based on an overview of 16 greenway projects. According to him, a “greenway” refers to a linear corridor that could improve environmental quality and provide outdoor entertainment, or natural corridors along a river, or ravines and ridges, or line open spaces established along artificial corridors for recreational activities. He also suggested that it could include both natural and artificial landscape routes for pedestrians and riders, thus specifying five different types of greenways based on location and settings, namely urban riverside corridors, recreational greenways, ecological corridors, scenic or historical routes, and greenway networks.

These two naming events facilitated the greenway movement, which resulted in thousands of greenway plans and projects in US, as well as a variety of interpretations of this promising concept. Although there has been no widely accepted definition thus far, some common factors can be identified among the existing variations. For instance, Fabos (1995) defined greenways as “corridors of various widths, linked together in a network, in much the same way as networks of highways and railroads” (p. 5) and suggested a threefold typology comprising ecologically significant greenways, recreational greenways, and heritage or cultural greenways. Ahern (1995) defined greenways as “networks of land



containing linear elements that are planned, designed and managed for multiple purposes including ecological, recreational, cultural, aesthetic, or other purposes compatible with the concept of sustainable land use” (p. 134). Ahern’s definition addressed five aspects of greenways: the linear spatial configuration, linkage as a key characteristic, multifunctional balance, sustainable approach, and spatial strategy. Both definitions emphasized on the linear and network spatial forms and multi-functionality and were consistent with the early two definitions. Other observers have also shared similar views, as indicated in Table 2-1. It is widely acknowledged that **a greenway is a linear spatial network of various natural and artificial settings to primarily support recreation, protection, and connection functions.**

Table 2-1. The definitions of greenways (Source: Author)

Scholar	Definition	Focus	Commons
Smith & Hellmund (1993)	Linear open spaces that protect natural areas and water quality, enable wildlife to move freely, and provide opportunities for recreation.	Linear forms; Functions: protection, recreation	Forms: network including linear corridors and patches.  Functions: recreation, protection, and connection
Forman (1995)	Forming a network or matrix of patches and corridors (“aggregate-with-outliers” principle) that has numerous ecological as well as human benefits.	Network forms; Functions: protection, recreation	
Turner (1998)	A route which is good from an environmental point of view; corridors for movement.	Linear routes; Functions: protection, transportation	
European Greenways Association (2000)	Greenways are (1) ‘transport routes dedicated to light non-motorized traffic’; (2) “a communication route which has been developed for recreational purposes and/or for undertaking necessary daily trips (getting to work, place of study, shopping etc.), which we will call utility trips, using infrastructure closed to motorized traffic”; (3) “former transport routes in a specific location, partly or completely decommissioned, and which once properly restored, are made available to users of non-motorized transport such as pedestrians, cyclists, people with limited mobility, roller skaters, cross-country skiers, horse riders, etc.”.	Linear routes; Functions: non-motorized transportation, recreation	
Erickson (2004)	Linear open spaces along natural or human-made features such as rivers, ridgelines, railroads, canals or roads. They are planned, designed and managed to connect and protect ecological, scenic, recreational, and cultural resources.	Linear forms; Functions: connection, protection, recreation	
Tan (2006)	The proposed network system of linear corridors linking parks and open spaces was named the park connector network, and is very similar in concept to the definition of greenway espoused by Endicott (1993). Hence in Singapore, greenways are termed “park connectors”.	Network and linear forms; Functions: connection	

## 2.4.2 Greenway: An interdisciplinary development approach

When the greenway movement was facilitated by the promising vision of the future as depicted by the US President’s Commission and pioneering scholars (Ahern, 1995), its

multi-functionality captured the imagination of several diverse professionals, including politicians, social scientists, geographers, economists, and biologists, as well as urban planners and landscape architects (Fabos, 1995). It entails great potential for sustainability from multi-disciplinary perspectives by countering fragmentation in the urbanization process.

***Land ethic: Greenway as a sustainable urban landscape planning strategy***

From a landscape planning perspective, it considers the role for revival of the old land ethic in making urban forms at both the micro- and macro-scales (Walmsley, 1995). According to Aldo Leopold's land ethic, a thing is right "when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (Leopold, 1948, cited from Lewis, 1995, p. 477). By including ecologically significant corridors, the greenways movement is an appropriate means to integrate the single protection purpose with a more comprehensive planning vision. As the late Stanley White who was a professional in the field of landscape architecture argued, "the form is there, we just have to respect it and fit our human activities around those forms" (Fabos, 1995, p. 8). Greenways intend to maintain landscape integrity (Hellmund & Smith, 2013), that is, to connect and beautify landscapes, rather than to make scatter and fragment them. Moreover, the alienation of people and nature is also increasingly felt by modern people because of technology and modernity, both of which make humans feel disoriented and alone. The greenway movement is an attempt to fight back, to break down the "road-block" in the technological vacuum and in modernity (Quayle, 1995), and to reconnect them with their natural surroundings (Little, 1990). As a planning strategy, it makes strategic efforts to build a linear network to unite the entire landscape as a whole without compromising on development needs, while facilitating the integrity of both the biotic and abiotic environments (Hellmund & Smith, 2013).

***Public access: Greenways to open space recreation***

In terms of open space recreation, earlier parks and parkways were scattered and were only made accessible to some middle-class communities (James et al., 2009). By contrast, greenway networks achieved popularity among different stakeholders, such as politicians, lay-persons, and planners (Fabos, 1995; Tzolova, 1995) owing to its improved accessibility to the public (Zaworsky & Lutzker, 2003). Defined as "the ability/power to

derive benefits from things” (Ribot & Peluso, 2003, p. 153), access can be considered as an effective tool to evaluate the social and policy environments that shape the distribution of benefits, the efficiency and equity of resource use, and sustainability with fewer social conflicts and greater social well-being (Curry, 2001; Ribot & Peluso, 2003). Access to greenways is improved in three ways. One way is to enable access to leisure opportunities for a greater number and a larger variety of individuals across the entire city and region because of its widespread nature (Van Herzele & Wiedemann, 2003). As Little (1990) stated, greenways were less expensive and more accessible lands. As many as 80% of Americans in urban and suburban areas were able to enjoy the wilderness close to their homes through greenways near them (Grove, 1990). Second is the access to multiple levels of leisure functions. A greenway is an open space connector that links parks, cultural resources, historical sites, and natural reserves. People with various motivations can have their needs satisfied (Henderson, Presley, & Bialeschki, 2004). A third way could be creating access to public life. The ethic of a responsible public life can validate and bind different individual values together to promote societal integration and cohesion (Quayle, 1995). Greenways have largely improved accessibility to responsible public life by providing open spaces that connect communities (Ryan et al., 1993).

### ***Ecology literacy: Greenways to shape sustainable urban characters***

In the book *The Image of the City*, Kevin Lynch (1960) demonstrated that the spatial design of a city, mainly the five elements: paths, edges, districts, nodes, and landmarks, could produce information that shapes the observers’ mind maps. Physical information within a spatial structure creates the urban form with special images and functionality, and the spiritual information expressed within these settings make the urban characters. Greenways as a sustainable planning strategy successfully create ecology literacy in the city character in two interrelated dimensions, namely the physical ecological infrastructure and psychological ecology literacy.

From the ecologists’ point of view, greenway was a product of the environmental movement, and thus treat ecological protection as a priority. Greenways provide a system of ecological infrastructure that can help manage and sustain the biodiversity and dynamic natural processes to maintain ecological stability, especially in megalopolitan landscapes (McGuckin & Brown, 1995). Greenways mostly stretch along ecologically significant

natural systems as rivers, coastal areas, and ridgelines to serve as buffer zones (A, 1995; Lewis, 1995; Luymes & Tamminga, 1995). They also enhance the ecological re-connectivity to offer species corridors for migration and refuge within various habitats.

The physical ecological framework is insufficient for the maintenance of the sustainability of the city. Orr, an environmental educator, criticized technological sustainability.<sup>4</sup> Instead, he proposed “ecological sustainability”<sup>5</sup> which emphasized the importance of the human and knowledge components, which he also summarized as “ecology literacy.” This term refers to the ability to understand the natural systems in order to create sustainable human communities (Orr, 1992). According to Fritjof Capra (2009, p. 242), “in the coming decades, the survival of humanity will depend on our ecological literacy – our ability to understand the basic principles of ecology and to live accordingly.” In other words, a new nature principle should be included in education to promote system-thinking on sustainability in terms of the entire population (Orr, Stone, & Barlow, 2012). Based on the multi-functionality and network features, greenways are not only human attempts at combining the social system and ecology together (Kent & Elliot, 1995), but also factors that foster a learning society. Living with a greenway network can help form urban characters with ecology literacy.

### ***Human ecology: Greenways to promote interaction***

The fragmentation of society is not just about the physical environment, but rather the self, social relations, and public values. Sennett (1990), a sociologist, argued that the urban soul-searching that continues nowadays is indeed a quest for human ecology. Human ecology refers to the symbiotic interaction of humans with their environment (Burel & Baudry, 1995; Krumpe & Lucas, 1986). In this regard, “environment” refers to the full range of social, cultural, biotic, and abiotic settings. Greenways provide public spaces for creation of human ecology in four aspects, namely sociability, human-environment interactions, sense of place, and linkage (Ryan et al., 1993), based on which a spiritualistic civitas could be attained.

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<sup>4</sup> Use science and technology and market solutions to create sustainable development without fundamentally transforming modern industrial civilization (Orr, 1992, p.25).

<sup>5</sup> Sustainable development is a cultural process in which needs and their satisfaction arise from a vernacular culture (Orr, 1992, p.25).

The sociability refers to interactions with others. Greenways facilitate group activities to strengthen social relations (Coutts & Miles, 2011; Quayle, 1995). The human-environment interactions through the use of facilities and engagement in physical activities (Coutts, 2008; Dorwart, 2015; West & Shores, 2015) promote “health and fitness” and maintain the physical, social, and mental harmony of people and places (Lv & Yan, 2013; Shafer, Lee, & Turner, 2000; Taylor et al., 1995). Third, greenways can create a “sense of place,” which is the ultimate quest of urban designers throughout history (Ryan et al., 1993). The physical vision of cities as shaped by greenway networks can facilitate feelings that are deeply connected to the cities themselves (Fabos & Ahern, 1996) and contribute directly to the lost sense of region and place in urban areas (Hiss, 1991, cited from Linehan et al., 1995). The last dimension to be addressed is the creation of public values. Greenway planning, implementation, and management in western countries have stimulated the spirit of community support and partnership because of the complexity of land ownership in western countries (Fabos, 1995; Linehan et al., 1995).

#### ***Green Economy: Greenways to promote economic growth***

Greenways originated in western countries and were not designed directly for economic reasons. However, they have been proven to generate large amount of direct and indirect economic outputs in a more sustainable manner, namely in the form of the green economy, which is defined as an economy that aims at reducing environmental risks and ecological scarcities while also aiming at economic growth (Kahle & Gurel-Atay, 2014).

Direct economic benefits include visitor expenditure and business creation. Greenways increase the opportunities for recreation. Individuals, both residents and visitors, are attracted not only by the walks, but also by the businesses nearby. Several hundreds of dollars have been spent by visitors to get to the sites, for recreation-related supplies and equipment (Grove, 1990; Rugani & Goldsmith, 2014). Some businesses were created to serve a large number of visitors, such as street vendors, accommodation providers, bicycle sellers, repair and rental stores, and restaurants (Li, 2011). Indirect economic effects include increased real property values. People who live in proximity to greenways can expect a higher appraised value for their homes (Grove, 1990). Besides, greenway construction, management, and maintenance provide direct job opportunities and indirect employment for the local market. Greenway developments have allowed for the

efficient and economical expenditure of funds, as well. From a visitor's perspective, greenways give residents the opportunity for both physical and mental relief. This preventive health service makes good economic sense. Further, the good quality of life that greenways have created can be a catalyst for certain industries in selecting cities to establish their businesses (Langdon, 1995).

To summarize, different disciplinarians have interpreted greenways differently. Urban planning and landscape ecology have treated greenways as a scientific strategy or approach against the fragmentation of landscapes (Baschak & Brown, 1995; Bueno, Tsihrintzis, & Alvarez, 1995; Dawson, 1995). As connectors, greenways are important not only for equal access to resources, but also for the reconstruction of public life (Bryant, 2006). From the perspective of environmentalists, while also protecting national cultural heritage through well-organized scenic routes, greenways can “express” the value of such heritage to the users and provoke ecological literacy (Bischoff, 1995; George et al., 2015). Socio-cultural scholars have found that greenways are actually a public product that promote social interactions and construct human ecology. Economists have identified the great potential of greenways in generating resource-free growth. Together, the rationale can create the theoretical basis of greenways for sustainability.

#### **2.4.3 Tourism on greenways: Leading to a future of sustainable tourism**

In recent years, tourism academics have begun to treat greenways as a promising pattern in tourism, especially the short-haul and holiday trips for urban residents (Pettengill, Lee, & Manning, 2012; Timothy & Boyd, 2014). In greenway plans, enhancing tourism has always been an important objective (Peterson et al., 2010). The link between greenways and tourism are a two-way route: greenways act as tourist attractions themselves by connecting different natural, historical, and cultural resources (Meneghello & Minghetti, 2004), and also protect the resource that serves the tourism industry directly. The potential of greenways in mass and urban tourism was highlighted often but discussed only rarely (Walmsley, 1995). The question is whether it can support sustainable tourism based on the theoretical basis of sustainability in the greenways. In literature, greenway tourism can be interpreted from three perspectives in leading to sustainable tourism:

#### **Green + Way + Tourism**

### ***Green: To protect the tourism resource system***

Tourism is a resource-based industry (Bramwell, 2010; Kirch & Kirch, 1987; Shackley, 2006). Large amounts of human intervention and production activities have led to the fragmentation and endangerment of the ecological system particularly in urban areas (Hoolachan, 2014). Greenways have been discussed as strategies to counter ecological fragmentation and to maintain environmental processes systematically in both rural and urban areas (Burel & Baudry, 1995; Kent & Elliot, 1995). Networks with patches and corridors are not only an optimum configuration for supporting wildlife, but are also “well adapted for camping and primitive travel (by foot or on horseback)” (MacKay, 1962 reprint, p. 179). They might be used in day-tours and overnight, weekend, or vacation trips, such as the wetlands conservation greenway in Taiwan (Hsieh et al., 2004). Simultaneously, greenways as a large scale network can also effectively distract tourist flows and control the carrying capacity of natural systems (Burley, 1995).

Historical and cultural sites are another kind of tourism resource (Cano & Mysyk, 2004; Jeong & Santos, 2004; Medina, 2003). Artificial resources are vulnerable because of their non-renewable feature. Greenway networks contain a significant amount of historical heritage and cultural values. Lewis (1964) and his associates identified 220 natural and cultural resources in Wisconsin through a mapping technique and found that an estimated 90% of the heritage areas and cultural resources were concentrated along rivers and seashores, thus imbuing greenways with great potential for recreation and tourist activities (Dawson, 1995). On the other hand, greenways offer an important means to preserve these historical sites and to educate the public about traditional culture for the next generation to enjoy them (Searns, 1995). Furthermore, greenway plans provide funds and opportunities for historical and cultural resource assessment (M’ikiugu, Kinoshita, & Tashiro, 2012), in the course of which many potential assets of humans have been protected and preserved (O’Connell, 2001).

Greenway tourism can also promote a green economy (Furlan, Meneghello, & Minghetti, 2004). Greenway networks were considered as less expensive but engaging in a more equitable use of land. They help make it far more easier to approach nature and culture sites, thus generating tourism demands, especially in the context of day-tours and holiday travels (Giordano & Riedel, 2008; Imam, 2006; Lindsey & Nguyen, 2004). The

effects of greenways in promoting a tourism economy not only manifest in boosting tourism demand, but also function in a sustainable manner. It may first improve visitors' travel frequency so as to reduce the agglomeration effects of tourism and to reduce the time pressure on the environment (Meneghello & Minghetti, 2004). Second, as a regional tourism strategy, it entails equity by benefiting all communities along the greenways. They can enjoy equal access to the greenways and the economic opportunities as well (James et al., 2009; Kurdoglu et al., 2010; Teng, Wu, Zhou, Lord, & Zheng, 2011). Third, the seasonality of greenway tourism is not as evident as is traditional mass tourism (Mundet & Coenders, 2010) because urban areas are usually far more developed destinations and are not sensitive to seasonal fluctuations. It can also reduce the need for long-haul trips (Hellmund & Smith, 2013) and increase local tourism-related employment (Dawe, 1996).

As a clear physical expression of a national commitment to sustainable resource use, greenways integrate natural, historic, cultural, and economic resources (Timothy & Boyd, 2014). When greenways become a part of the 21<sup>st</sup> century tourism pattern, the routine appropriate uses and protection practices may facilitate the protection of the resource system, while there is still only little discussion on it.

#### ***Way: To connect tourism system segments***

The most popular tourism model was proposed by Leiper (1979) with three main elements (Figure 2-7), namely traveler-generating region, tourist destination region, and the transit route region. The Royal Commission Report asserted that "greenways are connectors-not simply connecting recreational areas through trails, but connecting wildlife habitats to each other, human communities to human communities, city to country, people to nature" (Royal Commission on the Future of the Toronto Waterfront, 1992, cited from Taylor et al., 1995, p. 56). It means that greenways could connect elements of the tourism model. As a transregional network, greenways are not only the skeletons of the tourism routes of cities to link main attractions, but can also possibly connect the traveler-generating regions to destination regions because weekend holiday travels usually ranging up to about 200 kms and day-trips extending over 50 kms are well within the extension of greenways. It theoretically challenges the original two-pole structure tourism model and develops it into a continuum by incorporating transportation as part of the tourism experience (Figure 2-8).



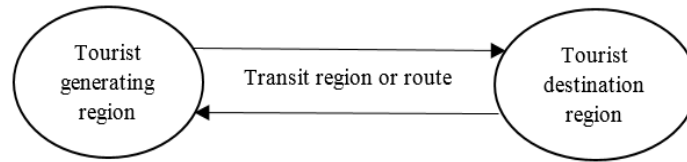


Figure 2-7. Tourism system model (Source: Leiper, 1979; 1989)

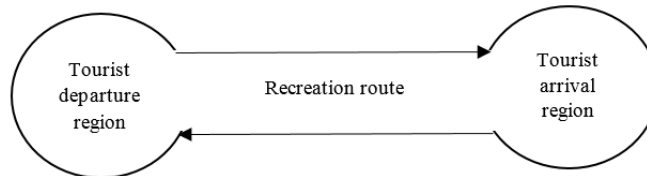


Figure 2-8. Adapted tourism system model (Source: by author)

The experience of traveling along the greenways, such as by walking and cycling along the route itself, were enjoyable and entertaining, and tended to be perceived as more important than experiences at specific sites in the future (Lumsdon, 2000; Mundet & Coenders, 2010; Searns, 1995). Evidence has revealed an increasing demand among visitors for casual and healthy recreational activities, like cycling and walking (Lumsdon, 2000). In Britain, 5500 million day-visits were made each year. Of these, 5200 million were leisure day-visits from home and 218 million from other regions for holidays (Grant, Human, & Le Pelley, 1997). Greenway travels with smaller carbon footprints and slower traffic were considered a desirable travel pattern to accommodate this market (Dickinson, Robbins, & Lumsdon, 2010). This Transit-Oriented Developments (TODs) and travel pattern extends the tourism experience from points to a whole process including the transportation part. In this regard, greenways change the tourism attraction system from nuclei resources to a more network-based regional recreation system (Leiper, 1990), especially at the destination level and on short distance tours. Furthermore, the direct substitution of car trips by foot or cycle rides can reduce the consumption of resources, as well as reduce pollution (Csapó, Szabó, & Szabó, 2015; Lumsdon, 2000). However, this great potential in tourism has not been examined.

### ***Tourism: To satisfy all stakeholders' needs***

Tourism is a complex industry that involves a series of different stakeholders and has an inherent economic nature (Cohen, 1987; Tribe, 2015). As argued before, sustainable tourism requires the satisfaction of all stakeholders' needs while being equally concerned

about the protection of environment. The greenway strategy is consistent with principles of sustainable tourism (Ahern, 1995). It promotes tourism economy and at the same time keeps the continuity of tourism settings, as well as provides low-carbon transport patterns (Litman & Burwell, 2006). Notably, greenways were meant for recreational use (Fabos & Ryan, 2004). Not all recreation activities are tourism-defined (Mill, 2008; Smith & Godbey, 1991), while the daily recreation surrounding greenways can shift to tourism activities with the extension of time spent and distance travelled along greenway networks, such as whole-day trips by walking and bicycling, and cross-regional jogging, and skiing (Gobster, 1995).

Greenway tourism tends to satisfy all stakeholders' needs pertaining to sustainable consideration. The public sector, especially the local and regional governments all over the world, have showed great passion for the planning and implementation of greenway projects since the 1990s (Henderson & Bialeschki, 2005; Walmsley, 2006). The emphasis on the greenway movement including "green infrastructure," "smart conservation," "new urbanism," and TODs are closely related to the urban issues of pollution, congestion, and obesity for a healthy lifestyle (Hauserman, 1995; Rabiah Wan Omar, Patterson, & Pegg, 2012). George et al. (2015) found that greenways in Sydney had constructed a sustainable and livable environment for a medium density region by linking the community and the natural environment so that it actualized the state and local governments' goals of improving the quality of life in general.

Greenways can improve the image of cities by linking green open spaces and arranging the attractions into well-organized scenic routes (Bischoff, 1995). As Masberg and Jamieson (1998) theorized, open parks contribute to the overall image of a destination. Greenways as a system of such an open sapce can augment the positive effects of the space itself, while simultaneously creating an impressive city image (Deenihan & Caulfield, 2015) and inspiring tourist demand (Macdonald, 2011). Green road construction and marketing in Singapore and Ruhr in Germany have completely changed the urban development environment and the images associated with each such city (Lindsey & Nguyen, 2004; Sun & Lv, 2012; Toccolini et al., 2006).

In response to the concerns raised by voluntary organizations, greenways are highlighted as the products of green tourism entailing quality, empathy, and environment awareness (Chancellor et al., 2011; Lamont, 2009; Lumsdon, 2000). Greenways facilitate

low-carbon activities and the conservation of urban species by linking the fragmented habitats together (Turner, 1995). In a broad sense, greenway tourism can become an important strategy for traditional mass tourism to adapt to climate change because of its environmentally friendly nature (Scott, Peeters, & Gossling, 2010).

Greenway development can enhance tourism businesses as well, such as hotels, tour operators, travel agencies, and special “hallmark” events (Beeton, 2009; Dawe, 1996). Greenway projects aim at the improvement of the territory and the creation of tourism products and are composed of tourism services and local resources (Furlan et al., 2004). With tourism usage becoming popular across greenway networks, it is possible that in the future, more opportunities for business can be identified, including the development of en route accommodations for longer tours and cycle hire markets (Beeton, 2009; Szabó, Csapó, & Szabó, 2014).

Greenway has numerous positive effects on the community that it passes through (Brown et al., 1993; Lv & Yan, 2013). Cross-region greenway linkages encourage both simple and complex forms of public communication. Simple forms refer to the superficial communications between citizens and among private and public organizations. Complex forms are a kind of participatory democracy that strive to reach a shared understanding of public issues so as to encourage equity (Hoover & Shannon, 1995).

A greenway network is a slow system that can satisfy visitors’ needs with non-motorization (Mundet & Coenders, 2010) and non-seasonal travels (Lumsdon, 2000; Weston & Mota, 2012; Willard & Beeton, 2012). Greenway system is a tourist attraction in itself and an important component in the attractiveness of an urban destination. As a transit-oriented route, the experience of visitors with greenways is not simply a movement from one point to another, but rather an active one that seeks to move around the entire area in a more responsible manner (Lee, 2014; MacLeod, 2016).

Furthermore, this pro-environmental concept initiates the creation of a sustainable society and a healthy lifestyle by strengthening the cooperation among different actors (Leccese, 1996). The role of community, government, and external bodies are all highlighted in greenway projects (Erickson, 2004; Ryan, Fabos, & Allan, 2006). Cooperative discourse takes place among participants at different levels of authority: federal, state, local, and citizen. While each group can identify formal linkages to other

levels of authority, most studies have focused on local governments and landowners (Chancellor et al., 2011; Reis & Jellum, 2012).

To conclude, greenway tourism is a new type of green tourism with a greenway network. Based on multi-disciplinary ideologies, in theory, it seems an ideal mode of sustainable tourism that benefits all stakeholders and integrates ecological, social, and economic benefits, and a healthy lifestyle, which is consistent with the principles of sustainable tourism, particularly in urban areas (Chancellor et al., 2011; McGehee et al., 2013). Although the inclusion of day-trips is a contentious issue in defining tourism *per se*, single-day recreation activities are included in greenway tourism on account of its increasing popularity and significant economic benefits to the host communities (Macdonald, 2011). It is becoming increasingly common for tourism to include all visitor activities, including overnight and excursionist markets (Mundet & Coenders, 2010). Commuters using greenways should certainly be excluded from the scope of sustainable tourism. Based on the definition of cycle tourism provided by Lamont (2009), greenway tourism is technically defined as trips involving a minimum distance of 40 kilometers from a person's home or a minimum four-hour stay on greenways, involving active or passive participation for holiday, recreation, leisure, and/or competition purposes. Meanwhile, since tourism is an experience industry (Leiper, 1979), greenway tourism could be defined based on individuals' own experiences and identities.

#### **2.4.4 Greenway tourism research**

##### ***Greenway literature: Rising tourism and orientation toward utility***

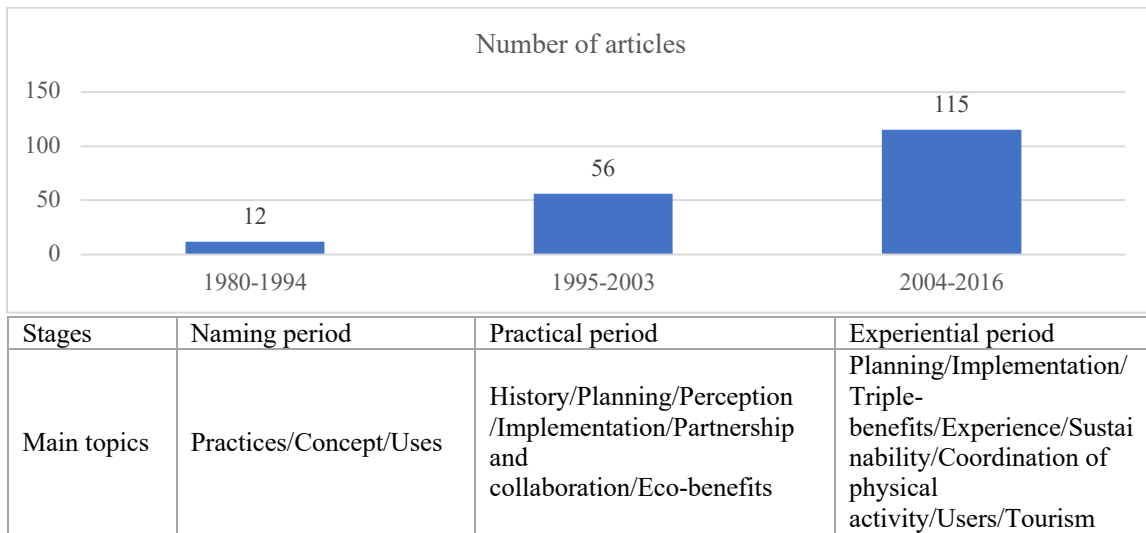
Despite the great potential of greenways for tourism (Bonduelle, 2006), it is a relatively unstudied area in the related literature. Derived from the fields of landscape planning and urban ecology, the earliest notable work compiled on greenways may arguably be Charles Little's *Greenways for America* (1990), followed by *Ecology of Greenways* by Smith and Hellmund (1993); *Greenways: a Guide to Planning, Design and Development* by Flink and Searns (1993); *Greenways: The Beginning of an International Movement* by Fábos and Ahern (1996); *Trails for the 21st Century: Planning, Design and Management Manual for Multi-Use Trails* by Ryan and Kathy (2001), *1000 Great Rail-Trails: A Comprehensive Directory by the Rails-To-Trails Conservancy* by the Globe Pequot Press, *Ecological networks and greenways: concept, design, implementation by*

Jongman and Pungetti (2004), *Designing Greenways: Sustainable Landscapes for Nature and People (second edition)* by Hellmund and Smith (2013), and *Tourism and trails: Cultural, ecological and management issues* by Timothy and Boyd (2014). It is interesting to note that most of these books focus on the concept, as well as details of the planning, implementation, and management issue of greenways. While the books by Smith and Hellmund (1993) and Jongman and Pungetti (2004) are mainly concerned with the ecology aspect, others have recognized the importance of recreation, protection and historical/cultural values, including the two earlier books on trails. It was only 2014 that a book sought to discuss the tourism aspect of trails, which implied that the tourism aspect had begun to gain attention among the public. This book *Tourism and trails: Cultural, ecological and management issues* (Timothy and Boyd, 2014) deals with different types of trails and discusses the demand, planning, impacts, and management issues centered on greenways.

Nine academic doctoral dissertations have also been found focusing on greenways between 1998 and 2019, among which six concern planning issues. The focus on greenways changed from ecology-oriented to a more multi-use-centric focus and finally settled on addressing humans and communities. A dissertation by Ribeiro (1998) discussed the protection of cultural landscape by historical greenways in metropolitan areas. Another dissertation by Ahern (2002) was concerned with greenways as a method of strategic landscape planning for ecological protection. Lusk (2002) considered multiple uses of these corridors and Erbil (2005) explored greenways planning from an environmental perspective. Chon (2005) cared about the aesthetic response of humans to greenways in order to contribute to sustainable development in tourism and recreation settings. Bowman (2009) focused on the placement of the community with respect to greenway plans. Human use and behaviors have been an area of interest, as represented by Coutts' (2006) dissertation on physical activity behaviors. Furthermore, the interactions between greenways and humans gained practical and theoretical attention based on implementation of greenway projects. Pippi (2014) described the social interaction that arises from the greenway environments. It is worth noting that although the author recognized the nature of greenways as a setting for tourism and recreation, he was mainly concerned with the interactions within the communities.

There are several articles on greenways. Based on an incomplete statistic drawing from 183 related articles, studies on greenways can be divided into three main stages by chronology, outlining the main topics concerned (Table 2-2). The first stage is the “naming period” and extended from 1980 to 1994, where the research mainly introduced greenway practices (Bristow, 1991; Brown et al., 1993; Rolley, 1993), conceptualization (Grove, 1990; Moore, 1994) and uses of greenways (Crookham, 1989; Furuseth & Altman, 1991; Krumpe & Lucas, 1986). Since 1995, systematic research on greenways began, paving the way for the “practical period” which extended until 2003, where greenways were taken as an urban planning approach and researchers were concerned more with the practices of planning and implementation of greenways (Ahern, 1995; Linehan et al., 1995; Ryder, 1995) than anything else. Some also cared about eco-benefits (A, 1995; Baschak & Brown, 1995; Ndubisi, Demeo, & Ditto, 1995) and the perceptions of planners, landowners, and users (Crompton, 2001; Lindsey & Knaap, 1999; Shafer et al., 2000). The collaborations among different actors was also emphasized at this stage (Martin, 2003; Ryan, Fabos, & Lindhult, 2002). From 2004 onward, apart from the continuing discussions on greenways planning and multiple benefits (Asabere & Huffman, 2009; Fabos & Ryan, 2006; Lindsey, Man, Payton, & Dickson, 2004; Teng et al., 2011), there were an increasing number of studies on greenway experience (Gobster & Westphal, 2004; Willard & Beeton, 2012), including those that focused on recreational values (Furlan et al., 2004; Henderson & Bialeschki, 2005; Lindsey et al., 2004) and physical activities (Dorwart, 2015; West & Shores, 2015; Wolff-Hughes et al., 2014). Meanwhile, the creation of greenways with the aim of promoting sustainability has also been examined (Floress, Baumgart-Getz, Prokopy, & Janota, 2009; George et al., 2015; Kurdoglu et al., 2010; Pena, Abreu, Teles, & Espírito-Santo, 2010) from different perspectives, such as coordination (Giordano & Riedel, 2008; Ryan et al., 2006) and transport transformation (Gentile & Noekel, 2016; Wolff, Fitzhugh, Fitzhugh, Bassett, & Cherry, 2012). Tourism experience has also been explicitly mentioned in research in this area since this experiential stage (Furlan et al., 2004), indicating a utility-oriented turn in research on greenways. Research on greenways was significantly promoted by the *Landscape and Urban Planning Journal*, especially the three special issues on greenways around the world in 1995, 2004, and 2006 respectively, in response to the spectacular growth of greenway planning in the United States and Canada.

Table 2-2. Research topics pertaining to greenways (Source: Author)



***Greenway tourism: Beginning with recreation and cycling tourism***

Although tourism has been mentioned explicitly in greenway literature since 2004 onward, the related development began long before that. Greenway tourism development in western countries took place over five stages: the urban recreation stage (Masberg & Jamieson, 1998), the rural tourism stage, the ecological tourism stage, the bicycle tourism stage, and the greenway tourism stage. As a comprehensive tourism pattern, greenway tourism can be interpreted as a combination of different visitor activities on greenways. In urban areas, it mainly refers to recreational activities like cycling. Therefore, cycling tourism is a most recent antecedent of urban greenway tourism in the literature (Deenihan & Caulfield, 2015; Meschik, 2012; Weston & Mota, 2012).

Evidence suggests that cycling for leisure, recreation, and tourism are undergoing a resurgence. Ritchie (1998) pointed to data that indicated a boom in bicycle sales across Europe, UK, and New Zealand, while the Australian government demonstrated an increase in cycling for leisure and recreation between 1997 and 2006 (Department of Communications, Information Technology & the Arts, 2006). The potential of cycling-related tourism to contribute to economic development in Australia is gradually being recognized as well (Downward, Lumsdon, & Weston, 2009; Kaplanidou, 2006; Lamont, 2009). For example, the Munda Biddi Trail in Western Australia meanders over 900 km through a forest setting and numerous small towns. Most visitors reported that they spent around three days cycling on the trail, which stimulated the demand for overnight accommodation, bicycle hiring services, transportation, and food and beverage supplies in

many of the small towns in the region (Munda Biddi Foundation, 2005). The recent decade witnessed a continuing growth in knowledge on cycling tourism, particularly its potential in sustainability (Meschik, 2012; Weston & Mota, 2012). Despite the increasing prevalence of supply initiatives and demand for bicycle tourism products, scholarly inquiry into the relationship between cycling and tourism is scarce. From 2004 onward, there has been a small body of literature on greenway tourism, which continues to focus on cycling tourism. Some have examined tourists' experience and willingness to pay to explore greenways' potential for promoting sustainability (Downward et al., 2009; Kline, Cardenas, Duffy, & Swanson, 2012; Manton et al., 2016). However, research is rather limited. Several gaps have been identified in the domain.

First, studies on greenways over the past few decades have engaged more with the urban/landscape planning or nature protection perspectives. Though recreation, heritage, and cultural values been addressed since the very beginning, greenways have not been proposed as a low-carbon tourism approach until the recent years. To date, very few studies have paid attention to greenway tourism and to greenway visitors (Manton et al., 2016; Meneghello & Minghetti, 2004; Mundet & Coenders, 2010). In other words, past research has mainly been confined to the "green" and "way" parts and has rarely focused on "tourism." Second, based on the literature review, it is clear that greenway tourism is theoretically an approach toward sustainable development (Kline et al., 2012; Mundet & Coenders, 2010; Weston & Mota, 2012; Willard & Beeton, 2012) through the facilitation of a systemic change. However, few studies have mentioned this and have explored the rationale in reality aside from some studies that have looked at users' perception and spending behaviors (Manton et al., 2016; Nickerson, Jorgenson, & Boley, 2016). Users' experience is relatively scant in literature. Third, with respect to the methodological approaches, quantitative patterns such as survey questionnaires, survey mapping exercises, and GIS methods (Pippi, 2014) have played a more dominant role in studying greenway characteristics and its uses and interactions. A qualitative approach, however, is necessary to study the more recent trends in greenway experience and users' perspectives. Finally, past research has discussed the concepts, functions, and principles pertaining to greenways based on large numbers of practices and cases (Keith, 2016). It is necessary to rely on comprehensive theories in studying the shift in the focus of research from landscape



concern to utility in greenway tourism in order to understand greenway tourism within a complicated social context (MacLeod, 2016).

#### **2.4.5 Greenway users: Lifestyle visitors**

The greatest potential of greenway construction is that it is not only an ecological network but also a social network on different levels (Hellmund & Smith, 2013). It is a natural corridor that facilitates a link between humankind and nature. While greenway research has seen a shift toward utility in more recent times, very few studies have focused on greenway visitors thus far, partially because greenway travel is a relatively new phenomenon within the confines of greenway development.

##### ***Greenway users as lifestyle visitors***

There are some studies that have intended to clarify the motivations and types of users. The recreational nature of greenways is derived from the conceptual framework of parks and outdoor recreation management (Baker, 2002; Curry, 2001; Masberg & Jamieson, 1998). Very little is known about the exact role that greenways play in “recreation” nowadays. Given the transportation versus recreation dichotomy, earlier studies have found that the transportation use of urban trails ranged as high as 75% of the total number of trips taken (Turner et al., 1996). However, a study on Oakland trail reported that only 36% of the trail users contacted on-site were engaged in a trip classified as transportation (Shafer et al., 2000). There seems to be an increasing proportion of users treating regular recreation as the main purpose of greenway use (Davies, Lumsdon, & Weston, 2012; Pettengill et al., 2012). For instance, Pettengill et al. (2012) focused on three urban settings in Texas and distinguished among travelers as commuting only, recreation only, or mixed use travelers. Findings revealed that most travelers used greenways for recreational purposes (52%, 82%, and 85% respectively in the three urban settings) on a regular basis. This specific group was classified as “lifestyle visitors” because of the high frequency of their trips. Different from traditional mass tourism to escape from everyday life (Uriely, 2005), lifestyle visitors make tourism an everyday practice owing to high accessibility (Cohen, 2011). Furthermore, it was suggested that recreationists believed greenways contributed to their quality of life with the provision of natural space, while commuters valued the reduced pollution and transportation costs they offered (Pettengill et al., 2012).

Recreation uses include walking and jogging for short durations of time by residents nearby and leisure activities for lifestyle visitors who are motivated by tourism. Mundet and Coenders (2010) differentiated among several different types of greenway user profiles based on use time, area, and motivations: utility trips, health seekers, and tourists. Utility trips refer to those who treated greenways as transportation routes. Health seekers point to users that take “walking/jogging/cycling trips of less than 2 h, live in the area, and state motivations relating to physical activity or health” (p. 663). Tourists include users from other areas enjoying “walking or cycling trip of half a day or more and stating motivations relating to tourism or leisure” (p. 663). Lifestyle visitors on greenways mainly mean those tourism-related users. Whereas several studies stated that the pattern of visitation has showed no evidence that users nearby the area around the greenways use the greenways for utility and health purposes only. Nearly half the number of bicyclists using the trail on weekends to various points along the trail (Furuseth & Altman, 1991). They may also be included as lifestyle visitors. The definition of greenway visitors varies by motivations and experiences, thus requiring a more contextual classification. Hence, besides using a technical definition, this study adopted a user-based approach to identify the tourist group by asking the participants to self-determine their roles (visitors or not).

Although Moore and Ross’ (1998) found that only 1.8% of trips were tourism-related, a small proportion of the total number of trips, the impact of greenways on tourism should not be dismissed. First, regarding the total trips of 1.3 billion, as many as 23,000 tourism-related trips are important for the local tourism industry. This proportion still increased over time. In 2012 study, over 50% users have mentioned leisure and tourism as reasons for using the greenway (Pettengill et al., 2012). It means that a demand exists and it has great potential for tourism (Downward et al., 2009). Moreover, since the 23,000 tourism-related trips tend to be longer in terms of time and distance, the effects of the tourism-related trips are greater than those indicated by the figures. To this end, it is important that the “tourist” aspect of greenways should not be neglected. Indeed, it is these rising needs that will support the future of the sustainable tourism industry.

### *User’s perception and attitudes*

Since greenways are ultimately conceived, designed, and consumed by individuals and groups of people, understanding human perceptions and attitudes is an essential part

of the narrative although it has been overlooked in greenway literature (Searns, 1995). The uses of greenways led to the creation of a community identity and facilitates positive social interactions among individuals within that community. Among the few studies on perceptions and preferences of trail users from different perspectives (Gobster, 1995), Airola and Wilson's (1982) work with three northeastern New Jersey cities on residents' attitudes and perceptions of urban open space was the first of its kind. Later research has identified six interdependent "human dimensions" of greenways that are related to how people perceive greenways for recreation and related activities; the six dimensions are cleanliness, naturalness, aesthetics, safety, access, and appropriateness of development (Gobster & Westphal, 2004). To greenway users, a real virtue of greenways appears to be the opportunities that they provide for people to enhance human experience in different ways. Such experience can increase livability, and thus contribute to the quality of life from the perspective of individuals and communities (Shafer et al., 2000).

However, the multifunctional nature and the presence of various kinds of greenways increase the importance and complexity of understanding the perceptions of visitors. For instance, the trail location and scales had proved to have strongly influenced the use pattern, use frequency, and types of users on greenways, and this has been supported by on-site surveys with 2873 recreationists and 13 diverse greenway trails in metropolitan Chicago (Gobster, 1995). Similar studies have also demonstrated how vegetation management and trail surfacing can affect the use modes and preferences (Deenihan et al., 2013). It means that contextual information, such as location, design, and resources can influence the possibility of metropolitan greenway systems to achieve recreational, social, and environmental goals. Thus, this study collected data from different types of greenways in order to reduce the sample bias.

### ***User behavior pattern***

User behavior was the final construct that this study intended to survey (Raaij, 1986). However, existing studies have generally remained confined to examining the economic aspect, that is, users' expenditure behaviors.

Admittedly, treating greenways as a tourism product suggests several possibilities of a business approach being employed by the local government and national tourism bureaus (Manton et al., 2016). Visitors to greenways were expected to spend more money

(Nickerson et al., 2016). As Mundet and Coenders (2010) stated, tourists consume bar and restaurant services more often than do local people. Tourist expenditure had a direct economic impact (Oswald Beiler, Burkhart, & Nicholson, 2015). The 23,000 annual tourist trips in Moore and Ross' (1998) study were reported to have incurred an expenditure of 14.38 US dollars on average, amounting to an estimated overall spending of 4,026,400 USD. This is only a rough approximation. Their survey was based on a single question centered on individual expenditure. The multiplication effects were not considered.

A small number of studies have used the travel cost method to estimate the associated recreational use values of greenways (Betz, Bergstrom, & Bowker, 2003; Manton et al., 2016), among which cycling was the main activity that was accounted for (Downward et al., 2009; Han, Meng, & Kim, 2017). Sælensminde (2004) concluded the input-output ratios of cycling routes in three Norwegian cities. Considering corresponding health benefits, environmental improvements, reduced traffic accidents, and increased travel opportunities, the benefit to cost ratios lay between 4 and 5 to 1, which demonstrated that the cycle networks enjoyed higher input-output ratios than other modes of transport. Siderelis and Moore (1995) applied the travel cost method to evaluate recreational values of three geographically diverse greenways in the United States and found that the greenways located in rural areas were valued higher than those in suburban areas by recreationists. Lindsey et al. (2004) used the travel cost method and estimated the recreation values of a greenway in Indianapolis, USA. They concluded that developing the greenway was a beneficial project. Existing studies on visitor behavior are limited to topics pertaining to expenditure and economic outcomes without considering the multi-dimensions of consumption values on greenways. Further, the scarce literature has preferred to rely on questionnaires to understand user behavior patterns without getting into the details of the mindset underlying such actions (Meisner, Wang, & Laplante, 2008).

It was recently observed that greenway visitors had a higher degree willingness to pay, and also exhibited eco-friendly behaviors (Han, 2015). Reilly, Williams, and Haider (2010) conducted intercept surveys on visitors in Whistler, British Columbia, and identified the willingness among the people in the region to opt for more sustainable transport options because tourists were more likely to choose energy efficient transportation when they traveled longer distances. As argued, "unless and until the tourist also seeks to travel in a

more sustainable manner, tourism's carbon footprint is unlikely to decline" (Pang, McKercher, & Prideaux, 2013, p. 15), whereas the willingness of tourists to change their behavior continues to remain low (Pang et al., 2013). To promote responsible behavior among tourists is indeed a challenge for the future of sustainable tourism. The potential of greenway tourism in this regard deserves further attentions.

## **2.5 Responsible tourist behavior**

*...being a tourist remains the domain of an individual's free choice. This is where the challenge ultimately lies for those wanting to push such an agenda forward.*

*(Weeden, 2014, p. 17)*

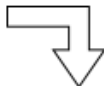

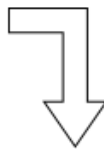




Tourism, with its rapid growth in the past few decades and its promising future, is identified as being related to environmental changes in two ways: as the victim of environment change and simultaneously as the source of it (Patterson, Bastianoni, & Simpson, 2006). On the one hand, environmental change could exert great negative influence on low altitude, coral-reef-dependent, and ski destinations (Bonzanigo, Giupponi, & Balbi, 2016). On the other hand, though sceptics exist, tourism gets a consensus recognition of its significant contribution to destination change (Gronau, 2016). Global tourism's CO<sub>2</sub> emissions is estimated as having contributed around 5% of human-made CO<sub>2</sub> emissions, and they are expected to grow rapidly in the coming decades (Bonzanigo et al., 2016). According to this vicious cycle, the arguable myth that "tourism destroys tourism," or at least that tourism contributes to tourism decline, could come true in some destinations. In that case, adaption strategies, such as collaboration among stakeholders to foster destination resilience, and pro-environment actions to reduce climate change, have been widely discussed (Scott, Hall, & Gössling, 2016). However, as Pang, McKercher, and Prideaux (2013) noted, tourists' complicity in response to environmental change has gained limited attention (Stanford, 2008), even though it has been pointed out by some researchers that tourists play the most important role in facilitating sustainable development (Gossling et al., 2012; Pang et al., 2013).

### **2.5.1 Tourists' pro-environmental behaviors**

Weeden (2014) did an exploratory study and concluded that responsible tourist behavior included traveling independently and sharing the economic benefits with destination communities—shopping locally, using public transportation, avoiding flying,

spending time outdoors, talking to local people, and respecting traditions, customs, and cultural norms. Though limited, there seems to have been an increasing interest in tourists' responsible behavior in recent years. As a continuing review of Pang et al. (2013), related papers on responsible tourist behavior between 2014 and 2019 were searched. Drawing on grounded theory, a four-step coding analysis was adopted for theme identification (Table 2-3): key specific themes (open themes), axis themes by merging similar items, selective themes, and core research themes.

Table 2-3. The themes identified (Source: author)

Open themes for papers	Axis themes	Selective themes	Core themes		
Adaption behavior					
Environment disaster (cyclones, flood)					
Risk management					
Vulnerable destination					
Adoption of voluntary carbon offsets	Environmental change	Environmental-oriented: to reduce tourism impact on environment	Tourists' attitude-behavior gap for environment change		
Environmental change	Behavior change				
Airlines	Behavior interventions				
Environmental change perceptions	Carbon footprint				
Aviation	Attitude-behavior gap				
Tourists' perception of environment change	Aviation				
Disappearing destinations	Academic intervention				
Behavior change	Awareness				
Consumer attitudes and preference	Attitudes				
Label content and design	Values				
Carbon footprint	Decision-making	Context: intersection of tourism and environment	Timing and spatial substitutions for tourists		
Decision-making	Segments				
Sustainability	Tourist motivation				
Values	Risk management				
Voluntary reductions of air travel	Adaptation behaviors	Tourism-oriented: to get less influence on tourism from environment change			
Behavior change	Sustainable tourism				
Climate change					
Academic interventions					
Behavior interventions					
Behavior adaptation					
Winter alpine tourists					
Tourist motivation					
Leisure sustainability					
Behavior change					
Developing countries					
Sustainable development					
Attitude-behavior gap					
Sustainable tourism					
Awareness					

As can be seen from the Table 2-3, themes went in three different directions. The environmental-oriented theme concerns reducing tourism impacts on the environment from a tourist perspective. For instance, it is believed that through behavior interventions (Eijgelaar, Nawijn, Barten, Okuhn, & Dijkstra, 2016), tourists can change their behaviors (Dillimono & Dickinson, 2015) and reduce their carbon footprints (Segerstedt & Grote, 2016), especially by not taking air travel (Reis & Higham, 2016). However, the attitude–behavior gap was found to exist (Juvan & Dolnicar, 2014). Even though people showed intentions to take actions, their actual behaviors could be different. Therefore, research has turned to a contextual explanation for this gap. The relationship of tourists’ awareness, attitudes, and behavioral intentions in travel to their actual behavior changes has been examined frequently (Büchs, 2016; Eijgelaar et al., 2016; Font & Hindley, 2016). However, most studies have focused on behavioral intentions or behavioral change intentions, and have rarely explored their actual behavior changes afterward, due to the difficulties in tracking over-time changes. Furthermore, different market segments, such as infrequent travelers, tourists in disappearing destinations, and tourists from developing countries, have been investigated (Dillimono & Dickinson, 2015; Font & Hindley, 2016; Reis & Higham, 2016). The third theme is tourism-oriented, which focuses on tourism development under the conditions of climate change. Both industry and academia intend to identify the potential of destinations, to free themselves from the influence of environmental change by tourists’ adaption behaviors, such as motivation changes or risk management (Cocolas, Walters, & Ruhanen, 2015; Wu, Zhang, Lu, & Rahman, 2016).

In the end, two main core themes were identified. One is the pro-environmental attitude–behavior gap of tourists in response to environment change; the other is timing and spatial substitutions for tourists in decision-making regarding vulnerable destinations, representing the views of environmentalism and tourism, respectively. Visitors tend to adapt to environmental change with different substitution behaviors, rather than reduce their travel opportunities (Cocolas et al., 2015). Besides, actual behaviors were rarely examined in research. Most scholars examined stated a preference for indicating actual behaviors, but it was found that more variables affected stated preferences than actual behaviors (Han & Hyun, 2018). This means that there exists a gap between stated intentions

and actual behaviors (Ziegler et al., 2018). In future studies, actual behaviors should be considered to advance this line of research.

### **2.5.2 The antecedents of tourists' responsible behaviors**

Attitude has always been a key focus of theory in both the social and behavioral sciences (Shahzalal, 2016). Eagly and Chaiken (1993, p. 1) defined “attitude” as “a psychological tendency that is expressed by evaluating a particular entity with some degrees of favor or disfavor, [where] evaluating refers to all classes of evaluative responding, whether overt or covert, cognitive, affective or behavioral.” The attitude’s constructs can be broken down into beliefs about the likely outcome of the behavior, and about the values that individuals hold (Sparks, 2007). The latter is considered extremely significant for attitude change (Sussmann & Unel, 1999). According to Schwartz and Bilsky's (1987) universal value theory, humans are value-oriented, and are classified as being eco-centric, social or altruistic, and egocentric or selfish. Combined with the normative influence model, which explains the mechanism that leads people to behave in a certain manner, and the beliefs inherent in the new ecology paradigm (the new environmental paradigm) developed by Dunlap et al. (2000), which measure environmental awareness and how it affects human actions, Stern (2000) proposed the value–belief–norm theory, which assumed a hierarchical model (Figure 2-9) where individual value orientations directly influence beliefs, and thereby norms and behaviors.

At the first level of this model (Figure 2-9), different value orientations influence the formation of the general beliefs that people hold about nature and their relationship to the environment (belief in an ecological worldview) (López-Mosquera & Sánchez, 2012). The more deeply rooted the ecological worldview, the deeper people’s recognitions of the consequences of their behavior toward the environment (belief in behaviors). The belief that actions can alleviate the consequences could also be changed accordingly (belief in control). Finally, the self-acceptance of responsibility results in a sense of moral obligation toward the environment, or the activation of a personal norm for action. Those variables were assumed to be influential in determining actual pro-environmental behaviors at different levels (Nordlund & Garvill, 2002), whereas the behaviors that are explored in the literature were mainly about behavioral intentions instead of actual behaviors. Although behavioral intention is an influential factor determining actual behaviors, significant



attitude–behavior gaps were identified in both practices and academia (Segerstedt & Grote, 2016).

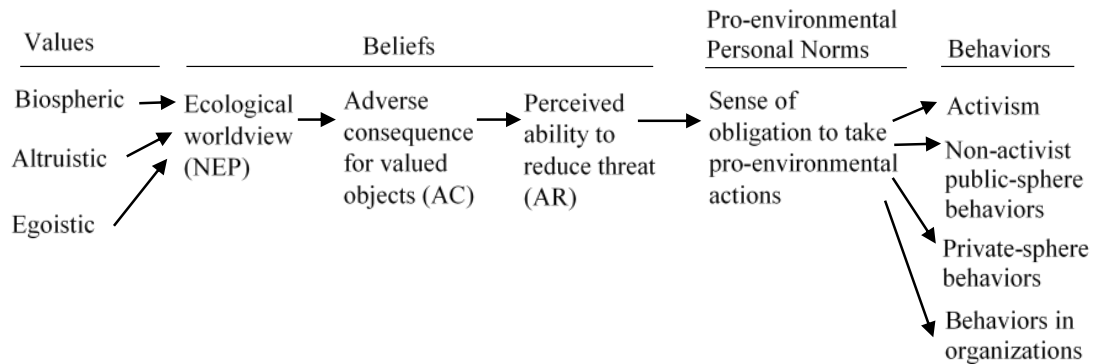


Figure 2-9. The value-belief-norm theory (Source: Stern, 2000)

The attitude–behavior gap in tourists’ responsible behavior has been frequently discussed based on the diffusion of innovations (DOI) theory (Segerstedt & Grote, 2016), reactance theory (Font & Hindley, 2016), attribution theory (Heider, 1985), and cognitive dissonance theory (Juvan & Dolnicar, 2014). Those theories provided explanations for the inconsistency between attitudes and behaviors. Cognitive dissonance theory states that human beings often have an internal dissonance between their beliefs and their behaviors. As a response, individuals usually tend to adjust either beliefs or their behavior so they can return to consonance (Juvan & Dolnicar, 2014). This means that visitors’ attitude changes do not necessarily lead to pro-environmental behavior changes, because an attitude or an antecedent of an actual behavior is not a single element like behavioral intention, but a systematic combination of factors. The in-depth exploration of influential antecedent variables may go some way toward explaining and narrowing the perceived gap between tourists’ stated intentions and their behaviors.

Regarding responsible tourists, values are argued as the fundamental influencing factor of their attitudes and actual behaviors. People make decisions according to their value priorities. For instance, ethical behaviors are influenced by the extent to which people are motivated by the self-transcendent values of universalism and benevolence, and unethical behaviors are related to the self-enhancing values of power and achievement (Juvan & Dolnicar, 2014). However, for society as a whole, individuals’ actual behavior

changes appeared to be slightly incremental due to inconsistent and complex environmental values (Ribeiro, Pinto, Silva, & Woosnam, 2017).

First, value is a multilevel concept that is inconsistent in nature. As Freud (1922) stated, human beings have both conscious and unconscious values. The conscious value refers to rational thinking tied to human benefits, while the unconscious value refers to the inner view of the outside world. Research linking the environment to personal values is often presented as a binary issue: the environment is either valued for its own sake (intrinsic value), or for the benefit it brings to the human population (instrumental value) (Ho et al., 2015; Winter, 2007). People may state that they have eco-friendly concerns (conscious level) but are actually ego-centric in terms of unconscious awareness. In other words, tourists with a stronger intrinsic environmental value would behave in a more eco-friendly way, indicating that it is their environmental awareness (unconscious value) not their environmental concern (conscious value) that induces pro-environmental behavior changes (Eijgelaar et al., 2016). It is necessary to discover people's conscious environmental concerns and their unconscious environmental awareness to support low-carbon behaviors (Büchs, 2016).

Second, values are difficult to change. Juvan and Dolnicar (2014) argued that targeting personal beliefs seemed more successful than targeting values for behavior changes, as values are established early in life and beliefs can be modified by social norms throughout a person's life. It means that environmental beliefs can also promote behavioral changes, even though the effects may be limited. Some people have knowledge about environment degradation, while their knowledge of its link to tourism may be variable (Chi, Ouyang, & Xu, 2018).

In addition, environmental values do not necessarily lead to changes in behavior patterns, as they tend to ascribe the responsibility to others or deny self-responsibility (Chi et al., 2018). It means that norms on taking personal responsibility are also important in enacting actual behaviors (Olya & Akhshik, 2018). Beliefs and norms have been explored in many studies, particularly those seeking to explain ethical consumption behavior (Tolkach, Pratt, & Zeng, 2017). However, there has been a serious lack of research attention on changes in values as a means of offering insight into responsible tourist behavior. Individuals tend to be "locked-in" to social consumption patterns and behaviors,

which were shaped by the media and by common norms (Hall, 2015). Visitors' behaviors reflect a wider social value, such as routine, habit, and social practice (Dickinson et al., 2010; Jackson, 2005). Hence, an in-depth exploration of different antecedents of pro-environmental behaviors could enlighten systematic—and overdue—behavioral changes (Dillimono & Dickinson, 2015; Hall, 2015).

### **2.5.3 Strategies for promoting responsible tourist behavior**

Based on the aforementioned review, personal attitude systems (values, beliefs, and norms), as a complex set, affect tourists' behaviors. Meanwhile, the tourism-oriented view demonstrates that travel needs, together with motivation factors, are also influential in tourists' pro-environmental behaviors. Tourists' primary motivations for a holiday are to enjoy themselves, have fun, and relax. It is reasonable that an individual might experience some dissonances or internal conflicts between ethical considerations and their holiday purchases. Only tourists value environment protection as a priority in making decisions over their travel needs would they sacrifice their personal needs to undertake pro-environmental behaviors.

While the driving forces of behavioral changes have been thoroughly discussed (Steg & Vlek, 2009), there remains a great need for research to uncover effective ways to achieve these goals. Supply-side tourism made efforts to provide eco-friendly products. For instance, ecotourism was largely promoted as leading pro-environmental behaviors through the provision of educational programs (Higham & Carr, 2002). The effects of such programs are widely questioned. On the one hand, the educational effects of ecotourism were limited due to the liminality of the tourism context. Even though ecotourism visitors were assumed to possess strong green and ethical values (Winter, 2007), and were reported to take part in pro-environmental behaviors at their destinations, once they returned to their daily life, tourists went back to their routine behavior patterns. This indicates that the education or learning outcomes of such a transferable approach has difficulties in inducing longitudinal tourist behavior changes. On the other hand, upon returning, their general pro-environmental behavior did not continue because tourists tend to behave out of their “ordinary selves” in tourism contexts. It means that this strategy is limited to those contextual situations rather than bringing about systematic changes. Ways to promote

overdue pro-environmental behaviors, both on-site and in daily life, needs further investigation (Weeden, 2014).

Recently, it has been argued that visitor education on a demand basis could be more effective than a supply-side strategy, since tourists' experiential learning could induce more grounded changes in both values and behaviors (Lee et al., 2015). In this regard, greenway tourism seems to provide a potential context for such sorts of studies. First, as argued above, greenway users increasingly tend to be lifestyle visitors, and their experience on greenways is more routine, which may reduce the effects of liminality to bridge the transformable gap between routine behavior and behavior in a tourism context. Second, greenways have been argued to be a vehicle of expression in terms of its personal, patriotic, commemorative, cultural, and sociopolitical meanings (Bischoff, 1995). Third, greenways as an interdisciplinary approach to promote sustainable tourism could promote multidimensional interactions between individuals' leisure experience, personal values, and behaviors. In addition, because greenways tourism involves more frequent and repeated activities, it is possible to approach repeat visitors and trace their actual behavioral changes.

## **2.6 Visitor education**

*To protect landscapes from negative recreational impacts while providing recreation-related and ecosystem services benefits to the public, land and water managers often try to educate recreationists about behaviors to avoid or reduce the negative environmental impacts of recreation with on-site activities and resources such as education programs and signs, posters, interpretation, personal contact and other communication tools.*

*(Guo et al., 2017, p. 26)*

For sustainable tourism development, destination management strategies have been taken by the governments and organizations. However, it turns out that those supply-oriented visitor management techniques, such as carrying capacity, failed to mitigate the negative impacts of increasing tourist visits and behaviors (Frauman & Norman, 2004; Millar, 1989), because there is always compromise between protection strategies and a large amount of economic benefit. With a recognition of the critical role of visitors in resource use (Van Herzele & Wiedemann, 2003), the importance of visitors' pro-

environmental behaviors has been emphasized, particularly against human-induced damage (Prentice, Guerin, & McGugan, 1998). Visitor education, as “an important tool for park and protected area management” (Vagias, 2009, p. 73), is then increasingly recommended in the tourism sector (Guo et al., 2017; Wei & Wen, 2015).

### **2.6.1 Visitor education and learning traditions in tourism**

Originating in the United States, the tourism education system began with an education program launched by Jim Bradley, a wilderness specialist, in 1979. The purpose of this project was to address tourists’ damage of natural and cultural resources (Shouwen, 2011; Wei, Wen, Ardjouman, & Chen, 2014). The difference between this program and other destination management skills, such as carrying capacity, is that this program educates visitors to avoid and reduce their damage to the environment through activities and communication tools (Guo et al., 2017). Among many other followers, the Leave No Trace program, refined by the US Forest Service and the National Outdoor Leadership School in the early 1990s, received great attention and was introduced into many other countries (Jun, 2003; Marion & Reid, 2007). Visitor education was initially based on ecotourism or nature-based destinations (He & Chen, 2012; Shouwen, 2011). Visitor learning and education was one of the most important objectives in these areas (Buckley, Cater, Linsheng, & Chen, 2008; Donohoe & Needham, 2006).

Walter (2013) theorized that ecotourism could take three different forms, based on Wight’s (1993) spectrum of “soft” and “hard” ecotourism: wildlife ecotourism (soft), adventure ecotourism (hard), and community-based ecotourism (mixed). Among them, free choice and behaviorist learning models in wildlife ecotourism has taken the predominant role in research on visitor learning to date (Ballantyne & Packer, 2011), through such models as cognitive dissonance theory and Ajzen’s theory of planned behavior. Wildlife ecotourism, in previous discussions, mainly refers to short trips to view marine or land-based wildlife, like whale or dolphin watching, or going to zoos (Frost, 2011). Other forms of soft ecotourism, such as tours to national parks, campfire programs, or hiking or biking in natural areas (Tan & Law, 2016; Weaver, 2006), were not addressed in previous studies.

The earliest theorizing of visitor learning in wildlife ecotourism should be Forestell’s (1993) three-stage behavioral model, which includes being open to knowledge

in the pre-contact stage, and viewing dynamic disequilibrium in the contact stage as a “teachable moment” and learning “content” and consolidation as a way to restore visitors’ cognitive equilibrium. Visitors’ new knowledge is then reinforced and connected to personal behaviors in the post-contact stage. When designing an interpretation system for dolphin ecotourism, a similar sequential behavioral change process was proposed by Orams (1997) based on Forestell’s model, the cognitive dissonance and dynamic disequilibrium (Figure 2-10). The main difference between the two models is that the latter one emphasized the affective responses of visitors stimulated by the dissonance during the contact stage. With that environmental information and those emotional experiences, visitors generate the motivation to act, thereby promoting new environmental knowledge, cognition, and behavior (Walter, 2013).

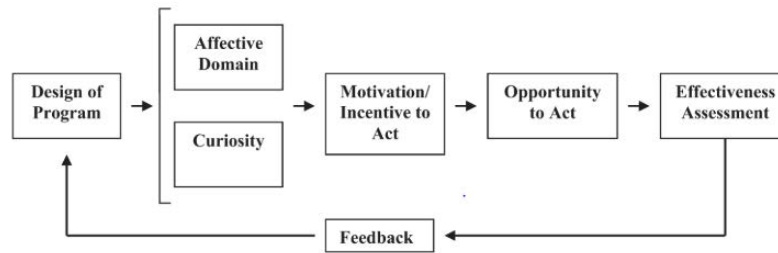


Figure 2-10. Orams’ model for program design (Source: Orams, 1997, p. 297)

Likewise, Ajzen’s (1991) theory of planned behavior is also a behavioral model that explains visitor learning in wildlife ecotourism (Goh et al., 2017). Three kinds of beliefs (behavioral, normative, and control) were identified during the process of learning to make behavior changes in Ajzen’s theory (Figure 2-11). In it, behavioral beliefs are “beliefs about the outcomes and consequences of particular behavior”; normative beliefs are “beliefs relating to social pressures to perform or not perform the behavior”; and control beliefs are “beliefs about our ability, knowledge, skill, resources and opportunity to perform the behavior” (Ballantyne & Packer, 2005, p. 284). These three elements together are predictors of visitors’ behavioral intention, based on which their behaviors could be finally formed. Through them, environmental interpretation in wildlife ecotourism was often designed to challenge the behavioral, normative, or control beliefs upon which the intention and behaviors are based so as to achieve the desired outcome (Ballantyne & Packer, 2005).

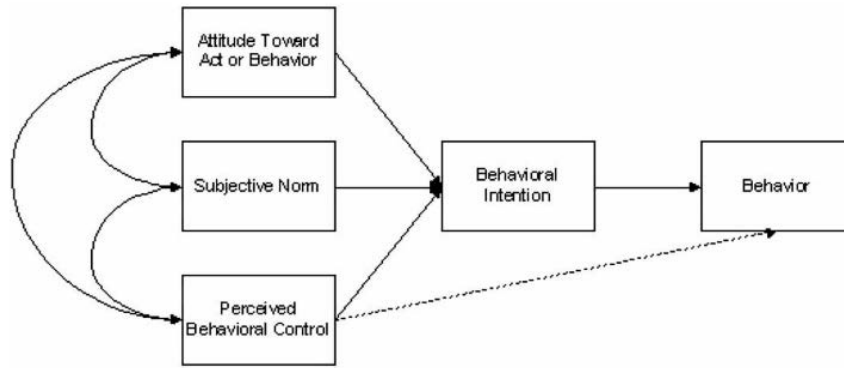


Figure 2-11. Ajzen's theory of planned behavior (Source: Ajzen, 1991)

The philosophical foundation of visitor learning in adventure ecotourism lies in the progressive education tradition for adults, which takes environment, experimentation, experience, and visitor-centered problem-solving as pivotal elements (Tisdell & Wilson, 2005). As for this tradition, learning is facilitated by the experimentation and performance of learners. And among many others, Kolb's (1984) experiential learning is one of the most prominent theories in this learning style, and has been studied and discussed in adventure and recreation education over the past decades (Xie, 2004). Rather than a linear sequence, Kolb's model is a cycling process with four learning steps, and learners could be positioned in one of them at any given time (Figure 2-12).

Adults in adventure ecotourism tend to enjoy a concrete wilderness experience, which challenges them both physically and mentally and creates "constructive anxiety" (McCarthy, 2010). This diverging period with anxiety drives visitors to reflect on themselves and others. Based on the reflective observation on individual and collective experiences, learners assimilate these experiences and develop a series of effective approaches or strategies to alleviate their anxiety. These strategies, attained through abstract conceptualization, are then tried out and coalesce into active experimentation (Bergsteiner, Avery, & Neumann, 2010). After accommodating the new knowledge, visitors may encounter new challenges in next concrete experience (Roberts, 2006), which then leads to a new cycle of learning.

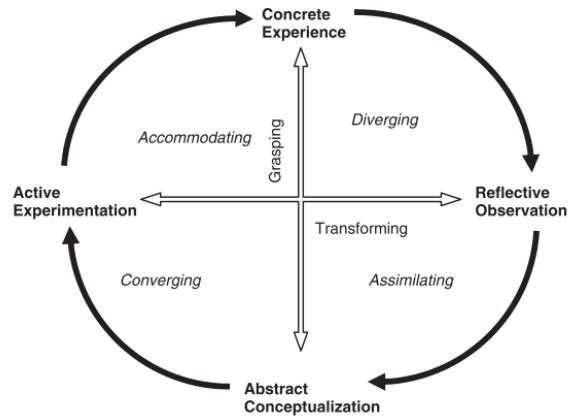


Figure 2-12. Kolb's cycle of experiential learning (Source: Kolb, 1984)

Regarding mixed or community-based ecotourism, visitor learning was philosophically positioned within humanist, progressive, and radical traditions (Walter, 2013), which all emphasize learning from the culture, identity, and lifeways of local communities in natural areas (Fallon & Kriwoken, 2003; Reimer & Walter, 2013). In other words, visitor learning in this domain is based on an appreciation of the knowledge, ecological practices, and belief systems of indigenous communities. “Transformative learning,” proposed by Mezirow (2000), may be triggered by those profound personal experiences in different cultures and in nature (Fu, Peterson, Kannan, Shavelson, & Kurpius, 2015).

Theoretically, transformative learning refers to a “worldview transformation.” Through personal experience, some “taken-for-granted” frames of action, such as habits and mindset, could be modified and updated to more inclusive, reflective, and discriminating ones. Therefore, the personal experience, which Mezirow (2000) termed a “disorienting dilemma,” is the catalyst for the entire ten-step process of learning (Figure 2-13). Following the disorienting dilemma, learners might then go through self-examination, a critical assessment of assumptions, a recognition of shared concern with others who tend to be more environmental friendly, an exploring of options for new roles and relationships, the planning of a course of action, the achieving of the knowledge and skills required to implement these actions, the trying out of new roles by volunteering or teaching others, the building of self-confidence, and the merging of the new roles into their self-identity and worldview. However, few empirical studies have been conducted on this process in visitor education (Walter, 2013).



1. A disorientating dilemma.
2. Self-examination with feelings of shame, fear, guilt or anger.
3. A critical assessment of assumptions.
4. Recognition that one's discontent and the process of transformation are shared.
5. Exploration of options for new roles, relationships and actions.
6. Planning a course of action.
7. Acquiring knowledge and skills for implementing one's plans.
8. Provisional trying of new roles.
9. Building self-confidence and competence in new roles and relationships.
10. Reintegration into one's life on the basis of conditions dictated by one's new perspective.

Figure 2-13. The phases in transformative learning (Source: Mezirow, 2000, p. 22)

While there are different visitor learning models with different philosophical traditions, only the rational and behavioral models have been significantly examined in rural and marine wildlife tourism. Other forms of learning models have had few empirical studies in tourism (Strange & Gibson, 2017). Approaching sustainable tourism, as argued above, pertains more to systematic value changes on a mass market basis. Being a mixed ecotourism form, greenways combine wilderness ecotourism, adventure ecotourism, and community-based tourism. Whether and how the greenways could promote responsible tourist behavior needs a comprehensive learning model and empirical studies.

### 2.6.2 Visitor education paradigms in the future

*“Experience is the child of Thought, and Thought is the child of Action—we cannot learn more from books.”*

*(Benjamin Disraeli, 1826)*

During the nineteenth and twentieth centuries, education was mainly understood as the delivery of information to learners whose task was to absorb as much as possible (Hvenegaard, Spenceley, & Snyman, 2017). Knowledge was understood as objective, external to the knower, and transferable. Visitor education started with and is still focused on the informative and formal interpretation system in different tourism contexts, particularly in nature-based destinations, zoos, heritage sites, and museums (Doucette & Cole, 1993; Moscardo, 1998). It was assumed that such kinds of education programs can encompass skills development, knowledge and awareness expansion, and social learning (Jun, 2003; Marion & Reid, 2007). However, a small but growing body of research on visitors' behaviors from a systems perspective found that a knowledge-based interpretation induced more on-site pro-environmental behaviors than did general ones (Cheng & Wu, 2014; Lee et al., 2015). The forgetting-curve hypothesis derived from Ebbinghaus's classic

memory theory could explain this limitation of interpretation (Ballantyne, Packer, & Falk, 2011). It suggests that the longer the time between when a message is delivered and when the targeted recreation behavior occurs, the less likely it is that individuals will alter their actions. As time goes on, most of the information achieved by reading or viewing messages would be forgotten by individuals (Ballantyne, Packer, & Sutherland, 2011). This indicates that information and knowledge are not enough to change the inherent values that determine people's behaviors (Guo et al., 2017).

However, the stable attitude hypothesis suggests that human values are relatively stable. If an educational program can influence individuals' values, those impacts will remain stable and will continue to change behaviors over time. This hypothesis is alien to value-belief-norm theory, in which related attitudes comprised of values and beliefs are major determinants of volitional behavior (Eagly & Chaiken, 1993), and experiential learning theory and transformative learning theory, which indicate personal changes with worldview transformation. In addition, the elaboration likelihood model also supports the idea that temporally persistent behavioral changes could result from attitudinal changes (Juvan & Dolnicar, 2016). This means that despite the effect of the negatively accelerating forgetting of educational messages, the stability of values could overcome the information decay tendency and be more temporally effective with changes in attitudes. How to make changes in values then becomes the key problem in visitor education.

Experiential learning theory as introduced above, proposed by Kolb (1984), tells us that individuals are active in constructing their own particular interpretation of educational experiences (Kolb, 1981; Lee et al., 2015). Learning and experience are closely intertwined and almost inseparable. Actually, learning is the process whereby knowledge is created through the transformation of experience (Beard & Wilson, 2013). New ideas must be received, considered, applied, and finally, understood through experience. From this perspective, knowledge is relative; it will be reviewed and used subjectively, and learning is therefore unpredictable. The responsibility for learning falls more squarely on the learner, and society's responsibility is to prepare appropriate learning environments (Burnham & Kai-Kee, 2011; Hooper-Greenhill, 1999). The growing corpus of literature dealing with tourist experiences also provides further insights into the role of learning in

travel and leisure (Pine & Gilmore, 1999). Experience is seen as a critical element in absorbing and providing active education, albeit with limited adoption in visitor education.

To conclude, as Benjamin stated at the beginning, experience is the very channel for actual action changes. Learning from experience deserves more attention than learning from books. Visitor education to promote sustainable tourism should change its pattern from information-based education to an experience-oriented pattern; from on-site behaviors to values and attitudes that make systematic and stable changes in a general sense; and from provider-centered to learner-centered education (Beard & Wilson, 2013; Kolb, 1984).

### **2.6.3 An extended model of experiential learning in greenways**

“Experiential learning is the sense-making process of active engagement between the inner world of the person and the outer world of the environment” (Beard & Wilson, 2013, p. 26). As argued earlier, greenway tourism provides a comprehensive recreation experience consisting of natural and community resources, indicating potential experiential learning by combining models in different traditions. Both Kolb’s experiential learning cycle and Mezirow’s transformative learning model take learning from experience as the theoretical basis for visitor education (Strange & Gibson, 2017). The former focuses on the experiential learning process, while the latter emphasizes the personal worldview transformation (Strange & Gibson, 2017). They are compatible and consistent with each other. Specifically, the disorientating dilemma of Mezirow’s model (step 1) could be derived from concrete experiences in Kolb’s cycle; reflective observation includes self-examination in assessment compared to different patterns (steps 2–4); the exploration of new roles and planning actions (steps 5–7) could be classified as specific steps in abstract conceptualization; and active experimentation consists of trying out new roles and building self-confidence in them (steps 8–9). The last step points to the return from experimentation to a potential new experience. The dissonance theory and planned behavior models could also be positioned in different parts of the cycle. The dissonance refers to the disorientating dilemma. The values, behavioral beliefs, subjective norms, and perceived controls of behavioral intentions form the process of conceptualization based on the observation of self and others. The actual behavior is, in fact, the experimentation period. Finally, it is necessary to take habitual behaviors into consideration, as 95% of daily responsible

behaviors are of the habitual type (Clarke, 1996). In return, if turned into habits, long-term behavioral pattern changes could be achieved.

The extended experiential learning model (Figure 2-14) was thus theoretically constructed to describe the process from experience to behavior changes. The study intends to explore the relationship between greenway experiences, personal environmental attitudes (values, beliefs, and norms), and visitor behavior changes based on empirical facts and experiential learning epistemology.

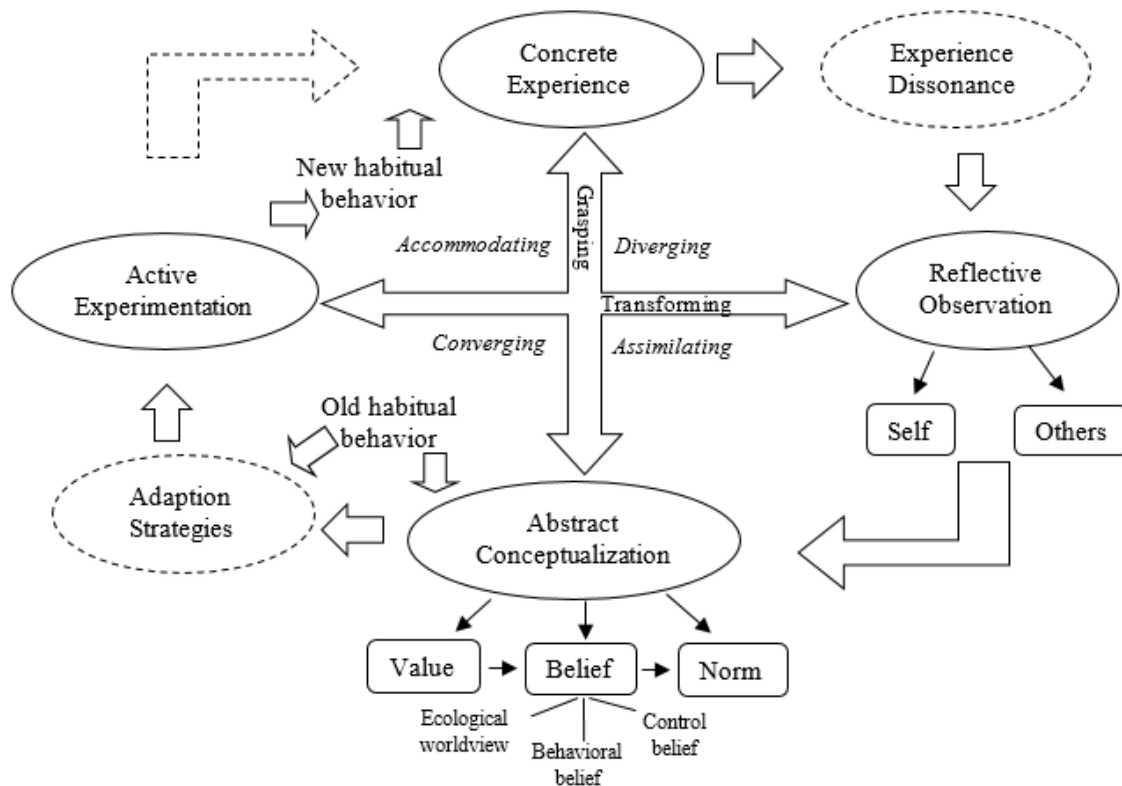


Figure 2-14. An extended experiential learning process (Source: author)

## 2.7 Localization of research in China

Like many other concepts, sustainable development and sustainable tourism in China were borrowed from the West as a reaction to rising environmental issues due to the rapid economic-oriented development after the institution of the Reform and Opening-Up Policy (1978). It is worth noting that those concepts are Western and value-focused, and research considering the Chinese context should be promoted (Xu, Ding, & Packer, 2008).

Modernization in China not only started a century later than in the West but was slow-moving during the first half of the 20th century until New China was founded in 1949.

However, upon the first official proposition of sustainable development in the UN's Brundtland Report in 1987, the "Sustainable Development Strategy Report" in China was published in 1999 by the Chinese Science Institute. However, after nearly two decades, the concept in China is still more of a catchphrase slogan than a localized approach for different social values and a short development path. On the one hand, though China has a long history of appreciating the spiritual property of nature and have enjoyed Zhuang Zi's philosophy of "nature and humans as one" (*Tianrenheyi*) for thousands of years, the abundance of natural resources weakened the public's awareness of resource scarcity. On the other hand, while New China has a socialist view of development, it is still in the traditional-modern development period. Economic development was regarded as the top priority over the past decades and is also important for China currently in this developing stage. This means it is necessary to integrate those concepts in China's context to interpret them better.

With regard to the increasingly important low-carbon and ecological principles in recent years, tourism in China has shown a diversified tendency, and the era of greenway tourism is coming (Jiao, 2012), especially in cities where the natural resources are precious but lack connections between the scatter-distributed tourist attractions (Wang, 2012). However, the greenway concept is based on Western experience, especially North American (Ahern, 2002; Fabos & Ahern, 1996; Smith & Hellmund, 1993). The Western experience laid the solid foundation of greenway theory and practice for Chinese academics and planners. Domestic professors provided further interpretation of the concept with Chinese characteristics according to the special social, natural, and cultural context of China. For instance, the greenway is usually defined as a linear landscape with elements of trees and vegetation (Yu, Li, & Li, 2006), an open-space belt linking parks, nature reserves, scenic areas, and historical sites in an intensive settlement area (Xu, Hu, & Wang, 2011), or an open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas (C. Li, 2005). In terms of the formation and function, three types of greenways are discussed: riparian greenways, parkways or road greenways, and farmland greenways (Yu et al., 2006). The Pearl River Delta Regional Greenway Network Planning of 2010, which is the first such practice in China, classified

greenways into regional level, city level, and community level based on scale, and into ecological, suburban, urban greenways based on their locations (Li, 2010).

Greenways research in China remains at the primary stage because of its late start (Hu, 2012). The greenways constructed were mainly for tourism (Guo, 2012b), while academic studies focused on Western greenway theory (Wu, 2014a), ignoring the country's implementation issues in favor of greenway tourism. Moreover, empirical studies in China are mostly based on theoretical hypotheses. Specifically, the resources and data for analyzing primarily come from greenway plans rather than actual practices. Besides, studies in China have shown less concern for nature problems, focusing instead on planning issues (Table 2-4).

Furthermore, contrary to the great need, there have been few studies concerning greenway users since 2010. It has been found that most of the public-supported greenway construction (Yang & Liu, 2012) have occurred because of their importance in urban tourism and to improve the image of the city (Yang, Liu, & Liu, 2011). Visitors to Guangzhou greenways showed high expectations for economic development, leisure entertainment, and aesthetic function, rather than for its ecological significance (Lin et al., 2012). The ecological landscape, accessibility, and facilities were found to be the three main factors that influence their satisfaction (Liang & Liu, 2012). Noting the weak public awareness (Lin et al., 2012), more attention to the impact of greenways on sustainable tourism according to the perceptions and values of visitors is called for (Guo, 2012a).

**Table 2-4. The research topics of greenways (Source: author)**

Year	Chinese papers	
	Number	Main topics
1980–2007	10	Western practices; theory learning
2008–2010	9	Greenway planning in China
2011	28	Perception of users; tourism; urban–rural development
2012	30	Evaluation; theoretical exploration; different types; management
2013	53	Practices of China; effects of greenways; perception and satisfaction of users; tourism
2014	21	
2015	2	Practices of China
2016	2	Literature review
Total	155	Focus on the Western experience; planning and management issues in China

Regarding responsible tourist behavior, most studies have examined and discussed the ethical issues involved in the consumption of tourism using a Western perspective only, referring particularly to the UK, US, and Australia, largely ignoring the views of people living in the “majority world” (Weeden, 2014). With the global consumption of tourism increasing significantly, the need arises to study what “responsibility” or “ethics in tourism” mean to international and domestic tourists in the emerging economies of Brazil, India, and China (Tsotsou & Ratten, 2010). Ma (2009) suggests that not only would research benefit from a greater understanding of ethics and ethical behavior from a non-Western perspective, but also that studies involving individuals from a collectivist society, such as China, would necessarily challenge the existing Western viewpoint on how ethics in tourism might or should work.

## **2.8 A conceptual framework for research**

### **2.8.1 Research questions statement**

Based on the literature review, an experiential leaning epistemology will be adopted to facilitate this study. Therefore, the research question could be restated as “If and how can greenways promote sustainable tourism through visitors’ experiential leaning?” and it can be detailed in four related questions:

Question 1: What is the main experience for visitors on greenways? This is to reveal the specific greenway experience of visitors, including different stages and aspects. Detailed experience descriptions could help determine the essence of the experience and the experience dissonances. The experience includes interaction with the environment and others.

Question 2: How do visitors conceptualize the experience of greenways? This question is to identify the visitors’ mental actions toward the greenway experience.

Question 3: How does the greenway experience change their behavioral patterns? This includes efforts to discover the potential impact of the greenway experience on visitors’ behavioral changes, both on-site and in daily life, as well as the potential barriers regarding behavioral changes.

Question 4: How could greenway tourism promote sustainable tourism systematically? This question is to engender discussions on the process of moving from

greenway travels to sustainable tourism based on the greenway experience, and to suggest the learning outcomes.

### **2.8.2 Conceptual framework**

Accordingly, the research conceptual framework could be built as follows (Figure 2-15). Three main parts are involved in the process. First are the individual interactions during the greenway tourism consumption process. Greenway tourism in research literature has been interpreted from three aspects: green + way + tourism. Previous research mainly focused on the public sector's view and concerned the "green" and "way" parts. This study, instead, intends to look into visitors' tourism experience. Based on the three dimensions of expression in greenway tourism, visitors could have a systematic experience, which is comprised of four aspects: self, setting, emotion, and social interaction (Ballantyne, Packer, & Falk, 2011), thus facilitating learning. The second part is the visitors' subjective experiential learning, which is constructed based on the experiential learning theory and behavioral change-related theories, as discussed above. The final part is further discussion on the relationship between this experiential learning process and sustainable tourism based on the theoretical constructs of sustainability, to identify the potential of greenway tourism in promoting systematic change in the tourism industry.



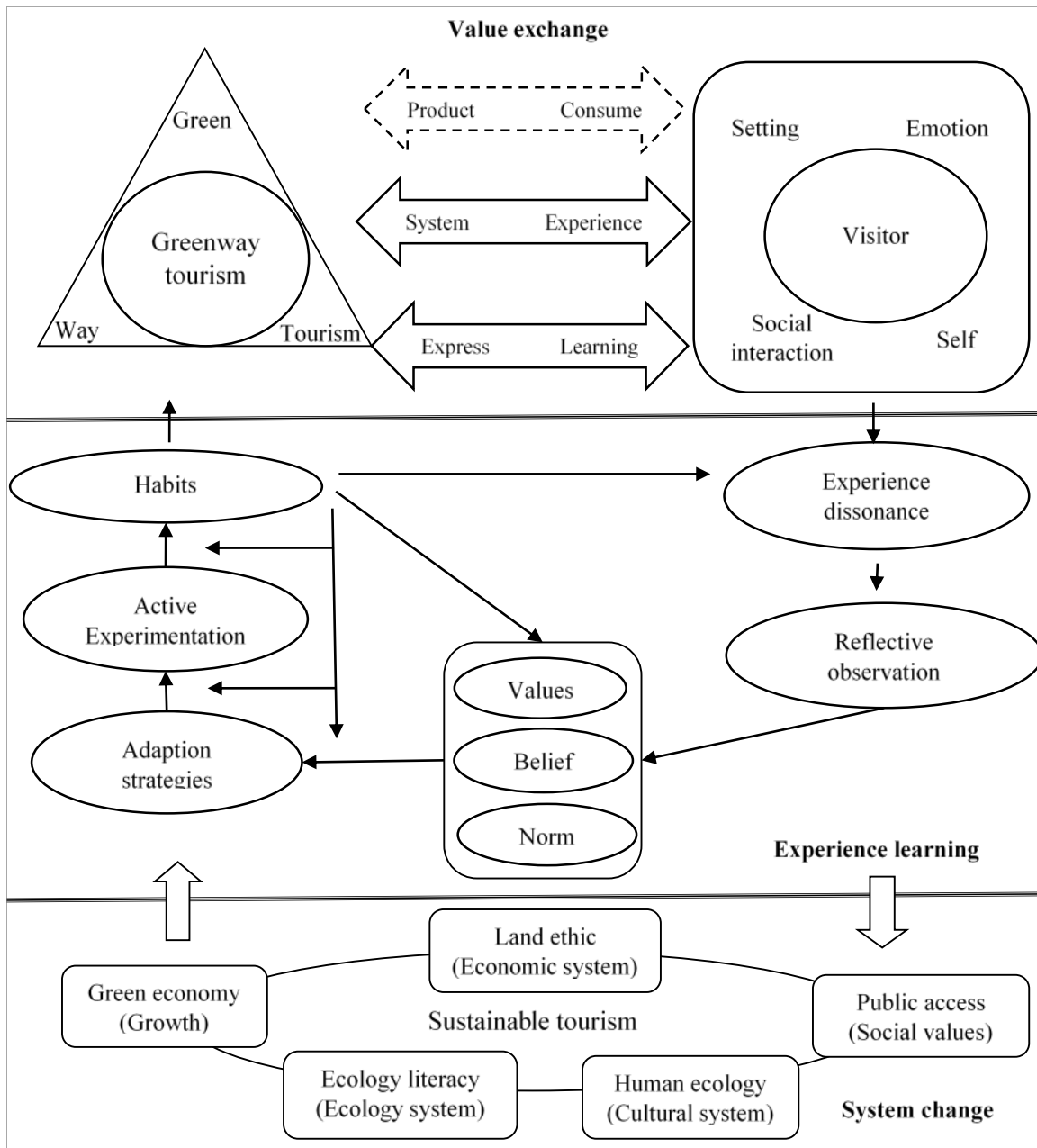


Figure 2-15. The interaction between travelers and greenways for sustainable tourism (Source: author)

Admittedly, as a qualitative study based on the inductive approach, outcomes and theories are expected to be achieved based on the data collected. A conceptual framework based upon reviews of related studies is still necessary. On the one hand, it functions to help visualize the theoretical relationship of keywords in this research. On the other hand, it summarizes the research focuses of this study. The author took it as a guideline but was not limited to it. Rather than testing this framework, this study is expected to receive

feedback and discussions on it. Certainly, such a framework may pose challenges to theoretical sensitivity in research. To overcome it, the author limited reflections on the whole process to the theoretical realm.

## **2.9 Theoretical self-reflection**

As Tribe (2006) argued, there exists a gap between the truth and the knowledge due to “the force field.” Specifically, the people who examine the “truth” and the approaches adopted could exert great influence on the results. Therefore, it is necessary for academia to take reflexive views on themselves (Xiao, 2016). After finalizing the research questions and constructing the conceptual framework based on a literature review, the author must be reflective about why this path was taken and not others. For this study, I think the most important thing is to ask, “Why experiential learning?”

My interest in greenways was triggered by a personal experience in 2011, when the greenways in Guangzhou had just been built for the Asian Games. I participated in a research project about city renewal and renovation, which took greenways as one of the major elements for investigation. I was extremely impressed by the great passion that people, both locals and non-locals, showed in taking recreational activities around greenways. Some special facilities, like pet relief areas on greenways, were addressed by many visitors. The greenway trips appeared to form a fashionable and environmentally friendly pattern.

Keeping an eye on greenway development in China since then, I found that increasingly, greenway plans and practices were being promoted all over the country as sustainable and regional tourism. How did that come about, and what does it mean for the future? When delving into it further in the literature, greenways as a sustainable development strategy already has a long history in Western countries. While the great potential with multi-functionality was emphasized, most studies took a planning or managerial view. My past knowledge about sustainable tourism implied that visitors’ values may make a significant amount of sense in promoting responsible tourism. This has spurred my intention to do something about greenway visitors.

Greenways are not planned as intentional education products like museums or zoos, but my past investigation implied that visitors were pleased and informed by the environment. Given my social science background, a psychological perspective looking

into the experience and consciousness of visitors seems feasible for revealing this process, resonating with the experiential learning perspective, which was proposed in the field of education.

With specific experiential learning models, experiential learning mainly provides the epistemology for knowledge and behavioral transformations here. This study intends to stay open-minded to interpret visitors' greenway experience and their interaction process, based on in-depth explorations.

## **2.10 Chapter summary**

Sustainable development has been regarded as a global goal in the 21st century, though it mostly remains just a blueprint on paper. How to achieve it is a question that deserves continuous discussion. Tourism, on the one hand, is seen as the “green” industry for promoting sustainability, while on the other hand, as it is a contributor to environmental degradation, tourism is supposed to be an essential tool to become a sustainable society. However, the past two decades have witnessed the failure of efforts to promote sustainable tourism through alternative tourism. For one thing, niche markets have limitations in their ability to change the whole industry, regardless of its final growth on a massive scale. For another thing, the previous supply-oriented strategy has been challenged by the free-choice model of visitors.

Considering the worldwide growth trend in city trips, greenway tourism has been promoted as a sustainable approach. Though greenways were characterized as multifunctional route for connection, protection, and recreation, most of the attention has been paid to the physical ecology aspect and to planning issues. Whether it actually promoted sustainable tourism and how could reach that goal remain unknown. With the emphasis on utility in greenway research and the recognition of the importance of making systematic changes in responsible tourist behavior, visitor education has received due attention. Nevertheless, past efforts focused on contextual and knowledge-based behavioral models for learning, thus resulting in a large amount of discussion on the attitude–behavior gap. Experiential learning theory is identified as an effective educational model toward systematic behavior change based on social value theories, while there has been little adoption of it in the visitor education field.

Table 2-5 summarizes the specific research gaps in related topics, such as sustainable development, sustainable tourism, greenway tourism, responsible tourist behavior, visitor education and greenways in China's context to justify the significance of this research. Meanwhile, the main efforts of this study to address some main gaps among the list are also concluded in the table. Overall, it is worthwhile to make an in-depth investigation to reveal visitors' experience and their spontaneous learning process on greenways, to determine the potential for greenway tourism in promoting sustainability in a systematic way.

Table 2-5. The conclusion of research gaps (Source: author)

Study area	Specific research gaps	Main gaps to be addressed	Efforts in the study
Sustainable development	Blurred definition	Lack of theoretical definition (Milne, 1998)	Define it with etymological definition techniques
	Lack of conceptual framework		
	Theory–practice gap		
Sustainable tourism	Blurred definition	Blurred definition	Define it with etymological definition techniques
	Lack of conceptual framework		
	Focus on alternative markets		
	Trend from supply-side to demand-side		
	Focus on destination levels		
	Lack of attention on urban areas	Supply-oriented and a focus on alternative tourism markets, such as eco-tourism and backpacker tourism, etc. (Font, Higham, Miller, & Pourfakhimi, 2019)	Study sustainable tourism on urban, mass and systematic change basis from visitors' perspective.
	Need for social science views		
	Need for interdisciplinary work		
	Need to focus on systematic change		
	Theory–practice gap		
Greenway tourism	Focus on concepts and functions	Focus on physical ecology aspects and planning issues (Ryan & Eisenman, 2019)	Concern on visitors' greenway experience
	Focus on planning issues		
	Rising, but a lack of tourism studies		
	Rationale in sustainability		
	Users' perception and spending only		
	Mainly quantitative approaches		
	Mainly Western-based experiences		
Responsible tourist behavior	Need concern on actual behaviors	Lack of systematic approach for approaching it (Goh et al., 2017; Su, Hsu, & Boostrom Jr, 2019)	Investigate behavioral changes based on value exchanges.
	Lack of research on values		
	Promote through ecotourism and interpretation		
	Call for interdisciplinary study		
Visitor education	Ecotourism as contextual education	Focus on contextual and information-based education (Hvenegaard et al., 2017)	Adopt experiential learning theory.
	Knowledge-based education		
	Focus on on-site behavior change		
	Mainly supply-oriented education		
	Lack of details in experiential learning theory		
China context	Most Western-value oriented	Left behind in terms of both theory and practices (Liu, 2019)	Do empirical study in China's context.
	Same gaps as in greenway tourism		
	Based on planning data		

## **Chapter 3 Research Context**

### **3.1 Chapter introduction**

Both sustainable tourism and greenway tourism have encountered dilemmas in implementation in China owing to contextual differences. This Chapter firstly concludes the macro contextual characteristics of China from different aspects, including political, economic, cultural, and resource to implicate the present study. Afterwards, tourism development trends, sustainable tourism and greenway practices are discussed within China's context to summarize the features of China and contribute to the research.

### **3.2 Macro context: The China's characteristics**

#### **3.2.1 Political: Dominant role of government's needs**

China has always been a centralized country with government planning and policies being a dominant driving force underpinning the development process (Day, 2016). This top-down approach has both limitations and benefits. One of the most profound advantages is that it could, to a great extent, promote and control the direction of the whole country. For instance, it is the policy in 1986, which gave priority to tourism as an economic strategy that triggered the rapid growth of this industry (Zhang, Pine, & Qiu Zhang, 2000). Being a policy tool to improve economic level, tourism development in China was undoubted policy-oriented and economic-driven at early stage (Xu et al., 2008). While enjoying great economic growth, abundant negative impacts were unavoidable. The conflicts among stakeholders also followed. Even when tourism in some places took the bottom-up approaches, the need of the government was always the key tone in terms of "growth" (Airey & Chong, 2010; Lew & Yu, 1995). In the 18<sup>th</sup> Central Committee (2013), the government changed the development goal of "rapid and good growth" to "good and rapid growth", indicating the transformation from quantity to quality. Whereas it needs time to alter the value system of the whole country to focus on sustainability rather than economic growth only.

#### **3.2.2 Economic: From "high-speed growth" to "medium-high speed growth"**

Though China is a socialize country, it has experienced transition from planned economy to a socialist market economy. The "Reform and Open Door" policy proposed by Deng Xiao-Ping in 1978 brought in market liberation from a previously closed and tightly

government-regulated economy (du Cros, Bauer, Lo, & Rui, 2005). Such liberalization comprised three major sub-processes: the correction of market disequilibria, the privatization of state-owned enterprises and services, and international trade liberalization (Kirkpatrick & Lee, 1997). Tourism, as part of international trades, was the first sector opened to the world, and to participate in the competitive global market (Xu et al., 2008). After forty-year's high-speed growth (around 7%), China's per capita GDP reached about 9780 US dollars in 2018. Nine provinces exceeded 10000 US dollars, which means they have enjoyed the medium developed level and stepped into a popular recreation period<sup>6</sup> according to the international development experience (China Tourism Academy, 2017). With the economic growth slowed down to 6.6% in 2018, the "New Normalized Economy", which claimed an economic structural transformation from "high-speed growth" to "medium-high speed growth", was proposed. As can be seen, though admitted decrease in speed, the growth in an economic sense is still important for the whole country.

### **3.2.3 Resource: Extremely large and extremely small**

As one of the largest countries in terms of scope, China has always spoken to be abundant in resource. Little concerns the fact that the per capita resource is way below the world average level. Early development took priority to economic growth at the sacrifice of environment. Since the beginning of the 21<sup>st</sup> century, the rapid consumption and destruction of resource by tourism have been noticed by scholars and the public. Air pollution in some Chinese cities are among the worst levels worldwide. The energy consumption is about 20% higher than the average within Organization for Economic Co-operation and Development (OECD), and around a third of the watercourses are severely polluted (Day, 2016). Desertification, waste management, biodiversity and environment protection imposed increasingly severe challenges to China. However, considerable investigations of Chinese attitudes to the environment illustrate that individuals show little willingness and awareness to support environmental protection, particular those who live in rural areas (Day, 2016). Most of them are unaware of the scarcity and sensitivity of nature and environment (Edmonds, 2005). This demonstrates that the awareness of the

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<sup>6</sup> The international development experience shows that, a country will enter the popular recreation period after its per capita GDP exceeds 5000 US dollars. In this period, most of the public have their basic physical needs satisfied and turn to pursue the psychological needs, like recreation activities (Dann, 1981).

environment is way lagged behind urgent needs for resource protection. To promote sustainable tourism, a value system changes towards eco-centric is necessary.

### **3.2.4 Cultural: Ancient cultural value system and belief**

One factor that contributes to the weak environmental awareness could be the commonly recognized anthropomorphism and anthropocentrism inherent in the Chinese value system on the Confucian and Daoism philosophy basis (F. M. S. Li, 2005), which were the twin foundations of past Chinese society and continue to influence contemporary Chinese society (Sofield & Li, 2011; Yan & Bramwell, 2008). The anthropocentric perspective takes an active sociological determinant and prescribes that because nature is imperfect, “man” has a responsibility to improve on nature (Xu et al., 2008). Confucius and Zhuangzi decreed “nature and human as one” and the harmony could be achieved through “the middle way” (*zhong yong zhi dao*) – avoiding extremes. This world view is thus distinct from a western perspective that separates nature and humans, which views wilderness as ideally free from human intervention and artificiality. Given these different attitudes to nature, China's “middle way” accepts “improvements”, “modifications” and “adjustments” in name that would possibly be refused in western countries because of perceived negative impacts on the resource (Dredge, 2004; Li, 2008; Sofield & Li, 2007). Therefore, the “harmonious society” that China wants to achieve is one that combined GDP growth with environment protection underlying this ancient cultural value system (Sofield & Li, 2011), which should be considered in interpreting and reasoning the experiential learning process of Chinese visitors.

## **3.3 Tourism development trends: learning to travel**

### **3.3.1 Paradigm shift: From “romantic” to “tribal” (buluo)**

China's tourism has enjoyed an outstanding growth during the past decades. In 2018, the whole country enjoyed a total number of 5.54 billion domestic visits and 150 million outbound visits (China Tourism Academy, 2017). Tourism rates increased from 23% to 415% from 1985 to 2018 (Figure 3-1), arriving at 4 times per person per year in 2018. The State Council proposed that it will reach 4.5 times per capita by 2020 on “*Opinions about the Further Promotion of Tourism Investment and Consumption*” (State Council, 2016a). These figures show that with economic development, tourism is becoming one of the most important parts of the public life (China Tourism Academy, 2016). Tourism is

becoming a routine leisure activity of residents. The meaning of attractions thus expands extensively from world class resource to normal settings.

As Wang (2016) pointed out, for developing countries like China, as well as past western countries, tourism is experiencing a shift from the past “romantic paradigm” to a “tribal (*buluo*) paradigm”, represented by changes from mass sightseeing to public recreation, from occasional experience to an ordinary lifestyle. Accordingly, the academia should turn its focus from the “romantic” pursuit out of modernity and industrialization to the “tribal” (*buluo*) pursuit for emotions. Greenway can be such a tribal (*buluo*) attraction for studying.

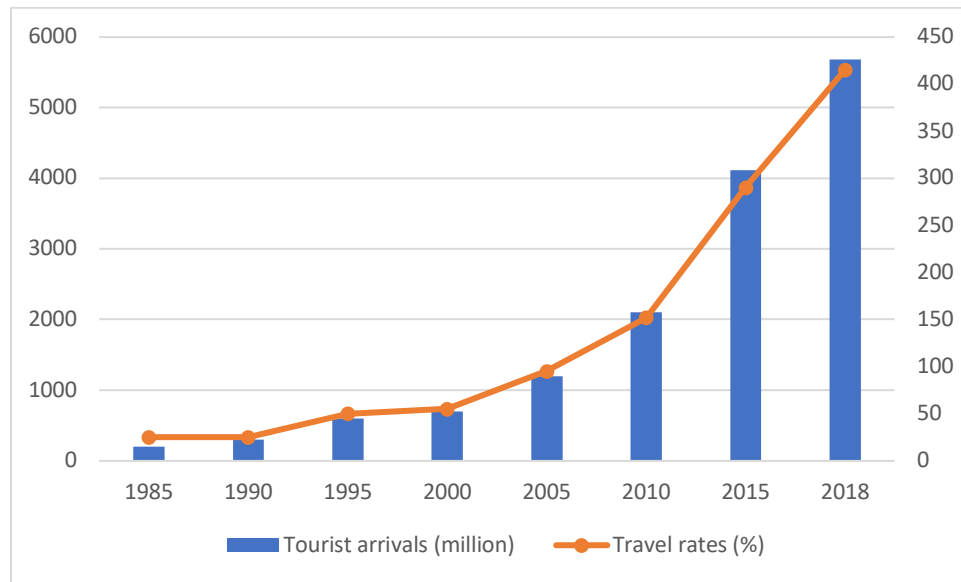


Figure 3-1. Tourist arrivals and travel rates during 1985-2018 (Source: State Council, 2018)

### 3.3.2 Behavior changes: From “conspicuous” to “rational”

In 2017, “China's *Economic Life Survey*” revealed that tourism has become the preferred consumption item of Chinese households for consecutive two years (China National TourismAdministration, 2017a). Since rapid tourism development in China during the past thirty years was driven by “scarcity”, mass tourists pursued the “mecca” and focused on “photo-taking”, which were criticized by environmentalists and others considering the large amount of irreversible damages to heritage sites (Ghimire, 2013; Xu, Zhu, & Bao, 2016). However, *The World Tourism Report 2016-2017*, published by ITB in 2017, the world’s largest travel organization, presents an important proposition that “Chinese will mature into Western-style tourists”.



The report pointed out that China's tourism market will continue its long-term rapid growth, and at the same time it will gradually show the characteristics of Western mature markets. For example, the early "frenzy" of the overseas shopping tours will gradually be reduced to a more "rational" level (ITB, 2017). At the same time, "Golden Week" oriented travels will gradually turn to short-distance weekend tours owing to the implementation of policies about "Paid Vacation" and "2.5-day Weekend". In the selection of tourism activities, the monitoring data of worldwide travel during the first eight months in 2016 illustrated that the dominant Asian overseas market – Chinese – showed a long-term development trend in recent years (ITB, 2017). More and more Chinese tourists yearn for sunshine, sandy beaches (20%), pastoral (15%), and urban leisure (8%). This means that they have become the same "normal holiday makers" as Western tourists, shifting from "conspicuous" tourism consumption to "lifestyle" leisure (Hakam, Wee, & Yang, 2015; Salazar & Zhang, 2013), further demonstrating that the era of greenway tourism to meet this rising demand is coming.

### **3.4 Sustainable tourism development in China**

#### **3.4.1 "Pseudo" sustainability and practices**

Following the commitment to the Agenda 21 on Sustainable Development and recognizing the scarcity of resource, the government of China has addressed environmental protection in a comprehensive set of laws and regulations since 1993 (Xu et al., 2008). Particularly in recent years, China embarked on enacting development strategies to concern the environment. For instance, the harmonious development (*xietiao fazhan*) and the scientific development concepts (*kexue fazhan guan*) are the current official socio-economic policies that claim to integrate environment protection, social welfare, democracy, and economic growth into a person-centered "harmonious society" (Grano, 2008).

However, the actual situation in China turns out not as hopeful as the policies imagined. Substantial implementation gaps existed between policies and practices (Liu, 2010). Although China has begun to grapple with issues of sustainability in all areas (energy, transport, manufacturing, mining, urban development, etc.) and with tourism being one of the first proponents that claims to incorporate sustainability in planning, development and operations (Zhou & Huang, 2004), Chinese tourism academia and the

tourism industry are often criticized as lacking concern for sustainability (Xu et al., 2008). A variety of contextual facts (Lai, Li, & Feng, 2006), such as the political and cultural aspects as discussed above could be the reasons. In addition, the weak awareness of the public was noted as the most critical barrier for successful implementation of sustainable tourism (Day, 2016; Grano, 2016). The improvement of public awareness is thus of vital importance for promoting sustainable tourism in both research and practices.

### **3.4.2 Visitor education in China**

Although there is recognition of the importance of improving environmental awareness in China, the visitor education in the whole country focuses on the interpretation system development (Xuan, 2011). The seminar titled “Educate the Educators” in the Shanghai Institute of Tourism in October 1995 popularized the visitor education through ecotourism, such as botanical gardens, zoos and museums (He & Chen, 2012). However, those methods were soon figured out to suffer from the limitation in relation to enriching visitors’ knowledge of the environment and enhancing environmental awareness (Sofield & Li, 2007). Therefore, there are still problems about the best settings for visitor education or learning in an active way.

## **3.5 Greenway movement in China**

### **3.5.1 “Comprehensive tourism” to “transport + tourism”**

China is experiencing the same tourism paradigm shifts and market fragmentation as the western countries in 19th century. To manage these issues and promote regional equity in tourism development, the government proposed a concept of “*Comprehensive Tourism*” (*Quan Yu Lv You*) and planned a series of product development strategies, including construction of urban greenways, cycling parks, slow systems to expand and connect the urban leisure space. Besides, “*The Thirteenth Five-year Tourism Development Planning*”, announced on 7th December 2016, stresses greenway construction as well. It is believed that those greenway systems could act as facilitator for industrial structural transformation and meet all levels of needs.

Additionally, to facilitate the “*Comprehensive Tourism*”, “transport + tourism” becomes a vital topic adopted in policies. On July 18, 2017, the *Ministry of Transport*, the *National Tourism Administration*, the *State Railway Administration*, *China Civil Aviation Administration*, *China Railway Corporation*, and the *State Development Bank* jointly

issued “*opinions about promoting integration of transport and tourism*” (here in after referred to as “Opinions”). This “Opinions” proposed to speed up the connection between highways and scenic roads, as well as the adjacent areas, to construct travel loops on conditions so as to significantly enhance the supply of tourism services and improve regional tourism quality (China National Tourism Administration, 2017b). It can be found that greenway development in China is later than western countries and is initially developed for tourism’s sake, which is quite different from America, its original country.

### **3.5.2 Greenway tourism implementation and practices**

In 2006, the first real greenway “Ordos Scenic Route” in China was planned, and this then started the greenway movement in China. Many provinces such as Guangdong, Jiangsu, Zhejiang and Shandong carried out greenway planning in recent years based on the western greenway theory and practices so as to echo the sustainable development policy, as well as to relieve natural resource destruction and decline in quality of urban life.

Briefly, the past decade has saw two main greenway construction booms, one from 2010 and another from 2016. The first period was represented by the *Pearl River Delta Greenway Network*, planned in 2008 and constructed in 2010. It is a network-like green open space system composed of six main regional greenways. As pictured in Figure 3-2, the No.1 Greenway extending 310 km from Zhaoqing to Zhuhai, the No.2 Greenway with 470 km from Guangzhou to Huizhou, the No.3 Greenway extending 360 km from Jiangmen to Huizhou, the No.4 Greenway extending 220 km from Guangzhou to Zhuhai, the No.5 Greenway extending 120 km from Huizhou to Shenzhen, and the No.6 Greenway extending 210 km from Zhaoqing to Jiangmen. Simultaneously, these cities constructed city and community levels of greenways to connect with regional ones. As planned, Guangdong province would build up the regional greenways with a total length of 1678 km by 2013 (Wu & Xie, 2012). This goal has been achieved in advance by 2011. These greenway networks connect various country parks, nature reserves, scenic spots, historical monuments and other important nodes of high natural, historical and cultural values through the bike lanes and the walkways. With building facilities and taking space control on a certain width of the green buffer zones, the greenway network integrates multifunction of environmental protection, sports, leisure and tourism.

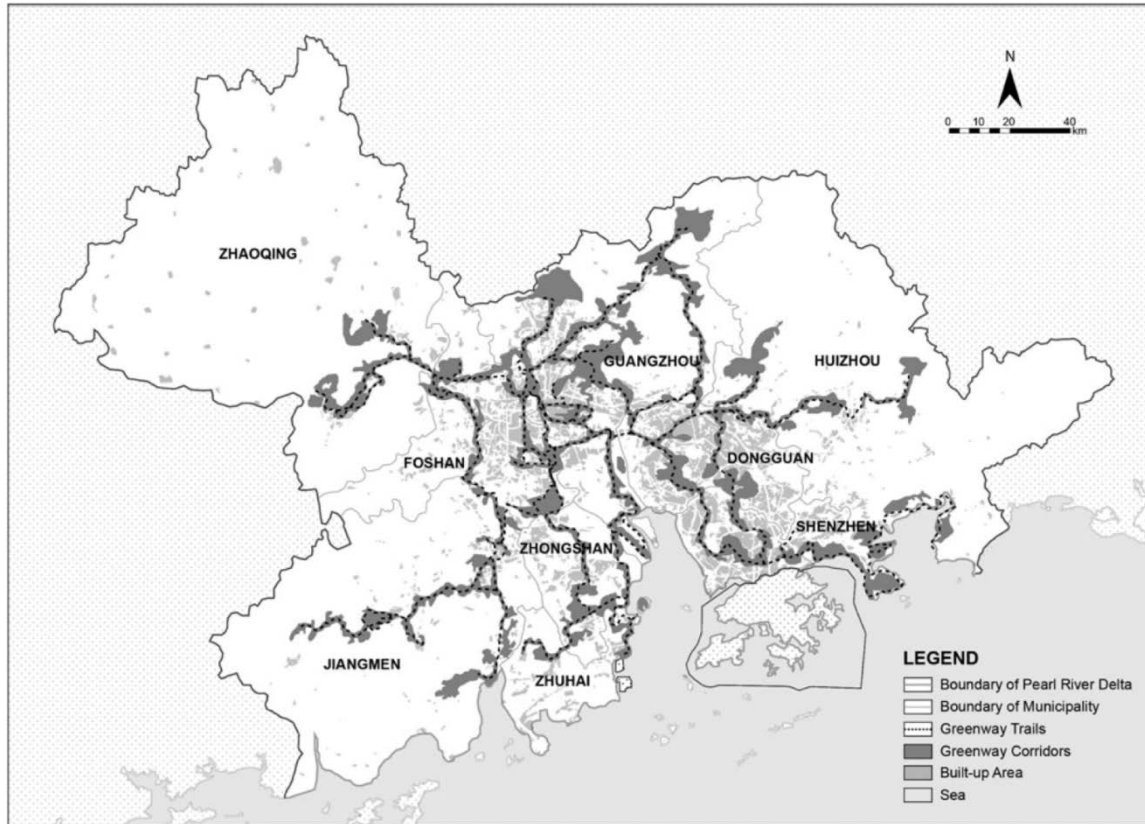


Figure 3-2. Pearl River Delta Greenway Network (Source: Chung, Zhang, & Wu, 2018)

As the first regional greenway network, Pearl River Delta Greenway Network enjoyed a great success. The Department of Housing Construction held the first “*Guangdong Greenway Forum in 2012*” in Beijing to promote its experience to other provinces. Both the large scale and early practices make it an ideal case for this study. More details will be introduced in methodology part.

Greenway planning and construction by that time was also popular in the Yangtze River Delta Region, such as Shanghai, Jiangsu and Zhejiang provinces. Other than in a regional network form, the practices in this area are much more on city or local basis. For instance, by 2015, Shanghai has 203 km greenways, Nanjing has completed more than 200 km of greenway construction and Hangzhou with 327 km. Zhejiang province is famous for its greenway tourism and planned to construct a “ten thousand miles of greenway network” by 2020, especially in Hangzhou and Wenzhou. Therefore, the city greenways in Zhejiang province will be selected as cases for study.

Otherwise, recent years have seen another greenway construction boom, motivated by the “*Comprehensive Tourism*” and “transport + tourism” policies. For instance, Guizhou

province is building up the first tourism road which extends about 160 km from Renhua County to the tourist center of Chishui County, including main roads and cycling roads. It is an attempt to create a new tourism approach in China for “transport + ecotourism”. Likewise, Neimenggu Province is also planning a tourism road which will extend about ten thousand km. Sichuang Province is also making the action plan for provincial “transport + tourism” development. Though they are also tourism-oriented greenway projects, they will not be included as the cases for study owing to the implementation undergoing.

### **3.6 Chapter summary**

As a brief conclusion, China’s special development process and traditional cultural values make sustainable tourism and greenway tourism practices different from the western countries. Given the importance of China’s market for the whole world and the need of improving Chinese tourists’ environmental awareness, an effective visitor education approach is vital for promoting sustainable tourism in China.

Notably, in studying sustainable tourism and greenway tourism in China, some main contextual facts should be taken into consideration: (1) the meaning of growth is always dominated by economic concern and driven by the government policies, with no exception to the greenway construction. (2) One of the key issues to promote sustainable tourism in China is to change individuals’ awareness of environmental scarcity and impacts. (3) The environmental values, which incorporate traditional culture norms are important in understanding the Chinese and should be considered in reasoning their behaviors. (4) The paradigm shifts of Chinese tourism make China an optimal case for this study. (5) A different approach other than the interpretation system to promote visitor education in China is needed. (6) The Pearl River Delta Greenway Network and greenways in Yangtze River Delta Region are ideal cases for the present study.

## **Chapter 4 Methodology**

### **4.1 Chapter introduction**

This chapter explains the methodology employed in this study. First, it provides an explanation of the research design based on a qualitative approach. After a description of the selected cases, this chapter describes in detail the data collection processes and data analysis methods. In addition, the validity and reliability, as well as the limitations of the research design are discussed, followed by a summary and presentation of the main findings.

### **4.2 Research design**

Concerning the two main research traditions in research, quantitative studies are typically conducted to test or verify a theory based on hypotheses, whereas qualitative ones are used to learn about people's experience. Compared with the concise and numerical quantitative method, qualitative research is rich, descriptive, and verbal with text-based information, such as words, images, observations, and symbols (Liamputtong, 2013). To examine visitors' greenway experience in depth, qualitative research was adopted due to its focus on the "lived experience" of participants and the method's merits in reflecting the world from the participants' view (Hennink, Hutter, & Bailey, 2010). Moreover, qualitative research is typically conducted to understand social interactions among people and the norms and values they share. Many paradigms exist regarding the qualitative approach. Investigators must first clarify the philosophical ontology and epistemology against the research questions so as to gain better position in the study.

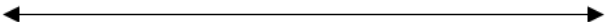

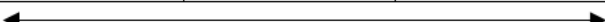
#### **4.2.1 Philosophy paradigm**

As "models or frameworks for observation and understanding which shape both what we see and how we understand it" (Babbie, 2007, p. 32), paradigms are the stances of researchers in observing reality. They frame the manner or perspectives of observations and reasoning. Denzin and Lincoln (2008) defined paradigm as a "net that contains the researchers' epistemological, ontological, and methodological premises" (p. 31). Specifically, ontology pertains to reality, whereas epistemology refers to the medium for knowing reality, or "what might represent knowledge or evidence of the social reality that is investigated" and "what is counted as evidence" (Mason, 2002, p. 16). Methodology is a systematic plan of action or design of methods to achieve the desired outcomes. It is embedded in ontological and epistemological assumptions (Goddard & Melville, 2004). In other words, after fixing the research paradigm, particularly in terms of the ontology and epistemology that underlie the research, the methodological principles, corresponding with a series of particular methods can

be derived.

Naturally, science is widely known to be dominated by the positivist tradition, which has also been the guiding philosophy of quantitative research in the social sciences from the very beginning. Until the 1970s, the constructivism paradigm, which emerged as a reaction to the drawbacks of positivism (i.e., ignoring humanness), sparked the qualitative research tradition (Prasad, 2005). Positivism assumes a single reality and emphasizes the objective measurement of social reality without the influence of researchers. Thus, academic research is expected to be value-free and takes an *etic* perspective based on numbers. By contrast, the constructivism paradigm is subjective and personal-oriented. It takes an *emic* view and addresses the inherent subjectivity of the study participants and researchers because it assumes that reality is socially constructed as a subjective experience. The multiple perspectives of truth and data for qualitative research are frequently presented not as numbers but as the lived experience of people (Wilson & Hollinshead, 2015). With the subjective nature of the qualitative approach and along the binary spectrum from positivism to constructivism, several paradigms for qualitative research emerged. Among many others, critical social theory, pragmatism, post-structuralism, and constructivism are the four main paradigms (Hennink et al., 2010). Table 4-1 provides their ontological, epistemological, and methodological assumptions.

Table 4-1. Research paradigms (Source: Savin-Baden & Major, 2013)

	Positivism	Critical social theory	Pragmatism	Post-structuralism	Constructivism
Ontology	Realism				
	An objective reality can be recognized	Reality is socially constructed through power relationships	Reality is that which is practical	Reality is what is passed on through symbolic discourse	Reality is an individual's mental construction
Epistemology	Empiricism				
	Knowledge develops through scientific methods	Knowledge is gained by co-construction of critical consciousness	Knowledge is obtained from observation of interaction with a group of individuals and artefacts in their environment	Knowledge may be gained through the deconstruction of social products, such as language, media, institutions, etc.	Knowledge is constructed by humans and not discovered in the world
Methodology	Nomothetic				
	Experimental/ hypothesis	Structural/ historical insights	Observation of subject in context	Deconstruction of text/meaning/structure	Individual reconstructions

Regarding research questions, the present study emphasizes contextual experience from the perspective of experiential learning, which implies the ontology of understanding the world

through personal experience (Roberts, 2006). Thus, this study was positioned with a constructivism paradigm, which posits that reality or knowledge resides in the minds of individuals. According to the different degrees of belief in idealism, constructivism can be clarified into three main domains, namely, limited realism (weak constructivism), epistemological constructivism (radical constructivism), and hermeneutic constructivism (social constructivism) (Raskin, 2002). Limited realism is the bridge between realism and idealism dichotomy. It believes in the existence of an external reality and that the possibility of knowing reality is limited to humanity's fallible perception. Epistemological constructivism further assumes that obtaining independent reality is impossible for observers except by constructing it. By contrast, hermeneutic constructivism does not believe that an objective reality exists. That is, multiple realities are shared by subjective understanding. Furthermore, it assumes that humans are active agents and meaning makers, where social-symbolic processes influence meaning making. Knowledge is considered a product of the reconstruction activity of observers. They are concerned more with "how people experience the world," "how they understand the world around them," and "the common forms of understanding the world or constructs" (Savin-Baden & Major, 2013). This context is where our research is exactly positioned. In this regard, language, discourse, and communication are of vital importance in understanding and maintaining the knowledge systems (Raskin, 2002). Moreover, social constructivists share "the view of knowledge as interpretation, an interpretation historically founded rather than timeless, contextually verifiable rather than universally valid, and linguistically generated and socially negotiated rather than cognitively and individually produced" (Chiari & Nuzzo, 1996, p. 174).

Regarding the ontological and epistemological assumptions of social constructivism, reality is constantly changing based on different experiences and levels of understanding (Wilson & Hollinshead, 2015). Knowledge develops through the human mind and reconstruction, such that it can be uncovered by unpacking interaction linguistics and communication experience (Hennink et al., 2010). Therefore, the methods employed to obtain the data of the present study are investigating participants' interaction experience with greenway travels and interpreting the mental processes that reconstruct their understanding.

#### **4.2.2 Research approach**

In line with social constructivism, experiential learning theory was adopted in this work to understand the learning processes. Kolb's experiential learning theory is holistic and based on the works of Dewey, Lewin, and Piaget. Notably, Lewin's main contribution was the action



research approach and laboratory training (Kolb, 1984). Using a feedback process, an action research approach laid the basis for the research on experiential learning. Therefore, the said approach will be adopted to probe into the visitor education process through greenway tourism in China. Known in many other forms, such as participatory research, action learning, and contextual action research, the simple essence of action research is “learning by doing.” (O’Brien, 1998, p. 2) offers a more succinct definition as follows:

*Action research...aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process.*

(Lewin, 1946) initially coined this approach, which was developed by many other followers, such as Eric Trist. Although varying in application contexts, they all adopted “a spiral of steps composed of a circle of planning, action, and fact-finding about the result of the action” (O’Brien, 1998, p. 11). This aspect is consistent with the research framework (Figure 2-15) and cycle of experiential learning theory (Figure 2-12). The input segment is composed of preliminary diagnosis and data gathering, specifically, detailed experience information, as shown in Figure 4-1. An action period follows as learning processes, referring to value exchange, in particular, the two middle actions of experiential learning (reflective observation and conceptualization). Finally, the output section points to the systematic changes in behavior based on learning processes. This process continues with feedback loops among the different steps (Denscombe, 2014; McNiff, 1993).

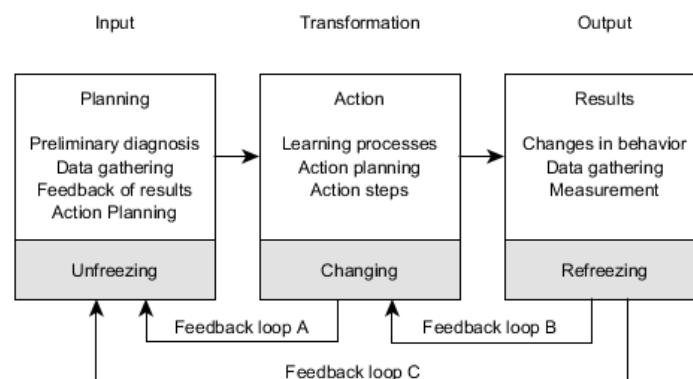


Figure 4-1. Systematic model of action-research process (Source: Lewin, 1958, cited from O’Brien, 1998)

Evidently, this approach well matches that of the study. It suits either research initiated to solve an immediate problem or a reflective exploration of progressive problem solving

(Denscombe, 2014). The current research aims to discover and reflect on the process of visitors' learning from greenway tourism so as to address the goal of sustainable tourism for the society as a whole, which is consequent to the latter purpose of this approach. Moreover, for visitors, the process is also consistent with action research. That is, they participate in greenway tourism activities and finally have their values and behaviors changed.

### 4.2.3 Research design

The two previous sections have justified the appropriateness of social constructivism and action research approach. With the guiding ontological, epistemological, and methodological principles, the research is much clearer in the philosophical sense of qualitative tradition. However, looking further into the method component, such as tools, strategies, and techniques, a multitude of choices remain. Specifically, in-depth interviews, focus group discussions, observations, biographies, textual analysis, and ethnography are popular methods for qualitative research. Table 4-2 summarizes the basic nature, purposes, and situations of these methods.

**Table 4-2. Qualitative research methods (Source: Veal, 2006)**

	<b>Nature</b>	<b>Purpose and situation</b>
<b>In-depth interview</b>	Longer in length; Deeper in depth; Semi-structured or unstructured	Small group of participants; Information varies from person to person; Used as a preliminary stage for a large study
<b>Focus groups</b>	Interview with a group of people Interviewer as a facilitator	The group is important; The interaction process is of interest; Individual in-depth interview is not acceptable for a group
<b>Participant observation</b>	Researcher as a participant	Considering the interaction of the researcher with participants; Studying sub-cultures
<b>Analyzing texts</b>	Basis for certain areas, such as literature, media, and cultural studies	Novels and other literature; Mass media coverage, film, and material culture
<b>Biographical research</b>	Studying all or a substantial part of the lives of individuals or groups of individual	Biography/autobiography; Oral history; Memory work and personal domain histories
<b>Ethnography</b>	Including a variety of techniques	Debunk conventional, established, sexual, and ethnic stereotypes and cultural studies.

The selection of these techniques depends not only on philosophical principles, but also on the type of data deemed necessary to the research questions. At times, a combination of methods should be used to achieve goals. Overall, this study needs to unpack the interaction experience, mental actions, and afterward behaviors of greenway visitors. The inner thoughts

of individuals, rather than the subculture or history of a group of people, are thus important. In this regard, in-depth interview and text analysis are deemed appropriate for this research.

For specificity and considering the research questions proposed, for Question 1, (“What is the main experience for visitors on greenways?”) we focus on the perception and, in particular, the experience of participants, which could only be achieved through in-depth interviews. Meanwhile, Question 2 (“How do visitors conceptualize the experience of greenways?”) refers to mental reactions. Undoubtedly, in-depth interviews are necessary to attain such type of information. Moreover, texts are also available to obtain mental reactions. Text messages, such as photos from visitors, could provide complementary interpretation of individuals’ unconsciousness that was unexpressed through words. This is because meaning making can be an unconscious process given that visual images usually reflect people’s inherent values, beliefs and norms (Ziller & Lewis, 1981). Question 3 (“How does the greenway experience change their behavioral patterns?”) is directly related to the final research question (i.e., “How can greenway tourism promote sustainable tourism systematically?”). This question intends to inspect changes in individual behaviors and consequently, the collective society. Information on changes on-site and, importantly, post-travel behaviors can be obtained through non-participant observations and interviews. In summary, in-depth interviews, non-participant observations, and text collection through photography should be adopted, not only for the sake of triangulation, but also to provide data for different research questions.

Moreover, in line with data types and research objectives, three corresponding analysis methods was taken step by step. First, a thematic analysis was used to conceptualize the related information from observations, in-depth interviews, and photography. In this manner, the respondents' main experiences on greenways, mental reactions, and subsequent actual behavioral changes can be specified because thematic analysis is advantageous in interpreting individuals’ experiences (Vaismoradi, Turunen, & Bondas, 2013). Then, a semiotic analysis was adopted to identify visitors’ mental actions based on visual images and interviews in consideration of the fact that individual reports may not always be the entire picture of their thoughts (Aktin, 2016). Photos from visitors could be interpreted to better understand their psychological preferences on the greenway experience. Furthermore, the results of photo interpretation can show participants’ value–belief–norm transformations that they may have yet to realize. Finally, we aim to build up the entire process from experience (greenway experience) to learning (value exchange) and finally to sustainable tourism (systematic change). Thus, a systematic dynamic analysis was applied to depict the entire feedback loops. This

method is advantageous in constructing relationships and rationalizing the links among various key themes or concepts (Roberts, Andersen, Deal, & Shaffer, 1983).

This three-step analysis collectively paved the way for the reconstruction of the entire learning process from greenway experience to visitors' changes in internal values, and systematic transformation of social values into sustainable ones. Figure 4-2 depicts the research route.

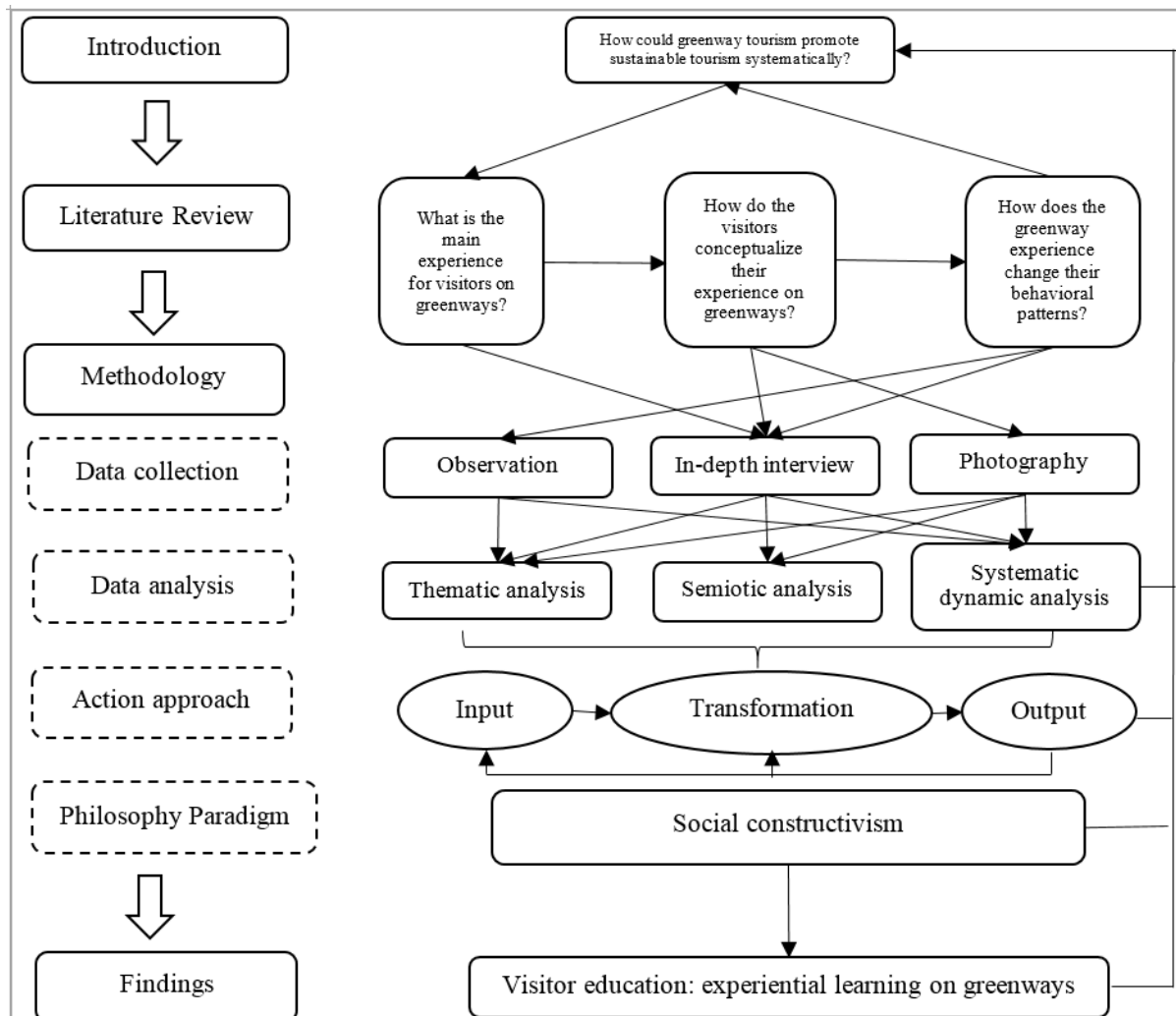


Figure 4-2. Research design route (Source: author)

### 4.3 Study cases

Although this research focuses on greenway visitors, selecting all visitors from all greenways is not plausible. Therefore, only the visitors from typical greenway sites were selected as cases for the present study.

#### 4.3.1 Greenway selection

Four main criteria were considered in selecting the cases. The first is purposive, which means selecting cases with similarities or differences in size, location, or levels (Veal, 2006).

For the present study, greenways as networks are comprehensive in terms of sizes and levels. The only difference that should be taken into consideration is the locations. As introduced in Chapter 3, the greenway networks of the Pearl River Delta and Yangtze River Delta are the original ones. The Pearl River Delta greenway network is not only the first greenway practice in China, but also the biggest greenway construction project that covered nine cities in Guangdong Province (Guo, 2012b). In addition, greenways within the Yangtze River Delta area are part of a regional influential network favored by residents in the northern part (Liu, Wang, & Wu, 2013). Hence, surveys were conducted in the two areas to include participants from different regions of the country.

The second criterion is illustrative, which indicates that the cases should be deliberately selected as more likely illustrating a particular proposition (Veal, 2006). Specifically, this research aims to focus on the influence of greenways on visitors' behavioral patterns. The greenways should be better favored by visitors. Hence, greenways that attracted many visitors are more preferred than others. For instance, among many other cities in the Pearl River Delta greenway network, Guangzhou, Shenzhen, and Zhuhai were selected as the target cities because they are famous for attracting visitors (Feng, 2012; Wu & Xie, 2012). Similarly, Hangzhou and Wenzhou in the Yangtze River Delta greenway network (Chen et al., 2009) were also selected as the study sites (Figure 4-3).

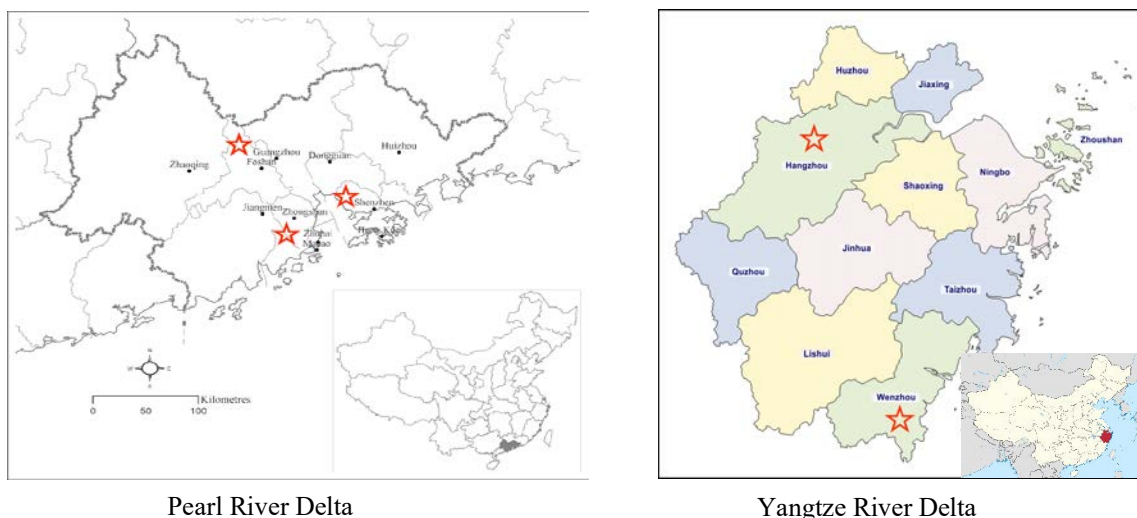


Figure 4-3. Interview sites (Source: highlighted by author based on Google map)

Third, pragmatic and opportunistic are also important criteria for case selection. They can increase the availability of data collection (Veal, 2006). Greenways in Guangzhou and Shenzhen are much lengthier than those in other cities (Guangdong, 2010), which makes overnight visits probable. Meanwhile, Zhuhai, Hangzhou, and Wenzhou are famous tourist destinations and suitable for long-haul visitors. Additionally, greenways in the aforementioned

cities were selected due to their long-time implementation and popularity (Yang et al., 2011; Zhu, 2013).

The fourth criterion is typical. That is, specific cases in existing studies or extreme cases should be chosen, such as the Liwan and Donghaochong Greenways in Guangzhou, which have gained great attention in 2010 (Wu & Xiao, 2011). Another example is the Zhuhai Qinglvlu Greenway, which is famous for its leisure activities and even extended in recent years (Chen & Jim, 2008). In addition, Wenzhou greenways has traditionally attracted large amounts of visitors (Wang, 2012). Moreover, the Zengcheng Greenway in Guangzhou, Shenzhen Luohu Regional, Wutong, and Qiandao Lake and other city greenways in Hangzhou have been more or less studied in limited contexts (Liu et al., 2016; Wu, 2014b). Thus, they were selected as typical cases for this research (Table 4-3). The next section introduces each case in detail.

Table 4-3. Greenways selected for the study (Source: author)

City	Name	Type	Length (km)	Main resource
Guangzhou	Liwan Greenway	Regional	49	Xiguang Culture and Liwan Lake
	Donghaochong Greenway	Community level	4	Donghaochong City River, Donghaochong Museum
	Zengcheng Greenway	Regional	335	Rural communities, ecological resource, and Zengjiang River
Shenzhen	Luohu Regional Greenway	Regional	21.15	People's Park, Honghu Park, Shenzhen Reservoir, Wutong Mountain Scenic Area, and Wutong Mountain Art Town
	Wutong Greenway	City level	14	Wangfo Temple, Donghu Lake, Shenzhen Reservoir, Wutong Mountain, Xianhu Biological Park, and Wutong River
Zhuhai	Qinglvlu Greenway	City level	28	Jiuzhou Harbor, Beach Swimming Pool, Zhuhai Fishing Woman, and Seaside Park
Hangzhou	West Lake Greenway	City level	12.5	West Lake, attractions in the West Lake Scenic Area
	Wentao Road Greenway	City level	15.9	Qiantang River, main bridges over Qiantang River, and Qiantang River Bridge
	Xiang Lake Greenway	City level	7.6	Xiang Lake, Hangzhou Xiang Lake, Tourist Resort
	Middle East River Greenway	Community level	12	Middle East River, Old bridges, Imperial City of the South Song Dynasty, and Beijing–Hangzhou Grand Canal
	Qiandao Lake Greenway	City level	200	Qiandao Lake and attractions around the Lake
Wenzhou	Oujiang Greenway	City level	24	Ou River, Jiangxin Island, and Puzhou port
	Daluoshan Greenway	Regional level	43.5	Daluoshan Mountain, Chashan Five Beauty Park in the north and south to the Xianyan Scenic Area

### 4.3.2 Brief introduction of selected greenways

#### *Guangzhou greenways*

By 27 March 2019, Guangzhou has constructed greenways extending 3,500 km. They cover 12 districts and counties, 234 attractions, 98 towns, 42 Asian Games venues, and 52 subway stations, and constitute the longest and largest coverage of a city greenway network in Guangdong Province. Among the greenways, the Liwan, Donghaochong, and Zengcheng Greenways are very famous.

The Liwan Greenway (Figure 4-4) is part of the No. 1 Regional Greenway. It has a total length of 49 km and overall investment of 38.03 million yuan. It was mainly completed before the Asian Games in 2010. It traverses through the oldest district in Guangzhou and connects the core historical area to address the traditional Xiguang culture.



Figure 4-4. Liwan Greenway (Source: author)

The Donghaochong Greenway (Figure 4-5) was built along the polluted city river named Donghaochong. Since 2008, the Guangzhou government has exerted efforts in restoring this river and built it into an urban community greenway for the Asian Games in 2010. The Donghaochong Museum was also constructed on the greenway to show the restoration process and transformation of this river from a severely polluted river to a leisure place. This 4-km greenway has since attracted large amounts of local residents and visitors from other areas, particularly during the first two years after its launch (Wu & Xiao, 2011).

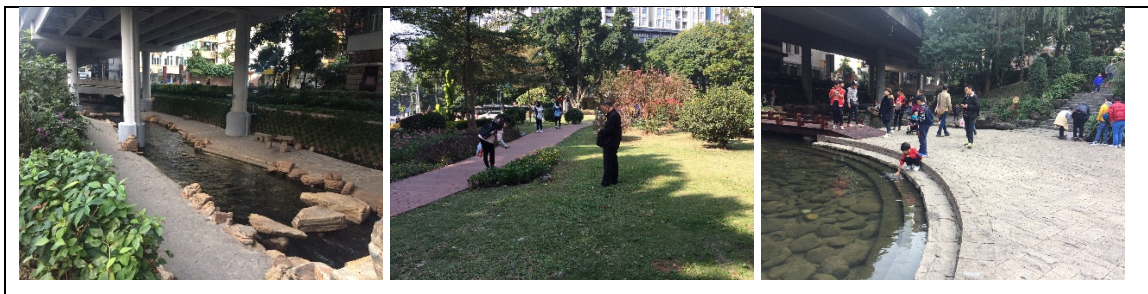


Figure 4-5. Donghaochong Greenway (Source: author)

The Zengcheng Greenway (Figure 4-6), as part of the regional Pearl River Delta greenway network is the longest and safest greenway route in Guangzhou (Wu & Xie, 2012).



The greenway extends along Zengjiang River and traverses through urban landscapes and beautiful ecological resources. It includes a 200-km self-driving road, a 335-km bicycle green route, and a 50-km water corridor in Zengjiang River. The Greenway facilitated poverty alleviation along the route through rural tourism (Wu & Xu, 2013). Reportedly, the visitors travelling to Zengcheng Greenway had contributed a large proportion to the local economy (Wu, 2014b). As evaluated by several institutes, the total potential value of Zengcheng Greenway in terms of ecology, leisure, and tourism amounted to approximately 48.5 million by 2010 (Wu & Xie, 2012).



Figure 4-6. Donghaochong Greenway (Source: author)

### *Shenzhen greenways*

Shenzhen has a total of 2,400 km greenways across the ten administrative areas, including Luohu, Futian, Nanshan, Baoan, Longhua, Guangming, Longgang, Yantian, Pingshan, and Dapeng. The ten areas have regional and city- or community-level greenways. Among many others, Luohu Regional and Wutong Greenways were selected because they were favored by the public as the most beautiful greenways in Shenzhen.

Luohu Regional Greenway (Figure 4-7) is part of the No. 2 Greenway of the Pearl River Delta greenway network. It extends 21.15 km in total and connects the People's Park, Honghu Park, Shenzhen Reservoir, Wutong Mountain Scenic Area, and Wutong Mountain Art Town.

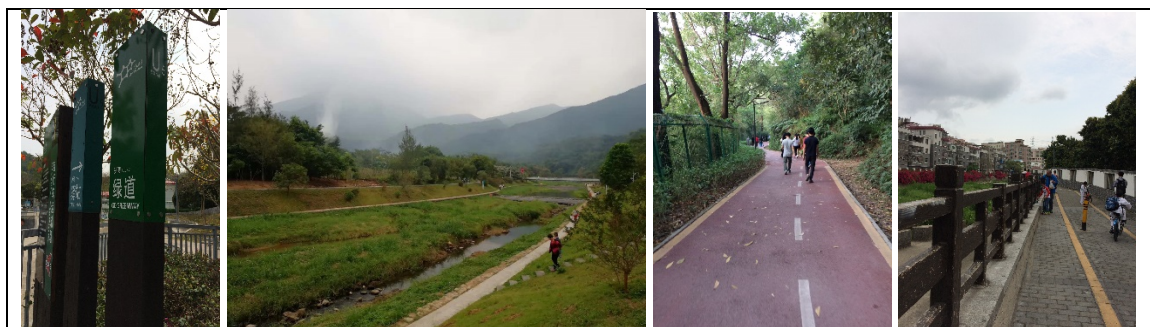


Figure 4-7. Luohu Regional Greenway (Source: author)

Wutong Greenway (Figure 4-8) is a city-level greenway in Luohu and connects to the Regional Greenway. It has a total of 14-km routes and enjoys a similar resource with the Luohu Regional Greenway. It includes three main parts, namely, 6 km for leisure with Wangfo Temple, Donghu Lake, Wutong Mountain, and Shenzhen Reservoir, 4.8 km for enjoyment with



the Xianhu Biological Park, and 3.2 km along Wutong River.



Figure 4-8. Wutong Greenway (Source: author)

### ***Zhuhai greenway***

Zhuhai's Qinglvlu Greenway (Figure 4-9) is a symbol of the city. It extends 28 km along the seaside from north (*Xiangzhou*) to south (*Gongbei*) and connects the Bay Hotel, Jiuzhou Harbor, Jinyi Hotel, Beach Swimming Pool, Zhuhai Fishing Woman, and Seaside Park. Zhuhai residents and visitors take leisurely walks to marvel at the beautiful scenery (Chen & Jim, 2008). It is a city greenway that existed before the Pearl River Delta greenway network. In the Master Plan of Zhuhai, the Couple Road will be extended to 55 km in the future (Liu, Li, & Zhang, 2008).



Figure 4-9. Qinglvlu Greenway (Source: author)

### ***Hangzhou greenways***

Hangzhou and Wenzhou saw a rise of the new trend in tourism, that is, “greenway tour” during the past years. Greenway practices in Hangzhou started in 2003. Over the past 15 years, Hangzhou has built 3,036 km of various greenways, such as Qiandao Lake, Three Rivers with Two Shores (*Sanjiangliangan*), West Lake, Canal, Xiang Lake, urban river lanes, and hiking trails. A greenway network with one axis and four vertical and three horizontal lines is basically formed, among which the West Lake, Xiang Lake, Wentao Road, Middle East River, and Qiandao Lake were awarded as the “most beautiful greenways” in Zhejiang.

The West Lake Greenway (Figure 4-10) surrounds the West Lake and connects the main attractions in the West Lake Scenic Area. It extends approximately 12.5 km based on the existing sidewalks and leisure roads. Most of the slow-pace greenway routes are no less than

1.5 m. The entire route has greening, hedges, and signs on both sides. All other roads and trails around the West Lake are connected to the greenway through particular transfer routes and links.



Figure 4-10. West Lake Greenway (Source: author)

Wentao Road Greenway (Figure 4-11) is part of the entire Three Rivers with Two Shores (Sanjiangliangan) Greenway, which extends a total of 716 km. Wentao Road Greenway along the Qiantang River was promoted as the most beautiful greenway for cherry appreciation, crosses main bridges, such as Qiantang River Bridge. It is a city-level greenway with a total length of 15.9 km.



Figure 4-11. Wentao Road Greenway (Source: author)

Xiang Lake Greenway (Figure 4-12) is located in the Hangzhou Xianghu Tourist Resort. The third phase of the Resort has constructed a green road for cycling around the lake with seven colors, namely, red, orange, yellow, green, blue-green, blue, and purple. The colorful greenway is approximately 7.6 km in total.



Figure 4-12. Xiang Lake Greenway (Source: author)

The Middle East River Greenway (Figure 4-13) was built along the city river, the



Middle East River. The entire greenway extends 12 km and represents the history and culture of Hangzhou. One of the main features of the Middle East River is a good bridge museum. A total of 52 ancient bridges are found over the river; hence, the greenway construction is centered on the protection of old bridges. In addition, the greenway connects the Imperial City of the South Song Dynasty to the Beijing–Hangzhou Grand Canal. Along the entirety of the greenway, people can experience the legacy of the South Song Dynasty and folk customs of the city.



Figure 4-13. Middle East River Greenway (Source: author)

The Qiandao Lake Greenway (Figure 4-14), which has a total length of nearly 200 km, is a city-level greenway constructed along the Qiandao Lake. It includes the Peninsula, Chunyang, and Qianfen routes. People can ride along the Qiandao Lake and appreciate the beautiful scenery, such as the clear water and gorgeous mountains.



Figure 4-14. Qiandao Lake Greenway (Source: author)

### ***Wenzhou greenways***

Since 2012, Wenzhou intended to complete the 2,200-km greenway construction including the path, green, and logo identification systems, station viewing platform, and other service facilities within three years. It includes 20 greenway routes to connect the rich ecological, natural, historical, and cultural resources in Zhejiang Province and to maximize the preservation of the original landscape. Thus, it can attract a large number of visitors for mountaineering fitness and leisure travel (Wenzhou, 2017).

The Oujiang Greenway (Figure 4-15) is located on the south bank of the Ou River. It

starts from the Oujiang Bridge in the west and reaches the Puzhou port in the east, with a total length of 24 km. Substantial supporting facilities and beautiful scenery can be found along the greenway. It also crosses the famous destination, which is Jiangxin Island in Wenzhou City. The greenway provides the public with a comfortable, laid-back, and recreational place.



Figure 4-15. Oujiang Greenway (Source: author)

The Daluo Mountain Greenway (Figure 4-16) is built around the Daluo Mountain. It is a famous regional greenway in Wenzhou City that starts from the Chashan Five Beauty Park in the north and runs south to the Xianyan Scenic Area as well as includes national fitness trails. Based on the two scenic areas, namely, Chashan and Xianyan, the Daluo Mountain Greenway retains the rich ecological, natural, and cultural resources of the Daluo Mountain.



Figure 4-16. Daluo Mountain Greenway (Source: author)

## 4.4 Data collection

### 4.4.1 Before entering the field

Preparation before fieldworks is necessary for data collection and analysis. In the current study, the specific aspects of preparation refer to field plans for the entire research (Appendix I), information list (Appendix II), outline of interview questions and photography techniques (Appendix III-V), necessary devices (i.e., camera for picture taking, notebook for field diaries, and recording pen), and supporting documents from the school (Appendix VI-VII). Notably, the interview guides presented in Appendix III–V were updated after the pilot data collection.

#### **4.4.2 Fieldworks**

Regarding this qualitative research, a series of well-organized fieldtrips (Figure 4-17) and post-trips (Table 4-4) were conducted for data collection based on in-depth interviews, observations, and photography techniques. First, a pilot field work was carried out to examine the efficiency of the questions and possibility of photo collection and photo elicitation. This work was carried out in Guangzhou. Based on the four criteria previously mentioned, greenways in Guangzhou are purposive, illustrative, typical, and pragmatic. The most important reason for selecting Guangzhou is the researcher's survey experience on its greenways in 2011. Moreover, greenways in Guangzhou were the earliest ones established and most popular in practice and literature (Wu, 2014b; Wu & Xu, 2013). Based on the pilot fieldtrip and post-trip, the strategies for participant recruitment and interviews, which shall be introduced later in detail, can be tested and selected. Concerning data accessibility, the data of this research seems approachable because it focuses on visitors. However, the availability of data may encounter certain problems due to the short period of greenway development. Therefore, the pilot field period is very important for the study. Observations and changes based on the pilot data collection were presented in Appendix VIII.

Afterwards, two main round fieldtrips (Figure 4-17) were conducted in the Pearl River Delta and Yangtze River Delta greenway networks. Table 4-4 provides the specific trip times and purposes. Following on-site fieldtrips, post-trip data collections were conducted after no less than two weeks. Two or three extra participants were interviewed after the information regarding on-site and follow-up interviews reached the saturation level (Savin-Baden & Major, 2013). Additionally, during the data preparation and analysis period, supplementary data collection was conducted with the participants based on the contact information collected.



Table 4-4. Fieldtrips for data collection (Source: author)

	Time	Purposes	Number of Participants	Sites
<b>Pilot fieldtrip</b>	06 December 2017 to 17 December 2017	To conduct pilot interviews, observation, and photographic techniques with greenway visitors on site.	10	Guangzhou
<b>Post trip work</b>	01 January 2018 to 04 February 2018	To conduct follow-up interviews with photographic techniques and adjust the interview guide accordingly	7	Hong Kong
<b>First main round fieldtrip</b>	16 March 2018 to 20 March 2018	To conduct pilot interviews, observation, and photographic techniques with greenway visitors on site.	9	Shenzhen
	21 March 2018 to 25 March 2018		10	Guangzhou
	26 March 2018 to 05 April 2018		9	Zhuhai
<b>Post-trip work</b>	13 April 2018 to 05 May 2018 <sup>7</sup>	To conduct follow-up interviews with photographic techniques	13	Hangzhou Wenzhou Hong Kong
<b>Second main round fieldtrip</b>	11 April 2018 to 18 April 2018	To conduct pilot interviews, observation, and photographic techniques with greenway visitors on site.	16	Hangzhou
	19 April 2018 to 25 April 2018		8	Wenzhou
<b>Post-trip work</b>	20 May 2018 to 20 June 2018	To conduct follow-up interviews with photographic techniques	14	Hong Kong
<b>Supplementary work</b>	20 June 2018 to 28 February 2019	To collect extra information for the thesis	—	Hong Kong United States



Figure 4-17. Fieldworks on greenways (Source: author)

#### 4.4.3 Participant recruitment

“The process of participant recruitment involves two stages: the first is to define an

<sup>7</sup> Follow-up interviews were conducted for the participants from Shenzhen and Guangzhou from 13 April 2018 to 18 April 2018. Participants from Zhuhai were interviewed from 24 April to 5 May 2018.

appropriate study population; and the second is to identify strategies for recruiting participants from this study population” (Hennink et al., 2010, p. 84). In other words, recruiting the participants pertains to the process of selecting individuals from the population. For this research, the population is composed of all visitors on greenways. Residents are not included for three main reasons: (1) greenways in China are constructed with an orientation towards tourism and visitors are the target groups to attract and serve; (2) visitors with a desire to experience the environment entail more possibilities to learn and interact with the greenways; (3) visitors on greenways represent new trends of city trips and lifestyle travels, which deserve attention from the tourism academia.

As discussed in the literature review, visitors on greenways mainly include those in daytrips and overnight tours. Daytrips refer to a minimum 50 km and a minimum period of 4 h away from home, whereas overnight tours involve a minimum distance of 40 km away from home and at least an overnight stay (Lamont, 2009). Apart from these technique definitions, a subjective definition was also adopted by asking the participants to define their roles (visitor or otherwise) on greenways so as to retain an exploratory and qualitative view. Visitors who met the objective techniques or subjective identification were recruited for this study. Additionally, to collect photos taken by visitors, those without photos were excluded.

In terms of the strategies for participant recruitment, qualitative research aims to gain a detailed understanding of the social phenomenon within the context. Thus, taking a random sampling method as in quantitative research is no longer necessary (Savin-Baden & Major, 2013). By contrast, identifying participants with specific characteristics or experiences is more meaningful. Therefore, a non-random sampling method was used for participant recruitment. Specifically, five strategies are typically used for qualitative participant recruitment, namely, “gatekeepers,” formal and informal networks, snowball, advertisements, and research-based recruitment (Hennink et al., 2010). Mostly, a combination of these strategies is adopted in research because they have advantages and disadvantages. Using “gatekeepers” refers to gaining assistance from the person who acts as the local leader or one with a recognized role in the group and is typically applicable in community research. Formal and informal networks are often taken when the study population may be associated with any formal or informal networks. They may represent a sub-culture group. Snowball is a commonly used strategy for research on a group of people with specific characteristics. Advertisements are often used when reaching the target population is difficult. The four aforementioned types of techniques are likely unsuitable for this research. However, the last one, namely, research-based recruitment, which is used in studies with multiple research techniques, seems feasible. The current research

used different data collection methods. Moreover, this strategy aims to recruit participants comprising a sample and ask them to participate in follow-up surveys at a later time, which conforms to the research design. Specifically, it includes the selection of participants for interviews on a random-like basis, that is, selecting visitors who meet the requirements of the study (Goddard & Melville, 2004; Liamputtong, 2013; Prasad, 2005). This study used this technique and randomly screened the individuals on greenways by asking three questions, namely, (1) What is your trip time and distance? (2) Do you think you are visitors on these greenways? (3) Did you take photos during the greenway trip? Only visitors who met the technical requirements and responded “yes” to the third question or have positive replies for the last two questions were included as the participants for this study. Distance was determined by comparing the starting points and target destinations.

Additionally, certain strategies were used to motivate and appreciate participation: (1) a recommendation letter (Appendix VI) was provided to make the process reliable and valuable; (2) souvenirs from the Hong Kong Polytechnic University were given after the interview to appreciate their involvement (Appendix VII); and (3) the researcher established friendship with the interviewees so as to facilitate follow-up data collection.

A total of 63 participants were selected for this study (Appendix IX). Table 4-5 outlines their demographic characteristics. Among the key participants, 39 were aged 19–35, whereas 15 were between 36 and 55. Eight elder visitors and one teenager were also included for a comprehensive understanding. The participants were equally distributed by gender, with 31 female and 32 male visitors. Most of them are daytrip visitors (52 out of 63) and the majority (42) visited greenways more than once. Regarding education level, approximately half were professional degree holders (14) or below (19), whereas the other half obtained bachelor’s degree (25) or above (5). Most of the participants had low to medium monthly income levels. Specifically, 21, 39, and only 3 earned below 5,000 RMB, between 5,001 and 20,000 RMB, and more than 20,000 RMB, respectively. Approximately half of the participants were married with children and one-third (21) were single. Undoubtedly, the former visited greenways with their family members, whereas the latter went with friends or alone. In addition, lovers and young couples were also part of the group (7). The participants varied in occupation: white-collar workers (28), students (9), and blue-collar workers (8), merchants (9), housewives (2), and retired (7). They were recruited across greenways in Guangzhou (20), Shenzhen (10), Zhuhai (9), Hangzhou (16), and Wenzhou (8). The participant group with diverse ranges of demographic information is expected to provide valid and trustworthy data.

**Table 4-5. Demographic information of participants (Source: author)**



Characteristics	Categories	Distribution (N = 63)
Age	Younger than 18	1
	19–35	39
	36–55	15
	56 or above	8
Gender	Female	31
	Male	32
Duration	Daytrip	52
	Overnight	11
Trip feature	First time	21
	Repeated	42
Education	High school or below	19
	Professional education	14
	Bachelor	25
	Graduate or above	5
Monthly income (RMB)	0–5,000	21
	5,001–10,000	26
	10,001–20,000	13
	20,001–50,000	2
	Over 50,000	1
Marriage status	Single	21
	Engaged	7
	Married without children	5
	Married with children	30
	Divorce	0
Occupation	Student	9
	White-collar	28
	Blue-collar	8
	Merchant	9
	Housewife	2
	Retired	7
Interview city	Guangzhou	20
	Shenzhen	10
	Zhuhai	9
	Hangzhou	16
	Wenzhou	8

Based on the pilot data collection, this research selected the two-step data collection strategy (to be introduced later), which involved interviewing the participants on-site and after they returned home to trace the influence of the greenway experience. In other words, the researcher should recruit the participants twice. However, not all the participants delivered follow-up interviews successfully due to time constraints or subjective unwillingness to attend. To ensure sufficient data for follow-up interviews, the author collected as large a sample as

possible on-site. Finally, 62 on-site interviews were collected, and 34 follow-up interviews were conducted, indicating that more than half of the participants had post-trip interviews. Notably, one participant (SZ01) provided only a follow-up interview because the investigator obtained the contact information of the participant but failed to conduct on-site interview with her. With the abundant information she provided in her post-trip interviews, the participant was still included.

Table 4-6 illustrates the profiles of the participants for on-site and follow-up interviews. Although one participant was excluded from the total sample, the demographic information for on-site participants changed little in relation to the overall situation. Regarding the follow-up interviewees, all items within one demographic group show similar distributions as those on-site. That is, on-site and follow-up interviews shared similar demographic profiles to provide valid comparisons for this study.

Table 4-6. Demographic information of participants for on-site and follow-up interviews (Source: author)

Characteristics	Categories	Distribution of on-site interviews (N = 62)	Distribution of follow-up interviews (N = 34)
Age	Younger than 18	1	1
	19–35	38	26
	36–55	15	6
	56 or above	8	1
Gender	Female	30	21
	Male	32	13
Duration	Daytrip	51	29
	Overnight	11	5
Trip feature	First time	21	11
	Repeated	41	23
Education	High school or below	19	4
	Professional education	14	9
	Bachelor	25	17
	Graduate or above	4	4
Monthly income	0–5,000	21	12
	5,001–10,000	26	15
	10,001–20,000	12	5
	20,001–50,000	2	1
	Over 50,000	1	1
Marriage status	Single	21	15
	Engaged	7	2
	Married without children	4	4
	Married with children	30	13
	Divorce	0	0
Occupation	Student	8	7
	White-collar	28	17

	Blue-collar	8	5
	Merchant	9	2
	Housewife	2	2
	Retired	7	1
Interview city	Guangzhou	20	10
	Shenzhen	9	7
	Zhuhai	9	3
	Hangzhou	16	9
	Wenzhou	8	5

#### 4.4.4 In-depth Interview

In-depth interview is “a one-to-one method of data collection that involves an interviewee and an interviewer to discuss specific topics in depth” (Hennink et al., 2010, p. 109). Although conversational in form, in such an interview, only the interviewees share their insights and the interviewers simply facilitate the storytelling. As a “meaning-making partnership” or a type of “knowledge-producing conversation,” an in-depth interview intends to gain detailed thoughts about research issues. To maintain an emic and in-depth talk, several techniques were used in the study: (1) using a semi-structured interview guide to prompt the talk (Appendixes III and IV); (2) establishing trust with interviewees; (3) proposing open and empathic questions; and (4) asking probing questions to motivate interviewees to talk (Hennink et al., 2010; Mason, 2002).

The study aims to reveal mind actions and behavioral changes. Thus, the same group of people were interviewed during and after the trips to provide their actual value and behavioral differences. This strategy (i.e., **Strategy one**) is preferred for this research. Moreover, an alternative strategy (i.e., **Strategy two**) was proposed in the case of failure to trace the same informants. Rather than investigating the same group at different time periods, the alternative strategy intends to compare first-time and repeat visitors. Fortunately, the pilot data collection proved the availability of strategy one such that the two-step interview was adopted (Appendix VIII).

Several steps were included for the two-step interviews: (1) preparing the official letters and introduction of the study; (2) randomly approaching visitors on greenways; (3) asking screening questions, such as time, distance, self-defined roles, and photos so as to select potential participants; (4) introducing the research and invite visitors to a two-round interview; (5) considering visitors who express willingness as participants; (6) obtaining their contact information after the on-site interview and setting an appointment for the follow-up interview; (7) contacting them after two weeks and confirming the appointment for the second interview

online; (8) and conducting the online interviews (e.g., phone call/WeChat/Skype).

The bilingual interview guidelines (English and Chinese) for on-site and follow-up data collection were used. In accordance with the translation-back-translation method (Lam & Hsu, 2004), one colleague was invited to translate the Chinese version back into English so as to check the accuracy of the translation. Simplified Chinese was used because data were collected in mainland China. The on-site interview guide (Appendix III) contains nine main parts, namely, introduction of study purpose; background information of interviewees; screening questions; opening questions on the respondents' greenway trip experience; questions about mental and behavioral reactions; questions about values, beliefs, and norms; questions about tourism pattern changes; and closing questions. Before the end of each interview, questions based on the photography techniques were also asked (Appendix V).

The interview guide for the follow-up interview (Appendix IV) includes five main parts, namely, opening questions about greenway experience; questions about mental and behavioral reactions; questions about values, beliefs, and norms; and questions about tourism pattern change. Finally, photography-based questions (Appendix V) were asked. As Ebbinghaus's forgetting curve illustrated, people tend to forget 90% of the knowledge learned after two weeks. However, if knowledge has been transformed to values, then it becomes difficult to change (Averell & Heathcote, 2011). Hence, the researcher conducted follow-up interviews after two weeks or more to discover changes in values that lead to actual behavioral changes in travel and daily life as well.

#### **4.4.5 Non-participant observations**

Through observations, the author aimed to collect data by systematically observing and recording people's actions, behaviors, and interactions. It is an important tool to discover silent social norms and values and to complement in-depth interviews or other methods of data collection in qualitative research (Hennink et al., 2010, p. 171). During the observation process, field notes and diaries can be used to record information. Regarding different relationships with the people being observed, the process can be divided into participant and non-participant observations, and the latter is taken as a supplementary method for in-depth understanding of participants on site.

The objective and systematic non-participant observation can be used to conduct an observation without being involved in the group being observed. The researcher carried out non-participant observations on-site to collect information about the physical features of greenways and group behaviors of visitors. Simultaneously, through observations on site, the

researcher can combine actual practices with the reported psychological actions of visitors for better interpretation. In this manner, the process of their greenway experience and learning during greenway tourism can be traced. In other words, non-participation observation is a complementary method to better understand visitors on greenways. Moreover, observing the participants from a distance can reduce the “Hawthorn effect” (Mulhall, 2003), that is, the influence of researchers on the situation under study.

#### **4.4.6 Photography**

As previously discussed, texts are also important sources of information. In the current study, two methods were used to include photos in the data collection: collecting photos from participants and presenting participants with photos to elicit discussion. In fact, they are the two main categories of photographic research, namely, participant-generated photography (Balomenou & Garrod, 2014) and photo elicitation (Supphellen, 2000).

##### ***Participant-generated photography***

Participant-generated photography refers to the process of collecting photos from participants, and is also well-known as photo-voice and auto-photography in social sciences (Balomenou & Garrod, 2016). Photo-taking is a very important activity during trips because it reflects the consciousness and unconsciousness of visitors (Hull & Stewart, 1992). To better interpret their behaviors and inner thoughts, the participants’ five most meaningful photos were collected along with their answers to corresponding questions during the on-site interviews (Appendix V). The photos were collected in both rounds of interviews through mobile phone transmission and copies taken by camera. Privacy protection was afforded to the participants to encourage sharing. A total of 545 photos were collected from the participants (group one photos). Among them, 375 and 170 photos were collected during on-site and follow-up interviews, respectively.

##### ***Photo elicitation technique***

Photo elicitation is well known in consumer research. Photos are considered a projective and stimuli technique (Pavesi, Denizci Guillet, & Law, 2017) that is capable of extracting conscious and unconscious feelings and connections (Butler-Kisber, 2010) as well as visual and non-visual information (Koll, Von Wallpach, & Kreuzer, 2010). Photo elicitation retrieves data from photographs to elicit hidden associations and metaphors associated with issues (Supphellen, 2000).

The present study used this technique to identify the values, belief, and norms of participants, which are typically difficult to perceive and describe by individuals. In Appendix

V, three groups of photos were prepared for the participants. The group two photos reflected the individuals' values by presenting three images that represent nature, others, and self. Rankings were supplemented by further explanations. These photos are tagged with different values online. Classifying the participants through the photos is not the aim of this exercise. The goal is to stimulate their discussion on related topics. The group three photos are related to climate change, which, together with the accompanying questions, intended to uncover visitors' beliefs (ecological, behavioral, and control) and norms. The most important aspect is the discussion about the photos rather than the photos themselves. The last group of photos depicts typical scenes of greenways, which have been discussed in the literature (Bischoff, 1995; Burel & Baudry, 1995). They were presented to uncover the participants' images and preferences on greenways. To identify changes in participants' values, beliefs, and norms, the three-step photo-elicitation was carried out during the on-site and follow-up interviews.

#### **4.4.7 Collection of official/unofficial statistics**

To obtain a whole picture of the greenway experience, a collection of official statistics through an online search was conducted. Moreover, photos taken by the researcher were also considered as supportive materials for the study, which could provide background information for the interpretation of visitors' experience.

### **4.5 Data analysis**

In contrast to quantitative research in a deductive approach, which tests the hypothesis based on existing theory, research under the social constructivism paradigm in a qualitative manner is inductive and co-constructed by the beliefs of the researcher and research objects (Creswell, 2007). Inductive approach, which is also known as inductive reasoning, is carried out opposite to the deductive in terms of observations to finally theory proposition (Goddard & Melville, 2004). It could also involve the development of explanations or theories for social phenomenon and patterns on the basis of a series of theoretical hypotheses (Babbie, 2013). This research followed the inductive method for thematic, semiotic, and systematic dynamic analyses to propose explanations for greenway tourism as a sustainable strategy based on experiential learning theory and value theories.

#### **4.5.1 Data editing and management**

To facilitate the data analysis process, all sources of data were managed and coded systematically. Participants were coded with their interview sites and interviewee number. For instance, "SZ01" refers to the first participant encountered in Shenzhen. Interviews for participants were specified as on-site and follow-up by denoting with "O" or "P" after the

participant codes. For instance, SZ01O means on-site interview for participant SZ01 and SZ01P pertains to the follow-up interview with the same participant.

The interviews were recorded, transcribed, and interpreted with different themes and codes. Records were taken with permission from the participants, who were given control over the recordings. Interviews were conducted in Chinese to minimize sense-making by language translation (Holden & Von Kortzfleisch, 2004), and the interview transcripts were coded in English directly to reduce translation bias. The transcripts for on-site and follow-up interviews of a typical participant (i.e., SZ13) were translated and provided to the supervisor for accuracy check.

Group one photos were classified based on interview codes. For instance, photo SZ01O-1 denotes the first photo provided by participant SZ01 during the on-site interview. The discussions on all groups of photos were selected and placed together with the corresponding photos for further analysis. In addition, observation notes and diaries were carefully checked for supplementary information. Software, such as *NVIVO 11* for coding, *FreeMind* 1.0.1 for thematic map, *VensimPLE* for systematic dynamic feedbacks, and *Xunfei Yuyin* for transcripts, was installed (Veal, 2006). During the coding process, numerous memos and annotations were recorded for further analysis.

#### **4.5.2 Thematic analysis**

Thematic analysis is a method for message analysis that uses systematic steps to observe context, interactive relationship, or culture and arrange observations in order based on “what is observed or sensed” so as to generate theories (Aronson, 1995). “Themes” represent the main topics or patterns that appear in the conceptual framework or data to describe a phenomenon associated with the research question (Fereday & Muir-Cochrane, 2006). From the data, we aim to explore common themes with recurring and commonality. Therefore, the entire analysis underwent a “whole–part–whole” process by checking the text and annotation repetitively (Braun & Clarke, 2006).

The thematic analysis consists of six steps: (1) gaining familiarity with the materials; (2) producing initial codes; (3) seeking out the main themes; (4) inspecting the themes; (5) defining the themes and identifying the relationships among them; and (6) reporting on the themes (Braun & Clarke, 2006). As presented in Figure 4-2, thematic analysis was adopted in the entire data to categorize information so as to describe visitors’ greenway tourism experience and their psychological activities related to all four specific questions. In other words, all interview transcripts, such those based on photos, were included in thematic analysis.

The software *NVIVO 11* was used for coding, and *FreeMind* was used to draw thematic maps. Appendix X provides an example of the theme development process.

Following the six steps of thematic analysis, the author read and re-read the transcripts as well as photos to generate initial ideas. The transcripts were individually coded and then abstracted and categorized step by step into key points, categories, subthemes, and themes. The different levels of categories and themes were checked and named according to the coded extracts and the entire data set. Figure 4-18 illustrates the thematic map of the entire analysis. The interviews and photo-based discussions implied 11 main themes based on approximately 2,348 codes. “Greenway knowledge” means the participants’ perceptions of greenways. “Greenway experience” includes the visitors’ experience on greenways, such as pre-trip motivations, on-site activities and feelings, and post-trip evaluations. “Travel preference” refers to the comparison between greenways travels and other type of tourism from the viewpoints of the participants. “Reflection” includes mind activities during or after greenway trips. “Self-development” pertains to the cognition or mind changes of the visitors. Furthermore, “actual behavioral changes” defines actual changes in visitors’ behaviors after the greenway tourism experience. “Norm identification” refers to obligations that the visitors hold toward the environment. “Belief identification” points to the ecological worldview, belief in the consequence of behaviors, and belief in control of consequences. “Value identification” implies values that visitors hold regarding egoism, altruism, and the eco-centric view. Additionally, “human nature” reveals the nature or essential features of human beings. Finally, “constraints” refer to the barriers that stopped people’s actual behaviors. These themes will be discussed in detail in the findings (Chapters 5 to 7) to reveal the connections among them and inner logics underpinning the experiential learning of visitors on greenways.

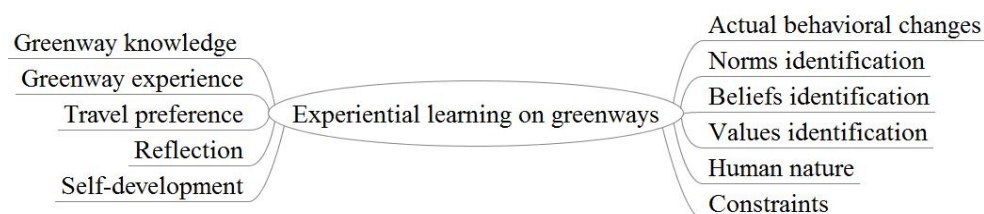


Figure 4-18. Thematic map of experiential learning on greenways (Source: author)

### 4.5.3 Semiotic analysis

Arguably, semiotics is a discipline or a philosophy. Distinct from the Saussurean tradition called semiology, which is a subset of social science, semiotics in this research was used as a philosophical logic in signs and sign processes similar to Peirce’s domain, who defined it as “what must be the characters of all signs ... an intelligence capable of learning by



experience” (Peirce, 1974, p. 91). To simplify, semiotics is a methodology of meaning-making to explore signs and symbols as a significant part of communication (Eco, 1976). Words, images, actions, and objects can all be studied as signs if recorded in a certain way and can be studied (Chandler, 2017).

Jensen (1995) referred to semiotics as the “science of meaning,” which is primarily concerned with the analysis of signs and symbols and their meaning. Signs should not be studied in isolation, but rather in the context and culture making the use of signs and sign systems. Semiotics analysis is used by scholars and professional researchers with three main steps: (1) definitional meaning analysis; (2) personal meaning analysis and (3) contextual meaning analysis (Aktin, 2016). In this research, semiotics was applied to interpret mind actions and value–belief–norms of participants through photos they present and their feelings about photos displayed to them.

Group one photos were analyzed in two ways. The first was by listing them in an Excel book sheet and individually extracting the main themes (definitional meaning) from the photos (Appendix XI). Statistics of the themes are presented in Appendix XII, which reveals the top themes of these photos. The second way was by coding the descriptions and discussions on the photos. Groups two to four photos were also analyzed in two main steps. The first involved thematic analysis based on corresponding discussions and summarizing results for a type of statistical analysis (Appendix XI). The codes and themes derived from the discussions were considered personal meanings. Contextual meanings were analyzed based on the specific culture accordingly observed in the findings.

#### **4.5.4 System dynamic analysis**

System dynamic analysis is an approach to understand the dynamic complex systems of behaviors over time using stocks, flows, feedback loops, and time delays (Sauer, Pai, & Chow, 2017). Originally developed in the 1950s to help corporate managers improve their understanding of industrial processes, it is currently being used throughout the public and private sectors for systematic analysis and design (Radzicki & Taylor, 2008). The best known systematic model is probably the 1972 *The Limits to Growth* (Meadows, Goldsmith, & Meadow, 1972). This model forecasted that the exponential growth of population and capital with finite resources, sinks, and perception delays, would lead to the economic collapse during the 21st century under a wide variety of growth scenarios.

The core idea of this method is the recognition that the structure of any system, such as many circular, interlocking, and often time-delayed relationships among its components, is as

important in determining its behavior as the individual components themselves (Sterman, 2001). The basic rationale for system dynamic analysis is feedback analysis, that is, “the process through which a signal travels through a chain of causal relations to re-affect itself” (Roberts et al., 1983, p. 16). It means the proposal of a visualized system dynamic model to explain behaviors. In fact, the final purpose of system dynamic analysis is forming quantitative equations and simulations of realities based on the system dynamic model. However, this qualitative study only adopted feedback analysis to construct the hypothesized model without simulating it with numerical data.

The system dynamic model consists of the causal loop diagram and stock and flow diagram. The causal loop diagram reflects the causal relationships among factors (variables), such as positive loops (even number of negative arrows) and negative loops (odd number of negative arrows). Figure 4-19 shows the basic units of the two loops. Frequent time delay effects, as illustrated by the mark between C and D, are observed in the causal relationships.

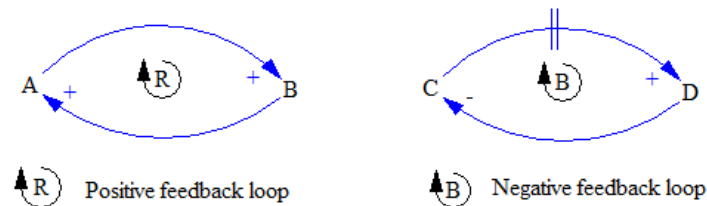


Figure 4-19. Samples for positive and negative loops (Source: Sauer, Pai, & Chow, 2017)

In contrast to the causal loop diagram that addresses the causal relationships, the stock and flow diagram (Figure 4-20) emphasizes the underlying physical states or structures. Stock signifies the state of the system and provides the basis for actions. It is an accumulation factor (variable), such as those of bank savings and population. Flow is the rate factor (variable) that causes the stock to change. For example, income and expenditure are input and output flows, respectively, for bank savings.



Figure 4-20. Sample for stock and flow diagram (Source: Sauer, Pai, & Chow, 2017)

Henceforth, system dynamic analysis in this study includes three main steps.

(1) Question analysis aims to identify the main factors, such as stock factors, flows, and other factors. This step refers to the analysis of the greenway experience and reactions of visitors.

(2) System dynamic model construction for targeted questions with the *Vensim@PLE7.2a* software. Two models were constructed in this study. The first explains the

systematic changes from the greenway experience to personal values and finally to actual pro-environmental behavioral changes. The second elucidates the achievement of sustainable tourism through greenway travels.

(3) Specific loops analysis. Based on the system dynamic model, discussions on key feedback loops were carried out to figure out the main logics in visitors' pro-environmental behaviors and sustainable tourism.

#### **4.6 Trustworthiness of data**

To ensure the reliability of data, this study employed the triangulation method, which refers to the validation of information by collecting and comparing data from different sources (Rubin & Babbie, 2016). In the current study, data were obtained from three sources: in-depth interviews, observations, and photography. In data collection, the researcher retained the transparency of the entire process as much as possible. An ethical clearance was obtained from the research office of the university. Study fact sheets, consent forms, and invitation letters were prepared. For the interviewees, records were taken with consent. All data were anonymously presented in paper or thesis with codes. The original statements of the visitors were quoted to ensure the trustworthiness of data analysis.

#### **4.7 Self-reflexivity of researcher**

As a constructivism study, taking a reflexive view is necessary for the researcher (Xiao, 2016). Despite prior knowledge of the fascinating nature of qualitative methods through past research experience, this study further led the researcher to recognize a more pluralistic and systematically qualitative world. First, subjectivity is the epistemological basis of a constructivism study. Qualitative and quantitative approaches have their deep roots in philosophy views, and they differ from each other not only in methods, but also, essentially, in ontology and epistemology. The choice of approaches is not by convenience, but on the reality, one believes in. Subjectivity is indispensable because the world is believed to be constructed, and no objective reality can be observed. As the author expects to understand the phenomenon and explore the constructed truth, eliminating researcher bias is unnecessary. Second, qualitative research is not limited to observation and interviews. Similar to quantitative research, it has a systematic process to address academic questions. A multifaceted world was inherent in the qualitative view with different methods. For instance, photographic techniques can reveal valuable information from pictures. In addition, subjective judgments and connections were made through interpretations to develop theories that can be tested through quantitative approaches in the future.

#### **4.8 Methodological limitations**

This research largely focuses on psychological analysis, which may pose an inherent dilemma for the researcher in selecting appropriate methods for data collection and avoiding subjective judgments. Another possible limitation is that behavioral change is a long-term process, which cannot be detected during the research period. Additionally, the photos for photography technique can induce flexibility in interpretation and sense-making in language may still exist.

#### **4.9 Chapter summary**

Given the visitors' experiential learning as a study perspective, this research was positioned in a social constructivism paradigm. In line with the action research pattern, a qualitative approach was conducted. On the different greenways selected, non-participant observations, in-depth interviews, and photography were used for data collection in terms of various topics. The three-step analysis, which included thematic, semiotic, and system dynamic analyses, was employed to answer the research questions raised in Chapter 2.

## **Chapter 5 Greenway Experience: Interaction between Self and Environment**

### **5.1 Chapter introduction**

This chapter focuses on the greenway experience (research question one) according to both on-site and post-trip interviews with participants. Two core themes are discussed: **greenway knowledge** and **greenway experience** (Figure 4-18). It starts with identification of the overall images of participants towards greenways, namely the greenway knowledge. Following is the specific discussions of greenway experience in three stages: pre-stage motivation, during-stage experience and post-stage impression and evaluation. Furthermore, three main features of the greenway experience are discussed, including the experience decay, the general but whole different feelings, and the liminal experience between traditional mass tourism and daily leisure. Finally, the chapter summary by the end answers the research question one and provides corresponding propositions.

### **5.2 Greenway knowledge: Regional green routes for human well-being**

Greenway has a long development history in western countries (as discussed in literature review), while it is not until the 1990s that the term was prevalent in use. Moreover, it was imported to China two decades later with the first greenway project (the Pearl River Delta Greenway Network) launched in 2008. As a broad concept to embrace the assemble terms such as trails, parks, paths, boulevards and parkways, greenway is comprehensive yet not familiar to the public. Participants' conception and knowledge of the greenways are contributive to the interpretation of their experience and development of greenway tourism.

Five subthemes were identified under the core theme "greenway knowledge": Greenway definition, greenway trip features, comparisons, changes identified on greenways and unknown of greenways. They are discussed upon the theme map below (Figure 5-1).

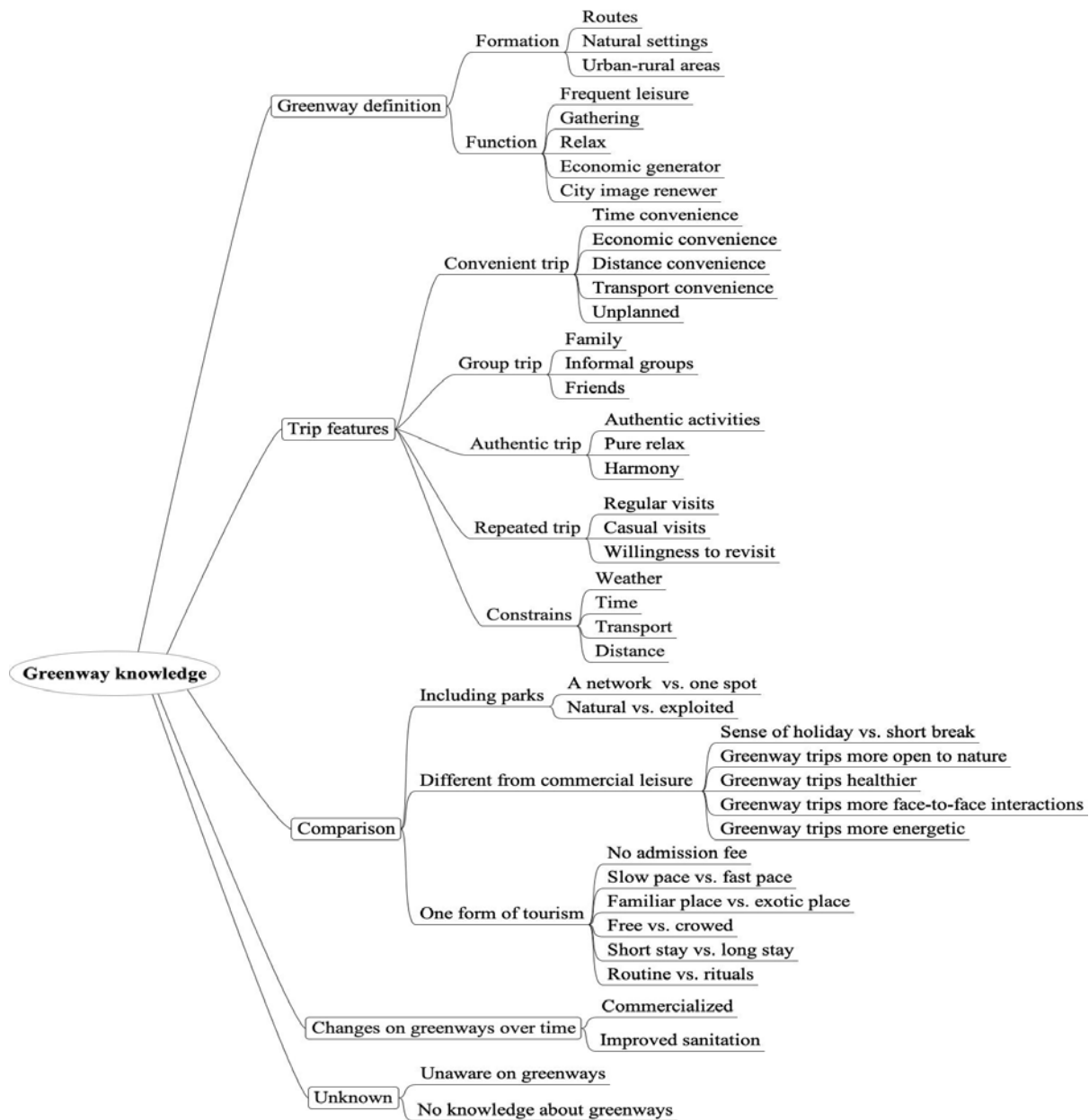


Figure 5-1. Subtheme structure of greenway knowledge (Source: author)

Figure 5-1 illustrates that greenways in visitors' view are certain routes with natural settings in both urban and rural areas (Figure 5-2). These routes are visible and well-built as colorful, surrounded by trees and separated from the driving roads. No automobile vehicles are permitted on the greenway routes. *"Some places on the edge of those big roads without environment like this are not safe. You have to cross main roads sometimes. It is meaningless and troublesome. For that, it is not called the greenway"* (SZ170). Regarding their functions, greenways are spaces for frequent leisure like one-day trips, gathering and relaxation. As well, they help to generate economic benefits and renew the city images for the local regions. It is interesting to note that these greenway projects are mainly planned for the purpose of promoting regional tourism so that all greenways are well designed and constructed to be

attractive for tourists both in local areas and out of the cities. *“For us, only if they [the government] can do a good job in the environment, it is always possible to attract a lot of people from outside. If the scenery is good, people will come here to play for one day or half day and certainly they will spend here” (GZ100).* Overall, through connecting natural resource in urban and rural areas, greenways are regional green network for travels and human wellbeing.



Figure 5-2. Greenway images (Sources: provided by visitors)

Trips on greenways are convenient in terms of time, economy, distance, transport and preparation. Visitors could take greenways trips on any convenient time, like weekends, holidays and even afternoon leaves: *“Today I have a half-day vacation, so I came here [Liwan Greenway] for a short trip because it is convenient to arrive, and I like this place very much. It represents the culture of Guangzhou. I feel very casual and leisure to take a walk around” (GZ210).* Besides, low cost acts as a facilitator for the whole public to enjoy trips on greenways. The possible expenditures include only bicycle renting, public transports, foods and toys like kites, as well as accommodations for some overnight visitors. Therefore, although greenway trips may share some similar constraints with the traditional mass tourism such as weather, time, distance and transport, economy no longer existed as limits for travels on greenways, which implies an equal access to public resource on greenways. Moreover, most visitors came from the local or nearby cities so that they could get to the greenways via various transports, including bus, self-driving, or cycling. The last but not least, greenways trips seem to be casual without planning. Preparation work is relatively simple to make the trips easy to carry out. *“[Researcher] Do you have any plan for today’s visit on greenways? [Participant] No, I did not have any plan. I just want to walk around for casual sightseeing in a leisure style” (GZ200).*

Greenway visits tend to be repeated group trips with authentic experience. Most visitors enjoyed the trips with their family members, friends or other informal groups like colleagues or classmates to promote human interactions. *“You can see that people come here with their families, big or small families. It is very interesting; don’t you think so? Let’s put it in another way. If you take your children to the supermarket. The air quality is not good and there is*

*nothing for children to learn. But if you bring the children here, the whole family could get together after work for the whole week. Other than enjoying a meal together, we can have cycling for free here!" (GZ24O).* Authentic activities are preferred on greenways, like quiet stay in certain places or walking around to feel the breeze, playing with trip partners, and taking exercises to experience the sweating. Through those authentic activities, visitors got pure relaxation and were relieved from daily pressure. A harmony atmosphere among humans, and harmony between human and nature were thus achieved: *"Everyone is happy here. This is something in common. No noise, no conflicts, no crying. Just happy together. You can see that" (GZ07O).* Moreover, upon the convenience and authentic experience, greenway trips are fascinating to visitors for regular or casual revisits. This is a very important feature that greenway trips differentiate from traditional mass tourism because one-time visit has been a longstanding challenge for mass tourist destinations to achieve sustainable development.

As for visitors, greenways lead to a new form of tourism lying between general business leisure (e.g. shopping and karaoke) and traditional mass tourism, particularly for people in urban areas. For one thing, greenway trips are different from parks because the former depends on networks of natural routes, which include parks as spots inside. Parks are usually exploited and equipped with variety of facilities, while greenway routes are in more natural forms and traverse through different spots and regions. For another thing, greenway trips are different from the indoor leisure activities like karaoke and bars in that the trips bring in sense of holidays instead of a short break from daily routine. Besides, greenway trips tend to be healthier and more energetic since they involve more interactions with nature, as well as face-to-face interactions with other persons: *"Not the same with indoor leisure. Ah, I think communication among people tend to be more in nature. That is, the direct communication increased. Like watching a movie or singing karaoke, people may have less communication. When they went to the green roads for leisure, they would naturally communicate more with each other" (GZ08P).* In addition, greenway trips are specified as a new form of tourism different from traditional mass tourism with regards to lower cost, slower pace, more free and familiar space, shorter stay and more routine feelings: *"Because Macao is very close to the place, I thought many foreign tourists may come here. But in fact, it seems no difference to me, quite general and peaceful" (ZH33O).*

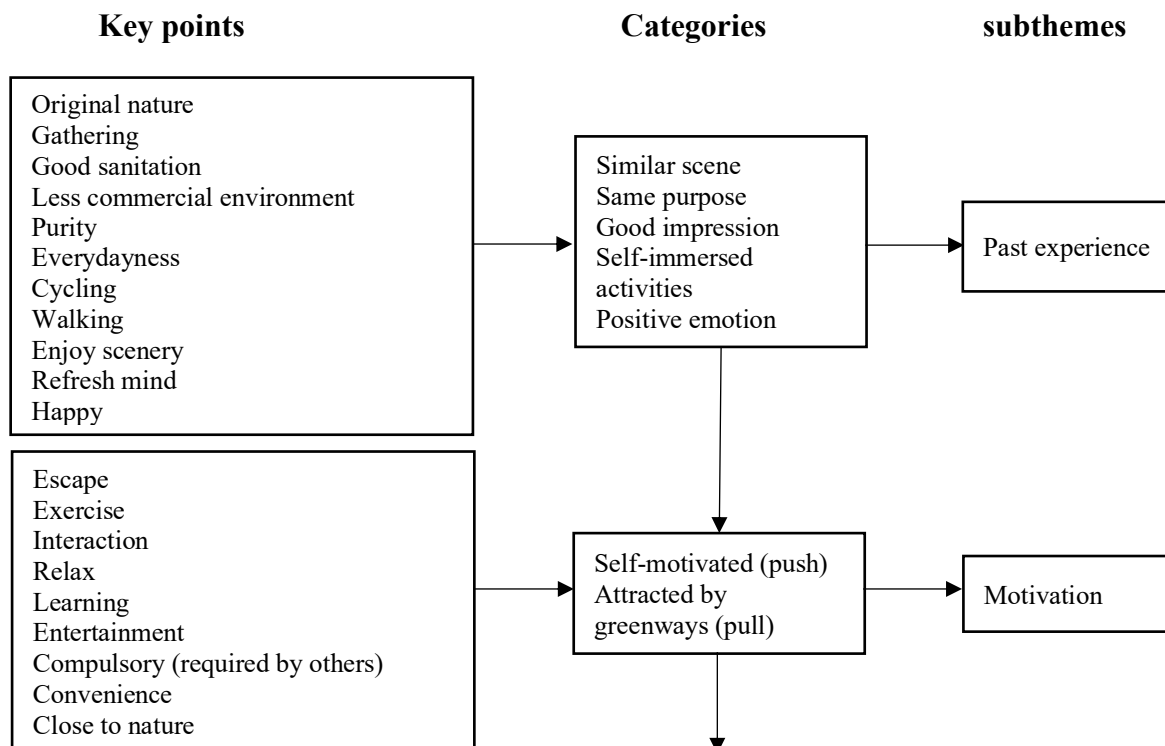
Changes on greenways were identified by repeated visitors. The greenways were found to be commercialized over time, with more and more businesses operated on greenways. This change demonstrated the accumulated economic effects on local regions. Meanwhile, the

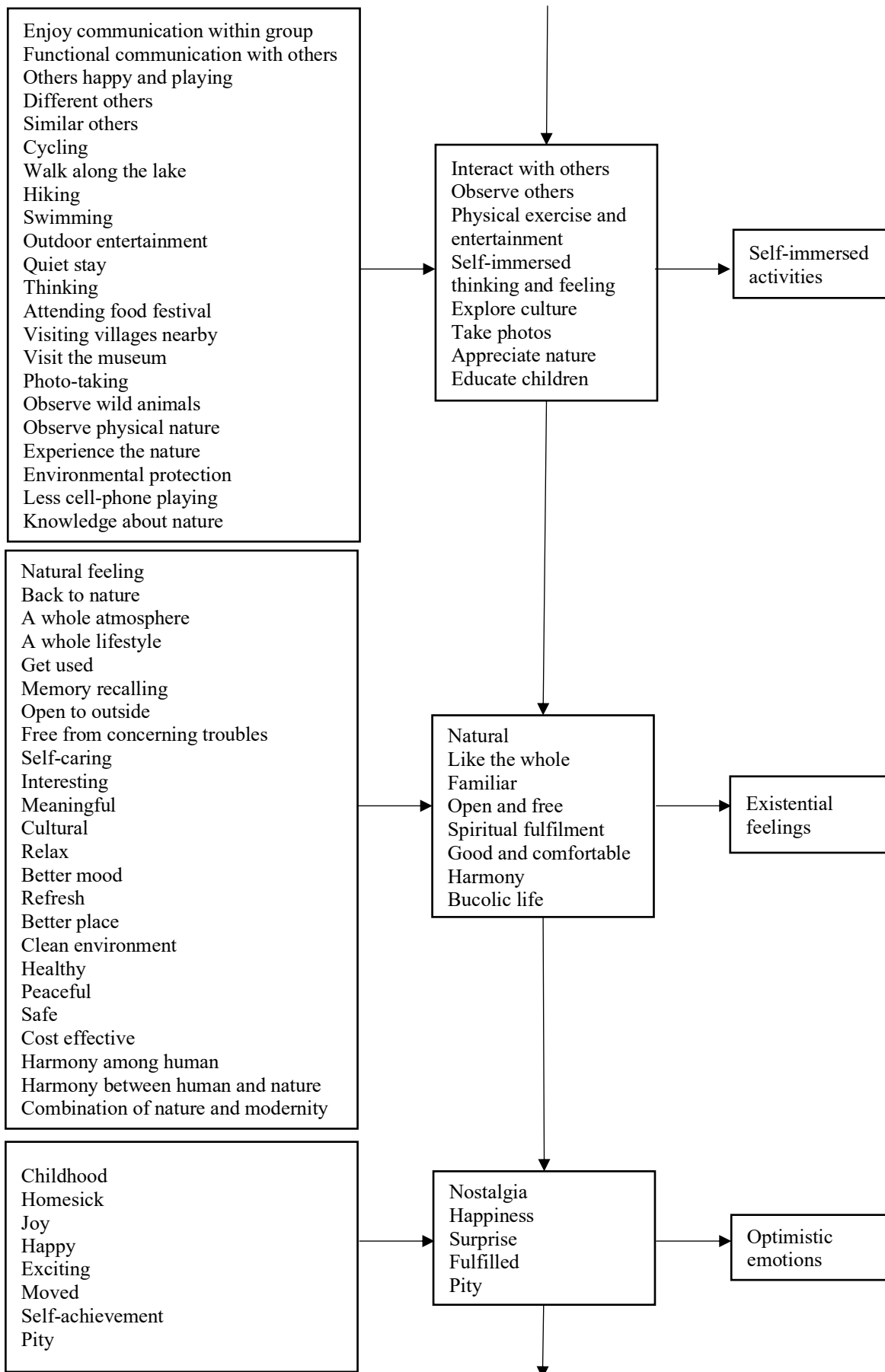


greenways were found to have better sanitation than before, which implicated the appreciation of visitors for the space: *“I think there are less people throwing rubbish on the greenway now. I remember five or six years ago when the greenway just opened to the public. People drank and threw the cans and other things on the greenway. Now the situation is greatly improved. The greenway routes are much cleaner. Few people littered as before”* (GZ24O). Notably, there are still visitors visiting greenways without knowledge of greenways. They were not aware that the places they were enjoying are greenways: *“[Researcher] Do you know the place here is greenway? [Participant] Greenway? No idea. Maybe I did not come here often so that I did not know much about that”* (GZ22O). Herein lies the potential for the government to construct and promote greenways as city icons for travels and human well-being.

### 5.3 Greenway experience: Existential authenticity

Experience includes pre-, during and post- stages. Visitors enjoyed existential authenticity on greenways, which were illustrated by the eight subthemes, various categories and key points that emerged within abundant codes from the entire data (Figure 5-3). The subtheme “past experience” and “motivation” are included in pre-stage experience. “Self-immersed activities”, “Existential feelings” and “optimistic emotions” are subthemes for during-stage experience. The post-stage experience refers to the “impressions”, “evaluations” and “afterwards behavioral intentions”. They are explained and discussed in detail in the following sections.





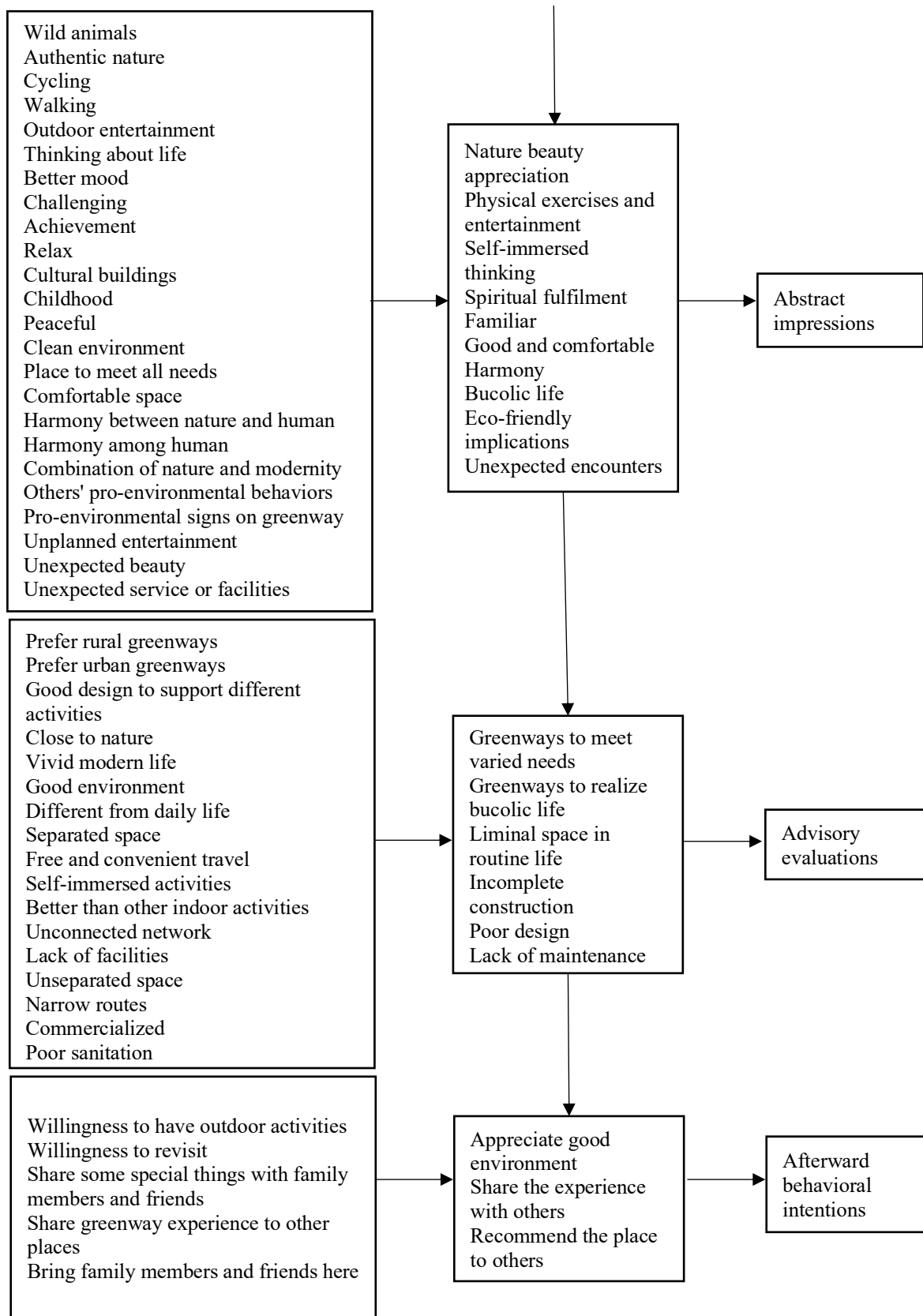


Figure 5-3. Key points, categories and subthemes for greenway experience (Source: author)

### 5.3.1 Pre-stage: Self-motivated to experience-motivated visits

Visitors' greenway knowledge implicated that greenways are neither resource-based attractions nor capital-based amusements, thereby not spontaneously attractive or known to most visitors. People are mainly motivated to take greenway trips by inner needs, little by the attractiveness of greenways themselves. In other words, the push factors function over pull factors in greenway travels.

#### ***Push factors: Self-motivated greenway trips***

Escape from routine life is a main factor for visitors to take greenway trips. Modern urban space is featured with high-rise buildings and intensive office working. Abundant pressure was generated. People stepped out and visited greenways to escape three main things. The first is to escape from the daily pressure. While enjoying the high-level convenience and happiness brought by the material civilization, human face with increasing pressure in competing for resource to improve their social status and family situation. Home and office are the main space for pressure production. Visitors need to escape from those space to get relax. The quiet environment on greenways with less people are expected to help them empty themselves temporarily: *"I just want to relieve the pressure in daily life. I am very tired after work. When I come to this place with green environment. I feel energetic and comfortable"* (SZ120). A second thing to escape for visitors on greenways is the repetitive and boring routine life. Happiness of humans mainly comes from variabilities in life rather than unchangeable status. A weekend on greenways is kind of breaking the routine status and brings in changes to life: *"After staying at office or at home for one week, I just want to step out to change myself and for relax"* (GZ040). Lastly, visitors intend to escape from the technology, particularly the mobile phones and televisions through visiting greenways. The development of internet technology and smart phones greatly increases the time people spend on mobile devices. Even children are addictive in playing games on electronic devices, which are detrimental to their health. Some visitors intend to take visits on greenways to spare their attention and time from modern technologies: *"People are curious about the things outside. We came here during the weekends purely for stopping children from watching TV and mobile phones. They played here and it doesn't matter if they get dirty after play. Just for fun and get wash at home"* (SZ130).

Exercise is another main reason for visiting greenways. Apart from some cycling lovers who take frequent cycling tours, most people intend to have leisure exercises on greenways to keep health. The long-term sitting before computers and lack of movements make people in

current society unhealthy to different extends. The linear open space equipped with some facilities like basketball courts and playgrounds provide opportunities for the public to take exercises in a leisure environment, such as walking along the greenway routes, cycling with family members or friends and hiking. The participant GZ10 (a 45-year old man) is a specific case to start exercises on greenway due to health problems. In 2012, he was announced by the doctor that he got hypertension issue. The doctor suggested exercises to him for health care. Since then, he began to swim in the river along Zengcheng Greenway and cycle on the routes every weekend. Even in the wintertime, he kept visits to greenways for regular exercises. The long-term swimming and cycling on greenways paid him off with not only stronger body, but also positive life attitudes and improved interests in exercises. By 2018, he reported to take exercises on greenway more frequently because he already fell in love with this lifestyle: *“I come here only if I have time. Sometimes I just stay here and enjoy the tea. People may come and talk to me. It is also kind of way to make new friends. I like such lifestyle”* (GZ10O).

Visitors also seek for intimate interactions with family members or friends through visiting greenways. Modern urban life was accompanied with alienation among people. There are too many noises or temptations around daily life to distract people from caring for each other. Many visitors intend to take greenway trips to provide space and time for family gathering particularly during the weekends: *“Previously, people went out for gambling or other consumptive activities. But now, we can work out with our family members. We communicate with each other in this new environment”* (GZ25O). Through these trips, people stay and play with family members to enhance family bonding. While the development of communication technologies and different social networks facilitates remote communications, people feel increasingly alienated because the face-to-face interactions are replaced by cold and exhausted texts. Even the video calls are not enough due to the lack of intimate touch. Through group activities like outdoor gaming and face-to-face communications on greenways, visitors could have immediate physical and emotional feedback from friends to build stronger connections with each other. The trips could also be memorable experience with friends: *“The only thing is to depart and come to the place. Maybe not this one, but some others. The scenery is not the most important. Only if we play together with the right persons do we feel happy”* (GZ08O).

Visits to greenways could be motivated by people’s desire to learn from the outside. An old motto “travelling a thousand miles is better than reading a thousand books” implicates that people learn more from the practical world. Greenways as a network linking different natural settings and communities provide space for people to explore and learn: *“Children are*

more outgoing and curious in the outdoor environment. Maybe you do not observe big differences for one time. The key point is that if you do not bring them out, they never know what is going on outside” (SZ17O). Sometimes, parents prefer to bring their children to the outside world to achieve knowledge about nature (e.g. trees, flowers and animals): “I usually tell my child some knowledge about nature. For example, if I know the flowers, I will tell him what the flowers are and what the names of some trees are. Sometime not if I have no idea about them. Anyway, I teach him something on the greenways” (SZ12O). Besides, some visitors took trips on greenways for changes in life and professional learning, like landscape planning, photo skills training, and biological classification: “I have been here for many times because I can practice my photography skills here. The beautiful scenery and natural environment provide me good space for practical learning” (WZ56O).

Entertainment is identified as one important factor for visitors to take tours on greenways. Different entertaining activities, such as kite flying, picnic, group cycling, BBQ, and fishing could meet people’s needs for fun or leisure during the weekends. Some visitors simply reported to visit the greenways for spending weekends or holidays: “Nothing special, I came here just for enjoying myself. I can do what I want. Sometimes cycling, sometimes watching others and sometimes kite flying with my children. This is the way I spend my leisure time” (ZH32O). Compared to some indoor leisure activities, the entertainments on greenways provide outdoor enjoyment. Besides, some visitors took intentional visits to experience something different, such as the delicious foods provided by communities along greenways: “I like to walk around during the weekends for tasty foods. Liwan Greenway is a good place to explore because there are many traditional Xiguan snacks here” (GZ21O). In addition, there are some other visitors coming to greenways mainly for a specific type of entertainment activities, like BBQ, fishing, cycling and camping: “We came here for picnic with friends. Sit on the lawn for a while and relax. It is boring to stay at home all the time” (HZ44O).

Relaxation is an essential yet broad factor for people to select greenways trips during spare time. Many visitors stated that they came to greenways just to relax. “I have no special things to see. Just because I want to relax. And I want to get close to nature. This is such kind of place to meet my needs, then I came” (SZ01P). Certainly, there are many other ways for people to relax after work, such as listening to music and watching the movies. Greenway visits are preferred by people for weekend relax because this outdoor activity, at the meantime to relax people, lasts longer time and signifies great distinction between workdays and weekends: “During the usual daily life, we work every day in the office. When it comes to the weekend,

*certainly, we would like to come here by the riverside to enjoy the sight views, feel the breeze or BBQ together for relax. We should relax ourselves during the weekend after a whole week of exhausted work” (GZ04O).*

Other than the above self-driven factors, people also took greenways trips due to some compulsory situations. For instance, some visitors came to greenways through participating in group trips organized by their companies: *“For celebrating the seventh anniversary of our company, the general manager organized this trip and invited us here” (GZ06O).* It is kind of welfare provided by the companies to build relationships among colleagues and cultivate organizational culture. Besides, some visitors are brought in or required to be here by their friends. These compulsory situations tend to happen with first-time visitors: *“It is my first time to be here. I never know the place before. My friends took me here because they enjoyed cycling here. I had no choice but followed them. Hahaha [laughing]. But I think it is a good place after being here” (GZ27O).* Although people are not directly driven by their inner needs in these situations, the trips indirectly reflect the needs of people to interact with their colleagues and friends. Moreover, in the views of the companies and those persons who brought their friends here, greenways are good space for gathering.

#### ***Pull factors: Visits attracted by greenways***

Greenways also attract visitors with their inherent advantages. The first advantage is the convenience to take visits on greenways for individuals. As discussed in the section about visitors’ greenway knowledge, greenways are networks of corridors with natural and cultural resources to provide convenient trips in both urban and rural areas. People could take one-day greenway trips without plans or preparations: *“I would like to come mainly because it is convenient to have a one-day trip here” (GZ02O).* Hence, most trips are casual visits. For instance, visitor GZ20 (a 31-year-old teacher) arrived at Guangzhou in the morning and should take the train to Hangzhou for conference at night. To make use of the time between, he visited Liwan Greenway for a short city trip considering its combination of natural beauty and local culture: *“I searched online and found this place. I have never been here before. It is suggested that there are many traditional architectures here. So, I want to come and see around. You know my time is limited. I could not visit too many places. I think this greenway is a good choice for me” (GZ20O).* For him, there is no other alternatives better than the greenway trip with the time limit. Moreover, the low cost and short distance of greenway trips enable people to have time and place substitutions. People could easily change their time for visits due to changed plans or bad weather or switch their destinations on greenways if traffic jam or crowd

found on certain parts of greenways: *“Originally, we intended to visit the Luohu Greenway in Dawang Art Town. But we changed our destination to Wutong Greenway in the biological park because we found terrible traffic congestion on the way” (GZ38P).*

“Close to nature” is the second advantage that greenways have to attract visitors. Most greenways are well built in open space. People could enjoy the fresh air and sunshine in spacious environment: *“This place is very natural and spacious. If I was depressed, I felt better and open minded to be here with fresh air and broad views” (SZ15O).* As well, greenway routes usually extend and traverse through green spaces or locate close to mountains and water. For instance, the Luohu Greenway in Shenzhen expands around the Wutong Mountain, the Zengcheng Greenway in Guangzhou travels along the Zengjiang River and Hangzhou greenways connects different lakes and rivers in the city. People feel comfortable with mountain and water: *“You know that, in such kind of places with mountain and water, the air quality is definitely good and different from our daily life. They make us peaceful and quiet in heart” (SZ18O).* Notably, “close to nature” is not only a pull factor to signify the attractiveness of greenways, but also a push factor that implies visitors’ inner needs to get connections with the nature: *“Our humankind came from the nature. We have desire to embrace the nature. It just like you are born in the mountain. You want to go back to the mountain. It is such kind of situation” (SZ16O).* Greenways provide the space for visitors to meet their natural needs.

The above push-pull scale of motivations demonstrates that greenway visitors are mostly self-driven for physical or psychological health. Although greenways have their own attractiveness, visitors require little of them but convenience and close to nature. It means self-development is the key engine for people to visit greenways.

### ***Experience-motivated: A virtuous circle for repeated visits***

Motivations may change over visiting, like the No.GZ10 participant discussed above has changed his motivation from exercise for health to preferred lifestyle with greenways over time. Some other visitors also experienced motivation changes of cycling on greenways from exercises to nature appreciation owing to the good greenway experience: *“I mean I had changes in habit for cycling over time. Maybe it is imperceptible so that I did not notice it in general. But when I think about it carefully, I found it used to be exercise for physical health. I rode fast. However, now I do not ride so fast because I want to appreciate the beautiful scenery. The speed is getting slower and slower. The purpose changed from exercise at the*



*beginning to, maybe a higher level, spiritual achievement” (SZ15P).* Greenway trips became experience-motivated in this regard.

Many visitors mentioned their past experience in talking of current visits. They emphasized the similar scenes on greenway routes. The original nature is an important thing that they pursue on greenways. In return, the nature beauty they appreciated before motivated their visits to other greenways in later life: *“I have cycled on greenways in Huizhou before. It was a really good experience, which made me get into this kind of activity. After that, I participated in Marathon on greenways. It is also good to visit the greenway here today, with relax, natural and green” (GZ22O).* Visitors reported same purposes for different visits on greenways, like gathering with their family members or friends: *“Most time, I come here with my family members for weekends. It is already kind of lifestyle for us” (HZ60O).* The previous visits met their needs so as to promote the current ones. Visitors also memorized the self-immersed activities on greenways such as cycling, walking around, appreciating the beautiful scenery, and refreshing their mind. These healthy and self-concerned activities supported the formation of good impressions of greenways trips. On one hand, people appreciated the good sanitation, purity and less commercial environment on greenways. On the other hand, the travels on greenways were regarded as kind of everydayness from the visitors’ views: *“Nothing impressive regarding the past experience. They are good and general to me” (GZ09O).* The combination of good environment and everydayness of greenways constructs an ideal scope for everyday life. An overall positive emotion, specifically happiness, was identified in visitors’ past experience to facilitate repeat visits.

A virtuous circle from self-motivated greenway visits to repeatedly experience-driven trips could be constructed based upon the motivation scale and visitors’ past experience on greenways (Figure 5-4). As the figure illustrated, people were mainly motivated by their physical and psychological needs to take greenway trips at the beginning. Only some were attracted by the convenience and natural environment of greenways. Nevertheless, past experience is an important reference for individuals’ decision-making in life. The positive experience on greenways could promote the experience-motivated trips later in two ways. One is to have repeated visits directly for reproduction of the good experience and meeting the needs. The other is to facilitate the repeated visits through constructing good images and attractiveness of greenways. The circle between self-concerned needs (self-motivated trips) and greenway appreciation needs (attractiveness of greenway trips) enable repeated visits on greenways.

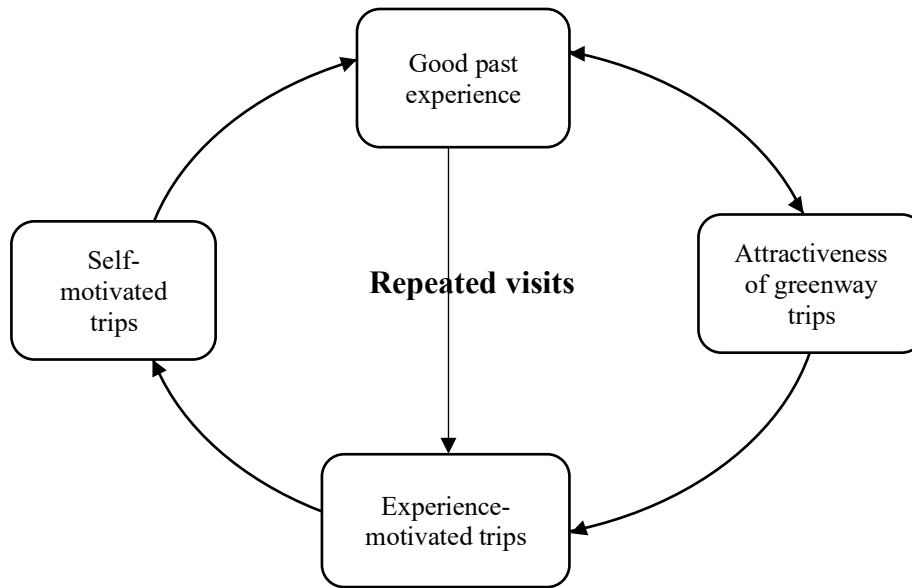


Figure 5-4. A virtuous circle from repeated visits on greenways (Source: author)

### 5.3.2 During-stage: Existential self

The interactions between visitors and greenways happened in the during-stage when people play and feel on site. An existential self was achieved through self-immersed activities, existential feelings and optimistic emotions (Figure 5-3).

#### *Self-immersed activities: The authentic self and others*

Greenways provide open and public space for visitors to enjoy different activities according to their own interests. Based on the self-driven motivation and the natural environment of greenways, people have intimate interactions with themselves, other people, and the natural or cultural world outside through eight different types of activities.

“Interacting with others” is the first activity for visitors on greenways as response to their critical needs of interaction. Private communications within group, like with family members, friends and colleagues are conducive to develop intimate relations. Through sharing both happiness and troubles, people got to relax and knew each other better: *“We come here with our colleagues. The main thing is to promote emotional connections with each other through private communications. We did not know others well before as we only talked about our works in general life. During the trips together, I feel we get closer to each other”* (GZ09O). To gather and play with children particularly during the trips are regarded as important parent-child time. People focused on their children only and showed their caring and love to each other: *“I enjoy the time with my daughter here. I find so many sweet and amazing moments with her during the trips. She is braver than your imagination. She fell down without crying.*

*Hiking with me along the whole trail. Only 4-year-old she is, you know. I feel lucky to catch her growth step by step” (WZ54O).* Chatting with friends in group was appreciated as warm-hearted and beneficial, although the topics are as general as in daily life, including work, study, experience, affective issues and joking: *“We talked everything coming into our mind, like something funny in daily life. The topics are similar as usual. Sometimes my partner shared past experience on the greenway. Nothing special but happy” (GZ26O).* The communication on greenways seems to be efficient in strengthening relationships. In addition, visitors had some functional communications with strangers for inquiring the local history and culture, while this kind of communication is not common because it is wired to disturb others for most people. Notably, unexpected greetings from strangers always inspire visitors to be positive and confident: *“Sometimes when I was exhausted after cycling along the greenways for several hours, the thumbs up and encouraging words like ‘come on’ given by people passed by always made me refreshed and energetic again” (HZ59O).*

“Educating children” was separated from interaction with group members because it is not only about communication, but also value changes or identity formation of new generation. This kind of outdoor education was preferred by parents because practical teaching makes more sense than preaching. Children can learn fast in practices: *“There is no need to teach the kids here. They follow us to behave. Maybe their teachers have told them no harm to the flowers and plants in class. But it is abstract to them. On the greenways, we appreciated the nature. The same to them. Then it is easier for them to understand the meaning of protection” (GZ23O).* Three main aspects were emphasized in outdoor education. The first one is environmental protection. In touch with the natural environment, the parents had more vivid stories to help children build up their ecological view and henceforth behave eco-friendly. The author has observed such kind of scene on Zhuhai Greenway: a father was pointing to flowers and told his little girl (around 4-5 years old) that *“you see, the flowers are so beautiful. We should let them there to be appreciated by all the people. If you pick them, they will die soon and not be pretty anymore”.* The children learnt to protect through such kind of education. The second aspect that the parents promoted to their children is the knowledge about nature through practical examples, such as the different types of plants, the natural laws and the ecological system: *“I prefer walking on greenways because I can get touch with the natural things and communicate with my child. I told him the names of different plants and the rationales of natural phenomenon” (SZ17O).* While the kids were attracted by the interesting outside world, they were naturally distracted from playing games on the electronic devices. This is the last

aspect that people want to teach their children, namely, keeping away from televisions and mobile phones. Here is the conversation happened between participant SZ13 and her son during my on-site interview with her.

*Son: Mum!*

*SZ13O: Yes, I am talking with the elder sister [the researcher]. You can have a nap in the tent.*

*Son: I want to watch some photos and games in your mobile phone.*

*SZ13O: No, you cannot. We are playing outside. It is not time for cellphone. You see, other peer kids are playing there without phone watching. Nobody could look at the phones here. You can take a nap or go there to play with others.*

*Son: Okay, I would like to play with them.*

*[The boy then left to have fun with other children].*

“Observing others” is also a common activity for visitors on greenways, particularly for those who visited greenways alone. People feel comfortable and enjoyable sitting on the lawn or at the benches to watch others playing out there or passing through. This may be an unconscious and simple process. But the happy others, such as children in play and couples laughing with kite flying or fishing usually inspired the observers to think and dream: “*Nothing special to do. We just sit here and feel happy to observe people playing the bubbles there. And many children run to touch the bubbles. Such kind of scene is really good and fulfil of happiness*” (GZ26O). People sometimes observed the differences and similarities among different visitors. Through the habits, dressing and expressions, participants recognized the social status of different groups on greenways. Those who came from the city center seemed to be exciting and curious, while those from the nearby communities focused on playing with each other: “*It is very interesting to observe others and guess where they are from. Sometimes you can learn from them. Sometimes you may find interesting things in others. There is a colorful world outside*” (ZH32O). Some visitors were encouraged by different others to image future family life. Some others showed sympathy to similar groups with high pressure and needs to relax: “*Most people here are all the same with pressure in daily life. We understand each other and find ourselves not alone*” (ZH28O). This is a self-immersed interaction between inner self and outside others.

“Appreciating nature” is undoubtedly an important activity that people cherish and pursue on greenways. Visitors felt excited to encounter wild animals that are scarce in daily life, such as snakes and turtles: *“We just saw people selling the turtles here. It is the first time for us to see that big turtles. Though surprising to us, we felt sorry because we thought they should be left in the lake”* (SZ16O). Observation of general animals was also preferred, like watching the ants moving, the butterflies flying and hearing the bird chirring. Meanwhile, people appreciated the physical nature on greenways: *“When I rode to the part with the dam, I suddenly saw a mountain. The sunlight just passed through two dark clouds and directly shed light on the mountain. The reflected light was so soft and accompanied with the dark green that shocked me. It is very simple, green and beautiful”* (GZ09O). Such kind of natural beauty not only brings romantic feeling to people, but also gets them into with the nature. Through watching the ecological system, such as the plants, the water and the stars, people knew the natural world better and understood its seasonal changes. Moreover, visitors actively involved themselves in the nature to get connection with the natural world. For example, visitors slept in nature, cycled or walked through the greenway routes to feel the breeze and breathe the fresh air. Such ways of beautiful scenery appreciation enabled humans to have intimate interactions with nature: *“Personally, I am active in sports. I also like to go to a place without anybody else. Just like the current situation, sit on the lawn, listen to music, and feel the wind. Such kind of quiet stay with nature is very good”* (SZ14O).

“Cultural exploration” is identified as an emergent and meaningful activity on greenways. Apart from the natural resource, there are also cultural spots along greenways, such as the museums and local communities. While people visited these cultural sites, they can experience the local lifestyles and histories. For instance, many people were impressed by the restoration process of Donghaochong presented in the Museum on Donghaochong Greenway: *“We visited the Donghaochong Museum and know more about the history of this city river. The before-after comparison of it upon restoration showed big changes of the whole community”* (GZ03O). Some visitors attended food festivals or other activities on greenways to enjoy the local culture. On Zengcheng Greenway, people explored the communities nearby and enjoyed the peasant meals. Particularly, the well on Zengcheng Greenway was mentioned by many participants as interesting and bringing childhood memory to them: *“I tried that well many times. Hahaha [laugh]. It is same to my hometown”* (GZ06O). The slow-paced travel on greenways enabled visitors to explore and discover cultural details of the city: *“I cycled along the Hangzhou Greenways and explored the city. I tried the local food and visited the Zhejiang*

*University for some artistic buildings. I like the city very much, including the beautiful scenery, polite people, friendly cycling environment and historical architectures” (HZ43O).*

“Photo-taking” is an important activity for some greenway visitors. It is meaningful for people to record their life moments, including the interactions with others, natural appreciation and cultural exploration on greenways. The development of smart phones greatly promotes individuals’ photo-taking of their interested things at anytime and anywhere. Visitors on greenways took photos of the beautiful sceneries and special things they encountered. The group gathering and children playing were also caught to memorize those happy moments. In addition, people recorded themselves in the photos for self-concern and self-caring: *“I took photos when I found something new. Sometimes if it was raining, I took photo for myself when I swam in the Zengjiang River. Hahaha [Laughing]” (GZ10O).* Therefore, photos are very important to reflect the experiential preference and mind activities of visitors on greenways, which were discussed further in detail in Chapter Six.

“Physical exercises and entertainments” are vital for greenway experience. Among many others, cycling is the most popular activity that attracts visitors because greenways support cycling with sufficient facilities like the separated cycling routes and the bicycle renting services. Some people enjoyed professional cycling on greenways. The long-haul cycling tour may extend more than 100 km, which was regarded as the life challenge and self-achievement: *“Today, I only cycled around 40 km. Days ago, we took a cycling group to Dameisha Greenway. We left 8am in the morning and returned home around 6pm. It was a whole day cycling with a total distance of around 130 km” (SZ39O).* Most visitors took group leisure cycling across certain parts of the greenways. It is not only kind of outdoor exercise, but most importantly great fun to play and chat together while cycling. Similarly, walking along the greenway routes provides visitors slow-pace and leisure experience to enjoy themselves and explore the surroundings: *“The general environment in daily life is noisy and upset. We like to come here to walk along the green routes by the riverside [Oujiang River] to have ourselves calm down” (WZ52O).* In addition, hiking, swimming and a variety of outdoor entertainments such as BBQ, kite flying, picnic, camping, fishing and gaming were taken on greenways. The commonality for those activities is that people are self-involved and care about others and the surroundings in this free and open place.

It is an important space for people to enjoy “self-immersed thinking and feeling”. Because visitors came here mainly for leisure purposes, they cared little about the exact attractions or activities. All they did, including walking, fishing and cycling were just for

leisure and relax. Most time, they stayed quietly in a certain place without exploring the main spots planned by the governments. Sometimes they walked randomly along the greenway routes. The only thing they concern was to stay alone, to feel and to think: *“We did not go to those famous sites. Because we do not like places with too many people. We just searched one corner by the riverside, usually quiet to stay. We felt the good environment and enjoyed ourselves”* (GZ040). The environment and atmosphere on greenways provide space for visitors to enjoy themselves in two different ways. One was to free their minds from thinking the daily troubles to achieve peace and relax: *“Sometimes when I was upset or unhappy, I came here. Just sit there quietly and watch the nature. At that moment, my mind was empty. Nothing to think. I got wholly relax, you know”* (GZ070). The other was to enjoy self-focus thinking and reflecting on greenways, or in other words, to let their minds wander and dream the future life: *“I did not pay much attention to other things. Just focus on myself. Thinking about myself. My daily life, as well as my future life”* (SZ180). Both less thinking and free thinking are self-focus and self-enjoyment.

To sum up, people get well with themselves, with the others and with the outside world through different activities on greenways. No matter what types of activities they took, the group activity for fun or the self-enjoyment for peace, the key point is that visitors are enjoying the time of concerning, interacting, caring the feelings of themselves. They are pursuing an authentic world, including the authentic self and the connections to other people and other things in this broad world on greenways.

### ***Existential feelings: Integrality and spirituality***

Visitors were asked to describe their feelings on greenways. Eight main categories of feelings were concluded from their descriptions (Figure 5-3).

Greenways with natural beauty and self-immersed activities make people feel “natural”: *“To describe the feeling on greenways, I would say leisure, natural and green”* (GZ220). The natural feeling means visitors were subjectively connected to the natural world. This kind of feeling did not necessarily relate to physical nature itself, but a whole unconscious feeling of purity and authenticity. They took the greenway trips in a natural process without planning and preparation and enjoyed activities in the physically natural environment: *“Communication in such kind of environment is very natural and comfortable. Nothing special and nothing complicated. After trip, we may invite each other to visit our homes. It is a very natural process”* (SZ130). When people felt themselves in a subjectively natural status, they regarded

themselves as an integral part of the original nature. Undoubtedly, an objective feeling of back to nature also existed. The green trees, the water, the fresh air, the sunshine and the mountains brought visitors into a natural world and facilitated the subjective integration of self and the natural world, in comparison to the alienation of self from the original nature in the artificial daily life: *“The first thing is that you did not take the cars here. You keep away from all those things and let yourself return to a natural status. This is the most essential feeling”* (SZ170). It demonstrated a combination of objective and subjective feelings of natural.

Meanwhile, visitors on greenways showed the feeling to “like the whole”. It is difficult for individuals to describe the specific aspects of the experience but a whole good and relaxing atmosphere. Every part of greenways was not special but indispensable to construct such a whole atmosphere, including the flowers, water, trees and other people playing out there. Therefore, what people like is the whole environment rather than a special thing: *“Over the process, certainly, the physical nature like flowers and plants or subjective factors like relax are both important. However, there is no one special aspect to focus on or to be separate from the whole environment. The whole is the main thing you need. Just to make yourself in a different environment”* (WZ550). It also represents a whole lifestyle with slow pace and natural feeling. People enjoyed the lifestyle and hence force appreciated all the things that support the lifestyle: *“I cannot tell what the favorite thing is on greenways. It is already a lifestyle for me. Nothing dislike. All good for me. I come here once I have time. I like to be here even though nothing to do. I like this lifestyle very much”* (ZH300).

“Harmony” is another important feeling that people reported on greenways. It includes the harmony between human and nature and the harmony among people as well. Visitors prioritized the combination of natural environment and cultural atmosphere on greenways. Natural environment only or man-made places were regarded as superficial: *“I have been to many other man-made greenways in Guangzhou like the Haizhu Wetland Park. The park is beautiful but not natural. While this greenway [Zengcheng Greenway] is both natural and cultural. The community and environment are authentic. There is no community in the Haizhu Wetland Park, then how can it reflect the local culture? It is nothing more than a superficial construction. Here we have both natural environment and Lingnan buildings”* (GZ070). Both the feeling of natural and the feeling of whole implicate visitors’ preferences on human-nature integration rather than the two individually. Besides, harmony among different persons is also emphasized by participants. The slow pace on greenways made everyone clam and patient. People were found to be cordial and showed more respect to each other on-site. Everyone was



self-disciplined and polite. Therefore, even though many people played there, peace and quiet could be felt in heart because all people on greenways were happy and laughing, which were different from noises in daily life: *“Overall, this is such kind of feeling, people cycle and walk here. This place is spacious so that many people play here and appreciate the beautiful scenery. Different people may focus on different things. The whole is a sense of harmony”* (ZH350). The happy and mild feelings further exerted positive influence on others to construct the whole harmony atmosphere. Some participants were even touched by the kindness and sincerity of local people. They appreciated the provincialism which has been scarce and lost in modern society: *“I feel really touched today. You know that I have come to the city many times. I was particularly touched today by the cordial local people. This is a very strong sense of provincialism”* (GZ070).

Visitors felt a “bucolic life” on greenways because of its combination of nature and modernity. On one hand, people could enjoy rural environment in urban areas. In contrast to the high-rise building in city center, the natural settings and the leisure environment on greenways brought in a slow-pace and green lifestyle, which is totally different from the busy and noisy urban routines: *“It is a different feeling to cycle on greenways from daily life. If cycled on greenways, we two can cycled together with the same pace for chatting, which is impossible in daily life. In that case, we cannot chat but only pass through the streets quickly. But here, you see, we can cycle in a slow pace and at the same time talk to each other”* (GZ110). On the other hand, the greenways are close to home, which makes people feel connected to daily life. They can easily enjoy the rural experience after work. This is an extension of the bucolic lifestyle into modern life by bringing nature in. Simultaneously, the natural surroundings on greenways inspired the romantic feeling of people. For instance, as the participant SZ01 described: *“There was a feeling out there when I walked back with my husband. Around 5 to 6pm, the sun moved down. The cooking frog rose up from the households. All the castles walked back home. You know, this is one feeling of pleasant. Maybe it is not the real scene there, but it was in my mind at that moment.”* This kind of poetic feeling beautified the life envisions of people and encouraged them to work harder for a better future. People temporarily purified themselves from an economic-oriented world.

The natural and spacious greenway environment helps people to achieve an “open and free” feeling. With both the body and heart open to the outside, visitors opened their minds to embrace the world. For instance, when people took sight views of the whole city from a high point, they felt belonging to the place and broadened their worldviews so as to have positive

attitudes in overcoming difficulties in daily life: *“When I walked along the greenway to the high points, I was shocked by the great overview of the city. I felt broad both in terms of the world and myself. Then I felt there could be many possibilities in life. Those problems in daily life thus became easy to overcome”* (WZ53O). Meanwhile, people felt free to do what they want on greenways. They preferred less thinking on daily troubles so as to free themselves from pressure. The only thing for them to do on greenways was to play and enjoy the moment: *“When I come out and stay here, I think nothing. Sometimes I just empty my mind. The main purpose for me to come here is to get myself free, right? So, I prefer no thinking on anything, just enjoy the time”* (SZ18O).

Visitors may have no conscious about the effects of greenway trip, but they felt “good and comfortable” with it in many different aspects. For one thing, greenways provided better space for people to enjoy leisure and relax. Compared to other places, such as the beach, the artificial amusement center and the home, greenways are convenient and considerable to meet various needs. It is good and comfortable for people to see nature and green and to play in beautiful sceneries: *“It is good to see nature and green. I feel comfortable and peaceful when cycling around water on greenways”* (GZ25O). For another thing, the environment on greenways was well maintained. Visitors can enjoy higher quality air, cleaner water and better sanitation on greenway than in daily life: *“Obviously, it is cleaner here than our working environment. So, I feel more comfortable in heart”* (GZ05O). Besides, exhausted exercise and slow-pace outdoor activities made people feel positive and healthy. Moreover, the whole harmony atmosphere brought in peaceful sensory to people because it is neither too quiet to be scared nor too noisy to be upset: *“It is not quiet here. Nor it is noisy. What I mean is that it is the place that our Chinese like. The place is warm-hearted (re nao) but not noisy”* (GZ09O). Overall, people felt safe in it and enjoyed such kind of cost-effective wellness project: *“I remembered I got lost on the greenway when I visited here for the first time. The routes were a little complicated. Then I stayed there and waited for my friends to find me. During that time, I looked around without feeling scared. I think it was safe and I believed I would finally find the way out”* (GZ08O).

Additionally, “familiar” is identified as an important feeling of visitors on greenways. People may get used to it and regard it as usual life. Particularly for repeated visitors, they felt it as general and routine that they could not tell the changes or differences over the trips. They recognized little special things on greenways even though their descriptions and talks showed appreciations of something like the beautiful sceneries, the children playing and the cycling:

*“How to say, we usually come here and enjoy the good environment. We just get used to it. It is always the same every time we came. So, I could not tell anything special here. Nothing special. Overall the environment is good” (ZH290).* For them, this was a familiar but overall good experience though nothing special. The familiar feeling also came from memory recalling of participants. For some urban residents from rural areas, it was a place with feeling of hometown. Taking participant GZ05 (a 35-year-old woman) as an example, she was a migrant who lived alone in Guangzhou for work. Zengcheng Greenway was a place for her to miss family members and look forward to the dreaming gathering life in future because the place was similar to her hometown. Some other local urban residents could also find childhood memory about nature through outdoor activities on greenways: *“This is kind of rural experience in my childhood to catch the tadpoles. My grandmother helped me after work. It was raining and the water level rose so that it was easy to catch them. Now I could experience it again on greenways. It is very difficult to experience this kind of thing in the city” (SZ150).*

Overall, visitors were gaining certain “spiritual fulfilment” through greenway trips. It is a self-caring process during which people concerned themselves and constructed memorable experience for themselves. Within the space and time nexus on greenways, visitors cared about their own needs, did what they want and felt their inner hearts to be free and relax. In comparison to daily life with self-lost in different things, visitors returned back to self and had love and care to rebuild themselves better: *“Everyone should have the space for self. I feel greenway is such kind of space and time for self” (SZ140).* People can also reconstruct curiosity and goals for life with the interesting and meaningful greenway trips. For instance, the energetic teenagers and animals made people passionate in life. The appreciation of experience with children on greenways helped visitors to rebuild family relationships: *“Looking at my son playing here so happy, I think I should accompany him more in daily life. He did not talk that much to me before. I feel we get close to each other” (GZ020).* Meanwhile, the records of cycling distance meant new challenges and achievements for people in life: *“Exercise itself could help us improve our confidence. Particularly when we complete some difficult tasks. For instance, we sometimes cycled to some mountainous areas, which were really challenging. But after we reached the top of the routes, we felt really great” (HZ590).* Moreover, people had cultural involvement on greenways. While walking or cycling slowly through the greenway routes, visitors concerned the local culture and achieved historical knowledge via some interpretation systems: *“I cycled to the temple near the West Lake. I like to explore the cultural spots. I read the historical introduction of the places. This kind of slow-*

*pace tour help me to understand the city better” (HZ46O). Most importantly, visitors got themselves relax on greenways with the spacious and natural environment. Greenway trips free from plans and preparation promoted both physical and psychological relaxation to help people out of the daily pressure and boring routines: “We sit there, and we got relaxed. The communication between us is relax. If we chat in a coffee shop, I won’t have such kind of sincere talk to you. Because I am totally relaxing here” (HZ45O). Consequently, people had better mood on greenways. Even the upsets in daily life could be discussed and solved in an easier way. People turned to be more active, more positive and more outgoing on greenways so as to be recharged for later life and work: “After the whole day stay here and then back home, it could be much happier to return to work on next Monday” (HZ47O).*

All feelings on greenways could be concluded as an existential feeling of self. It includes the identification of an integral world that embraces self and the natural process, the whole environment, the harmony atmosphere and the bucolic life to incorporate both human and nature. Besides, it entails the fulfilment of spirituality in self. With both body and heart open to the outside, people feel free and comfortable to enjoy self. The familiarity and various spiritual achievement help people to develop past self to a new one.

### ***Optimistic emotions: Upward development***

Emotion is a spontaneous expression in visitors’ talk and facial images. On the basis of the self-immersed activities and the existential feelings, visitors showed optimistic emotions in talking about their greenway trips. Firstly, the environment on greenways inspired the “nostalgia” emotion of visitors. People could recall the happy childhood experience and miss their family members on greenways. Particularly, those individuals who left their hometown and worked in the cities enjoyed the home feeling on greenways so as to reduce their homesickness. For the elderly, greenways were places to recall the painful past so as to cherish the current happiness: *“Every time when we enjoy time here, we feel great changes over the past decades. You know, in our past years, life was so tough that we had no time to appreciate such kind of leisure moment. It is totally different now. You are the lucky generation. You should appreciate that” (HZ60O).* Hence, people liked the place and felt happy to be here. They enjoyed great fun and joy to have gathering, group activities and communications with family members or friends. “Happiness” is then the second essential emotion for visitors during the greenway trips: *“The children are happy. Certainly, we are happy. Hahaha [laughing]” (HZ41O).* Meanwhile, people could be “surprised” by some unexpected encounters. Especially for the first-time visitors, they presented as exciting to see the beautiful scenery, wild animals

and good things: *“It was very hot that day, I wanted to drink water. We found many roadside shops selling fruits. The fruits were so fresh. I think we cannot buy fruits as fresh as that in our daily life. You know what, it was cheap and fantastic. We intended to buy some again on our way back, but they were sold out” (SZ01P)*. Some visitors may also be moved by the sincerity and purity of local residents: *“When we cycled to the Wutong Mountain and we found a security station on the top of the mountain. We were moved when we realized that there are many people guarding us silently” (SZ16P)*. Additionally, people showed “fulfilled” in talking about their greenway trips, particularly regarding their self-achievement: *“Others took me as a sport lover and admire my sprit in keeping exercise here. Actually, to be persistent in such kind of things could improve the confidence for my business as well” (HZ49O)*. The only negative emotion expressed by visitors could be kind of “pity” for uncomplete trips due to bad weather or limited time. This emotion is still positive regarding greenway development because it shows the willingness of people to stay with greenways.

The emotions identified from visitors’ talks showed upward development of self in greenways trips. With the optimistic emotions, people tend to appreciate their life and achieve positive attitudes. It shows the potential for self-development in experience (discuss in 6.2.2).

In conclusion, the on-site experience on greenways, including the self-immersed activities, existential feeling and optimistic emotions, supports the development of an existential self. Figure 5-5 summarized the logic behind. The self-immersed activities help people to find authentic self and others, which means the development of individuality. The corresponding existential feelings and optimistic emotions promote the recognition of a whole worldview (harmony and integrality) and its connection to self, as well as the spirituality of self. They together construct the existential self on basis of the greenway experience.

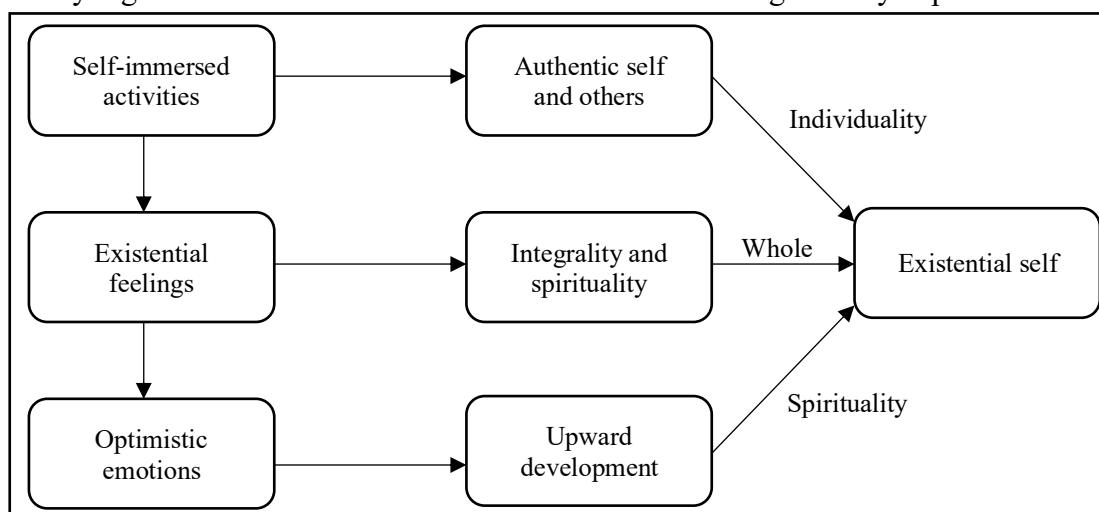


Figure 5-5. The existential self-development based on greenways experience (Source: author)

### 5.3.3 Post-stage: Affective affinity

The post-stage of greenway experience means the evaluations of the trips and the afterwards behavioral intentions of the visitors, which were interviewed on site. Meanwhile, to better implicate the post-stage experience, visitors' impressions of the greenway visits were also explored through the follow-up interviews. As well, repeated visitors discussed their past experience on greenways as impressions of previous trips.

#### *Abstract impressions: Affection-based appreciation*

Visitors showed impressions on greenway activities in three main aspects. The first one is the “natural beauty appreciation”. People were impressed by the wild animals and the authentic nature (e.g. trees, water, sunshine, flowers and natural sounds), which were in strong contrast to the high-rise building landscape in daily life. People got close to nature and travelled in slow pace so that the details of the nature were appreciated, and romantic moments were recorded in their minds. As the participant HZ43 described: *“I remembered the road where we encountered. I rode back slowly. I felt it was very beautiful. In this season there [Hangzhou], the leaves turned into the light green. It was pretty. You know, in Guangzhou where I worked now. I cannot see leaves in that spring color”* (HZ43P). This moment would be an unforgettable life envision with happy and hope to recall in future. The meaning behind is not just nature and greenway trip, but the discovery of beauty in life. Secondly, abundant “physical exercises and entertainments” were mentioned in follow-up interviews. Similar to the on-site discussion, cycling was the most popular one to be mentioned. Notably, it is the group cycling with family members and friends that people preferred because it represented happy memories with others: *“I shared the cycling experience with my wife after I returned home. Because I felt cycling together on Qiandao Lake Greenway was enjoyable. Particularly the weather was good to support. I told her this thing”* (HZ47P). Other outdoor entertainments like kite flying, BBQ and games contained the same meaning so that they were still appreciated after trips. Walking along the greenways was also an impressive activity due to the peaceful and interesting moments it brought to visitors. It could be concluded that physical exercises became memorable with affection attached to it. The last type of activities inscribed in visitors' minds is the “self-immersed thinking”. They appreciated the space and time that greenway trips provided for free thinking on past, current and future life: *“I dreamed there and thought where I would be in future. When I had an overview of the city, I thought where I would work and where I would live, things like that”* (SZ01P). In high-paced daily routine, it was really luxury for people to spare time for pure thinking without distractions.

The most impressive aspects for greenway visitors were the existential feelings to construct the integrality of the world that embraces self from a spiritual perspective. The “spiritual fulfilment” came to be the first thing to address. People achieved better mood after the trips due to the whole happy atmosphere and the spiritual encouragement from others. Challenges and difficulties encountered during the professional cycling impressed visitors because they meant achievements and self-development. Corresponding with these spiritual attainments, people got relax from daily pressure. Meanwhile, visitors were impressed by the cultural inspiration: *“I have impression on the Liwan Park where many residents enjoyed leisure time there. Some were singing. It was Yue drama. Overall there was a strong cultural atmosphere”* (GZ03P). The spiritual fulfilments further promoted emotional changes of people to be happy and positive. “Familiarity” was the second feeling that got visitors impressed owing to the childhood recalling on greenways. The third impressive feeling is that greenway was a “good and comfortable” place for visitors to enjoy themselves. It has peaceful environment with laughs of people rather than noise of cars. The good sanitation maintained by the public and the governors was also greatly appreciated. As well, visitors could have all their needs met on the spacious and well-designed greenway routes, such as different activities according to visitors’ interests. Since the routes were separated from driving roads, people felt safe and comfortable to play here: *“The environment there was good. The vegetation was good, and the signs of greenway were clear. The routes were made into red. I forgot what the material was”* (GZ20P). Fourthly, people appreciated the “harmony” felt on greenways. Both the harmony between nature and human and the harmony among people were memorized. The natural beauty and the nice people on greenways together constructed the good atmosphere as a whole for visitors. People were happy to have spiritual interactions with family members, friends or others on greenways: *“The impressive thing I had over past experience is that people were cordial and friendly to our cyclists. Even we did not know each other. They greeted to us. Only if they saw us cycling. They had greetings to us. Sometimes they said, ‘come on’ to encourage us”* (GZ100- past experience). Additionally, greenways provided a “bucolic life” for visitors with the combination of nature and modernity in urban areas. Although traversing through the cities, greenways provided significantly different landscapes. It was kind of to enjoy the rural experience in urban areas, which was the dreaming life for many visitors: *“That time, we enjoyed the homestay and meals in the community. Maybe after long-term residence in the city center, we were looking forward to such kind of status, in township or countryside”* (HZ59P). All these existential feelings inspired the positive affections of visitors and thus to impressed them over time.

There are two other aspects that inspired the positive affections of visitors and thus impressed them after the trips. One is the eco-friendly implications from greenway experience. Some people were touched by others' pro-environmental behaviors like educating children to protect and were thus encouraged to think about this issue in their own daily life: *"I have once met an elder woman who was walking on greenway. Not far away, a young people littered on the greenway. She approached him and told him it was not good to do that. The young people felt shame and picked up the rubbish, threw it into the dustbin. It was a really good behavior"* (GZ21O-past experience). Some other people paid attention to the pro-environmental signs on greenways to gain knowledge about the efforts that the governments made for restoring the environment. For instance, the Donghaochong Museum on Guangzhou greenways illustrated the whole process that Guangzhou government restored the city river which was seriously polluted and exerted negative influence on local communities into a beautiful greenway. Hence, visitors on this greenway were moved by the changes and thus impressed by the importance of environmental protection. The other aspect is the unexpected encounters on greenways that may inspire surprise for visitors, including the unplanned entertainment, unexpected beautiful scenery, facilities, animals and people. Such kind of surprising moments impressed visitors due to stronger affections raised: *"Many people there. But everyone was very nice and much more polite. I remember that they were comity in taking photos. No people would squeeze to take photos for themselves when others were taking photos there"* (ZH37P).

It can be seen that the post-trip impressions of greenway trips are more abstract and broader than on-site experience. On one hand, after people return home, daily life takes the priority and the detailed routines offsets the greenway experience so that people showed less appreciation towards greenways. On the other hand, people still held positive feelings towards greenway trips, though it is an overall feeling rather than as specific as on-site period. People were impressed by the greenway trips owing to the positive affections inspired by both the overall process and some emergent moments so as to appreciate the greenway experience.

#### ***Advisory evaluations: Advantages and suggestions***

Visitors appreciated greenway experience so that they provided advisory evaluations, which means while they noted the advantages of greenways, they provided suggestions to improve the greenways in future.

Regarding the advantages of greenways, visitors highlighted its merit to "meet varied needs". Some people preferred rural greenways, which can provide natural beauty. Some others



liked urban greenways because they are good space for leisure and relax against urban busy life. Less distance, more people and well-rounded facilities are important for them. The greenway network to connect the urban and rural areas could satisfy both needs for different types of greenways. Meanwhile, the greenways are public open space to support different activities, such as cycling, walking and outdoor entertaining for children. It is kind of high-end leisure for people to explore the outside and enjoy self. People enjoyed different things on greenways without disturbing others: *"Greenways provided us convenience. Different people have different needs. Greenways could make people, how to say, enjoy their own ways. It means that the cars have roads for cars. Human have routes for human. The bicycles also have the routes for cycling. So, the overall feeling was good"* (SZ16P). Moreover, both short haul and long-haul travels are available on greenways. And it is easy for people to have substitutions regarding time, access point and distance for visiting greenways. A second advantage of greenways for visitors is that the place can "provide a bucolic life". At the same time to get close to nature on greenways, people can enjoy vivid modern life including delicious food, convenient movement and leisure time. At the same time of providing natural sight views, the good environment ensures safety and basic facilities for enjoyable travel experience. It represents new lifestyle for modern society: *"I think city life needs more greenways like that, which can provide space for people to play after busy work. To breathe the fresh air in such kind of good environment is a very good thing"* (SZ12P). The last advantage addressed by visitors is that greenway "provides a liminal space in routine life". Although it locates close to home, the experience on greenways was different from daily life because visitors paid attention to things that they ignored in daily life, like the nature and themselves. The outdoor travels were preferred by people comparing to staying at home or other indoor entertainment activities. Because visitors felt more open and healthier in outdoor environment: *"Anyway, greenway visits help us avoid staying at home all the time. It is stuffy to stay at home and boring to go shopping. I prefer here than shopping. We can appreciate the scenery, play and relax. It is better"* (GZ050). On greenways, people could enjoy self-immersed activities in separated space. Those self-caring activities help them switch focuses from other things to inner self. The separated space like routes without automatic transports promoted a different lifestyle of slow-pace and green out for the public. Since it is easy and convenient to take greenway travels, people could enjoy such kind of liminal experience frequently without planning and preparation works.

Meanwhile, visitors provided advice for greenway development in wish of future improvement. The first and foremost thing is to have rounded-developed greenway network. The unconnected greenways were physical barriers for taking long haul greenway trips. In some areas, there were still no available accesses and public transports for visitors, which limited the uses of greenways: *“My boyfriend has been to some other places for BBQ and cycling. He thought the Zengcheng Greenway was better in comparison to those places. But the only problem is that the public transportation to Zengcheng Greenway was not so convenient”* (GZ11P). And the lack of facilities like restrooms and bicycle renting on greenways was pointed as a big problem for visitors to have lengthy stays. Unreasonable designs were also identified for improvement. For instance, some space on greenway was not segregated for different uses. People suggested to have cycling routes separated from walking trails on Zengcheng Greenway to provide safe and high-quality experience for visitors. The narrow routes on some parts of greenways were complained to induce congestions and dangers during the weekends, which discouraged people to visit: *“As for me, it should be better with two routes for two different directions. You see, during the weekend, it is crowded to cycle and walk here. The trail is too narrow”* (GZ25O). The last problem that visitors concerned is the lack of maintenance of greenway environment. Some visitors complained the commercialization of greenway space with more and more businesses appeared without good organization. For instance, visitors showed ambivalence towards the BBQ because while it provided joy and fun for visitors, it produced pollutions and wastes on greenways. Appropriate management was expected to address the problem: *“If you walked to the parts in front, you may find many restaurants and BBQ sites. Certainly, as for visitors, it is necessary to provide food and drinks. However, the restaurants have their wastes poured into the river directly. It is not good for the development”* (GZ04O). Moreover, poor sanitation in some places was suggested to be improved, such as the wastes produced by pets.

Although people complained the disadvantages of greenways, the underlying affections attached to greenways should be noted. Visitors appreciated greenway experience and had expectations on its development, thereby actively proposing suggestions for improvements.

#### ***Afterward behavioral intention: Extensions of environment appreciation***

On basis of the on-site greenway experience, visitors showed behavioral intentions to extend environmental appreciation in self and to others. Regarding self-extension, people showed willingness to have outdoor activities and revisits in future to enjoy good environment, including both the natural and artificial environments. It means people have the intentions to

deepen the appreciation of environment through repeated visits and more interactions with environment. Some people planned next trips and some others intended to explore more places on greenways through cycling further: *“In future we can come out more. Once we have time, definitely we will come here again. We have such kind of intentions”* (GZ23O). There were even individuals intending to live besides greenways for convenient visits. These intentions implied extension of environment appreciation in life.

Regarding extensions to others, people showed the behavioral intentions of sharing the greenway experience with family members and friends, including the good feelings and special things, to encourage them to visit greenways. As well, people intended to share successful greenway experience to other places, such as hometown city after visits: *“I want to share the restoration experience of Donghaochong Greenway to my hometown for improvement of the polluted water”* (GZ03O). Through such kind of actively word-of-mouth sharing, it is expected to promote widely appreciation of environment among the public. Furthermore, people had the intentions to recommend the place to family members and friends or bring them here directly: *“When I arrived here, I had an idea in my mind that I could bring my whole family here if available. This was a very strong feeling”* (GZ02O). Some participants were recommended by friends to take the first visits.

Figure 5-6 concluded the post-trip abstraction of greenway experience. Although the abstract impressions were mainly gained during the follow-up interviews, they reflect the most important parts of greenway experience on-site. Hence, it could be concluded that the affection-based appreciation of good environment upon greenway experience and the advisory evaluations for enhancements and improvements of greenways together promoted the behavioral intentions of visitors for extensions of environment appreciation in both self and to others, which finally lead to the development of a whole affective affinity between human and environment.

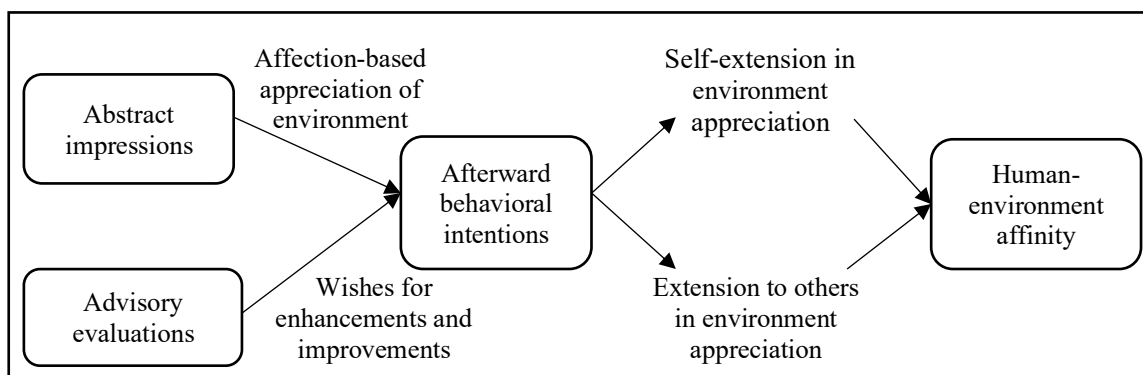


Figure 5-6. The development of affective affinity between human and environment (Source: author)

## 5.4 Experience decay

Similar to information forgetting curve, experience fades over time as well. According to the on-site descriptions of greenway experience and the post-trip impressions, significant experience decay was identified. Specifically, three aspects of experience decay were concluded, including the decay in main themes, the decay in details of experience and the decay in differences between daily life and greenway travels.

### *Theme decay to self-concerned affections*

As can be seen from the Table 5-1, on-site experience discussion and the follow-up impression shared some subthemes regarding activities, feelings and emotions, whilst there is an evident decay of greenway experience after the trips. Particularly for the activities that people took on greenways, only three out of the original eight themes were left in visitors' mind weeks later. And it is worth noting that all the themes left are self-concerned. They include the natural beauty that visitors appreciated, the entertainment activities that people played and the things that individuals thought on greenways.

The self-involved activities inspired existential feelings and affective connections of self to the outside world. Such kind of affection-based feelings were impressive to visitors so that most of them were left in mind. Moreover, it is the self-based feelings tended to be left after trips. For instance, "familiar", "spiritual fulfilment", "good and comfortable", "harmony" and the "bucolic life" were all self and human concerned. While those greenway-based feelings, like "natural", "like the whole" and "open and free" were not specifically mentioned.

The corresponding emotional changes are also important for visitors. The two most impressive emotions were the "fulfilled" regarding pro-environmental implications and the "surprise" due to unexpected encounters. It implies that those emotions for spiritual or experiential self-development are more endure over time. Other general emotions like "nostalgia", "happiness" and "pity" seem to more temporarily on-site.

The comparison of subthemes for greenway experience between during-stage and post stage illustrated the decay in themes of experience. Those human affection-based themes were more impressive for visitors. In other words, among the multisensory greenway experience, the affective aspect showed more lasting effects on people. People tend to have self-concerned affections left rather than the environment-based ones.

**Table 5-1. Comparison of subthemes for experience at different stages (Source: author)**

<b>Sub-themes</b>	<b>During-stage experience</b>	<b>Post-stage impressions</b>
Self-immersed activities	Interact with others Observe others Physical exercise and entertainment Self-immersed thinking and feeling Explore culture Take photos Appreciate nature Educate children	Nature beauty appreciation Physical exercises and entertainment Self-immersed thinking
Existential feelings	Natural Like the whole Familiar Open and free Spiritual fulfilment Good and comfortable Harmony Bucolic life	Familiar Spiritual fulfilment Good and comfortable Harmony Bucolic life
Optimistic emotions	Nostalgia Happiness Surprise Fulfilled Pity	Eco-friendly implications (fulfilled) Unexpected encounters (surprise)

### ***Detail decay to overall feelings***

Regarding the same themes, visitors may have distinct follow-up impressions from on-site descriptions. For one thing, the same topics may be addressed in different ways. For instance, participant GZ03 emphasized the Donghaochong Museum of Guangzhou greenway for its introduction of the river restoration on-site. However, during the follow-up interview, she addressed the cultural significance of Guangzhou greenway without mentioning the Museum. Regarding the impressive fountain on Donghaochong Greenway, she emphasized the ecological design of bricks with plants on-site, which was concluded as good vegetation of the place afterwards. For another thing, specific experience may be replaced by broad conclusion with less details. Participant GZ26 appreciated kite flying and playing bubbles with children on greenways, while she provided an overall description as having fun together after trips. Similarly, the authentic nature that visitors appreciated on-site, like flowers, clean water and green trees was concluded as the beautiful scenery during post-trip stage by participant HZ46. As another example, the ethical promotion signs have been discussed by participant GZ02 during both on-site and follow-up interviews. However, the statements are different as followed:

*There are some promotional signs around. They introduced stories of Tianyou Zhan [A historical elite in China] about his merits of friendship and love, as well as harmony family relationship. (GZ02O, 9 September 2017)*

*I remember some promotional signs there. It is about Tianyou Zhan and his*

*merits, something like that. (GZ02P, 6 January 2018)*

The comparisons highlight the process that people abstracted the overall feelings out of the specific experience over time. The greenway experience, although not so sharp, impressed visitors on certain aspects. Particularly, the whole environment, including the ecological system and the social system, created a pleasing atmosphere for visitors. While differences appeared in details of descriptions, same overall feelings could be concluded from both during and after interviews. To put it simply, people tend to have abstract feelings and overall atmosphere left in their mind after trips.

### ***Difference decay to usual lifestyle***

Here is another decay identified in people's greenways experience over time. Visitors recognized the big gap between greenway experience and daily life on site. The greenway trips were regarded as escape from daily life and pressure. However, for follow-up interviews, greenway trips seemed to be general leisure that were not so different regarding daily life. The different statements of participant SZ13 for on-site and follow-up interviews were presented below as an example. It could be seen from the comparison that after returning to the routine sphere, the daily life took the priority and the greenway experience decayed to be general.

*We are relaxing here. Just relax yourself. You can do what you want, fishing, sitting on the lawn, walking or exercises on the routes. This relax may be incomprehensible for the youth from city center. But for us who have children, this kind of place is the best. (SZ13O, 17 March 2018)*

*Nothing special there. I do not know how to say. Anyway, we are realistic. For people with our age, nothing special to be touched. For your youth, maybe you could be satisfied by some minor changes. But for us, we have so many daily chores that we have no such poetic feelings. It is only a small part of our life. (SZ13P, 15 April)*

The different attitudes of first-time visitors and repeated visitors could also illustrate this difference decay. First-time visitors were excited to find the place and surprised at the environment: *"It is very good to be here. The weather is good. And the beautiful environment have us good mood. We like communication here. Super happy and amazing scenery, right?" (ZH28O)*. While the repeated visitors seemed to regard the greenway trips as part of their usual life: *"No special feeling. It is already a habit for me to visits here. It is mainly good for health" (ZH30O)*. It is kind of to incorporate the greenway experience into daily life as a new lifestyle.

The three aspects of experience decay depicted the whole process that concrete greenway experience was abstracted into self-concerned affections, overall feelings and finally

incorporated into daily life as a usual lifestyle. This process implies the potential of greenways in leading lifestyle changes over time.

### **5.5 General but whole different experience**

It is interesting to note that people regarded everything on greenways as general, but they appreciated the greenway experience as a whole to be different and necessary for daily life.

#### ***General settings easy to achieve***

The generality of greenways could be concluded in two dimensions: one is the material formation and the other is the geographical location. Greenways are planned and constructed to connect existed resources across regions, such as the rivers, the urban parks and the mountains. These resources are actually general to people. With specific routes and some facilities provided, visitors admitted the good sight views along greenways while found no special scenes for photo taking. No extraordinary sceneries existed on greenways for them to concern: *“I did not take many photos because there were no particular things or views worth of photos-taking” (SZ01P)*. Everything was just general as in usual life. Particularly for repeated visitors who got used to the greenway experience reported no special impressions.

Besides, greenways are open space close to home, which means high accessibility for the public. It is easy for people to visit the greenways. Hence, greenway trips were such kind of natural and routine activities that are not necessary to share and post on social network platforms like the moments of WeChat: *“We can come here whenever we want. So, it is very common for us to visit” (ZH31)*. The general resources and high accessibility enabled every city to plan and design their own greenways, but at the same time, resulted in visitors denying of the specialty of greenways.

#### ***Whole feelings hard to describe***

The generality of greenways in material formation and location does not mean the experience of greenway trips is general. Although there are no special things to address, people reported to have a wholly good and positive feeling. For instance, participant GZ34 took tour on Zengcheng greenway and reported that *“it is a good and surprising experience on a leisure way to have different sight views of the city, although they seemed not so special” (GZ34O)*. The focus is the overall feelings rather than any specific aspects.

People showed difficulties to describe the whole feeling in detail: *“It is just kind of feelings, obscure and hard to describe. Similar to the situation that you like a person, while you cannot tell the specific thing you like. It is hazy. Maybe clear in your mind but not in words”*

(GZ040). Two main reasons were responsible. One is that this is an unconsciously experiencing process. All settings on greenways were general in conscious because the visitors already got familiar with all the things. They could not figure out the different or special things on greenways. However, it is those general things that gather together to provide an important space and a warm experience to them, thus promoting their existential self and affective affinity to the environment. The self-concerned and affection-based greenway trips or experiences reside in heart or unconsciousness.

The other reason is that this is a whole feeling supported by a systematic environment on greenways. Not only the natural resource, but also the social interaction did constitute this good experience for them. Even the strangers playing there made visitors feel happy and peaceful: *“Like this route, it is boring if there is only one person. Definitely, I think it is better with colorful and abundant stuff here, like different people and other things. It feels like lively and with sense of humanity. Even if I stay here alone, I hope there are some others playing there”* (SZ140). It means the greenway experience relied on every detailed thing like the fresh air or the good weather, but it is not only about that special thing. All aspects were indispensable and made contributions to the overall feeling. Hence force, two implications could be concluded. For one thing, what people prefer on greenway is not only the physical nature (wilderness), but a whole atmosphere as natural, which is kind of human-concerned “natural”. For another thing, it is not necessary for people to have different and extraordinary resources to enjoy themselves in travels. What is more important is the whole environment for leisure and relaxation.

## **5.6 Liminal experience between mass tourism and daily leisure**

In the greenway knowledge section, greenway trips were compared to both traditional mass tourism and daily business leisure activities from visitors' views and were categorized into the type between. According to the discussion on greenway experience, a liminal experience between traditional mass tourism and daily leisure could be identified.

### ***Liminal space on greenways***

Greenway experience provided liminal space for visitors because people could enjoy a distinct lifestyle on greenways through slow-pace activities in a natural environment. This is a kind of paradise to escape from the modern alienation in urban areas. Citizens forgot the daily troubles and were separated from work pressure temporarily during the trips: *“The tour made me relax for a period of time. After back to the work, the pressure came back again. I should say that after a period of pressure in daily life, you need to go out for relax to relieve the*



*previous pressure. And once return home, you could have better mood, at least, for another short time” (HZ48P).* Hence, greenway travels had the same influences on people as mass tourism to provide liminality.

While visitors enjoyed spiritual fulfilment during the trips, the above quotation and the experience decay demonstrated that people returned back to the pressure after greenway trips. The routine life became the main tone again, thus finishing the whole process of liminal experience from escape to return. Moreover, there are also constraints for people to enter the liminal space, such as available time, transports and distance: *“Recently I did not have such kind of trips due to the heavy workload. I have to work overtime now, including the weekends” (HZ42P).* These constraints help people to achieve feeling of rituals in taking the trips.

### ***Liminality between mass tourism and daily leisure***

Though similar to some extent, the liminality of greenway trips is different from the traditional mass tourism. Firstly, regarding the accessibility, it is easier for people to take greenway trips in terms of the convenient distance, time and cost. Secondly, compared to the traditional mass tourism visiting unfamiliar places, greenways are close to visitors' home so that the sense of ritual and separation decreases, which means the gap between the greenway space and the daily life is smaller than the traditional destination space: *“The traditional tourism destinations mean some places that you have never been with a totally different experience, while this kind of greenways are good places for leisure and relax” (GZ11P).* People showed more concern on daily life and took activities general as daily life on greenways, thereby the greenway experience was easily connected to daily life. Furthermore, after certain traditional travels, people particularly the elderly may be less motivated to travel far but prefer leisure travels instead: *“It is almost same to different destinations. I like cycling on greenways than visiting those famous tourist destinations now” (GZ19O).* With repeated visits, the greenway experience has potential to exert deeper influences on people's daily life to induce lifestyle changes than the traditional mass tourism.

Considering the intimate connection between greenway experience and daily life, greenway trips are more like routine leisure activities, rather than traditional mass tourism. However, visitors reported significant differences between greenway trips and daily leisure such as Karaoke and indoor leisure. Greenway visits helped individuals escape from the modernity and enjoy a relax time. People took longer time on greenways than daily leisure. The close but different relationship between greenway trips and daily leisure could be illustrated by the conversation with participant GZ23O:

*[Researcher] What are the differences between greenway trips and daily life?*

*[Participant] No difference. We still do what we do in daily life. You see others, everyone plays as usual and in group. Anyway, the place is not the most important. But the people you play with are the most essential.*

*[Researcher] So why not to select staying at home to play together?*

*[Participant] Certainly, it is different to play here than at home. We can enjoy the good and natural environment here. With the flowers, plants and trees, right?*

To conclude, greenway trips could be placed between daily leisure and the traditional mass tourism to bridge the gap between daily life and spiritual world. Although people want to visit famous places to enjoy different life and spiritual fulfilment, the reality is that to travel around home seems to be more practical: *“If time and economy available, we certainly intend to travel to some different places. But in reality, we took more visits on greenways” (GZ34O).*

## **5.7 Chapter summary**

This chapter discussed the interaction between human and greenway environment, thus answering the first research question “what is the main experience for visitors on greenways”. Greenways are regional green networks to connect different natural and cultural resources to provide leisure trips for the public. It is easy and convenient to visit greenways due to the short distance and high accessibility, thereby the trips on greenway were regarded as the activities between mass tourism and daily leisure.

The whole experience on greenways is actually a process to achieve existential authenticity of self. Initially, people are motivated to visit greenways by inner needs of themselves. This self-driven visit turns into experience-driven because the good experience on greenways motivates visitors to take repeated trips. On greenways, people enjoy existential self through self-immersed activities, existential feelings and optimistic emotions. All activities people take are based on their own interests and choices. They care about themselves and their connections with the authentic world. The corresponding positive emotional changes help people to build themselves better and take optimistic attitudes against daily life. After the trips, visitors’ affection-based impressions strengthen their affinity with greenways to promote advisory evaluation and behavior intentions to extend the environment appreciation in both self and others.

Notably, greenway experience shows decay effects over time. But it has differences with the traditional mass tourism that it is affection-based and has less gap between greenway experience and daily life, thereby leading to lifestyle changes more easily. Although the greenway settings are general and usual for visitors, the whole feelings of greenway trips are

different to provide a liminal space for visitors. Greenway experience is kind of the middle thing that is more accessible than traditional mass tourism and at the same time helps people to escape from daily routine. It narrows the gap between spirituality in liminal space and mundane in daily life.

Propositions regarding greenway experience could thus be provided:

(1) The trips to the greenway in the visitors' point of view range between traditional mass tourism and daily leisure.

(2) Greenway experience promotes the development of existential authenticity in self.

(3) The liminality in greenway experience has less gap with daily life and the gap could be further reduced with repeated visits, which implicates changes of daily life.

## **Chapter 6 Visitors' Value Exchanges with Environment**

### **6.1 Chapter introduction**

On basis of the greenway experience, this chapter steps further to explore the value exchanges of visitors with the environment (research question two). The exchange process includes the reflective observation and abstract conceptualization of visitors' greenway experience. The reflective observation ("reflection") is examined through participant-generated photos and their mind activities. The abstract conceptualization includes visitors' constructions of their "travel preferences" and "self-development", as well as their environmental "values", "beliefs", and "norms" based upon the photo-elicitation technique (Figure 4-18). Changes regarding these aspects over different greenway trip stages are explored. Afterwards, the main characteristics for reflections and conceptualizations of greenway experience are concluded as leading to lifestyle changes, environmental concern as human oriented and longitudinal effects. Propositions in response to the research question two are finally given in the chapter summary.

### **6.2 Reflection: From environmental appreciation to environmental concern**

While people enjoyed the greenway trips, they appreciated, thought about and reflected on the experience. Over this process, they made different meanings from the experience and had reflective observations towards the environment, the others, as well as themselves.

#### **6.2.1 Meaning making on greenways: Appreciation of the holistic environment**

Greenway experience is a multisensory process that involves visitors' subjective feelings, which is complex and difficult to cover in words. Photos collected from participants were used to extract the themes (as illustrated in Appendix XI). The main themes in the photos (detailed in Appendix XII) were selected and grouped into key meanings that visitors made on greenways. It was found that the same themes and meanings emerged in photos from both on-site and follow-up interviews (Table 6-1): green nature appreciation, water appreciation, ecological system appreciation, greenway routes, cultural buildings, human play, and cycling. They were further categorized into nature appreciation, artificial environment appreciation and human involvement appreciation. A detailed report of these meanings is provided below.

Table 6-1. Meanings made on greenways (Source: author)

Meaning making		Themes in photos	On-site interview	Follow-up interview
			No. of photos (N=375)	No. of photos (N=170)
Nature appreciation	Green nature appreciation	Trees	192	94
		Mount	85	25
		Lawn	34	6
	Water appreciation	Water (River or Lake)	163	62
	Ecological system appreciation	Flowers	32	13
		Sky	28	21
		Sunshine	21	8
		Beach	12	5
		Wild animals	8	4
Artificial environment appreciation	Greenway routes	Greenway road	69	40
	Cultural buildings	Buildings (like bridge, cultural, historical, artistic buildings)	62	42
		Sign of place	16	2
		Overview of city	14	4
Human involvement appreciation	Human play	People play	77	42
		Group photo	24	5
		Self	20	1
		Children play	12	4
		BBQ	10	1
	Cycling	Cycling	24	7
		Bicycle	12	1

### *Nature appreciation: Psychological comforts and preferences*

Visitors' photos showed a significant preference for authentic nature, which could be specified into three main categories: the green nature, the water and the ecological system. They were highly captured in the photos.

People highly appreciated the green nature on greenways, including trees, mountains and lawn (Figure 6-1). Trees have the highest appearance in on-site photos (192 out of 375). Mountains and lawn appeared in 85 and 34 of the photos from on-site interviews respectively. Similarly, the green nature, particularly the trees, was the most popular theme in photos

collected from follow-up interviews. Visitors felt comfortable and relaxed with the green nature:

*I just stood there and took the photos; it was really pretty (SZ12O).*

*I remember the green mountain to make me enjoy (SZ12P).*

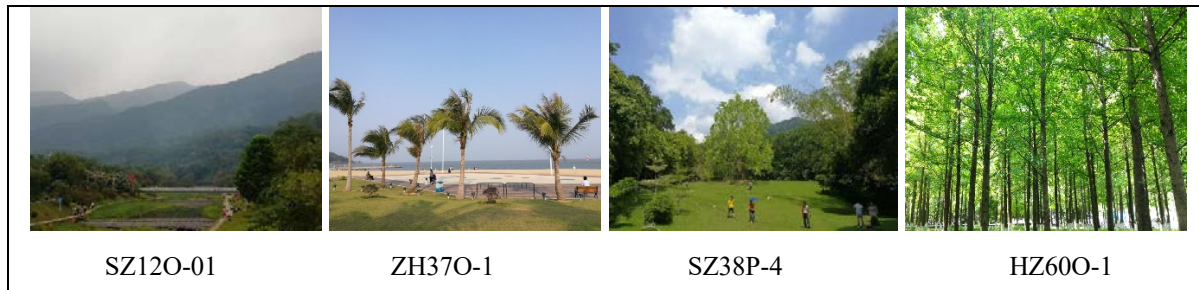


Figure 6-1. Photo samples with green nature appreciation (Source: participants)

Water, of all different kinds, is also a high rank theme in participants' photos (Figure 6-2). 163 photos on-site and 62 photos provided after trips illustrated visitors' appreciation of water. Close to water was regarded as an important aspect in greenway experience. Water helps people calm down to feel peaceful:

*I was impressed by the city river (Donghaochong), the flowing water makes me peaceful, exactly (GZ02O).*

*The most impressive thing is the city river (Donghaochong). It was so clean that you can see the bottom of the river. Such kind of trickling water had comfortable feeling to people. With such kind of feeling, people can calm down to appreciate the scenery (GZ02P)*

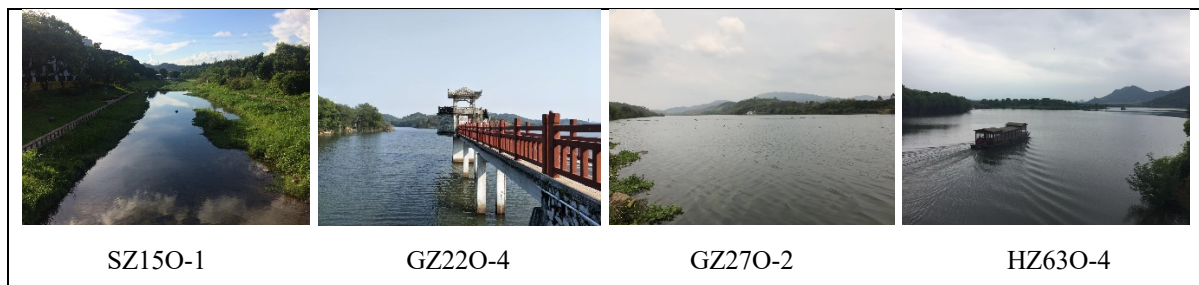


Figure 6-2. Photo samples with water appreciation (Source: participants)

Apart from the green nature and the water, visitors showed preferences on ecological system in both on-site and follow-up photos (Figure 6-3). The natural beauty such as the flowers, the sky, the sunshine, the wild animals, and the beach with seasonal changes impressed visitors and brought colorful and romantic feeling to their boring daily life.

*I like those photos because I like the natural scenery, the good environment, the fresh air and the blue sky. People can rarely see the blue sky in Beijing (ZH37O).*

*The only problem is that the water is a little bit dirty. It looks like clean. But compared to the sea in Dalian, it is worse. There are many marine animals on the beach in Dalian, I feel like delighted with them. However, we can rarely see animals here. It seems that the*

government of Zhuhai does not care about that. They just make sure that there are no visible rubbishes there (ZH37P).

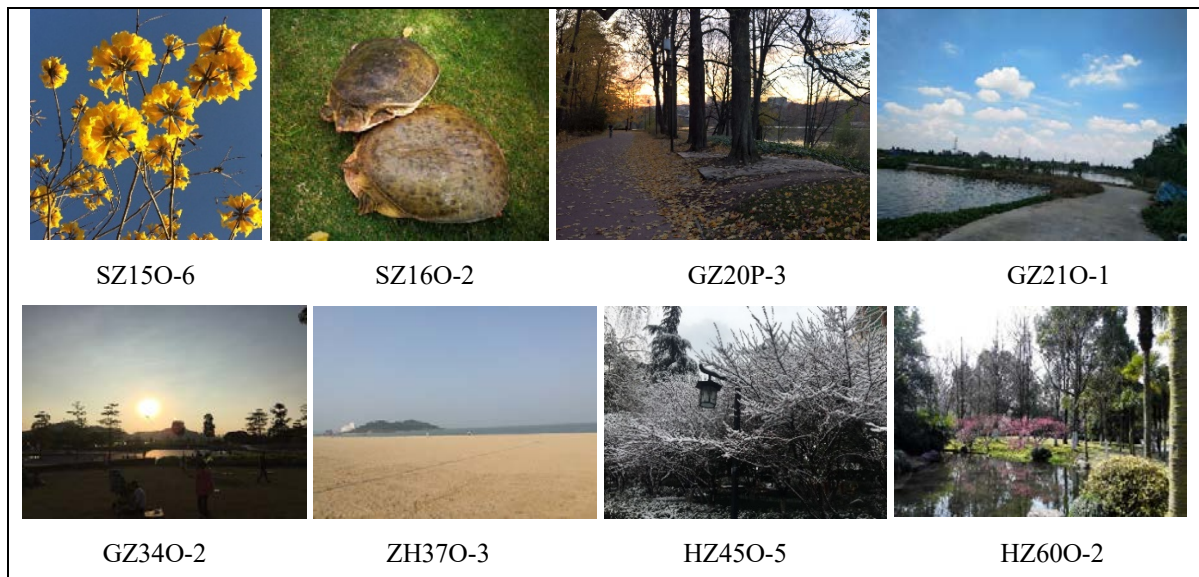


Figure 6-3. Photo samples with ecological system appreciation (Source: participants)

#### ***Artificial environment appreciation: Spiritual reliability***

Artificial environment on greenways is also appreciated by visitors. Particularly, the greenway routes and the cultural buildings were noted in participant-generated photos from both round of interviews.

The greenway routes appeared in 69 and 40 photos from on-site interviews and follow-up interviews respectively (Figure 6-4). The well-planned routes with special design not only gave visitors the sense of safety, but also separated them from daily life with explicit spatial boundaries:

*I like the route. It's a pedestrian road. I can ride on it. Greenway is not just a concept. I do not like those conceptual things. This is a real route that I can walk along. Yeah, it is such kind of feeling that there is a route, which particularly let me be here and play here (GZ08O).*

*I like the greenway routes like this (GZ21O-5). I like the flowers on both sides. The whole route is colored. Many greenway routes have different colors (GZ21O).*



Figure 6-4. Photo samples with greenway routes (Source: participants)

Cultural buildings like bridges, statues, historical and artistic architectures are also



highly captured in visitors' photos (Figure 6-5). There are 42 out of 170 post-trip photos representing this theme, while the number for on-site stage is 62 out of 375. Visitors felt spiritual inspiration with cultural appreciation, which was always beyond the physical beauty:

*I like the bridge, so I took photo of it. It is the Foxing Bridge, one of the landmarks of the city, just besides the Qiantang River Bridge (HZ42P).*

*My photos are more about the Leifer Tower. I did not find anything special with the physical nature. When I walked around there, I found really beautiful scenery with the Tower. But I was disappointed that the photos I took could not demonstrate its real beauty. I also took photos of the statues about the Legend of White Snake although it looks not so good (HZ46O).*

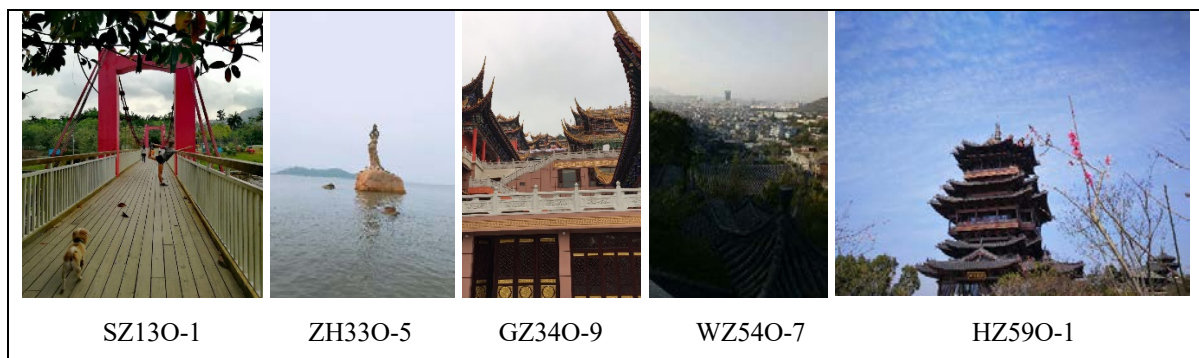


Figure 6-5. Photo samples with cultural buildings (Source: participants)

### ***Human involvement appreciation: Emotional satisfaction***

On basis of the collective residential tradition from the ancient time, people prefer environment with others, rather than isolated. Hence, while visitors appreciated nature beauty on greenways, they addressed the importance of human involvements at the same time.

Visitors were impressed by other people playing on greenways, including their family members, friends, or even strangers (Figure 6-6). There are 87 photos from on-site interview and 43 from the follow-up round showing people playing or BBQ out there. Besides, 24, 20 and 12 photos contained groups, self and children respectively on greenways. The corresponding numbers were low among the photos provided by participants after trips (5, 1, and 4) because people were unwilling to share their own photos and had more alternatives during the post-trip round. In return, participants replaced themselves by the public playing to support their high appreciation of human play. The whole atmosphere inspired visitors to be positive and happy. It is kind of feeling of provincialism with human and nature together:

*Most photos we took are about human. All are selfies about us. We like to take photos of ourselves (ZH28O).*

*We like the photos with people enjoying kite flying there. Yeah, we took photos with human. The image was very beautiful. I felt that people were happy, which also inspired me.*



*This was a happy atmosphere, very happy (GZ11P).*



Figure 6-6. Photo samples with human play (Source: participants)

Among many others, cycling was one of the most popular activities on greenways. It also appeared frequently in participants' photos (Figure 6-7). Around 36 photos included cycling or bicycles among on-site participant-generated photos, and 8 among post-trip photos. Visitors could enjoy both professional cycling for challenges and group cycling for enjoyment on greenways. It not only involved physical exercises, but also brought psychological achievements to people. Cycling was regarded as a meaningful and necessary activity on greenways. Sometimes cycling *per se* was regarded as a good scenery:

*I like outdoor activities. And I feel cycling is meaningful because it is physical exercises to improve health for me (GZ11O).*

*I like cycling on greenways. It is also a beautiful scenery in tourist attractions [greenways]. You see, many people took photos on that. I also cycled before in Guilin. When we cycled, we would also take photos on the bicycles (GZ02P).*



Figure 6-7. Photo samples with cycling (Source: participants)

The seven meanings identified demonstrated visitors' environment appreciation during the greenway visits. The environment includes natural, cultural and humanistic spheres. People concerned the green nature, the water and the ecological system for psychological comforts and preferences on nature. The artificial environment promoted sense of safety and spiritual inspiration in experience. The human involvement was important to inspire positive emotions of visitors during trips.

### 6.2.2 Reflection upon greenway experience: Concern on living environment

Figure 6-8 illustrates subthemes of participants' reflections. While visitors made

meanings from greenway experience, those meanings in turn promoted people to reflect on the environment, the others and themselves to envision better life.

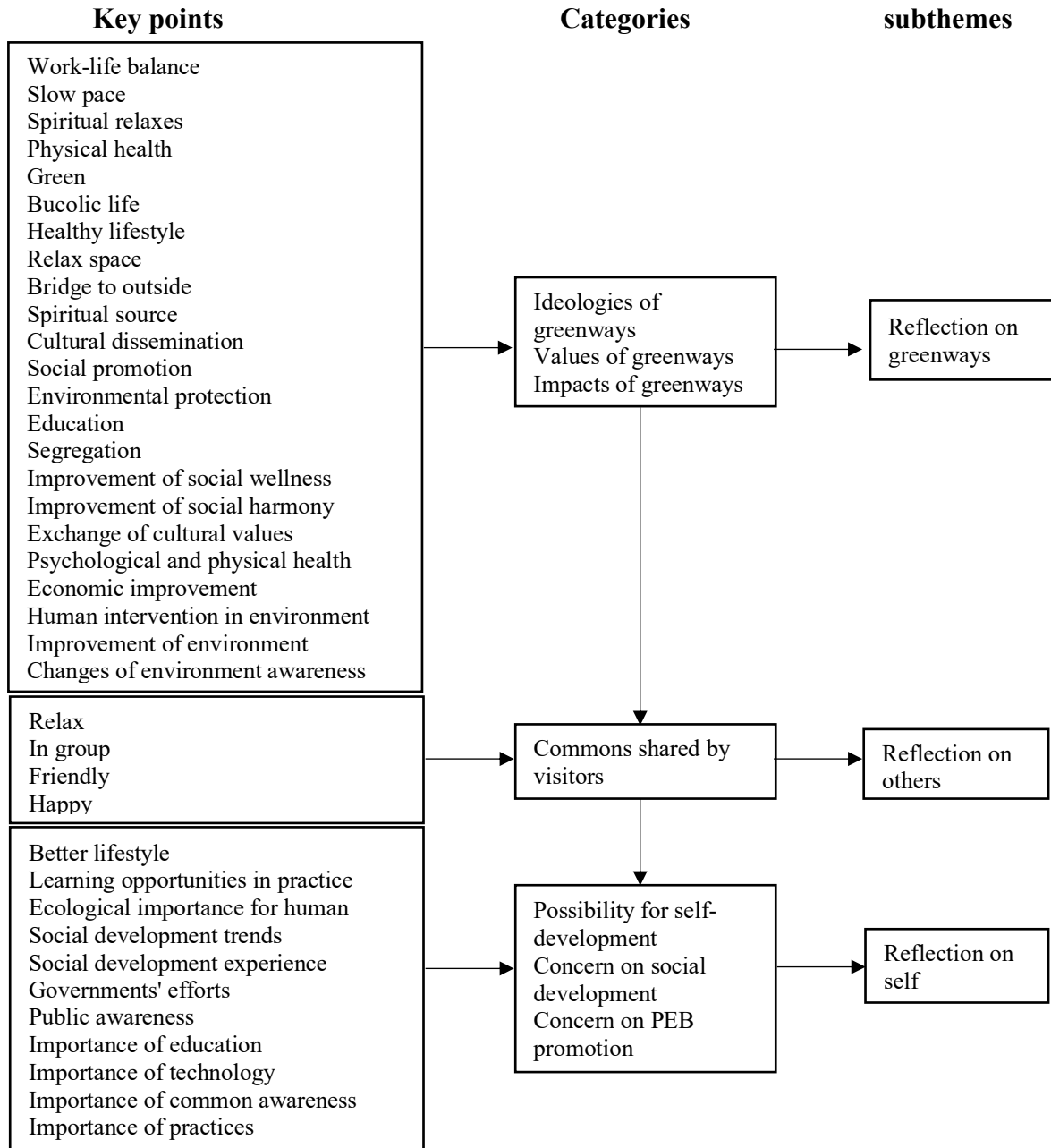


Figure 6-8. Key points, categories and subthemes for reflection (Source: author)

### ***Reflection on greenways: Ideological promotion***

The slow-pace self-immersed activities and the natural and peaceful environment facilitated meaning-making and observations of greenway visitors on the surroundings, thus leading to their reflections on greenways.

From visitors' views, greenways expressed a series of life ideologies: (1) Work-life balance; greenways provided weekend relax space for visitors. People could escape from work and daily pressure temporarily to appreciate life. It implicates the work-life balance between

daily work and leisure activities. (2) Slow pace; greenways promoted slow pace of life that was different from daily life. People walked, cycled, and communicated with others on greenways and appreciated the surroundings. (3) Spiritual relax; through self-immersed activities, people expected to achieve spiritual improvement on greenways, such as the natural and authentic self, the sense of hometown and the peace in heart. (4) Physical health; physical health was promoted on greenways through exercises and promotional signs. (5) Green; visitors could feel the eco-friendly ideology of greenways. The greenway visits were regarded as green tourism. People connected greenway activities such as cycling with pro-environmental transports to promote green out: *"I think greenway expresses the life idea of green out. It means to have healthy transportations, such as walking and cycling. They are energy-saving and less consumptive"* (GZ22O). (6) Bucolic life; greenways provided opportunities for citizens to get close to nature. People could enjoy both urban and rural sceneries on greenways so as to enjoy a bucolic life: *"Initially, when the government planned the greenway projects. They intended to develop green tourism. People who live in the urban areas can enjoy the countryside view on greenways. We can cycle along the greenways to experience the nature"* (GZ25O).

According to practical uses, greenways were valued by visitors in multiple aspects: (1) Healthy lifestyles; the convenient greenway trips could help people to stop their busy life during the weekend for leisure activities. At the meantime of improving the physical and psychological health, individuals could achieve work-life balance and realize their dreaming urban lifestyle, which involves modernity, sunshine, happiness and family gathering: *"It implies a leisure lifestyle, which involves the natural beauty, leisure, entertainment, education and spiritual encouragement"* (GZ03P). (2) Relax space; the natural settings and different leisure activities on greenways create a relaxed atmosphere and space for the public. (3) Bridge to outside; greenways are open space that is different from daily life. With high accessibility, people could be encouraged to step out to explore the outside world. (4) Spiritual source; greenways are networks of different natural and cultural resource. Visitors enjoyed spiritual fulfilments such as hope for life and positive attitudes through either the outside inspiration or self-reflection on greenways. (5) Cultural dissemination; greenways represent the culture and image of the city with traversing through local communities. (6) Social promotion; interaction is an important activity on greenways. Hence, greenways have the potential to promote social relationships among family and friends. Economic benefits are also possible to be achieved with the large number of visits. (7) Environment protection; the construction and management of greenways could improve the physical environment from visitors' perspective. Meanwhile, the human-nature interaction on greenways could gradually promote pro-environmental

behaviors. (8) Education; greenways provide space for outdoor education, particularly for children and students: *"I could feel the environment to improve my artistic appreciation. The environment could encourage talents and creativity"* (SZ15P). (9) Segregation; greenways provide separated spaces for cycling and other different activities.

As well, people identified the abundant influences of greenways on human development and the whole society: (1) Improvement of social wellness; greenway trips as outdoor activities replaced some indoor leisure. People enjoyed existential feelings and optimistic emotions through the self-immersed activities on trips, thereby improving the wellness of public. (2) Improvement of social harmony; greenway trips helped people to relieve from daily pressure and interact with others. The reduced negative emotions like anxiety and the improved personal connections facilitated the harmony between human and nature, as well as harmony among people. (3) Exchange of cultural values; through active observations and interactions, greenways were found to promote the cultural value exchanges between visitors and the local communities, and between individuals and others on greenways. (4) Psychological and physical health; people felt positive impacts from greenway visits in terms of both their psychological and physical conditions. Some visitors became positive and open minded with inspirations from the nature or happy others. Some people got their health improved after exercises on greenways: *"Cycling or walking on greenway made us psychologically and physically healthy. We felt comfortable. This is already a significant meaning of greenways"* (WZ50O). (5) Economic improvement; extra incomes from the expenditures of visitors were generated in the local communities based on the increasing greenway visits. (6) Human intervention in environment; greenway trips had impacts on the natural environment, including the negative aspects like human's alterations and exploitations of environment. (7) Improvement of environment; meanwhile, greenway projects exerted positive impacts on the environmental maintenance and improvement through planning and management. Cycling as green transportation reduced the carbon dioxide emissions. (8) Changes of environment awareness; greenway travels led to the affective affinity between human and environment, thereby promoting human literacy and environmental awareness. People tended to concern more environmental protection on greenways. While visitors felt excited to see wild animals, the first thing came to their mind was that people should protect those wild animals: *"It is important to protect environment on greenways because we should not destroy the beautiful environment and leave them to meet future human needs"* (GZ24P).

Visitors had relatively consistent observations regarding ideologies, values and impacts of greenways (Table 6-2). People identified the health and human-nature harmony ideologies

of greenway and appreciated its promotions for physical and psychological health, social interaction and pro-environmental education. Through repeated visits and multisensory interaction with greenways, broad effects were observed, including social, cultural and economic improvement, psychological and physical health and human-environment interaction. It is worth noting that not only was the environment protection promoted, but also negative impacts on the environment were exerted.

Table 6-2. Main observations from reflections on greenways (Source: author)

	Key points	Main observations
Ideologies of greenways	Work-life balance Slow pace Spiritual relaxes Physical health	Health
	Green Bucolic life	Human-nature harmony
Values of greenways	Healthy lifestyle Relax space Spiritual source Segregation	Physical and psychological health promotion
	Bridge to outside Cultural dissemination Social promotion	Social interaction promotion
	Education Environmental protection	Pro-environment education
Impacts of greenways	Improvement of social wellness Improvement of social harmony Exchange of cultural values Economic improvement	Social-cultural-economic improvement
	Psychological and physical health	Physical and psychological health improvement
	Human intervention in environment Improvement of environment Changes of environment awareness	Human-environmental interaction

### ***Reflection on others: Emotional inspiration***

People interacted with and observed others on greenways to identify their common characteristics. Those common characteristics inspired people to think and to dream. The first thing shared by visitors is that they are all relaxed on greenways. Most people came here for relieving their daily pressure. Compared to the busy urban life, people got free and leisure here. The relaxed others made individuals relax as well: *“Actually, most people here are relatively relax. They came here for a walk, or just sit there to feel the breeze. All are in such kind of status. I also let myself relax here”* (GZ21O). A second commonality shared by greenway visitors is that they came in group. Observing those playing with family members or friends, visitors may look forward to enjoying family life or coming with friends in future: *“Most people came here with family members and friends. I like that. I thought about bringing my*

*family members there someday” (GZ06P). Also, people on greenways were found to be friendly, both to the environment and to others. Visitors learnt from others to protect and to be cordial to each other: “All the people I met on greenways are very nice, including the businessmen and strangers. They are all polite and with smiles on their faces. It is really great” (GZ11O). The happy emotions of others inspired visitors to be positive and make changes in life: “You see, there are no people conflicting with each other, no noise, no crying, right? Once come, people are very happy. You see everywhere” (GZ07O).*

The common characteristics observed from others are all positive emotions that inspired people to relax, be happy, promising and friendly.

### ***Reflection on self: Self-development potential***

During greenway trips, visitors concerned themselves through feeling, thinking and reflecting. They figured out “possibilities for self-development”. The first and foremost, people found better lifestyles on greenways, such as the slow-pace life and work-life balance. The happy experience with children made them rethink about more time spending with family members. The good and comfortable environment inspired hope for a better residential environment and more outdoor activities. Possibilities to improve life qualities were achieved on greenways: *“Now I just want to change. I come to greenways because I want changes. We can walk out for exercises and relax. We need relax after one-week work or study. We can appreciate the green things with family members and friends, to breath the fresh air, and then BBQ, picnic, anything else, all good, just for relax” (GZ26O).* Besides, visitors found the opportunities to learn in practices on greenways. For instance, people could challenge and improve their cycling skills. Particularly, students and the young generation put theoretical learning into practices here, such as participant GZ03 learning water management and participant SZ15 improving artistic appreciation on greenways. Others’ behaviors or special designs on greenways provided learning opportunities to individuals over the process as well. Moreover, people developed themselves through recognizing the ecological importance. People got to aware the importance of environment protection through enjoyment in nature. The harmony between human and nature was appreciated so as to promote nature respect, like participant GZ10 experiencing the motivation of cycling changing from exercise to nature appreciation. For visitors who felt their daily life far away from environmental, they learnt from greenway trips about protection practices and tended to be unsatisfied with self-performance due to improved environmental awareness: *“When you went out to find beautiful sceneries, you enjoyed the fresh air, you must have thought about the issue, right? When you*

*enjoyed in it, you must aware the importance of the environment, right? If all the environment was destroyed, places like this became less and less. By that time the public like us cannot enjoy such good scenery and high-quality air anymore” (SZ18P).*

Visitors got increased “concern on social development” with greenway trips. They identified the social development trends, such as the increasing needs for leisure travels and the changing city trip patterns with greenway development in different cities. The trends implicated social changes from economic-oriented to literacy-oriented: *“This is a trend. The president Xi passed a signal to us through the greenway development. China needs development, but it is not only about the industrial development, but also about the health and literacy improvement. It is different from past decades to focus on economic development only” (GZ04O).* People also concluded social development experience from greenway trips. They appreciated other cities’ efforts in greenway development and environmental protection, thus intending to expand those experience to their residential cities or home cities. Moreover, the experience on greenways inspired visitors’ appreciation or complaints of governments’ efforts. The positive social development trends improved people’s belief in governments: *“As I see, the main reason for improved environmental protection is that the government addressed the development of this place. Another reason is that short-haul visitors like us took frequent visits here to improve personal protection awareness” (SZ14O).* Additionally, people concerned the public awareness in environment protection and hoped to have better interpretation system on greenways for public awareness improvement because environment protection was still not a common phenomenon in current society.

Visitors showed “concern on environmental protection promotion” upon greenway trips. They realized the importance of education for environment protection because there are still many people without knowledge on environmental protection. Family education and practical education were both necessary other than school education. Because even though people have knowledge, they may not behave eco-friendly. Many participants showed their theoretical knowledge on environmental protection, while they were less self-motivated to carry out environmental protection practices for different reasons: *“[Participant] I think I did not do well in protection. [Researcher] What are the reasons? [Participant] I do not want to talk about this question, next one please. [Researcher] I am really curious about it. Because many people have the same situation. Why you cannot make it. [Participant] It does not mean I cannot make it. It is just because sometimes I will suddenly... Anyway, it is real, I did not well. Let’s move on to the next question” (SZ14O).* It means to know does not necessarily lead to actual behaviors. Some visitors expected the technology improvement for environment

protection, while some others addressed the importance of promoting common awareness. They thought the public awareness is the basis to protect. In addition, there is a domain view that practices make things different. People learn from the environment or experience because they are more visible than knowledge and promote unconscious changes.

To sum, visitors identified the potential to improve themselves at self, social and environmental levels. Specifically, it includes improvements of life quality, practical knowledge, ecological importance, social development and pro-environmental concerns. Combined with reflections on the other two aspects, people showed their concerns on the living environment from self, societal and physical environmental perspectives.

Figure 6-9 concludes the whole process from greenway experience to visitors' reflexive observations, namely from environmental appreciation to environmental concern. Through interactions between human and greenway environment, people tended to have revisits based on self-driven and experience-driven motivations. The existential self achieved through activities, feelings and emotions on greenways and the human-environment affective affinity left afterwards promoted meaning-making and reflective observations of greenway experience on various dimensions. Overall, three main aspects were addressed regarding the meanings made and the observations: One is the self-concern. Through self-involvement and appreciation of the natural and artificial environments, people concerned life quality, knowledge, positive attitudes, and physical and psychological health to develop themselves. Second is the social-concern. The appreciation of human involvement on greenways help people to concern the social development and the social harmony. The last is the environment-concern. The nature appreciation particularly promoted people's awareness of ecological importance and concern on the harmony between human and nature. They together reflected people's appreciation of the holistic environment to concern on the living environment based on greenway trips.

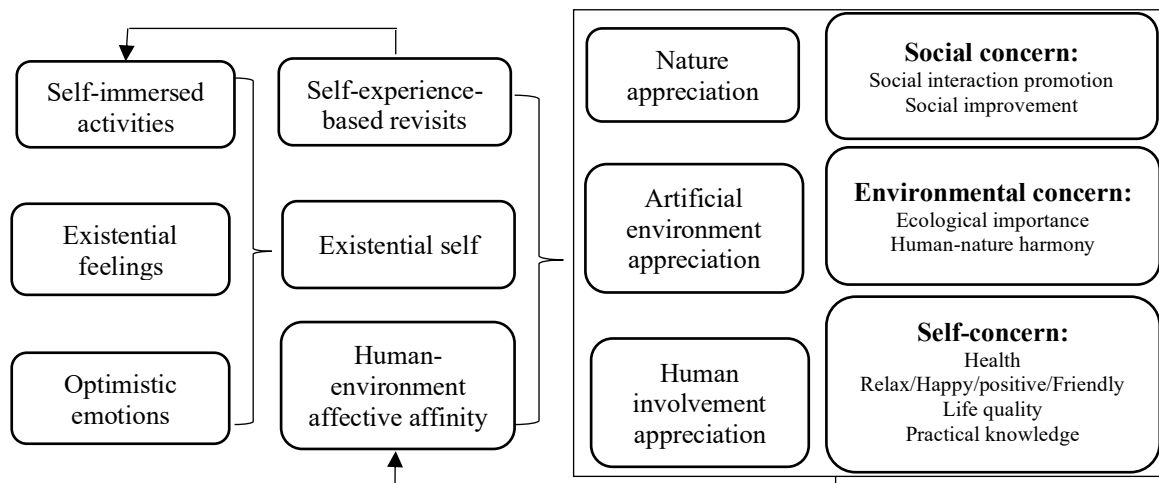


Figure 6-9. The reflections based on greenways experience (Source: author)



### 6.3 Travel preferences: Human-friendly trips

The reflective observations on greenway trips help people to conceptualize travel pattern changes in current society and construct their own travel preferences, as the Figure 6-10 illustrates. The travel preferences as relationships of people to the outside world actually show people's conceptualization on the social concern. There are no significant differences identified between the on-site reported preferences and after-trip reported preferences, thus reporting them together.

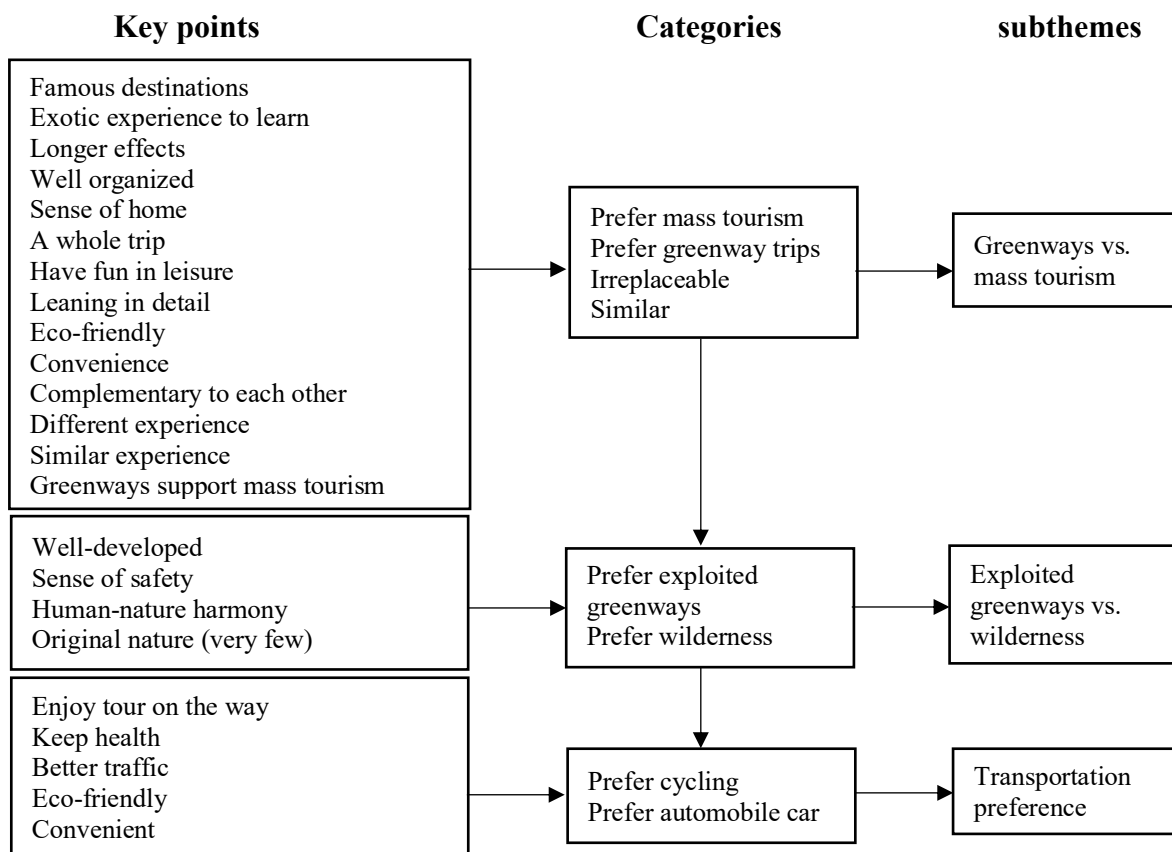


Figure 6-10. Key points, categories and subthemes for travel preference (Source: author)

#### 6.3.1 Greenway trips VS. Mass tourism: For different achievements

Traditional mass tourism is favored by the public in past decades. With increasing needs for leisure travels, people intend to have more alternatives for holidays. The greenway experience was compared to mass tourism to implicate future travelling patterns.

Some visitors preferred traditional mass tourism because they thought it was necessary to visit famous destinations. Those famous destinations were usually different from the routine environment so that visitors could learn more from the exotic experience, including different landscapes, different culture and different people. They are particularly meaningful for young generation to broaden their horizons: *"We can experience different things through long haul travels. Maybe you experienced different transports and saw what you did not see before."*

*Maybe this mountain is lower, and that mountain is higher. And the plants in different areas are different” (ZH28O).* Such kind of exotic experience could thus be more impressive and exert longer effects on visitors: *“Greenway may help us relieve from the pressure temporarily, while the long-haul tourism could offset or relieve the pressure for long time” (ZH37P).* In addition, mass tourism was preferred because it was well organized with various products and high-quality services. People could enjoy the happiness in consumption and being served. In contrast, greenway trips were more of self-involvement activities and enjoyment.

There are also visitors showing preference on greenway trips. For one thing, greenways are more general to visitors, thus providing sense of home. Hence, people prefer greenways that combine natural environment and local communities. The general environment helps people to connect greenway trips with daily life for lifestyle changes. For another thing, people could enjoy the whole trip rather than the destinations only. Transportation along greenways is also part of the experience. Besides, visitors prefer activities on greenways because they are kind of having fun in leisure. People could stop and relax whenever and wherever they want: *“I just want to take casual exercises. I could stop if I find something interesting. Sit for a while, walk for a while and see around. That’s all. No need to be exhausted to seek for different spots” (HZ46P).* Although there are no exotic resources on greenways, the visitors could explore and learn from the places in detail. For instance, compared to previous preferences on famous destinations, participant GZ02 showed great interests in the Guangzhou greenways because she found it a good place to learn. During greenway trips, she had relatively close interactions with the surroundings. Moreover, greenway trips are more eco-friendly than long haul travels due to the green transportations and less human interventions. In addition, convenience is an important advantage of greenway trips. Although people want to go to famous places, the reality is that travel around home seems to be more practical.

For most people, the mass tourism and the greenway trips are irreplaceable to each other. They both have their own merits for human’s leisure life so that they are not exclusive but complementary to each other. Long haul travels may be one-time visits with specific purposes while the greenway trips are repeated leisure trips. The former is rare in life while the latter is frequent, thereby they could support each other to construct a whole leisure scape. People achieve different experiences through the two different types of trips. Mass tourism facilitates cultural learning, while greenways promote relax in life. Different purposes and different feelings result in distinct behaviors in mass destinations and on greenways. People could take same activities at same places for greenway trips, while for long haul travels, visitors usually take different journeys and programs for exotic experience. For instance, people took

less photos on greenways. They focused on relax here: *“It was just relaxed to cycle on greenways. Cycling to nearby places to observe around, to see something green and relieve from the tired daily life” (GZ26P)*. By contrast, in mass destinations, people participated in different activities. Photo-taking was a very important part of their whole tourism experience.

Nevertheless, there are visitors, particularly the elderly and people who have traveled to many different places found that the two were similar to each other. Because they provide similar experiences to help people relieve from daily pressure. People thought there were no significant differences between the two: *“Cycling on greenways and long-haul travels are rather the same. The main purpose is to relieve from our pressure in daily life. Sometimes I feel better on greenways because it is freer and more convenient. Travelling to other places is also walking around. After travelling to different places, I find they are almost the same, no big differences” (ZH30O)*. Furthermore, the greenway network could also support long haul travels to some famous destinations.

Visitors’ preferences regarding mass tourism and greenway travels illustrated people’s needs for both experiences to have different achievements. In the long run, greenway trips seem to be more sustainable because people regarded them as eco-friendly and intended to take repeated visits on greenways rather than to mass destinations.

### **6.3.2 Exploited greenways VS. Wilderness: Human-friendly natural environment**

Preference on greenway types reflects visitors’ relationship with the environment. To capture their inner concepts of good leisure environment. Photo elicitation technique was used. Participants were interviewed based on the two photos in Group 4 (Figure 6-11) to elicit their preferences. The photo on the left (Group 4-3) represents planned or exploited greenways by human with well-designed greenway routes and landscapes. The right photo (Group 4-4) in Figure 6-11 shows greenways in wilderness, which has original nature and less people. The interviews were also analyzed based on the thematic analysis.



Figure 6-11. Photos for eliciting greenway preference (Source: author)

It is interesting to note that although people showed interests in nature and tended to get close to nature. They preferred the exploited greenways rather than the wilderness one. It was mainly because the exploited greenways are well-developed. The environment is designed to have beautiful scenery with trees, flowers and water. The space is developed with facilities to cater human's needs for leisure activities, such as cycling on the well-constructed greenway routes, sitting and communicating on the lawns and fishing by the riverside. From visitors' views, exploited greenways are more comfortable and suitable for human. While the wilderness greenways are not so human-friendly because there is no space for people to take a rest and enjoy shelters from strong sunshine during the trips: *"This type [the wilderness one] is just like the countryside road. It is not that normalized, that modern. So, I think it is not convenient to this place. For instance, the road is not so flat for cycling. And you see, the surroundings are free weeds. If you want to sit down for a rest, there are no suitable places for you to do that. I think those places with infrastructures are better. There are lawns for you to take a rest. And there are trees by routes for you to avoid shinning sun. This place [the wilderness one] is for purely cycling, no places for rest. I think it is not good"* (SZ12P). Besides, people enjoyed the exploited environment due to the sense of safety. With human interventions on the environment, people felt secured during the trips. In contrast, people felt scared in wilderness routes. Additionally, people showed preference to exploited greenways with other people playing around because the participants regarded places with certain amount of people as sense of harmony, kind of representative of collectivism: *"The wilderness routes looks a little bit remote. We prefer the left one because we are collective living animals. They are more people in that one, which looks harmony"* (GZ03P).

Few people showed preference to the greenways in wilderness because they liked the original nature and the advantages of wilderness for long-haul cycling as a challenge: *"The nature environment for this route [wilderness] is good. If you want to enjoy cycling on rural routes, it is this one better"* (HZ49P).

Visitors' choices of the exploited greenways illustrated people's preference on human-friendly natural environment. People felt comfortable with the revised environment to emphasize the importance of human-nature harmony. The differences between western and eastern ideologies towards nature were noted. The western culture appreciated the wilderness because they regarded it as nature, while the eastern culture regarded the exploited greenway as natural only if it contains the natural elements, such as trees, water and plants. Human is an inseparable part of the good environment.

### 6.3.3 Transportation on greenways: Experience-based choices

Since greenways are networks close to home, there are different choices of transports for people to arrive at the greenways. The preferences on transportations show people's interacting patterns with surroundings over the trips.

Visitors showed preference of cycling to and on greenways. Evidently, cycling was exercise for physical health. Meanwhile, cycling itself was an enjoyable process. People could appreciate and explore the surroundings with slow-paced cycling tour: *"If time and health available, I prefer to cycle out. Because with cycling, you can concern the people and things around you. When you cycle there, you can stop to talk to the local people and to feel their life. It is not available to do so by flights, which can only take you from one place to another. Once you arrived, you arrived at your destinations. There are no chance for you to have close interactions with them"* (SZ16P). Besides, visitors could enjoy better traffic by cycling because it causes less traffic jams and is not limited to the traffic congestion. With increasing interest in cycling and available facilities, people may change their transport patterns in daily life, which may further relieve the traffic pressure. Furthermore, cycling is eco-friendly because it does not produce the carbon emissions, which is the main source of climate change.

Some visitors preferred cars because of the convenience in arriving the destinations. Compared to cycling, which is an eco-friendly enjoyment, cars are only options for transporting and commuting, particularly in condition of no available public transports: *"If there are too many people, certainly, the cars or buses could be better"* (GZ06O).

It can be seen that the transportation preferences are experience-based choices. People tend to select transports that promote their whole experience on greenways. Notably, eco-friendly emerged in transportation considerations over the process.

The construction of travel preferences reflects visitors' conceptualization of their relationships with the surrounding environment. In other words, it is the conceptualization of people's concerns on social development. The preferences on both types of visits for different achievements illustrate the human-need driven selections in trips. The greenway experience, though appreciated, could not replace the mass tourism because it mainly provided ideological and emotional feedback to visitors. The exotic experience and cultural learning that mass tourism provides are also important for people. Visitors' preference on exploited greenways shows their tendency to enjoy the human-friendly environment. They selected transports that supported and favored their experience. Therefore, people regarded their needs the most important thing in travels. This human-friendly travel preference implies an anthropocentric

view in social development. The only deviant is that cycling on greenways was preferred as eco-friendly travel, as well as eco-friendly transportation.

#### **6.4 Self-development: Envisions for new life**

When people enjoyed greenway experience, they concerned themselves and figured out the potential for self-development through meaning making and reflections on the experience. Self-development is the conceptualization of self-concern over greenway trips. Different from the travel preferences based on overall experience, the self-development tended to have relations with experience details so that the experience decay has influences on it. Differences between on-site and follow-up self-concept developments could then be identified. Figure 6-12 summarized the subthemes, categories and key points for self-development of visitors, including the visitors' self-identity, cognition changes on site and corresponding behavioral change intentions, and cognition changes after trips.

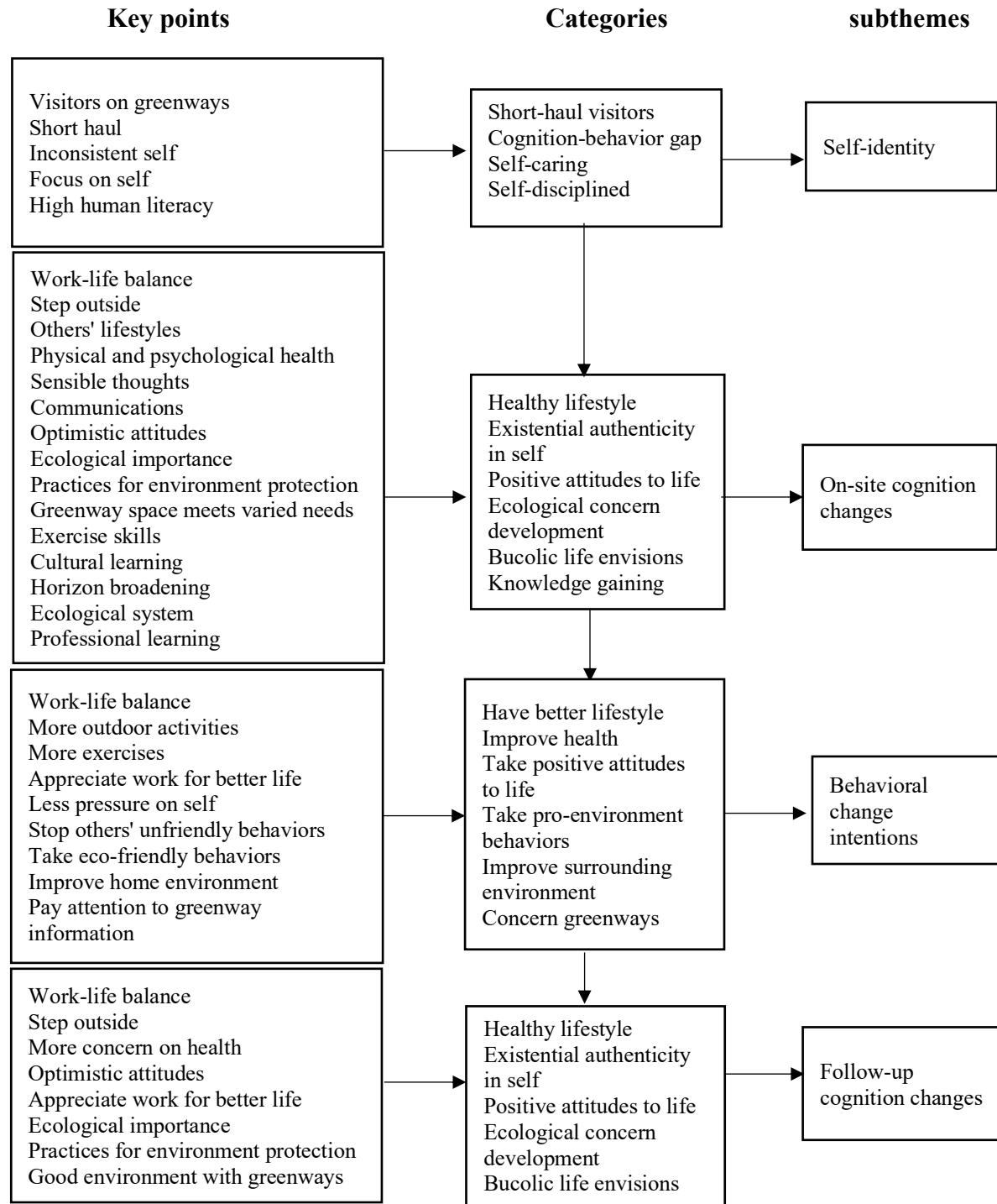


Figure 6-12. Key points, categories and subthemes for self-development (Source: author)

#### 6.4.1 Self-identity: Justification for self

Based on the screening questions during data collection, participants in this study regarded themselves as long-haul or short-haul visitors on greenways. They took the whole or most of the day stay for weekend or holiday relax: *“This is kind of short tour. It is just I am free, so I came here for a trip”* (GZ200). They are sport lovers or leisure seekers.

Visitors showed inconsistent self, thus resulted in the cognition-behavior gaps. They

liked greenways because of the natural design without motor vehicles and modern bricks. However, they selected the exploited greenways as preferred places for travels. Some visitors previously mentioned the contribution of tourism to climate change, while they avoided to mention this in talking about their intentions to travel: *“There are no rubbishes on greenways. We cared about these things. We ourselves sometimes would take away those rubbishes if we found some around us. Indeed, China has a big population. If everybody did such a little thing, the environment could naturally be good. But it is really a too small thing”* (GZ040).

Meanwhile, people tended to admit their focuses on self, which implied that the self-caring is a common phenomenon in current society. People thought they can only concern and control themselves: *“I felt everyone just cared about themselves. Walk with themselves and play with themselves. No attentions paid to other people”* (GZ220). It is difficult for visitors to intervene in others’ behaviors, particularly for people with experience in the society: *“We never disturb others. People do not willing to respond to you. We avoid disturbing others”* (SZ390).

Visitors thought it was enough for themselves to be self-disciplined. Some people thought themselves with high human literacy, while not so positive towards others’ behaviors: *“I think I always have such kind of good habit to keep the environment clean. I never litter or spit. I think there is no difference between on greenways or at home. Once I have the habit, I keep it everywhere. But somebody else may feel significant differences. Maybe they did not care about the environment in daily life. But when they came here, they found the places very clean. They may not want to litter or spit anymore. This is a gradual process to change”* (GZ250). It is also kind of self-deny in responsibility but to rely on others’ changes for improvement.

Regarding self-identity, people tended to justify for themselves in terms of the cognition-behavioral gaps through ignoring or denying the responsibility. They were encouraged to be self-caring by the current society and got relatively high evaluations on self rather than others, which implicated the importance of self-concept development for promoting the social advancements.

#### **6.4.2 Cognition changes: Knowledge decay in learning**

Visitors showed learning from greenways trips. With on-site experience and further reflective observations, people reported self-cognition changes in various aspects both on-site and after trips. The experience decay was identified to have influences on the cognition changes.

##### ***On-site cognition changes: Well-rounded learning***



People found “healthy lifestyles” on greenways to improve life quality. Life was recognized as different from work. Visitors realized the importance to achieve work-life balance and spend more time with family members. Enjoying the comfortable feeling on greenways, visitors figured out the beautiful and broad outside world to be appreciated. They regarded it as necessary to step out to take more outdoor activities in future life. Through observing others, visitors also found different lifestyles and good habits from others and were motivated by greenways to change a consumptive lifestyle to a slow-pace healthy and natural lifestyle: *“I hope to have a slow pace life after the first visit, we should step out of the closed city center during the weekends to enjoy the fresh air and refresh our mind” (SZ130).*

Through self-immersed activities on greenways, people (re)constructed themselves and their relationships to the outside world underpinning the existential feelings, which further promoted the conceptualization of “existential authenticity in self”. Specifically, people achieved physical and psychological health with physical exercises and entertainment on greenways. Meanwhile, the self-immersed thinking and feeling helped individuals to calm down and figure out sensible thoughts regarding daily issues. Some people got theoretical thinking connected with practices, and some others had effective solutions for troubles in family and work: *“When I stayed here quietly, I felt relax and peaceful. Gradually when I calmed down myself and rethought about the problems, many solutions came to my mind. I got myself smooth in thinking” (HZ450).* As well, with interacting with, observing and educating others, people developed themselves in communication skills so as to improve their intimate relationships with others.

People (re)built up “positive attitudes to life” with optimistic emotions through observing the good environment and happy others during greenway trips. Visitors turned to be positive and sunny with the visits. They showed more confidence in self and presented to be more persistent with long-term exercises on greenways: *“I think to cycle on greenway for a long distance could improve my patience and persistence. Actually, it is exhausted to cycle so long. Not everybody could make it. But we can and we insist to touch our goals” (GZ110).*

Since nature appreciation was a very important activity and a significant meaning made on greenways, people got their “ecological concern” developed over the process. For one thing, visitors identified the ecological importance and appreciated the human-nature harmony. For instance, they realized that good environment like clean water is important for human use. It implicated the improvement of environmental concern on greenway trips: *“I think we should respect the nature after the trip. This is the most direct feeling. People here could understand the importance of nature and achieve the harmony between human and nature gradually”*

(GZ07O). For another thing, there are visitors who had knowledge and cognition to protect environment, but they did not know how to take protective practices in daily life. They learnt the practices for environmental protection during greenway experience, such as avoiding unfriendly behaviors or stopping others' unfriendly behaviors and taking cycling to replace driving. People got improvements in environmental protection in their daily life.

People found greenways good places to meet various needs of people in urban areas. They appreciated the human involvements on greenways and identified the human-nature harmony. Individuals were happy, relaxed and friendly to enjoy the nature after work. Greenways constructed a "bucolic life envision" for the public to enjoy natural experience in urban regions. People took photos to record the dreaming life and looked forward to the social development towards such kind of bucolic life: *"I think I have changed my mind regarding the designers. They are really considerable. It is not a casual project. They have taken many problems into consideration to construct a human-friendly environment, such as the service stations and the pet toilets. It will make our life better and we can learn to protect the environment"* (GZ26O).

In addition, "knowledge gaining" was important for people to enjoy greenway trips. Through cultural exploration and appreciation of the artificial environment, people achieved cultural learning like the local customs. Besides, visitors got their horizons broadened with new knowledge about others and the world. Sometimes, people gained knowledge about ecological system in nature and improved their exercise skills like cycling. Professional learning is also possible for greenway visitors. For instance, participant HZ43 appreciated the greenways from an artistic view because he was majored in architecture. Greenway trip was a chance for him to explore the different styles of buildings in Hangzhou.

### ***Follow-up cognition changes: Envisions for new life***

The on-site conceptualization of self could be extended to daily life after trips. However, it is not a full extension due to the experience decay. Table 6-3 concluded the differences between on-site and follow-up cognition changes.

The most notable difference is the knowledge decay of visitors. The knowledge gaining including cultural learning, horizon broadening, knowledge of ecological system, exercise skills and professional learning were not emphasized during the post-trip interviews. The failure of knowledge extension is partly caused by the information forgetting curves in human, such as the cultural learning and nature knowledge. However, it is also possible that people already got the learning in skills or sight views incorporated into their inner minds but without

pointing out that afterwards. Nonetheless, knowledge gaining is not directly linked to the afterwards cognition changes of greenway visitors.

The second difference refers to the decay in constructions of healthy lifestyles. Although people still concerned to have better lifestyles with work-life balance and more outdoor activities: *"I just felt like once it comes to the weekend, I am looking forward to going somewhere or planning the routes. Because the daily life is boring without changes. If we have chances to change during the weekends, we are willing to do so"* (SZ16P). Others' lifestyles were not mentioned in self cognitions after the trips.

The third difference is the decay of existential authenticity in self. Apart from concern on health, people did not mention the sensible thoughts and communication skills with others. Because people returned to their routine life after trips. Without self-immersed activities and existential feelings, the peace in heart for sensible thoughts and the communication desire for close relationships with others were offset by daily chores. Only the concern on health remained over time: *"I felt like to keep healthy is very important. Because I felt like more confident with exercises, Definitely, I would have more concern on health"* (SZ18P).

The last difference is not a decay rather an increase in positive attitudes to life. Apart from the optimistic attitudes, people were encouraged to work harder for better life after greenway trips. This may because when people returned to their daily life, work became the key tone. Greenway trips meant the promising life for them to achieve through hard working: *"What I want to do after greenway trips, I just want to make more money and take more work. Previously, I thought myself lazy. Now, I think I became hard working"* (GZ06P).

The both rounds interviews revealed similar cognition changes in ecological concern development and the construction of bucolic life envisions through visits on greenways. Visitors showed improved concerns towards ecological importance and practices for environmental protection. For instance, people realized that sanitation was only one aspect of the environment protection: *"I did not litter to keep the place clean. But it is a general and minor thing"* (GZ22P). Meanwhile, living with greenways became a dreaming bucolic life for the public after trips to inspire their promising attitudes towards future life: *"As our previous president Deng said, to cross the river by touching the stones, greenway development is a gradual process, once succeed in one city and then to implement it in other places"* (GZ09P).

Obviously, visitors tended to show more cognition changes in life envisions after trips. Through visits on greenways, people constructed bucolic life envisions and positive attitudes to life. While recognizing the vital role of good environment to realize their dreaming life envisions, people understood the ecological importance and intended to take practices in

environmental protection. In short, people got self-development in terms of healthy self with better lifestyles and better living environment.

Table 6-3. Comparisons of on-site and follow-up cognition changes (Source: author)

On-site		Follow-up	
<b>Healthy lifestyle</b>	Work-life balance Step outside Others' lifestyles	Work-life balance Step outside	<b>Healthy lifestyle</b>
<b>Existential authenticity in self</b>	Physical and psychological health Sensible thoughts Communication	More concern on health	<b>Existential authenticity in self</b>
<b>Positive attitudes to life</b>	Optimistic attitudes	Optimistic attitudes Appreciate work for better life	<b>Positive attitudes to life</b>
<b>Ecological concern development</b>	Ecological importance Practices for environment protection	Ecological importance Practices for environment protection	<b>Ecological concern development</b>
<b>Bucolic life envisions</b>	Greenway space meets varied needs	Good environment with greenways	<b>Bucolic life envisions</b>
<b>Knowledge gaining</b>	Cultural learning Horizon broadening Ecological system Exercise skills Professional learning	-	-

#### 6.4.3 Behavioral change intentions: To build self and living environment

Six main behavioral change intentions were identified in on-site interviews. In correspondence to the cognition changes, the self-concept development of visitors led to behavioral change intentions to improve themselves and their living environment.

The first thing that people intended to make changes is to have better lifestyles, including achieving work-life balance with slow-pace life after work. Besides, visitors reported to take more outdoor activities afterwards: *“I will come out more frequently in future, because it is good and comfortable to enjoy the outdoor environment”* (ZH33O). Through those lifestyle changes, people expected to enjoy healthier life.

Secondly, visitors stated that they would improve physical health through taking more exercises because they found the importance of keeping health to enjoy life: *“I want to have a try to cycle further next time. It is just to improve step by step for health”* (HZ48O).

The third change for people to enact is to take positive attitudes to life. On one hand, people realized the importance of work-life balance and intended to improve working efficiency for leisure time. On the other hand, visitors tended to have less pressure on self after greenway trips: *“For habit changes in daily life, I will not have too much pressure on self. We need to relax ourselves sometimes”* (GZ05O).

Besides, with ecological concern improved on greenway trips, visitors intended to take

pro-environment behaviors in daily life, including eco-friendly behaviors by themselves, such as selecting public transports in travels and saving habits in daily life. Besides, people achieved intentions to stop others' unfriendly behaviors: *"Maybe when I see some unfriendly behaviors of others, if I know it is not good. Maybe I will stop them or do something like that"* (HZ41O).

In addition, visitors showed intentions to improve their surrounding environment, such as their home environment to extend the good feeling on greenways to daily life: *"When you found successful cases in other places. You yourself will have confidence. Then when you go back to your residential environment and see something bad, maybe you will want to improve it. You will want to make efforts to improve it"* (GZ03O). Some visitors even intended to move to places with better environment: *"I want to move to a bigger house and to make my house more beautiful with more green plants. There is such kind of idea"* (GZ06O).

The last but not least, people showed willingness to concern greenway development afterwards. They intended to pay more attention to greenway information with recognizing the importance of the space for urban life: *"Certainly, when we find information on greenways, we care more about it. Because we have already got some understandings about it, we will keep an eye on its development"* (ZH30O).

Whether those behavioral change intentions had been put into practices, which could be the most important, is examined in the next Chapter.

## **6.5 Value-belief-norm exchanges on greenways: Improved environmental awareness**

The travel preferences and self-development conceptualized visitors' social-concern and self-concern, both of which implicated environmental concern improvement. Eco-friendly was considered in travel preferences on transport selections. Ecological concern got developed in self-concept. However, those changes are both human experience and human needs driven. Whether people had environmental awareness improved based on the environment-concern should be further explored. Photo elicitation technique was used to examine the changes in visitors' environmental values, beliefs and norms based on on-site and follow-up interviews to psychologically reveal their environmental awareness changes.

### **6.5.1 Value identifications: Varied values**

Value for behaviors is a complex system. Value identification was achieved through three steps. First is to ask the participants their ranks regarding themselves ("ego"), helping others ("alt") and environmental protection ("bio") in interviews. The instant responses implied visitors' unconscious values. Second is to show the Group 2 photos to participants for their rankings based on preferences. Because the three photos have underlying meanings of

themselves, helping others and natural environment respectively. The rankings implicate the preferred values of people. Third is to inform the participants the meanings of the photos and then ask them to rank the photos again based on the importance. This is to elicit the conscious values of visitors.

Figure 6-13 shows the results for the three rounds of value identification and the reasons provided by participants.

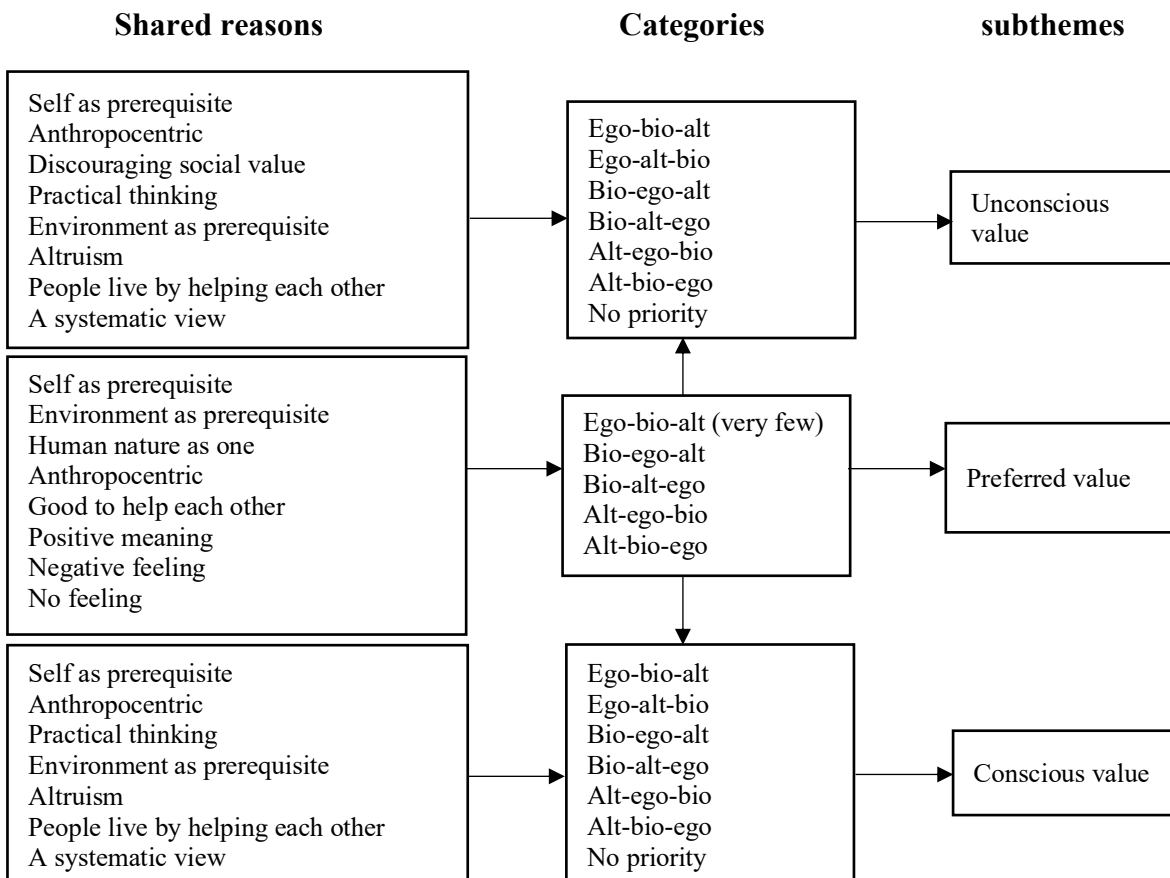


Figure 6-13. Shared reasons, categories and subthemes for value identification (Source: author)

As can be seen from the Figure 6-13, the identifications of three layers of values reported similar categories. Different people held different values. For unconscious and conscious values, people shared similar reasons for different rankings. For those who held egoism value (ego-bio-alt and ego-alt-bio), self is the prerequisite to concern others or the environment. Even though people showed concern on the outside other than self, it was because the outside had benefits to self. Such an anthropocentric value took an important role in human's unconscious and conscious world. Besides, people learnt from the practices that to care about themselves is the first law to live in the current society. Moreover, it seemed that the environmental protection is too broad and too far away from their daily life to take actions: *"Certainly, we should take care of ourselves first. I think environmental protection is important. But how can I make it in daily life"* (ZH330).

Regarding people who are eco-centric (bio-ego-alt and bio-alt-ego), environment is the basis for people and other creatures to live. If the environment is destroyed, people could not survive and enjoy good life: *"The environment pertains to the future and the next generation. Once destroyed, it is difficult to recover"* (SZ18O). Students tended to be more of eco-centric and put themselves as the last in rankings.

As for the visitors who took altruistic values (alt-ego-bio and alt-bio-ego), they held an altruism attitudes to life because they felt happy and comfortable to help others. In their views, people should live by helping each other: *"We live in the society through interacting with different people. Hence, we need to help each other. I feel happy to help others"* (SZ15P). Some visitors learnt to help each other through past experience of receiving help from others. Some others provided helps because they hoped to have help from others in future life.

In addition, some participants showed no priorities in ranking the three different aspects. Because they took a systematic view regarding self, others and the biosphere. The three different elements depend on each other to construct the whole. People cannot live well without supports from any part of them: *"I think all of them are the whole. They cannot be separated. It is just like to compare the importance between father and mother. You cannot make it. They are the whole"* (GZ24P).

Notably, there is a minor difference identified between the reasoning for egoism value at the unconscious and conscious levels. People unconsciously tended to compromise to social values or norms. For instance, people may prioritize themselves due to the discouraging social norms that disfavored eco-centric and altruistic values: *"Of course, self is more important. The current society is too utilitarian. Real helps, how to say, sometimes seem to be unreasonable"* (SZ18O). It is kind of unconsciously thinking. Whilst the conscious thinking did not emphasize the compromising to social values. It means people know what is right, but they tend to compromise owing to the social norms.

The categories for preferred values are a little bit different in that very few people prioritized self because people had more negative feelings towards the photo with only self, such as loneliness, arrogant, monotonous and uncomfortable: *"This one [egoism] is too lonely and a little bit arrogant, anyway, I do not like it"* (ZH36O). And it seemed that there was no ambiguity in ranking the photos according to preference because it is easy for people to purely select what they like. In contrast, it is difficult to rank them regarding the importance because they are interwoven in the complex reality and involve different interests. It means the reality detracts people from their preferred values. From a preferred perspective, people hope to have human-nature harmony. So, the photos of ecosystem and altruism were preferred more by

visitors: “I like this one [altruism]. As for me, it represents more of the harmony between human and nature” (SZ170).

### 6.5.2 Belief identification: Limited connections

Belief in environment is the relationships that people constructed between themselves and the environment. It includes three main aspects. The belief in ecological worldview refers the attitudes that people hold towards the ecological environment. The belief in behaviors means the connections of behaviors to environmental impacts. The belief in control means that whether the participants believe the environmental impacts could be controlled or solved.

Group 3 photos, which implicate the climate change were used to elicit the beliefs of visitors. Before the identification of beliefs, knowledge of climate change was examined by asking participants’ understanding of the photos. Notably, most participants showed clear knowledge of the climate change when watching the photos. The others seemed to know little about the environmental issues. It means most people have concerns on environment.

Subsequently, the beliefs regarding environment were explored based on the photo-elicitation and interviews. Figure 6-14 illustrates the key points and categories for the three subthemes of environmental beliefs.

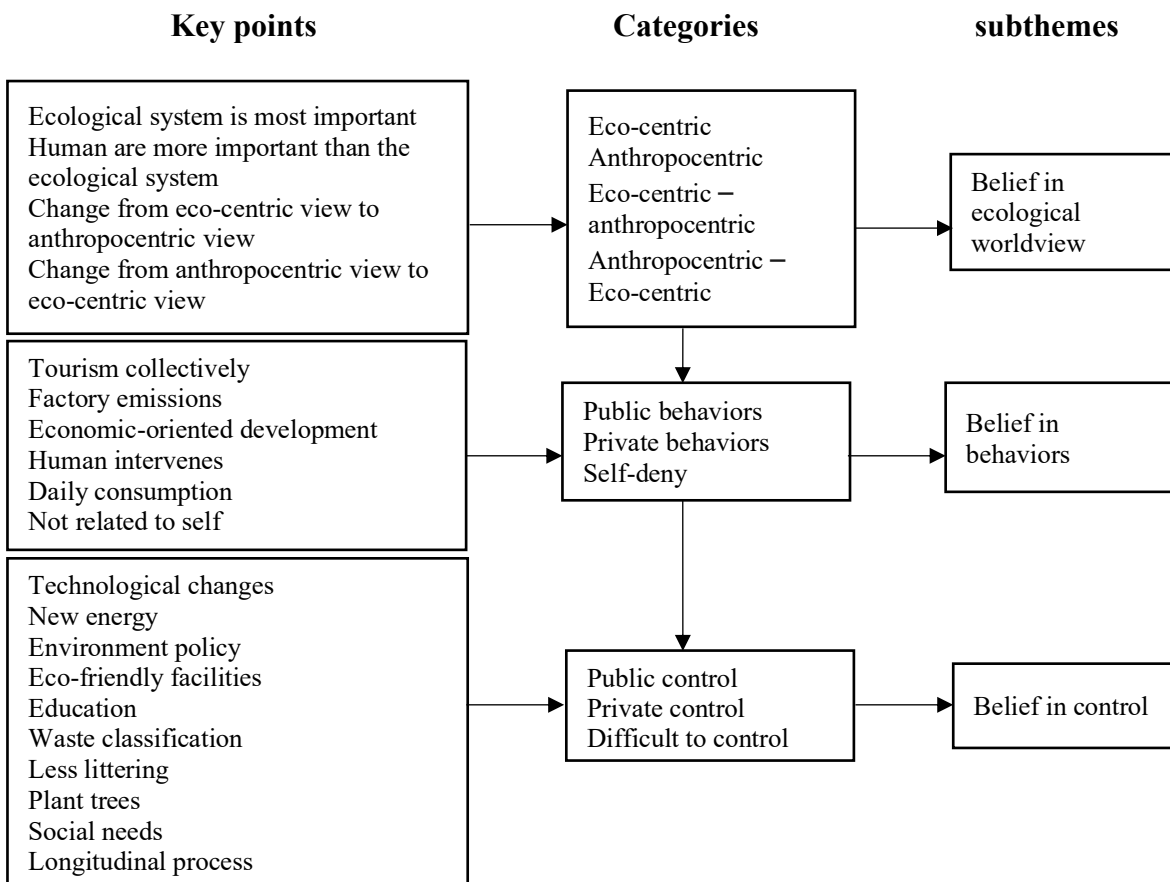


Figure 6-14. Key points, categories and subthemes for belief identification (Source: author)



Belief in ecological worldview was actually recognized based on the value identifications and questions about climate changes. Four different beliefs in ecological worldview were identified. The eco-centric view regarded ecological system as the most important in daily life. They appreciated the environment itself and regarded it as important as humankind. In contrast, the anthropocentric view took human the top priority instead. Human has the dominant influences and power in social development in relative to the ecological system. Certainly, there are also people lying in the places between the two views. They may undergo changes from the eco-centric view to the anthropocentric one, or verse visa. For instance, the participant WZ57 as a first-time visitor held the anthropocentric view during the whole on-site value identification, as well as the follow-up interview at the unconscious level. However, he expressed an eco-centric view at the conscious level of the follow-up interview.

*I think help others is the most important. Because I feel great to help others (WZ57P-unconscious ranking).*

*From these photos, the first one is environmental protection, and then help others and self. Because I feel like environmental protection is very important. It seems that to protect environment could avoid some animals to extinct. It is good (WZ57P-conscious ranking).*

The beliefs in behaviors were categorized into three groups. One is the belief that public behaviors should be responsible for the climate changes and environmental issues. The factory emissions, economic-oriented development, human interventions in the environment and tourism collectively contributed to the global environmental crisis. Some people admitted their contributions to climate change, while they were only aware of limited behaviors, such as daily consumption of water and other resources. Some participants tended to deny their behavioral impacts on the environment: *“These [climate changes] are not caused by us. There are many reasons for making these issues, but not me” (GZ190).*

In corresponding with the beliefs in behaviors, visitors showed three divides regarding the beliefs in control of the environmental issues. Most people tended to believe in the public's efforts for improving environmental degradation. Strategies such as technological changes, discovery of new energies as alternatives, environmental policy, eco-friendly facilities and education to improve the environmental awareness were considered to be efficient in solving environmental problems in future. Some people suggested private control through daily habits such as waste classification, less littering and vegetation improvement. In addition, some visitors thought it was difficult to improve the environment because humans should have their needs met, which definitely induced environmental impacts. It is a difficult and longitudinal process to change: *“It may be possible to improve the environment but if you said to improve*

or change immediately, it is impossible. Because it is a long process for the problem coming into being like this, certainly we could only change it gradually” (GZ240).

Overall, people recognized limited connections between their behaviors and environmental issues, even less with climate changes. Because they thought environmental issues particular climate changes were far away from their life: “*Maybe the forest degradation is kind of related to our life because we used the timber to build our houses. But there are no relationships between us and the glacier melting and desertification*” (SZ390).

### 6.5.3 Norm identification: Passive obligation

Norm is the obligation that people have for environment protection. Both Group 3 and Group 4 photos were used for elicitation of participant’s norms regarding environment protection in daily life and on greenways respectively. Interviews were accompanied for the norm identification.

On the basis of the pro-environmental obligation in daily life and on greenways identified respectively, the comparison was made to tell the differences. It was found that the sense of obligation improved on greenways. Apart from the examination of self-obligation, the dominant responsible parties were explored from the visitors’ views. Figure 6-15 concludes the key points and categories for the three subthemes of norm identification.

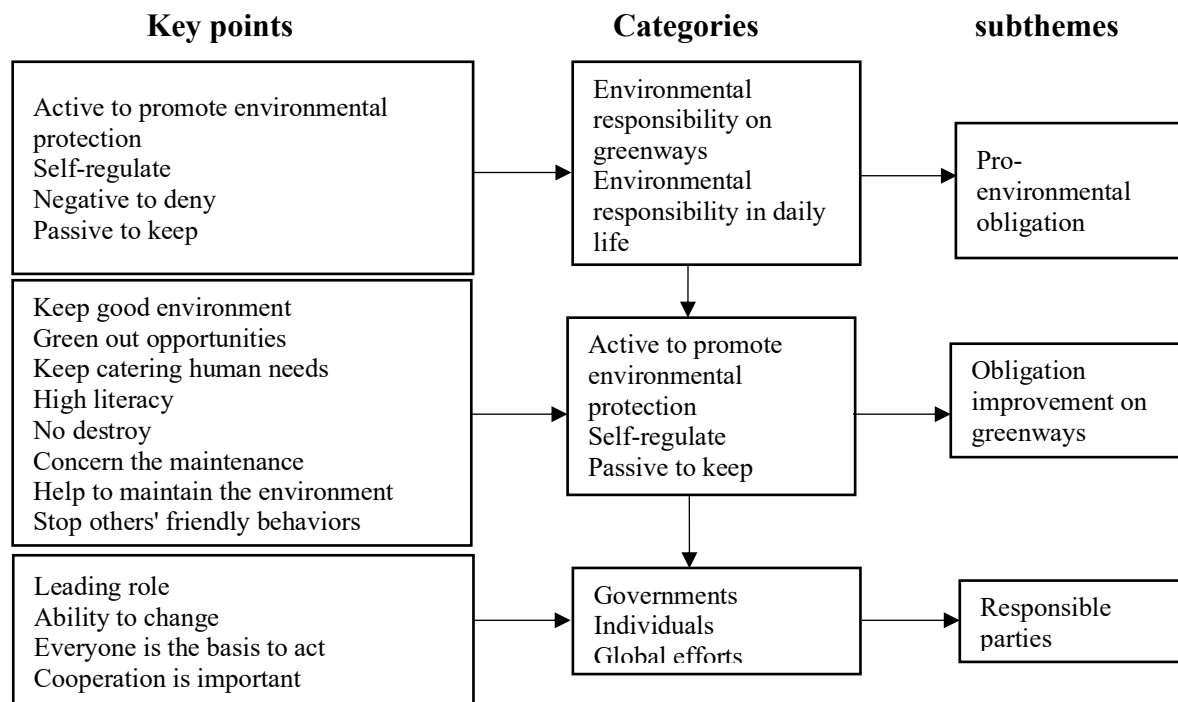


Figure 6-15. Key points, categories and subthemes for norm identification (Source: author)

It was found that visitors shared the same four levels of obligations on greenways and in daily life. But they are different in details. For instance, people tended to be responsible for stopping others’ unfriendly behaviors on greenways, while in daily life, people were active to

promote environment protection through children education or planting trees. It is not common for people to disturb or intervene with strangers in daily life. Self-regulation was regarded as important in both daily life and greenway visits. The former context was accompanied with obligation to reduce resource waste, such as water and air conditioner to protect. On greenways, people thought it was important to regulate self-behaviors to keep the basic human literacy. In both contexts, there were people showing negative attitudes to deny their obligations because they were not the sole responsible party to promote environmental protection. People suspected their individual capacities to change the whole. They had limited power to make it: *"I feel like what we can do are only some minor things. We have no purposive activities to attend for environmental protection"* (WZ50O). It is worth noting that people showed more passive obligations to keep the good environment on greenways. People enjoyed good environment and thereby felt obligated to protect the environment for human's sake. By contrast, in daily life, the environment was far away from their key concerns.

The obligations reported by the participants implied improved responsibilities on greenways. To specify the exact differences between obligations in daily life and on greenways, participants were asked to grade the importance of environmental protection in daily life and on greenways respectively between 1 (the least important) and 10 (the most important). Although it is kind of casual scores, it could to some extent imply the improvement of environmental protection obligation between the two contexts. The results showed that apart from the 18 interviews reported same scores and 12 interviews were not available to report the scores, the rest 66 interviews showed higher scores on greenways, which proved the improvement of obligations on greenways. According to the interviews, the improvement reflected in three main aspects. The first one is that people showed more responsibilities in active promotion of environment protection, such as to concern the official maintenance of the environment and to sustain the environment by themselves. People felt more obligated to pick up rubbishes on greenways and stop others on friendly behaviors: *"I think we should do what we can. If I found some rubbishes on greenways, like the plastics and cans that were unresolvable, I picked it up. Or it looked not so good"* (WZ57O). The second aspect is to regulate self-behaviors to ensure no harm to the environment. People thought it was basic literacy to regulate themselves in public space. The most significant improvement was reflected on the passive obligation to keep the good environment as it was. Because people hoped the environment could cater human's needs over time. Moreover, the greenways provided them the chances to be eco-friendly, such as taking pro-environmental transportations like cycling.

Regarding the responsibility parties, most people took passive attitudes to ascribe the

responsibility to the government rather than themselves. Because they denied their own capabilities to change the environment as a whole, while the governments had the power and abilities to control and change. Governments took the leading role in social development, as well as in environmental protection. Although some people thought individual efforts were the basis for changes, cooperation between individual and government was necessary to achieve the global goal for environment protection: *"I think we should work together. All are important. First of all, we should notice the problem. Then we provided suggestions to the governments. They accepted the advices and began to improve the environment. All of us work together and step into beautiful future"* (HZ60).

Basically, visitors realized their obligations for environmental protection but more in a passive way, which were improved on greenways. People relied on governments' efforts to change the environmental problems considering individuals' limited abilities.

#### **6.5.4 Value-belief-norm changes: A recursive process to approach environmentalism**

The identifications of visitors' values, beliefs and norms during both on-site and follow-up interviews illustrated people's varied values, limited connections and passive obligations. Most importantly, this study intends to identify the changes of these values, beliefs and norms over greenway experience. Besides the comparison between on-site and follow-up interviews to show the changes over one specific experience, it is also important and necessary to interpret the discrepancies between the first-time visitors and repeated visitors to show the longitudinal effects of greenway experience on visitors' values, beliefs and norms. Therefore, four sub-groups were obtained for comprehensive understanding of the changes, including interviews for the on-site first-time visitors (OF); the post-trip first-time visitors (PF); the on-site repeated visitors (OR); and the post-trip repeated visitors (PR) representing different time durations regarding effects of greenway experience.

All the responses in the photo-elicitation based interviews regarding Group 2-4 photos are concluded in an excel sheet (e.g. Appendix XI). Table 6-4 summarized the overall and segmented visitors' value-belief-norm responses. The distributions of responses for every value-belief-norm category over the four groups could imply the changes of environmental values, beliefs and norms over time with greenway experience. For instance, there are 2 respondents in the OF group took an eco-centric value at the unconscious level. Half of respondents (11) held an egoistic value therein. By contrast, the eco-centric proposition in the PF group increased to half with the egoistic value dropped to 1 out of 11. It means that some first-time visitors changed from egoistic value to eco-centric value after the greenway trips.

Table 6-4. Visitors' value-belief-norm distributions in groups (Source: author)

Value-belief-norms	Categories	OF (21)	PF (11)	OR (41)	PR (23)	All (96)
<b>Unconscious values</b>	Eco-centric	2	5	9	8	24
	Altruistic	8	5	6	3	22
	Egoistic	11	1	18	8	38
	No priority	0	0	8	4	12
<b>Preferred values</b>	Eco-centric	4	6	9	10	29
	Altruistic	17	5	28	10	60
	Egoistic	0	0	4	0	4
	No priority	0	0	0	3	3
<b>Conscious values</b>	Eco-centric	9	6	21	13	49
	Altruistic	12	5	7	6	30
	Egoistic	0	0	6	2	8
	No priority	0	0	7	2	9
<b>Belief in ecological worldview</b>	Anthropocentric	11	4	11	9	35
	Eco-centric	2	4	7	8	21
	Anthropo-eco	8	2	21	6	37
	Eco-anthropo	0	1	2	0	3
<b>Belief in outcomes of general behaviors</b>	Yes	9	6	28	17	60
	Little	8	4	13	6	31
	No	4	1	0	0	5
<b>Belief in outcomes of greenway travels</b>	Yes	2	1	11	4	18
	Little	4	1	0	0	5
	No	15	9	30	19	73
<b>Belief in control</b>	Yes	17	10	32	18	77
	Difficult	4	0	9	4	17
	No	0	1	0	1	2
<b>Obligation in daily life</b>	Yes	13	9	26	17	65
	Little	8	2	15	6	31
	No	0	0	0	0	0
<b>Obligation on greenways</b>	Yes	21	11	37	20	89
	Little	0	0	4	3	7
	No	0	0	0	0	0
<b>Improved responsibility on greenways</b>	Yes	17	8	35	16	76
	Little	4	3	6	5	18
	No	0	0	0	2	2

***Values: Recursive changes between conscious and unconscious values***

Herein lies many interesting findings regarding greenway visitors' values and the influences of greenway trips over time. Overall, visitors held a more egoistic value at the unconsciousness level (38), while more eco-centric value at the conscious level (49). Same as the previous discussion on preferred value, people showed less preference on egoistic value but more on the altruistic values. It implied that people preferred collective life. Moreover, the differences among the three layers of values demonstrated the process of changes from conscious value to preferred value and finally the unconscious value towards eco-centric value.

Differences observed among the four segmented groups could provide implications for

changes of the environmental values over time based on greenway experience. For instance, repeated visitors with less changes in values (especially at the unconscious level) between on-site (9 out of 41) and follow-up interviews (8 out of 23) imply that the influences of greenway experience on values could be consolidated with repeated visits, which implied the glass ceiling of same environment's impacts on values. Although the first-time visit had evident impacts on the value changes regarding eco-centric (from 2 out of 21 to 5 out of 11), the changes may fade and decrease in daily life because only 9 out of 41 repeated visitors reported eco-centric values on greenways. It demonstrated a recursive process to approach the eco-centric value over repeated visits. Furthermore, changes easily happened at the conscious level, and then preferred level and unconscious level changes, which finally resulted in the actual pro-environmental behavioral changes in daily life.

### ***Beliefs: Visible changes towards practical evaluations***

Greenway trips had visible impacts on visitors' beliefs in ecological worldview. For one thing, the distributions in eco-centric belief increased for both first-time and repeated visitors after greenway trips. The responses over the four groups also showed that the changes decayed in daily life but were strengthened over repeated visits. For another thing, there were many visitors changing from anthropocentric to eco-centric views on greenways for both first-time (8) and repeated visitors (21). Although the effects declined in daily life, the repeated visits can strengthen the changes. Moreover, there are more visitors experiencing changes from anthropocentric to eco-centric views (37) based on greenway experience than the transformations from eco-centric to anthropocentric views (3), which implicated the positive influences of greenway experience on eco-centric view.

Greenway experience also had positive impacts on people's belief in outcomes of general behaviors with increasing accounts for "yes" responses across the four groups (9 out of 21, 6 out of 11, 28 out of 41, and 17 out of 23). Compared to values and ecological view, the belief in general behaviors showed no or less decay in daily life. Overall, less responses (18) reported belief in outcomes of greenway travels than general behaviors (60), which means greenway trips were regarded as green activities. Simultaneously, repeated visitors showed increased beliefs in greenways' influences on environment, which implied improved awareness of environment issues over repeated visits.

People showed high beliefs in control of the consequences with overall response of 77. First-time visitors showed higher beliefs in possibilities to improve (17 and 10) than repeated visitors (32 and 18), which implied the positive influences of greenway trips on first-time

visitors. However, with repeated visits, the awareness of environment improved to challenge the evaluations for control of environmental degradation, which turned to be more stable.

### ***Norms: Decayed gap with familiarity***

Most responses showed increased pro-environmental obligations in daily life after trips compared to on-site interviews for both first-time and repeated visitors. The changes showed growing responsibility in daily life after greenway trips. But the changes decayed in daily life over time. The reduced gap between on-site and follow-up interviews implied that repeated visitors got used to the greenway environment and had less feeling of difference between greenways and daily life.

Overall, more visitors (89) perceived responsibility on greenway than that in daily life (76). Particularly for first-time visitors, who appreciated the greenway experience and thus all showed responsibility for environmental protection. However, there was a decline in the same responses for repeated visitors on-site (37 out of 41) and post-trip (20 out of 23). It means visitors got used to the greenway environment and less appreciated the contrasting differences between greenways and daily life. Meanwhile the responses over the four groups demonstrated the high pro-environmental responsibility on greenways, particularly at the very beginning.

The decay of obligation gap between greenways and daily life over time could also be observed through the perceived improved responsibility on greenways across the four groups. Visitors showed the least improvement after repeated visits. However, overall, the majority respondents (76) reported improved obligations on greenways compared to in daily life.

## **6.6 Lifestyle envisions for the ideal self and social relations**

On basis of the greenway experience, visitors had reflective observations on social-concern, self-concern and environmental concern, which were further conceptualized accordingly into travel preferences, self-development and pro-environmental value-belief-norms. Since travel preferences as relationships of self to outside world are still kind of constructions of lifestyles, the lifestyle envisions, and environmental views are the two main constructs based on greenway visits. Visitors constructed their dreaming life with greenways.

### ***Physical and psychological health***

The beautiful environment and enjoyable experience inspired visitors to enjoy a healthy life: *“I think what greenways bring to us is health. It is certainly what I pursue, right? Anyway, only if you have health, can you look forward to your future and can you live a better life. Otherwise, if you are in poor health, no mention of other things” (SZ18P)*. The health included physical health through exercises and psychological health through interactions with others and

the outside world to keep positive attitudes to life: *“I think we can relax and at the same time take exercises during the weekends, which is good life for me”* (GZ11P).

### ***Bucolic living environment***

For urban visitors, greenways helped people to achieve a bucolic life. For one thing, people were encouraged to step outside to appreciate the green world and get close to nature, which may bring individuals quiet and poetic feelings. People could enjoy the human-nature harmony and good pace of life on greenways: *“It is natural, easy to connect with nature. The children in general like to get close to water, the same as our adults. It is very natural and harmony”* (SZ16O). For another thing, visitors appreciated the good environment on greenways so as to expect same good environment in daily life, including the green atmosphere and the fresh air which make people feel comfortable: *“I am thinking to move a big house so that we can make my home more beautiful with more green plants. I also want to make the surrounding environment at home better after I return home”* (GZ06P). Overall, People enjoy the result of consumption society but dislike the consumption atmosphere. They hope to combine the natural environment and modern life so as to enjoy the convenient economic opportunities and comfortable environment at the same time: *“Sure it is my dreaming life. Because the urban life is favored for its convenience, a modern fast and comfortable life. While the nature can give you a kind of healthy life. It provides sense of relax, not that depressive”* (GZ03O). With complementary spaces between city life and leisure on greenways, they found the opportunities to achieve such kind of bucolic living environment.

### ***Work-life balance***

Greenway experience helped people to envision a work-life balanced status. People realized the importance to have fun in life: *“Yes, it is what I dreamed. I think there should be more such kind of greenways in urban life. In that way, the public could have places to have fun after busy work. It is a fantastic thing to enjoy fresh air in such a good environment”* (SZ12P). Over the long-term depressive work, people need to take a break on greenways to enjoy the liminal space: *“So you do not need to be depressive for a long time. Sometime when you feel unmotivated, you can walk around to recharge yourself. It feels good”* (ZH37O). As well, it is also important for people to spend more time with their family members and friends out of time. When people enjoyed happiness with others on greenways, they cherished the moments and got improved possibilities to change: *“Yes, ideally, it is time for work from Monday to Friday, while during the weekends, we should play with our children in such kind of comfortable places”* (WZ54O).



### ***Slow tourism***

People enjoyed the slow-paced activities on greenways so as to envision a good pace of life, including in travel. People tended to have freedom in travel rather than to take the exhausted trips with tight schedules: *“I like greenway travel because I prefer freer trips with convenience. It is just a very leisure and very comfortable visit”* (GZ08P). Greenways not only improved the convenience in travels, but also provided slow tourism with comfortable and relax experience for visitors: *“I think this greenway provides us an alternative for travel. We have different physical activities here. When we come here, we just play and relax without too many consumptions. Compared to long trips requiring several days, people nearby could enjoy the trip within only one day”* (GZ24O).

To conclude, the lifestyles that people envisioned through greenway experience are actually the constructions of ideal self and relations to outside: *“I felt it [one photo on greenway] looked like a courtyard. There were many plants in the courtyard, which made me feel fresh. I imaged my future life also has such a courtyard. It is a sense of young. I think everyone has a courtyard like this in heart”* (SZ22P).

### **6.7 Anthropocentric environmental concern**

Although visitors showed strong environmental concern based on reflections, the environmental concern presented an evident anthropocentric feature, which means the concern on environment is driven by human needs rather than the appreciation of environment itself.

#### ***Preference on human-friendly environment***

The environment most people showed concern on is not the natural or original environment. Rather, it is the environment that has been developed or exploited by human. What the participants appreciate is the romantic or beautiful environment created with nature items, like flowers, water, and mountains rather than the nature per se. For instance, most visitors preferred the exploited greenways rather than the one in wilderness, even though they stated to appreciate the nature beauty of greenways. It seems contradictory, but it shows Chinese preference on human-friendly natural environment. What people like is the feeling of natural rather than nature itself. They felt better to the environment with human interventions rather than the original nature: *“I like this greenway [Group4-3] because there should be regular management for it, such as the plant pruning for both sides of the route, which makes the environment look better”* (GZ22P).

Besides, most people cared about the sanitation on greenways rather than the nature environment because they felt comfortable in clean environment. Moreover, people regarded

animals different from human. When the researcher showed them the photo of pet toilet (Group 4-1), they thought it was good design but suspected the possibility for pets to use it: *"I think the design is considerable, but it seems not so practical because the pets may not do it as you expected"* (HZ42O). All of those preferences or views showed an anthropocentric view towards environment.

### ***Environment concern to cater human needs***

People also showed an anthropocentric purpose in environmental concern. For instance, they intended to save water and do things good for future generations rather than the environment: *"I do what I can, like reuse water and saving electricity. Those things related to me or others, I will make it. Such as the stones on the routes which may get people fell down, I will move them away to bring convenience for others"* (GZ02P). To protect is for human's benefits rather than for the nature itself.

### ***Concern but deny the responsibility***

Although people showed concern on the environment, they tended to deny their responsibility or justify for their lack of actions on it. People thought the environmental problems were far from their daily life. Some visitors even held the view that human had no impacts on the environment. It is a natural process for environmental changes: *"Yes, environment is very important. But it is an autonomous system that cannot be changed or affected by our humankind"* (GZ09P). Meanwhile, there is a big gap between the concern and actual behaviors. Visitors had low scores regarding their environmental protection in daily life. For instance, participant WZ52 scored herself with 3 out of 10 in daily life, which means she had high concern on environment but little practices, indicating the cognition-behavior gap. The environment concern always gave way to routine needs in practical daily life.

Overall, people tend to have environmental concern, but more for human's preference and needs. Moreover, individuals tend to deny their responsibilities to take actions in improving environment.

## **6.8 Longitudinal process to environmental awareness changes**

The value-belief-norm identifications revealed the significant influences of greenway experience on visitors' pro-environmental values, beliefs and norms. However, the change in values, beliefs and norms is a longitudinal and recursive process. Figure 6-16 illustrates the process of longitudinal exchange process of visitors' pro-environmental values, beliefs and norms with the greenway experience.

Actually, it is easier for people to have their beliefs and norms changed than the values

except for the belief in ecological view, which was based on the conscious and unconscious values. Moreover, it is easier to have conscious value changes than the unconscious value, illustrated by the favored responses of eco-centric value at the conscious level. This may provide explanation to the long-standing attitude-behavior gap in pro-environmental behaviors. Changes in conscious value, as well as beliefs and norms does not guarantee the changes in unconscious value which plays the most important role in actual behaviors since the change route may stop or fade at any step of the process.

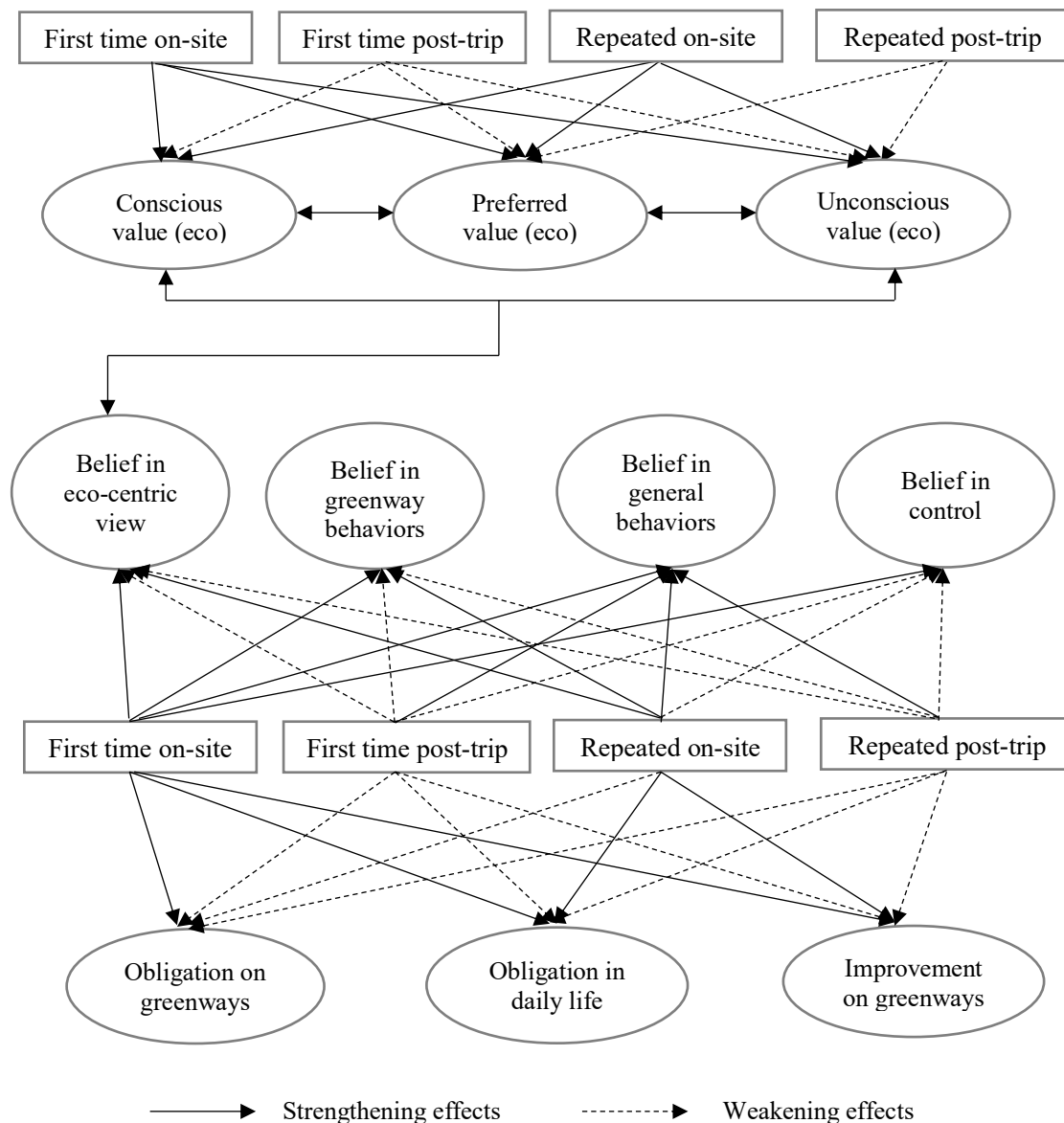


Figure 6-16. Value-belief-norm changes over greenway experience (Source: author)

### ***Recursive changing process***

As can be seen from Figure 6-16, visitors' value changes firstly began with the conscious value, which relates to the rational thinking. Then it could approach the changes in

belief of ecological worldview in two ways: risk avoidance through changing unconscious value directly and worldview transformation through changing preferred value to unconscious value. The difficulties for changes increased from conscious level to preferred level and finally unconscious level because the responses for eco-centric value at the three levels decreased accordingly (Table 6-4). Individuals may be experiencing different levels of value changes while interacting with greenways. Hence force, people may have gaps among the three different levels of values, which could be demonstrated by participant GZ19:

*[Without photos] Self is the most important. Firstly, you should take care of yourself. Then we should help others. The last one is environmental protection (GZ19O-unconscious value).*

*[Looking at photos without meaning informed] I like this one [Group 2-2] most. Because it is hiking, and the scenery is beautiful. Then is the first one with the green things. The last one I even cannot understand the meaning (GZ19O-preferred value).*

*[Looking at photos with meaning informed] This one [Group 2-1] is the most important. And then is to help others. Finally, to self. [Researcher: Why?] Because we should have good environment. Only if we have good environment can we have other things (GZ19O-conscious value).*

Greenway visitors' eco-centric values at three levels are changing in a recursive way, which was induced by the strengthening effects of on-site greenway experience and the weakening effects of daily life. Although the conscious value and the preferred value could be significantly influenced by both the first-time and repeated visits, the changes were weakened after people return home, thereby reducing the possibilities to transform them into unconscious values. Meanwhile, unconscious eco-centric value was also promoted by both first-time and repeated visits, but it was weakened to a larger extent after both first-time and repeated visits compared to the other two levels. Therefore, it is the most difficult to achieve the unconscious value changes towards eco-centric view. The differences between on-site and follow-up unconscious value could be illustrated by Participant WZ53, who showed the same rankings for preferred value (altruism) and conscious value (eco-centric) in both rounds:

*I think all of them are important, but we should do from self, and then to help others if they need help. Finally, to protect the environment (WZ53O-unconscious value).*

*Environmental protection should be the first one. Second is self and then to help others. Because without the first one, it is meaningless for the other two (WZ53P-unconscious value).*

Likewise, people also enjoyed recursive changes in their beliefs. The belief in eco-centric view was consistent to the unconscious value changes. Although there are no

differences between first-time post-trip and repeated post-trip interviews for belief in eco-centric view, there are significant changes in the responses of anthropocentric to eco-centric. Belief in greenway behaviors showed the same change trends because there were experience decay and appreciation decay of greenway environment after people return home. By contrast, the belief in general behavior showed a constant increase across four groups, which means once people realized the connections between their daily behaviors and the environmental issues, they kept that in mind. While for belief in control, it shows a reverse change. The first-time visits improved the confidence in improving environment significantly. However, with the experience decay after trips and the environmental awareness improved, people got their confidence declined accordingly.

With regards to the norms on greenways, people showed similar changes to the belief in control because the first-time visit impressed the visitors most to improve their obligation to protect the greenway environment significantly. However, with the decay in daily life and the reduced gap between daily life and greenways over repeated visits. People got the perceived obligations decreased over time. Meanwhile, the obligation in daily life got recursive increase due to the recursively improved environmental awareness (eco-centric view). Combining the changes in two directions, the perceived improved obligation on greenways showed recursive decrease over time as well.

### ***Longitudinal influences of greenway experience***

Despite of the decay and the weakening effects in daily life, the process still showed longitudinal influences of greenway experience on environmental values, beliefs and norms with response changes across the groups over time (Table 6-4).

Firstly, on-site greenway experience had significant strengthening impacts on all of the value-belief-norm items (Figure 6-16). Regarding the eco-centric values, which may have delay in changes, are higher after trips. The beliefs and norms are also higher on-site than in daily life. Particularly, the effects of first-time visits seem to be more significant because the perceived gap between on-site and in daily life after first-time visits are bigger than repeated visits. It means the first-time experience had stronger shocks to visitors' value-belief-norms.

Besides, the repeated visitors seem to have higher eco-centric values and more stable beliefs and norms after return home than first-time visitors. Which means the changes have been consolidated by the repeated visits. For instance, the participant GZ10 as a repeated visitor has continually visited Zengcheng Greenway for six years from 2012 to 2018. The researcher traced his moments in WeChat and figured out that his frequency of greenway visits increased

since 2014 and almost became the main rhythm of his life. His motivation for visits changed from keeping health to nature appreciation. During the interview, he showed great passion and willingness to share and teach others about the nature. It is a long-term learning from greenways. Besides, the value-belief-norms of repeated visitors, particularly those highly repeated ones seemed to be consistent between on-site and follow-up interview. Taking the different levels of values for participant WZ54 (visited the greenways during the weekends over the last five years) as an example:

*Environmental protection should be placed at the first place. Helping others is the second and self is placed as the last one. From the macro to micro (WZ54O-unconscious value).*

*I like this one [Group 2-1] most because it is nature even though I do not know what it means. Then is this one [Group 2-2] since the person gave hands to the others (WZ54O-preferred value).*

*More important of the images, I think should be this [Group 2-1] and this [Group 2-2]. Protection is more important. Final one is self. I do not know why. Just feel like this. If we do not protect the environment, we won't have good mood. Anyway, I think the environment is very important. I like the nature thing, the green thing (WZ54O-conscious value).*

*It should be that environmental protection is the most important. And then is helping others and self. Because environment is the basis for others. And self should live with others (WZ54P-unconscious value).*

*I like the first one [Group 2-1] because I feel happy to see the nature. And then the second one [Group 2-2] because I feel warm to see the person giving hands to each other (WZ54P-preferred value).*

*The same ranking of the photos for importance, because without environment, how can we help others. If the environment turned worse, people became selfish then. Helping others should be placed before self. Because yourself cannot live without others. People should help each other (WZ54P-conscious value)*

The eco-centric views have been rooted in mind for repeated visitors over time so that they did not notice the changes. So, people mentioned a phrase repeatedly, unconsciously influenced (qian yi mo hua), which means underlying changes and quiet transformations due to the gradual and longitudinal effects. People may have no feeling of changes for only one-time visit, but they could find the differences comparing the very beginning and the final end. For instance, participant GZ08 reported no increase in obligations after the specific trip, but she explained the whole logic to improve. It is a gradual process to make visible changes.

## **6.9 Chapter summary**

This chapter traced the in-depth value exchanges of visitors with greenway experience to answer the research question two “how do visitors conceptualize the experience of greenways”. For one thing, visitors observed and reflected on greenway trips. Through visits on greenways, people appreciated the holistic environment, including the green nature, water, ecological system, cultural buildings, greenway routes, human play, and cycling. Those meaningful elements on greenways promoted people to concern their own life by reflecting on greenways, others and inner self. The ideologies of greenways, emotional inspiration from others and potential for self-development facilitated visitors’ concerns on their living environment, including the self, social and environmental aspects.

For another thing, people conceptualized their social-concern, self-concern and environmental concern correspondingly. Regarding the social-concern, people constructed their travel preferences on human friendly trips. It is important for people to meet their different needs through different types of travels. Moreover, people preferred human-friendly environment and experience-based transportations.

As for the self-concern, people constructed new life envisions through greenway experience and reported corresponding behavioral change intentions as self-development. While there is a knowledge decay after trips, people achieved existentially authentic self to show self-caring and hoped to have healthy lifestyles with bucolic life with greenways. Positive attitudes to life were also conceptualized by greenways visitors. Besides, people got ecological concern incorporated into their self-concepts.

While the conceptualizations in travel preferences and self-development showed environmental concern of visitors, people got in-depth pro-environmental values, beliefs and norms exchanges with greenway experience. On basis of the identification of varied values, limited beliefs in behaviors and mainly passive obligations to protect the good environment, the change processes of values, beliefs and norms of visitors were traced. While the changes faded in daily life, repeated visits on greenways helped people to consolidate the effects of greenway experience on people’s pro-environmental constructs.

Three main features were concluded regarding visitors’ reflective observation and conceptualization of greenway experience. The first one is the lifestyle envisions. What people achieved from greenway travels is mainly their constructions of new lifestyles, including the work-life balance, bucolic living environment, physical and psychological health, and slow tourism with greenways. The second feature is the anthropocentric concern on the environment. Although people showed improved environment concern with greenway experience, this concern was found to be anthropocentric because the environment people care for is a well-

developed environment rather than the original nature. People intend to protect for catering human needs rather than for environment itself. The concern does not necessarily lead to responsibility due to the practical consideration in reality. The final feature is that people are in a longitudinal and recursive process of value-belief-norm changes. Repeated visits tended to have lifelong and solid influences on visitors' pro-environmental awareness.

Hence, the following propositions could be provided:

(1) Visitors' holistic appreciation of greenways, including the natural environment, the artificial environment, and the human involvements promote their concerns with their living environment, including the social, self and environmental aspects.

(2) Visitors construct new lifestyle envisions on greenways, including human-friendly travels, psychological and physical health, bucolic living environment, and work-life balance.

(3) Visitors show longitudinal and recursive exchanges of environmental values, beliefs and norms over repeated visits on greenways, given an anthropocentric environmental concern in China.



## Chapter 7 Experiential Learning on Greenways: Systematic Changes

### 7.1 Chapter introduction

This chapter concerns the research question three to investigate the self-reported actual behavioral changes as the influences of greenways visits. Through identifying the “behavioral changes”, the active experimentation of people’s conceptualization could be traced. Meanwhile, the logic for changes as “human nature” is examined from the participants’ views. In addition, the “constraints” for enacting actual behaviors are identified. Based on the whole analysis from greenway experience and visitors’ value exchanges to the behavioral changes and logics, the experiential learning feedbacks, including negative and positive feedbacks, are depicted to implicate the systematic changes.

### 7.2 Behavioral changes

Figure 7-1 illustrates the theme map for behavioral changes.

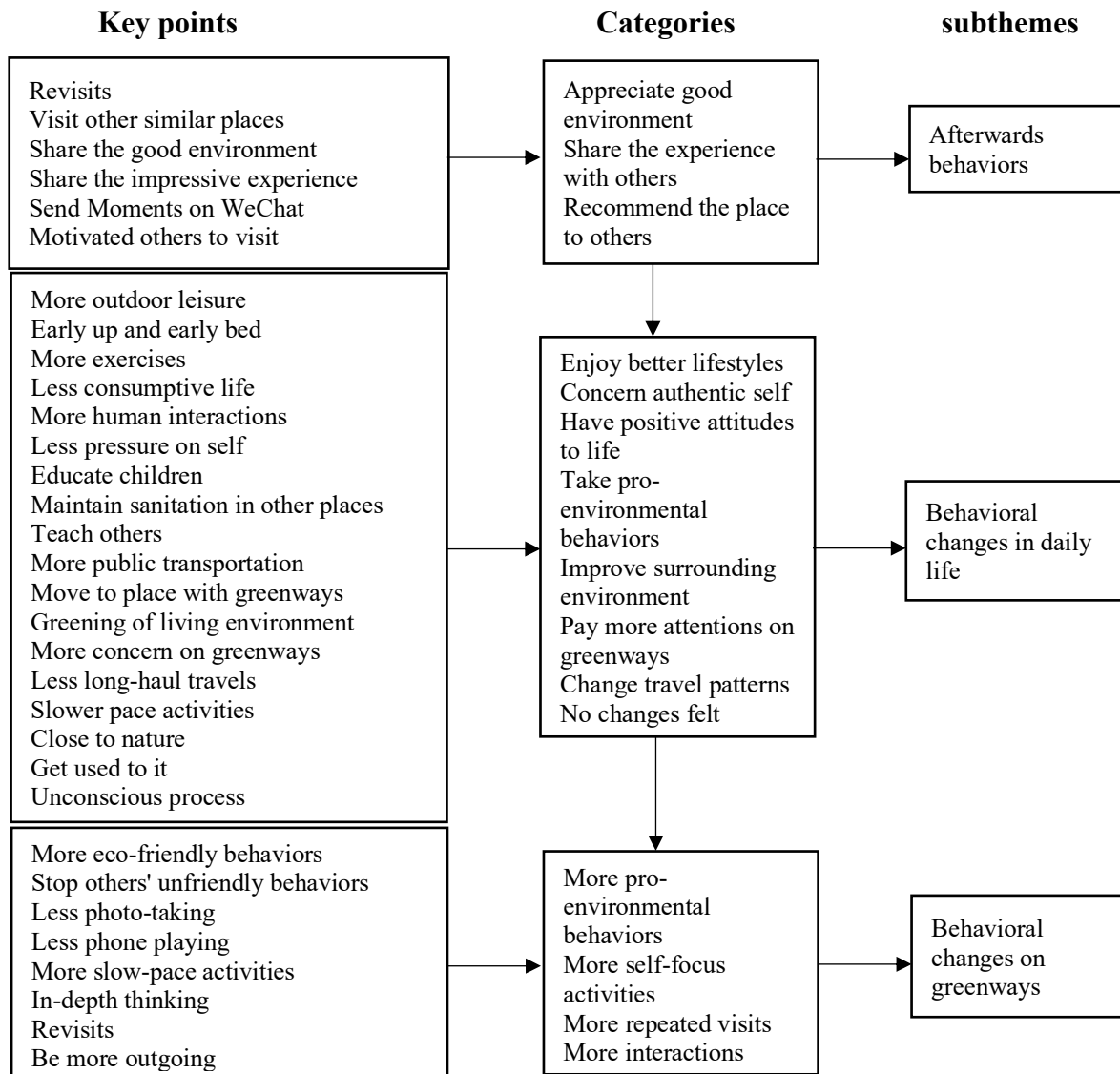


Figure 7-1. Key points, categories and subthemes for behaviors (Source: author)

### 7.2.1 Afterwards behaviors: Accessible to achieve

Aside from the behavioral changes which address the changes caused by greenway trips, this study examined visitors' general afterwards behaviors as well. The two-phrase interviews found that there is little gap between afterwards behavioral intention (Figure 5-3) and actual afterwards behaviors based on greenway experience (Table 7-1).

Table 7-1. Comparison between afterwards behavioral intentions and afterwards behaviors (Source: author)

	Afterwards behavioral intentions	Afterwards behaviors
<b>Categories</b>	Appreciate good environment Share the experience with others Recommend the place to others	Appreciate good environment Share the experience with others Recommend the place to others
<b>Key points</b>	Willingness to have outdoor activities Willingness to revisit Share some special things with family members and friends Share greenway experience to other places Bring family members and friends here	Revisits Visit other similar places Share the good environment Share the impressive experience Send Moments on WeChat Motivated others to visit

According to table 7-1, the afterwards behaviors reported by visitors are consistent to the afterwards behavioral intentions. People Appreciated good environment afterwards with revisits to the same greenways or to other similar places: *"I did not revisit that place, but I went to different place, the greenway in Merlin Reservoir"* (SZ16P). Besides, participants shared the greenway experience with others after return home. Particularly, the good environment and some impressive things were shared orally or through the Moments on WeChat (Figure 7-2): *"Yes, we posted the experience in Moments on WeChat to share the good things we met on greenways"* (ZH31P). In addition, people recommended the places to others and motivated them to visit. Some of their friends were inspired by the WeChat Moments to show interests in the places: *"My friends asked me the name of the place I posted on WeChat because they thought it looks beautiful"* (HZ49P).

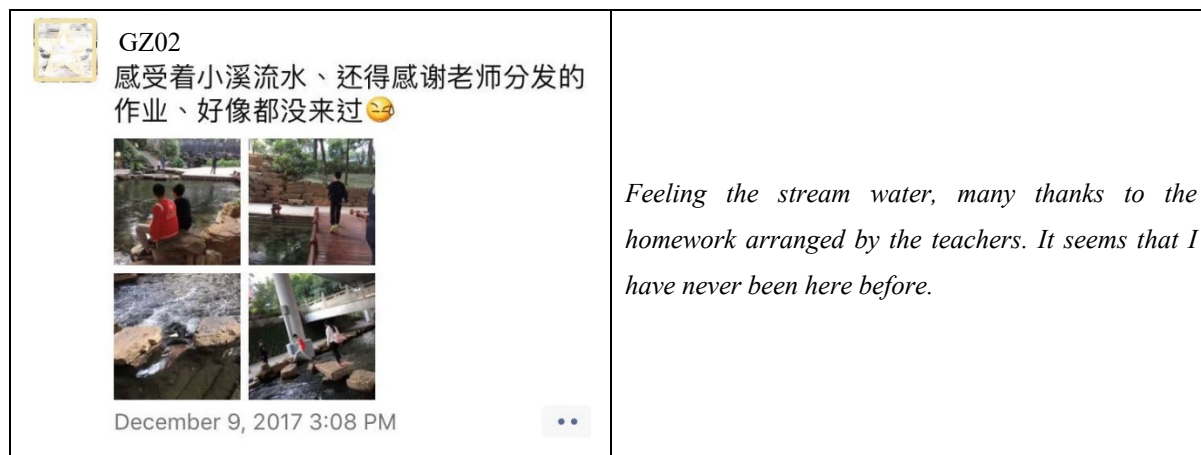


Figure 7-2. Moment on WeChat about greenway experience (Source: author)

### 7.2.2 Behavioral changes in daily life: Less intention-behavior gaps

The key point of this study is to figure out the behavioral changes after greenway trips. Some actual behavioral changes in daily life were reported after greenways trips, particular for those repeated visitors. In comparison to the behavioral change intentions (Figure 6-12), there was no decay in behavioral changes and more details were reported (Table 7-2).

Table 7-2. Comparison between behavioral change intentions and behavioral changes (Source: author)

	Behavioral change intentions	Behavioral changes
<b>Categories</b>	Have better lifestyle Improve health Take positive attitudes to life Take pro-environment behaviors Improve surrounding environment Concern greenways	Enjoy better lifestyles Concern authentic self Have positive attitudes to life Take pro-environmental behaviors Improve surrounding environment Pay more attentions on greenways Change travel patterns No changes felt
<b>Key points</b>	Work-life balance More outdoor activities More exercises Appreciate work for better life Less pressure on self Stop others' unfriendly behaviors Take eco-friendly behaviors Improve home environment Pay attention to greenway information	More outdoor leisure Early up and early bed More exercises Less consumptive life More human interactions Less pressure on self Educate children Maintain sanitation in other places Teach others More public transportation Move to place with greenways Greening of living environment More concern on greenways Less long-haul travels Slower pace activities Close to nature Get used to it Unconscious process

#### *Enjoy better lifestyles*

Visitors reported more outdoor leisure time during the weekends than before after the greenway trips. For instance, people took more outdoor activities to replace indoor leisure activities. They formed the habits to visit greenways or hang out during the weekends or holidays: *“Previously, I played badminton and ran, sometimes climbing stairs. But now more visits on greenways. This activity seems better than those things. Running and climbing stairs are really dreary. And few people will do these with you. This one is more convenient. Sometimes I sent an invitation in the Moments of WeChat, there must be somebody responding to go with me” (HZ49P).*

People also tried to cultivate habits like early up and early bed for healthy lifestyle after greenway visit: *“Regarding habit changes, I paid more attention to my daily time schedule. I*

*tried my best to have regular schedule because I found the physical health is very important. We should get to sleep early. As a habit, I push myself to take early bed. That's good. Before, I did not sleep until midnight (24pm). But now in general around 10 pm, I remind myself to go to bed. Because cycling on greenways improved my confidence. Psychologically, I will care more about my health"* (SZ18P).

### ***Concern authentic self***

The greenway experience was stated to promote self-caring and self-concern for existential authenticity. For one thing, health other than material enjoyment became the focus of their life. More exercises like cycling and walking were taken after the greenway visits. *"The greenway visits promoted my love in cycling. Initially it was just for fun, then for health, later it became a lifestyle. I joined a cycling club during the greenway visits. I like challenging myself in cycling"* (HZ59P).

People became less vanity in life with long-term stay with greenways. Specifically, they cared less about the house prices or the luxury products. As well, they had fewer consumptive activities. They turned to appreciate the spiritually happy or the sincere things, such as to enjoy cultivating plants rather than computer games: *"My son used to be keen on shopping, amusement parks. We used to live near a park, and he was constantly attracted to those facilities. Now that we have been living here for a few years, he has sort of changed his mind. He still likes amusement parks, of course. But he has expanded his horizon to discover new forms of entertainment"* (SZ13O).

People enjoyed more human interactions after greenway trips to promote intimate interpersonal relationships. For instance, the cyclists made new friends on greenways and after the trips. They got connected with each other and discussed about their cycling trips or skills in daily life: *"I made more friends who have the same interests with me through cycling on greenways. We made appointment with each other for new trips"* (HZ42P).

### ***Have positive attitudes to life***

Visitors reported to have positive attitudes towards daily life after greenway trips. Due to the walking and cycling on greenways, which improved their confidence and self-caring, people had less pressure on self to be open minded and happy: *"Through regular cycling and swimming on greenways. I got different attitudes in daily life. Actually, to be persistent for everything means a kind of confidence for your business. Not too stubborn. When others criticized my products or anything else, I do not think too much like why I did not make it well. I turned to be peaceful and calm. I do what I can. If I cannot make it. I won't be obsessed to*

*convince others” (GZ10O).*

### ***Take pro-environmental behaviors***

People reported to take pro-environmental behaviors in daily life on the basis of greenway experience. The first specific action could be educating their children. People connected the greenway experience with children’s school learning and cultivated their good habits to save and protect water: *“On greenways, we taught the kids to protect the environment we live in. We need to keep it from being polluted. The children gradually find themselves acting with environmental awareness. They get to know the circulation of water. They become aware that we drink that water. Over time, they get to realize the importance of protecting the water. If the water is contaminated, then we will be polluted by the contamination while drinking the water” (SZ13P).*

Meanwhile, visitors stated to maintain the sanitation in other places. For instance, some participant reduced their littering actions outside or cleaned up the rubbishes if available: *“I took plastics with me every time we work out after the trip on greenways because of the person there taught me that.” (GZ08P).*

Furthermore, people learnt from other greenway visitors to teach other persons to be eco-friendly: *“When I saw some people littered, I told them not to do that. Those persons always felt shame and picked up the rubbishes by themselves. Because I was also taught by others at my early years of cycling on greenways” (HZ49P).*

In addition, there are visitors becoming eco-friendly by taking more public transportations, such like cycling or walking instead of taxis: *“Because every time when I went to greenways, I walked or cycled. I got fun of that. So, I had less preferences on taxis. Sometimes I just want to walk for a while or cycle for a while (GZ22P).*

### ***Improve surrounding environment***

It is interesting to note that the greenway visits motivated people to improve their surrounding environment. Some visitors like participant SZ13 moved to place with greenways four years ago after her first visit on Wutong Greenway: *“Yes, I was so impressed by this place when I first visited it that I decided to move in so I can enjoy the fresh air frequently” (SZ13O).*

Some other people extended the green nature appreciation to daily life through greening their living environment. For instance, they had more potted plants at home (Figure 7-3): *“I had some potted plants at home. And my friends who went there with me even sent me a video about her plants after the trip” (24P).* Some photos about these plants were collected then as complementary data. Some visitors even implemented their practical learning from greenways

into daily life for better environment: *“Do you remember the pet toilet you showed to me last time [Group 4-1]? You know I am currently working as an administrative worker in the area, as property management. Dog waste has become a serious issue here and we get many complaints. Meetings were summoned to seek ideas and solutions. So, I proposed the idea of installing pet toilets. I showed them the picture you gave me. We decided to adopt the sand box. I feel very proud that my proposal was adopted”* (SZ13P).

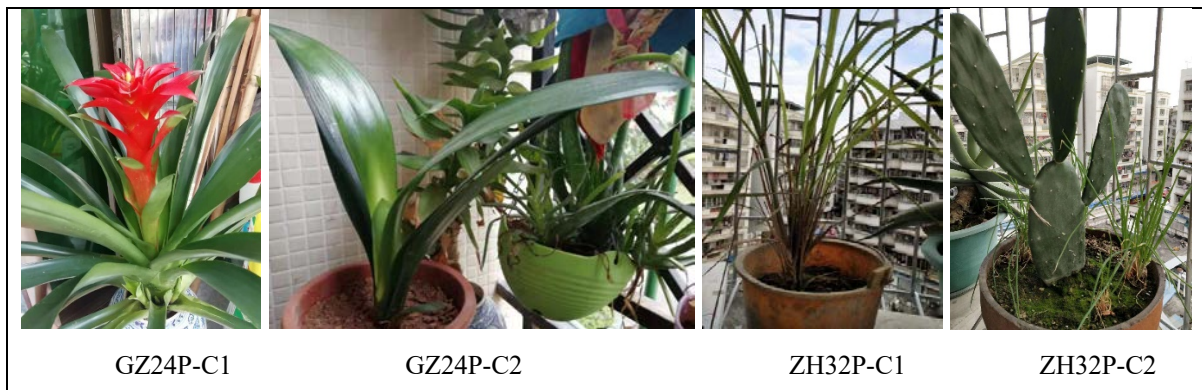


Figure 7-3. Photos for more potted plants at home after greenway trips (Source: author)

### ***Pay more attention on greenways***

Visitors reported that they paid more attention on greenway information than before after the visits. Some people cared the greenway development and the environment management from news and policies. Some others kept an eye on the greenway signs when walking or cycling in daily life: *“After the trip, I went to Shunde and found signs for greenways there. They are clearer than Liwan Greenway we visited last time”* (GZ20P).

### ***Change travel patterns***

There are visitors changed their travel patterns after greenway visits. For some people who already had enough long-haul travels or who did not have desire for long distance tourism, greenways reduced their needs or frequency for the long-haul travels because they found the experience to those famous destinations and to greenways are similar to each other: *“I have traveled to different places before. But now I do not have desire to do that. Cycling on greenways is enough for me to take a rest and at the same time to keep healthy”* (GZ19O).

Some people turned to enjoy slow-pace activities during trips after greenway visits: *“Since we get used to the greenway trips, we just like to stay in some place like Qinglv Road even we travelled a long distance from Xi’an. So, we can enjoy ourselves and appreciate the surrounding beauty”* (ZH36O).

Getting close to nature is another change regarding travel patterns based on greenway experience. People appreciated nature and travelled to places in nature: *“I found some changes.*

*I like the natural beauty now so that I prefer to travel to places with natural sceneries” (SZ38P).*

### ***No changes felt***

Certainly, not all visitors reported actual behavioral changes based on the greenway experience, some people stated no changes felt over the trips. For instance, participant GZ08 responded that *“no changes because I have been there for many times. Everything is just common for me” (GZ08P)*. Evidently, it is because visitors get used to the changes since she has mentioned specific changes like less lettering in the interviews.

Meanwhile, some people seemed to be unaware of the changes because it is an unconscious process, particularly for repeated participants. For instance, participant SZ18 initially reported no changes in daily life after greenway visits: *“Not much changes in daily habits or behaviors. Because it is almost the same situation. It is already part of my life. I went there almost every weekend. It is a regular activity” (SZ18P)*. But actually, he already mentioned significant changes in life habits such as early up and early bed.

### **7.2.3 Behavioral changes on greenways: Human-environment interactions**

Besides of the behavioral changes in daily life, people also reported different behaviors during greenway travels compared to traditional mass tourism or in daily life.

#### ***More pro-environmental behaviors***

It seems easier and more evident for visitors to make behavioral changes on greenways than in daily life or in traditional mass destinations regarding environment maintenance. Many people were motivated by the environment or others to behave eco-friendly and show different habits like no littering and concerning the surrounding environment. Even though they did not have good habits in daily life, they automatically behaved eco-friendly on greenways: *“Because I did not pay much attention on the sanitation in daily life. Sometimes I threw the cigarette butts everywhere. But here, I did not do that” (GZ27O)*. People felt shame to destroy the good environment.

Other than that, some individuals were actively to protect or keep the good environment on greenways. For instance, they picked up rubbishes on greenways or collected wastes of their friends. Some stopped others’ unfriendly behaviors. Some taught their children not to pick up the flowers: *“When I cycled with others on greenways, I would always address the need to be eco-friendly before we started” (HZ49O)*.

#### ***More self-focused activities***

The most significant difference regarding visitors’ behaviors on greenways is that they

took more self-focused activities. They got themselves immersed on greenways. Particularly, compared to mass tourism, people took less photos. For one thing, they thought the environment is not so distinct for photo-taking. For another thing, they got used to the environment so that there was no need for photo-taking. What they wanted was just to relax and play with their companions: *“I rarely took photos now because it is already common to me. Every time I came with the same persons. I did not intentionally take photos in general”* (GZ08O).

Greenway travels were also featured with less phone playing. People wanted to keep away from cellphones on greenways, in terms of both the children and the adults: *“I did not take many photos on greenways. Because there were no gorgeous sceneries. And there is a platform at the top of the mountain. Many people were playing shuttlecock there. My husband took me to play with them together. When I played my cellphone while walking down, he took off my cellphone”* (SZ01P).

People took more slow-pace activities on greenways, such as slow walking, group cycling or just sitting on the lawn to watch or observe the surrounding environment and others. Sometimes people sang while cycling, or some had a music box with them. Family visitors brought carpet for picnic and BBQ. Those slow-pace activities helped them relax and feel the surroundings: *“For instance, if you are in a tourism attraction, you go through it quickly. But here on the greenways, we stopped to stay. You just look around and leave. But here we usually stay for a whole day”* (GZ04O).

With peaceful environment and slow-pace activities, people reported to have in-depth thinking on greenways: *“I feel this environment makes me to think on some issues. Sometimes in depth. And on the routes, I observe the things. For instance, for somethings wired, I would think why being that. And regarding the building over there, I found there are words that aboard talents gathered here. Then I thought if good environment promoted productivity and creativity. We learned truth in practices”* (SZ15O).

### ***More interactions***

People were found to be more outgoing on greenways. They enjoyed interactions with the surroundings. The adults, particularly the young generation were crazy to play or cycle together. Without troubles or pressure in daily life, people opened their heart to the environment or the others. As well, children here were found to be livelier and more active: *“The children are livelier to play here. They ran all around. Maybe you did not notice that when you observed them. But the problem is if you did not bring them here. They never know*



*the outside, right? Maybe you did not notice that, but we should keep this in mind” (SZ170).*

### ***More repeated visits***

It is different from traditional mass tourism that people visited the greenways many times. They took repeated visits and stayed in the same places: *“For this place, we did not only come for once or twice. We came for many times. Once we want to relax, we would come. If for the tourist attractions, only one-time visit. Rarely did we visit the same spots for twice. This is another difference” (GZ040).*

To conclude, behavioral changes identified from respondents could be integrated into three different groups: self-caring that includes better lifestyles, authentic self and positive attitudes in daily life and more self-focused activities on greenways; environmental caring that contains the pro-environmental behaviors both in daily life and on greenways, and improvement of surrounding environment after people return home; and new human-environmental relationships which points to the more attention on greenways and travel pattern changes in general, and more interactions and more repeated visits on greenways.

## **7.3 Human nature: Environmental protection on greenways**

Compared to no feelings on behavioral changes in daily life, people reported some logics behind behavioral changes on greenways. Figure 7-4 showed the main subthemes, categories, and key points for human nature, which includes the preferences of human and the environmental laws for them, thus leading to the logic of eco-friendly behaviors on greenways.

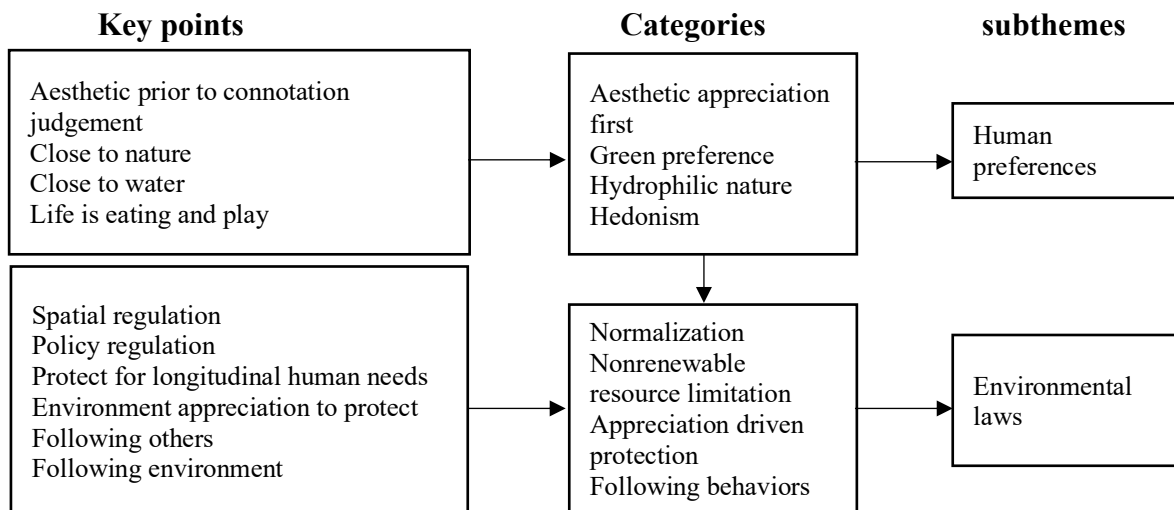


Figure 7-4. Key points, categories and subthemes for human nature (Source: author)

### **7.3.1 Human preferences: Enjoyments in nature**

The aforementioned discussions showed visitors’ appreciation of the greenway environment for meaning making, reflections and worldview conceptualizations. Meanwhile, four main human natures were identified in reasoning the enjoyments of people on greenways.

### ***Aesthetic appreciation first***

Humans have the five sensory dimensions: vision, taste, smell, touch and hear. Among many others, the vision came first to people. Hence, visitors appreciated the environment on its aesthetic appearances prior to the connotation judgements: *“When you presented the photos [Group 2] to me, the first thing came to my mind is the design of the images rather than the meaning of the photos”* (GZ03O). When asking people about the overall experience of greenway travels, most of them firstly replied with aesthetic appreciation, like *“the environment is very beautiful”* (HZ40O), *“beautiful sceneries”* (ZH35O), and *“good place with nature”* (ZH28O).

### ***Green preference***

In the meaning making part, green nature appreciation was identified as the most frequently theme in participant-generated photos. People wanted to get close to green nature, the trees, lawns and other plants. People felt comfortable and delighted with green things. It is a human nature to get close to nature and to like green stuff: *“It is a place with green trees and water, natural things. It is what our human pursues, right?”* (HZ63O).

### ***Hydrophilic nature***

Apart from green appreciation, water appreciation is another top theme in both photos and interviews. People have the hydrophilic nature to get close to water with the feelings of peaceful and calm. The platforms for people to get close to water impressed and attracted visitors: *“I selected that place for two main reasons. One is close to my home. Not so far to arrive. Second is there is a river there. In Shenzhen, few places have such kind of river but only lawn or trees. There is a river. I think it is good to bring the children there”* (SZ12P).

### ***Hedonism***

Nevertheless, hedonism is still a key nature of human. People need to relax and have entertainments after work. Life is eating and playing: *“If we got tired here, we can have some food, like BBQ or picnic. Currently, life is just for eating, drinking and playing”* (GZ06P). It means people make choices based on their needs. Greenways were thus attractive to people because they can meet various needs of human for entertaining at the same time bringing them aesthetic and nature appreciations.

### **7.3.2 Environmental laws**

Out of the inherent human nature, people also demonstrated some environmental laws in eco-friendly behaviors on greenways.

### ***Normalization***

Environment has a normalized meaning to human behaviors through the spatial regulation and the official regulation. Spatial regulation means to change human's behaviors through spatial strategies, like zoning. Greenways were regarded as regulation space. For instance, the routes on greenways make people to behave in an eco-friendly way: *"When there is a greenway, there is less access for vehicles. And we have to take riding and walking on the whole routes"* (GZ09O). It is a spontaneous process for people to take actions according to the spatial rules.

Policy regulation means to intentionally normalize people's behaviors through some human-made rules and regulations in the environment. For instance, some people addressed that the signs on greenways reminded people to change behaviors on greenways. Participant SZ13 provided an example of the effectiveness of this policy regulation method: *"See, it is the government who sends staff here telling people swimming is not allowed, fishing is prohibited. And it worked. Over time. I believe they should all be aware that the water is a precious natural resource in another 4 years, because it is a scarce resource as well"* (SZ13O).

### ***Unrenewable resource limitation***

A majority of visitors reported to protect the environment for the sake of meeting long-term human needs. Because people enjoyed the space for nature appreciation, relax and family or friends gathering so that they wanted to maintain it for continual uses. They held an anthropocentric view towards environment but realized the scarcity of such space. If destroyed, they themselves or the future generation cannot enjoy the good environment anymore: *"Once the environment was ruined, definitely, public space like this became less and less. By that time, our general public could not enjoy such a good place anymore. Right? With good scenery and fresh air"* (WZ55O).

### ***Appreciation driven protection***

The human nature of environment appreciation promoted people to protect. Visitors felt unwilling to destroy the beautiful and clean environment. They were shame or unbearable for the unfriendly behaviors in good environment: *"What I concerned most is the sanitation on greenways because I felt uncomfortable to see rubbish or dirty stuff in this good environment. You like the greenways so that you much protect them"* (SZ23O). They appreciated the good environment and hence hoped to keep it as it is: *"Because I felt comfortable on greenway in comparison to the daily space. So, I did not want to have it change to be worse. I just hoped to keep it or make it better"* (HZ40O).

### *Following behaviors*

Sometimes, people just enacted following behaviors to protect. For one thing, they may have group following behaviors. They learnt from each other and took the same actions so as to be included into the group culture. Others' actions made more sense in changing individuals' behaviors than signs or interpretation system: *"Just like you are in a public space. When you saw that the others did not litter there, you yourself would not do like. I think most people do like that"* (HZ450).

For another thing, people followed the environment to act. People were asked to compare the behaviors in the two different environments provided in the photos (Group 4-2). The photos show the different stages of Donghaochong Greenway: the previous polluted environment and the current restored one. People showed willingness to protect in the latter setting rather than the former one, referring to the appreciation driven protection (Figure 7-5).

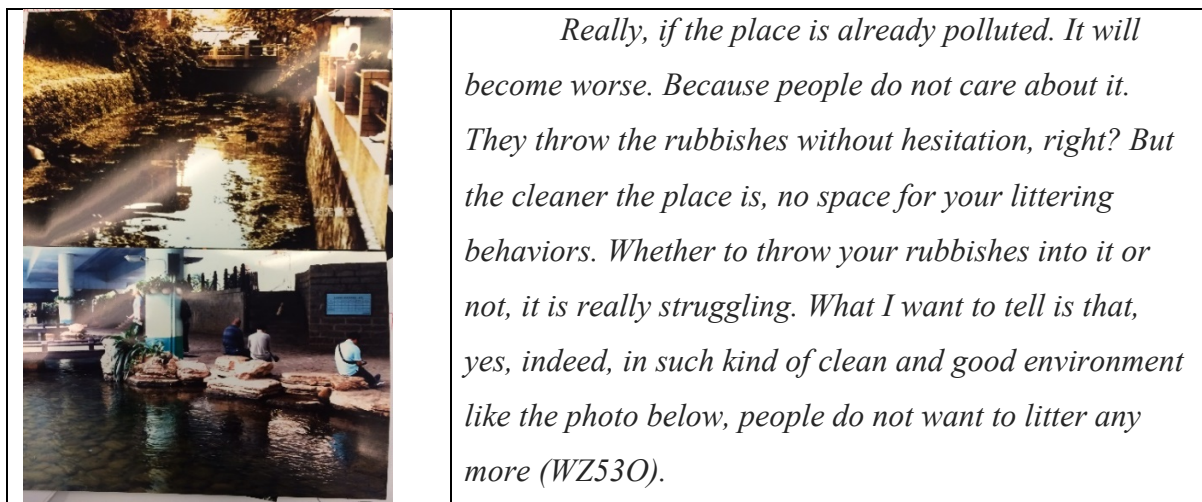


Figure 7-5. An example of physical regulation (Source: author)

### **7.4 Constraints in taking behavioral changes**

Overall, visitors showed little gap between their behavioral change intentions and actual behavioral changes. For individuals, there are still a series of constraints for behavior changes, particularly for pro-environmental behaviors both on greenways and in daily life (Figure 7-6).

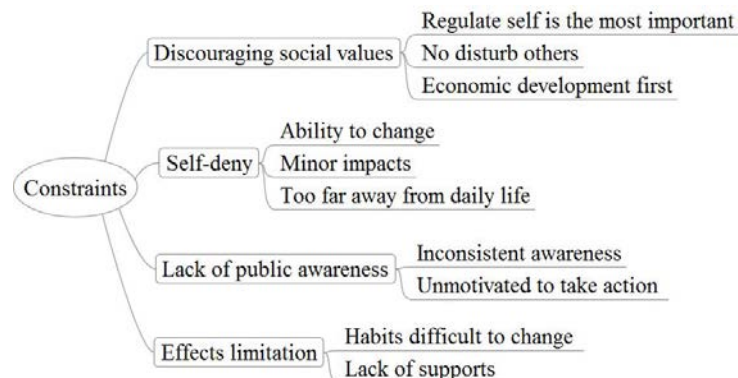


Figure 7-6. Constructs for constraints of pro-environmental behaviors (Source: author)

### ***Discouraging social values***

People not always do things right, but things conforming to the social norms. In the value rankings, people took discouraging social values as one of the main justifications for their egoism at the unconscious level. However, for rational thinking at the conscious level, no such kind of justification was identified. Since unconscious value played the most important role in determining the actual behaviors, the discouraging social values were identified as an important constraint in pro-environmental behaviors. The first and foremost, people were encouraged to regulate themselves and manage their own lives only. It is not necessary to care about others: *“As the old saying goes, everybody just swept the snow in front of their own doors, who cared about the frost on the others’ roofs” (HZ51O).*

Moreover, disturbing others was regarded as an unfriendly thing, which may have negative feedbacks. Even people found something good for the others, they avoided to inform them. Because the society may not believe the strangers and even hold a suspecting view towards the informants: *“Because now people are lack of sense of safety. When we saw so many bad news online, victims here, cheating there, people were getting more scare between each other. They are afraid to interact with each other. It does not mean they do not want, just because of their unbelief in each other” (SZ16O).* Hence when visitors felt uncomfortable with others’ unfriendly behaviors to environment, they were not willing to stop or intervene: *“I feel uncomfortable if people littered on greenways. But I won’t stop them. It is not good. Because we do not know each other, anyway” (GZ22O).*

Additionally, people took economic development as the first law in life. Even though they were encouraged on greenways to change their lifestyles for work-life balance or to protect or improve the surrounding environment, they left those things behind due to the living pressure coming around in their daily life: *“I was so busy with my work recently that I had no time to revisit the place” (ZH31O).*

### ***Lack of public awareness***

Lack of public awareness is another main constraint. People did not act eco-friendly even they had the intentions to do so because they found inconsistent awareness in the public. Even though they helped to keep the environment, there were still people littering, which may make their behaviors meaningless: *“I want [to protect the environment], but is it possible for us to make it? So many people here. Every person has his own ambition. The public awareness has not yet reached the high level. It is not practical. Hong Kong and Western countries are different. The public have the same awareness to protect the environment, no littering and*

*keeping the cigarette butts. For us, it needs time to change as a whole” (GZ25O).* With those words, the participant threw the cigarette butt directly to the lawn at the same time.

There are also visitors unmotivated to take actions due to the lack of environmental awareness. To specify, some people thought it was right to take eco-friendly behaviors, but finally they did not because it was not driven by their environmental awareness but their conscious thinking, which could be comprised to other “right” views in daily life: *“When I was a young student at the elementary school, I wanted to be a good student so that I always took eco-friendly behaviors. For instance, when I saw there were rubbish on the road, I would pick them up. While now I grew up and did not do that anymore. [Why?] Maybe it is just because, not easy to say, kind of shy or just feel like myself always behaving as a ‘goody person’ [not favored by the society]” (SZ15P).*

### ***Self-deny***

Some people tended to deny their connections with environmental issues so as to justify their intention-behavioral gap. They thought the environmental issues are not deeply related to self: *“Regarding taking flights, it is a complicated problem. It means that the flights still take off without your participation, right? It is already the sunk cost every day. Your boarding makes little changes to the emissions” (GZ20O).*

Some other visitors denied their abilities to make big differences. Because they felt powerless to make decisions or control others so that it was reasonable for their no actions. It is the governments or organizations which have power and resources should make changes: *“No, I think we currently have no enough ability to recreate the environment. If we had, definitely we will do more. It is not we do not want to improve the environment, but the present conditions limited our behaviors” (GZ03P).*

Also, visitors failed to take the behavioral changes regarding environment protection because they thought it was too far away from daily life, such as the climate changes, so that they did not take environmental protection as the top priority, especially in daily life: *“In routine life, we usually did not notice those issues so that we may leave them behind in taking actions (HZ47P).*

### ***Effects Limitation***

The limitations in effects were identified as the last group of constraints for people to take actual behavioral changes. For one thing, it is difficult to change long-term habits over one trip. This constraint was mentioned regarding both lifestyle changes and pro-environmental behavioral changes. Particularly for adults, habits change should be a longitudinal process over

repeated visits: *“I think little changes happened, except for the children. The kids learnt from the outside easily. For adults, the habits are already there, it is hard to change” (GZ110).*

For another thing, people complained about the lack of supports for them to take pro-environmental behaviors on greenways and in daily life, such as the lack of transport alternatives, the limited facilities and the lack of promotions: *“The transportation is more eco-friendly on greenways...I heard the flights made great contribution to environmental degradation. But I think it is irreplaceable. Because you must travel around. You cannot say that you do not travel anymore due to the impacts” (SZ390).* As well, the long distance and unconnected greenway network hindered them from enjoying better lifestyle and changing travel patterns.

Notably, most constraints were related to behavioral changes in daily life regarding pro-environment issues. Specific connections were concluded in Table 7-3.

**Table 7-3. Constraints for corresponding behaviors (Source: author)**

	<b>Context</b>	<b>Behaviors</b>
Regulate self is the most important	Greenways/daily life	Take pro-environmental behaviors
No disturb others	Greenways/daily life	Stop others' unfriendly behaviors
Economic development first	Daily life	Enjoy better lifestyles Take pro-environmental behaviors Improve surrounding environment
Ability to change	Daily life	Take pro-environmental behaviors
Minor impacts	Daily life	Take pro-environmental behaviors
Too far away from daily life	Daily life	Take pro-environmental behaviors
Inconsistent awareness	Greenways/Daily life	Take pro-environmental behaviors
Unmotivated to take action	Daily life	Take pro-environmental behaviors
Habits difficult to change	Daily life	Enjoy better lifestyles Take pro-environmental behaviors
Lack of supports	Greenways/Daily life	Enjoy better lifestyles Take pro-environmental behaviors Change travel patterns

## **7.5 Pro-environmental logics on greenways**

People tended to show different behavioral patterns on greenways compared to in daily life and in other mass tourist destinations. According to the human nature reported, three main logics could be identified for the pro-environmental behaviors on greenways: the appreciation logic, the needs logic and the environment logic. The causal feedback loops for the three logics were depicted as Figure 7-7.

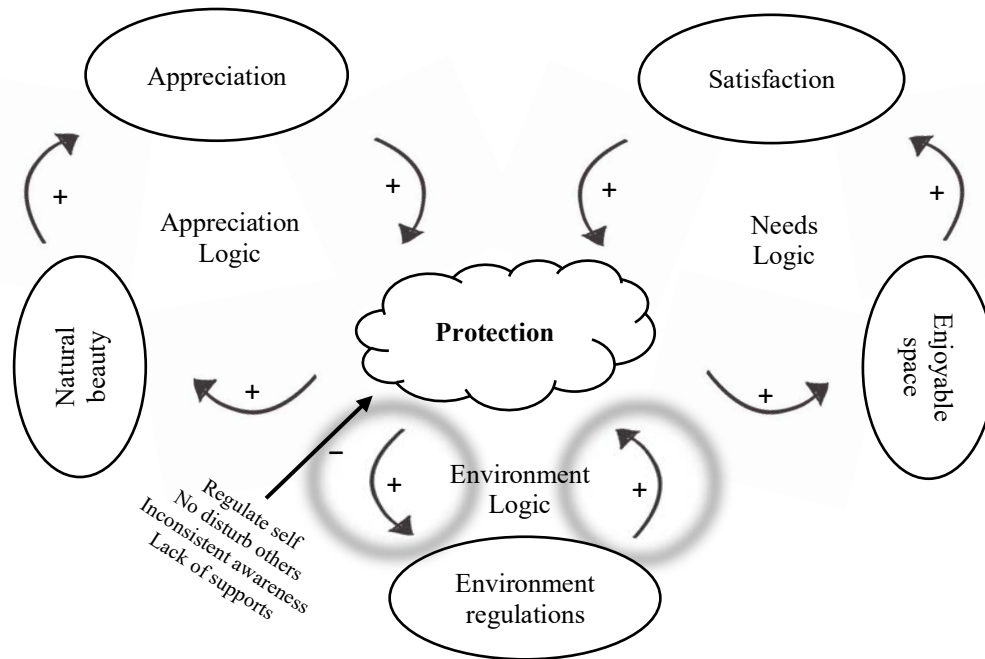


Figure 7-7. Main logics for pro-environmental behaviors on greenways (Source: author)

***Appreciation logic: Beauty-appreciation-protection feedback loop***

Humans have the nature to appreciate the aesthetic things, the green nature and the water. As the old saying goes, everyone longs for beauty. Those environmental elements and the environment as a whole on greenways bring people the natural beauty, which has been lost in modern urban life. On basis of the slow-paced activities and the self-focused feelings, people paid more attention to the surrounding nature beauty and appreciated them from an existential self perspective, which finally improved the human-environment affinity.

The appreciation and human-environment affinity were deepened and strengthened in inner self through meaning making and reflections. The ecological importance was thus figured out and developed into the environmental values, which further transferred into environmental awareness and promoted the protection behaviors on greenways from the inner heart.

In return, the protection behaviors help to maintain the greenway environment and the natural beauty that people appreciated, thereby leading to a positive feedback loop.

Actually, this beauty-appreciation-protection logic has been figured out by some recent research on visitors' pro-environmental behaviors at recreation destinations. It means this logic is not only applicable for greenway travels, but for all kind of resource-based tourism. The scarcer the resource is, the higher level the appreciation could be. However, the major difference of greenway travel from other destinations regarding this logic is that people took slow-paced trips without particular purposes but relax on greenways. The self-immersed



activities and repeated visits could help people to strengthen the nature appreciation for more inner heart-driven protections.

***Needs logic: Enjoyment-satisfaction-protection feedback loop***

An anthropocentric environmental concern was also identified. In current consumptive society, most people took a hedonism view. They regard self needs as the most important thing. After meeting the needs for modern urban life, people developed the new demands to escape from crowded and high-pressure urban environment. The bucolic vision to combine modern convenience and rural landscape became the dreaming life for most people. Greenways provide such kind of space for people to meet their leisure needs after busy work.

Although there is no extraordinary resource, people were satisfied with the experience on greenways because they felt happy and comfortable. They could do what they want, gathering with their family members and friends, cycling or just staying and thinking over there, all of which were difficult to achieve in daily life. Greenways provided the liminal experience in relation to boring routines but easier to access than traditional mass destinations. Greenway trips were thus incorporated into the whole travel plans of people. Urban life with greenways were regarded as kind of bucolic life envisions for visitors. Therefore, people cherished the chances and the spaces, thereby leading to protection of the greenway environment.

The well-maintained greenways further attracted people to revisit and enjoy themselves. The circulation from enjoyment to satisfaction with needs met and protection for future needs constitutes the needs-oriented positive feedback loop.

This needs logic is applicable in many different contexts only if people realized the scarcity and the unrenowable property of resource. However, greenway travel presented its specialty in this logic because most visitors took revisits here or hoped to revisit. To protect the greenway environment is not only for needs of future generation but also themselves.

***Environment logic: Environment regulation-protection feedback loop***

Environment itself also has evident impacts on people's behaviors. Because human is not an isolated entity in the world. They live on the environment and live with other people. The greenway environment regulated visitors' behaviors in four main different ways. The first is the spatial regulation. Because greenways have clear routes for slow-pace activities. People regarded the routes as boundary for actions. Constructions of greenways could also spatially rule out non eco-friendly vehicles to some extent. The second aspect is the policy regulation. Although greenways are public open space, the governments or the communities have formal or informal rules and regulations on the space, such as the promotional signs or the

management staffs to help maintain the environment. The third way is the social regulation. People tended to behave like others around them so as to be included into the same group. So, the visitors on greenways have impacts on each other in pro-environmental behaviors. The last one is the physical regulation. People tend to behave according to environment. The worse the environment, the less tendency may people have to protect, and verse visa. Hence, people were motivated to protect the environment by the spatial, policy, social and physical regulations.

In another way, if people enacted environment protection behaviors, they themselves became the social environment. The physical environment, special boundary, and policy were kept, thus strengthening the environment regulation to form the positive feedback loop.

The environment logic seems to be more evident on greenways than in daily life not only because greenways enjoyed clearer spatial and policy environment regulations, but also because the social and the physical environments were better on greenways than in daily life. Compared to mass tourist destination, greenways may have advantages on social environment regulation because people tended to be more cordial and milder on greenway with less business interests involved.

For those unfriendly behaviors, the discouraging social values like to regulate self is the most important and no disturb others, the inconsistent public awareness and the lack of supports could provide explanations.

## **7.6 Experiential learning: Pro-environmental behaviors in daily life**

Whether the influence of greenway experience could be extended to daily life is the final purpose for this study. Since the respondents replied with pro-environmental behavioral changes in daily life upon the greenway visits as well, the logics behind were explored based on the aforementioned experience and value exchange processes. Different from the pro-environmental behaviors on greenways, the learning process for visitors to change their behaviors in daily life as environmental responsible seemed to be more complex. On basis of the system dynamic analysis which incorporates the theme relationships built in greenway experience (Figure 5-4, 5-5, 5-6), value exchanges (Figure 6-16), behavioral changes and constraints (Table 7-3), a system dynamic model (Figure 7-8) was constructed to depict the experiential learning process of visitors to behave eco-friendly after return home from greenway visits.

The system dynamic model consists of three levels of interactions, the experience level, which depicts the whole experience on greenways; the value exchanges level, which concluded the mental activities based on greenway experience; and actions level, which includes the actual pro-environmental behavioral change process in daily life. With those branch loops

integrated into one, three main positive feedbacks (R1, R2 and R3) and three main negative feedbacks (B1, B2 and B3) were identified in Figure 7-8 to support greenway visitors' pro-environmental behavioral changes in daily life.

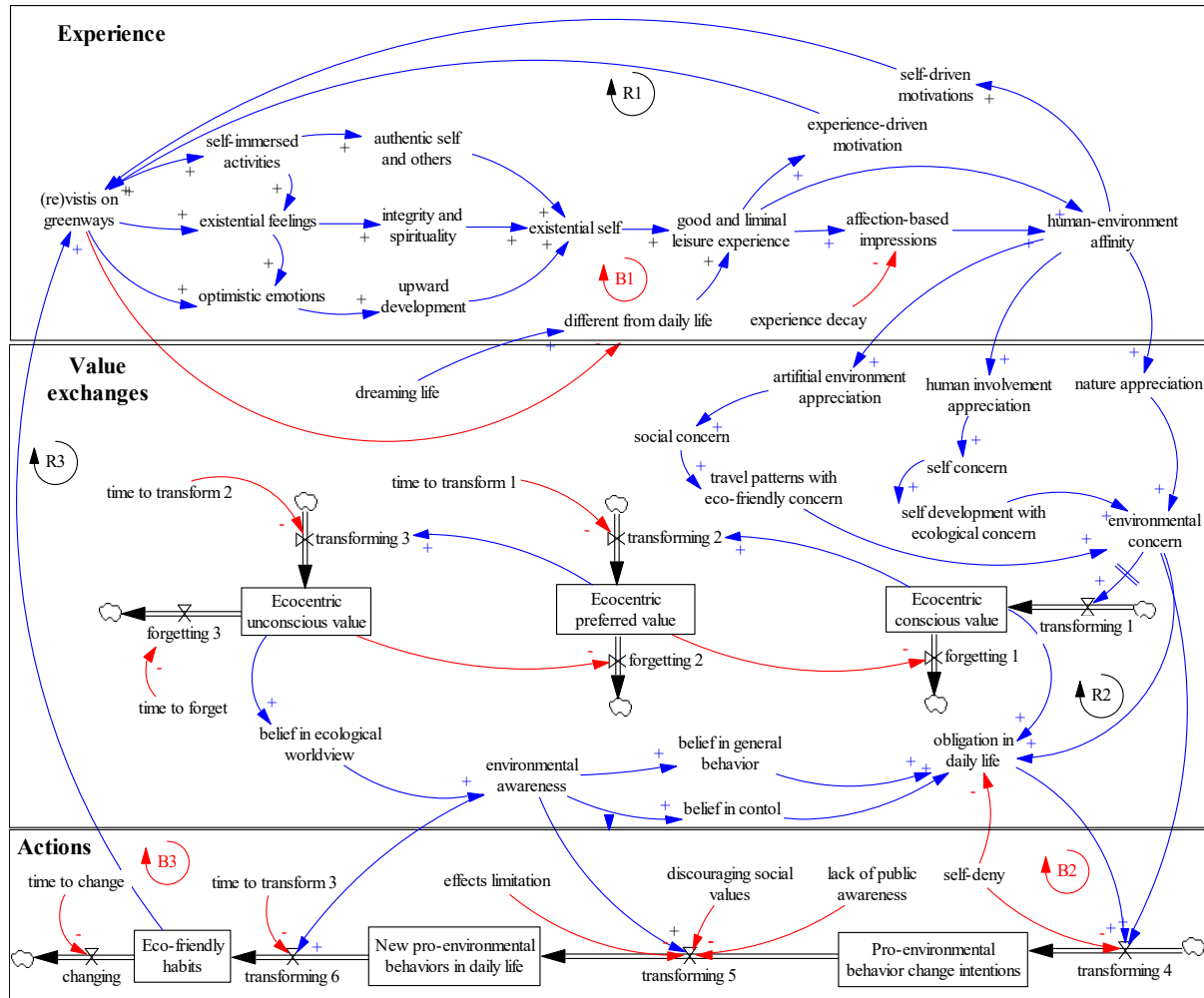


Figure 7-8. System dynamic model for pro-environmental behaviors on greenways (Source: author)

### ***Repetitive learning: Limited liminal experience (R1 and B1)***

The positive feedback loop *R1* refers to the process from the greenway visits to revisits through two different ways. One is based on the experience-based motivation through the achievement of existential self by self-immersed activities, existential feelings and optimistic emotions and the whole evaluation of good and liminal experience different from daily life. The other is based on the self-driven motivation with extension of the good experience to affection-based impressions and improved human-environment affinity. This positive feedback loop illustrated the high potential of revisits on greenways, thus providing the repetitive learning for visitors.

In the feedback loop *R1*, the good and liminal experience is the key for repetitive learning on greenways. Such liminality depends on the difference that visitors figured out

between their daily life and greenways. The differences were determined by people's goal for dreaming life and their familiarity with greenways (revisits). On one hand, holding a dreaming life helped people to enjoy the differences on greenway. On the other hand, the revisits may narrow down the gap between their daily life and greenways because they already got used to the environment and included the trips into part of their daily life. It means the repetitive learning on greenways was limited due to the decreasing liminality felt on greenways, and thus limiting the improvement of human-environment affinity and the experience-based or self-driven revisits (*B1*).

The two feedback loops *R1* and *B1* together illustrated an S-shape repetitive learning on greenways. The initial visits got significant increases in human-environment affinity. But with the existence of the negative feedback loop *B1*, the increase rate decreased in revisits and the human-environment affinity approached to the "glass ceiling". The differences from daily life felt on greenways approached "0" with long-time revisits.

#### ***Pseudo learning: Limited actions (R2 and B2)***

People further reflected and conceptualized their greenway experience. *R2* refers to the feedback loop from greenway experience to environment concern improvement, to pro-environmental behavioral changes intentions and finally to pro-environmental behaviors and habits to revisit the greenways. The improvement of environment concern, namely the realization of ecological importance, had different sources, including the eco-friendly concern in travel patterns, self-development with ecological importance and nature appreciation. Subsequently, the environmental concern promoted the transformation of pro-environmental behavioral change intentions directly (*transformation 4*) or through obligation improvement in daily life or with one more step through transformed into the eco-centric conscious value (*transformation 1*). This positive feedback illustrated a learning process of greenway visitors regarding pro-environmental behaviors in daily life, while there were many constraints emerging within the loop, particularly between environmental concern and behavioral change intentions, and between intentions and actual behaviors. For instance, although people were aware of the ecological importance, they denied their impacts, responsibility and ability to have pro-environmental behavioral intentions. Moreover, many other constraints like the discouraging social values, lack of public awareness, effects limitation and time existed to stop the transformation from intentions to new pro-environmental behaviors or further eco-friendly habits. That is how the intention-behavior gap came into being and why it was named as a pseudo learning.

Similar to the repetitive learning, there is a negative feedback loop *B2* (similar routes with *R2*) due to the decreasing influences of revisits. Hence, the pseudo learning also showed an S-shape process. People tended to learn fast and got their environmental concern improved significantly at the very beginning of visiting greenways. However, with time goes on, the learning effects infinitely approached its “glass ceiling”. Moreover, there is a time delay effect in transformation of environmental concern into eco-centric conscious value, which means there could be a minor oscillation or overshoot in approaching the “glass ceiling” of the pseudo learning.

***Silent transformation: Longitudinal process (R3 and B3)***

Other than the way from environment concern to pro-environmental behaviors, there is another longer and deeper process for visitors to learn to be eco-friendly. *R3* in the system dynamic model points to the unconscious value-based learning feedback loop, which extended the pseudo learning (*R2*) with transforming the eco-centric conscious value into eco-centric unconscious value. In other words, the environmental concern was transformed into the environmental awareness, which took the environment as the similar object as human to be respected. Since the environment awareness is kind of ecological view rooted in people’s mindset, it is influential in promoting the transformation from behavioral change intentions to actual behaviors (*transformation 5*) and from new behaviors to eco-friendly habits (*transformation 6*). Moreover, time needed for unconscious value and habits to change (*forgetting 3 and changing*). In this regard, there is less intention-behavioral gap regarding this learning process, which was named as the silent transformation due to two main reasons. The first reason is that the transformation among conscious value, preferred value and unconscious values is a longitudinal, cyclic and recursive process with time delay effects (*transformation 2 and transformation 3*). It means the eco-centric value exchange is a slow and oscillation process. The second reason is that time delay effects existed for transformation from behaviors to habits (*transformation 5*). For many visitors, it was an accumulated and gradual process to make changes and people were not aware the minor changes within the process. They changed unconsciously overtime. That is why the repeated visitors, particularly those long-term visitors could identify significant changes if compared to the very beginning but not regarding the latest trip.

Likewise, the negative influence regarding the repeat visits existed to make the negative feedback loop *B3*. An S-shape with overshoot or oscillation suits the silent transformation as well. Although it is a longitudinal process to change, the changes could maintain overtime with

the enduring environmental awareness and habits formulated. However, before the formation of the awareness and habits, the government should help to facilitate the implementation of the repetitive learning and pseudo learning to finally achieve the silent transformation.

## **7.7 Chapter summary**

This Chapter focuses on the actual behaviors based upon greenway experience to answer the research question three “how does the greenway experience change their behavioral patterns”. Regarding both afterwards behaviors and behavioral changes, there seems to be little intention-behavioral gaps. People took revisits or visiting other similar places afterwards to appreciate good environment, shared the greenway experience with others, and recommended the places to others, which overlapped with their afterwards behavioral intentions because they are accessible to achieve.

Meanwhile, people got their behaviors changed upon greenway visits. Similar to behavioral change intentions, people enjoyed better lifestyles, concerned authentic self, had positive attitudes to life, took pro-environmental behaviors, improved surrounding environment, and paid more attentions on greenways. Moreover, people changed their travel patterns gradually to have less long-haul travels and more slow-paced activities in nature. Besides, people showed different behaviors on greenways compared to mass tourist destinations and in daily life. They had more human-environmental interactions, such as pro-environmental actions, self-focused activities, more interactions and repeated visits.

Not only the human preferences on aesthetic things, green, water and entertainments promoted the protections on greenways, but also the environment itself regulated people’s behaviors through spatial, policy, social and physical aspects. However, discouraging social values, lack of public awareness, self-deny and effects limitations were found to limit the pro-environmental behaviors on greenway or in daily life.

Based upon all of the beforehand discussions, the three logics for pro-environmental behaviors on greenways were identified. People were motivated to protect based on their appreciation of the nature, their needs and the regulations of the environment. Most importantly, the system dynamic model of people’s pro-environmental behavioral changes in daily life were constructed. People changed to be eco-friendly through repetitive learning, environmental concern-based pseudo learning, and environment awareness-based silent transformations.

The propositions could be given as following:

(1) Though constraints existed, greenway trips promote behavioral changes both on greenways and in daily life with little intention-behavioral gap.

(2) Three logics existed for pro-environmental behavioral changes on greenways: the

appreciation logic based on environmental appreciations, the needs logic upon human nature of hedonism and the environment logic in line to the environmental laws.

(3) Three experiential learning feedback loops promote the pro-environmental behavioral changes in daily life: the repetitive learning upon repeated visits, the environmental concern-based pseudo learning, and environment awareness-based silent transformations.

## **Chapter 8 Discussion: From greenway experience to sustainable tourism**

### **8.1 Chapter introduction**

This Chapter is a comprehensive discussion based on the full greenway experience, afterwards mind actions and behavioral changes. In response to the last research question, this Chapter first explores the potential of the greenway experience to lead to sustainable tourism. In addition, broad discussions are made regarding the conceptualization of sustainable tourism, the potential of greenway tourism, its capability of providing experiential learning for visitor education as well as the implications in the context of China. Finally, the methodological applicability and implications of this study are discussed.

### **8.2 Systematic changes: Approaching social value-based sustainable tourism**

In the literature, the greenway was conceptualized to be an approach towards sustainability from the perspectives of urban landscape planning, open space recreation, social science, ecology, and economy. In other words, greenways were shaped to be sustainable products through planning and management. Greenway tourism was likewise hypothesized to construct the future of sustainable tourism through tourism resource system protection, tourism system segments connection, and resolution of various needs. However, sustainable tourism was argued to be a tourism development ethic rather than a specific product. Even though the design, planning, and management of greenways entail sustainable ethic, whether the potential of greenway tourism in promoting sustainable tourism can be realized depends on visitors' ethics becoming sustainable through greenway visits.

This study explores the greenway experience of visitors over time and its transformation to sustainable tourism from the visitors' perspective to determine the system dynamic model (Figure 8-1). All the relationships come from the discussions and well-built constructs in previous chapters (i.e. Figure 5-4, 5-5, 5-6, 6-16, 7-8 and Table 7-3). Five main positive feedback loops (R4 to R8) are identified to develop visitors' sustainable ethics (i.e. land ethic, public access, and ecology literacy, human ecology, and green economy referring to the literature review 2.4.2) through greenway experience. The loops are explained in detail below.



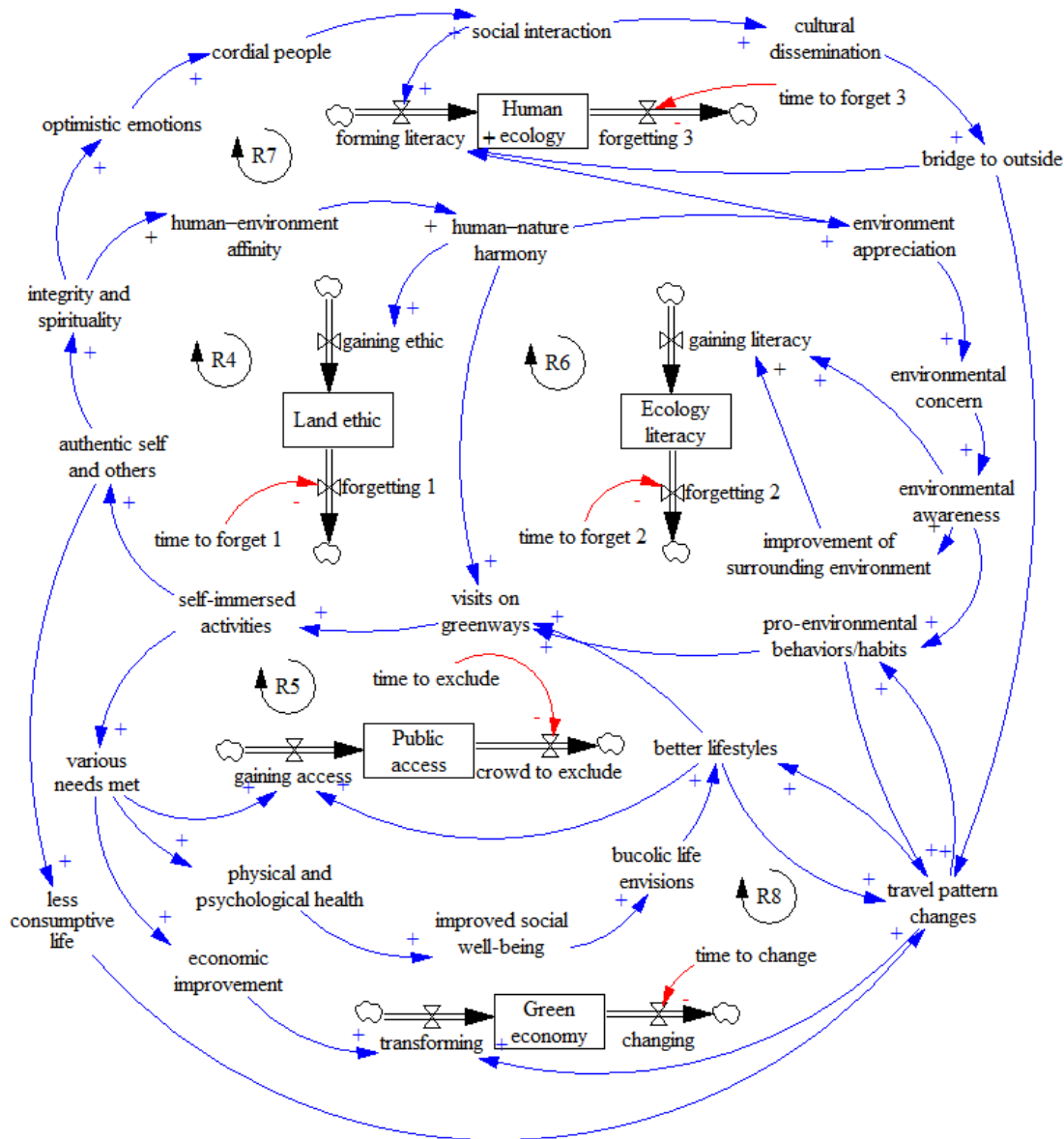


Figure 8-1. System dynamic model for sustainable tourism based on greenway visits (Source: author)

### 8.2.1 Greenway visits to promote human–nature harmony: Human-based land ethic (*R4*)

As can be seen in Figure 8-1, people enjoyed the self-immersed activities on greenways to attain the authentic self and others, as well as the feelings of integrity and spirituality. Concerning the self and the environment, people gained human–environment affinity to promote human–nature harmony and greenway revisits. This positive feedback loop *R4* is similar to *R1*. However, *R1* addresses repetitive learning, whereas *R4* addresses the integrity of human and environment consolidated through greenway visits and its contributions to the land ethic. Compared with the alienation experienced in daily life, the greenway visits reconnected people with the natural environment and others, which helped them gain the land ethic.

Notably, contrary to the original meaning emphasized by Leopold (1948), the attained

land ethic here did not focus on the integrality and beauty of the biotic community, but rather on the integrality of the biotic and abiotic environments (Hellmund & Smith, 2013). For one thing, people held an anthropocentric view towards environment appreciation, preferring the exploited rather than the original nature. For another, people not only appreciated nature, such as the greenery, the water, and the ecological system, they also appreciated the artificial environment and the human involvements in nature. In this regard, through the greenway experience, people regained the human-based land ethic against the technological vacuum and modernity (Quayle, 1995). The pristine land ethic was still far from public concern.

### **8.2.2 Greenway visits to cater to various needs: Individual-based public access (R5)**

The positive feedback loop *R5* in Figure 8-1 demonstrates the enforcements of public access through greenway visits. People were satisfied with the greenway experience because different activities may be carried out according to their own needs, such as slow-paced activities to relax, cycling for exercises, or picnics for family gatherings. Therefore, achieving physical and psychological health for individuals was a main achievement on greenways. People improved their social well-being and constructed visions of bucolic life. Moreover, greenways were close to home and convenient to visit such that people enjoyed better lifestyles afterwards.

Improved public access was achieved in two main aspects. The first one is that greenway visits could meet the various needs of visitors. People are provided with multiple leisure opportunities to improve their quality of life. The second aspect refers to the high public accessibility of greenways in terms of time, distance, and cost. Thus, the public could revisit the places and incorporate them into routine leisure for better lifestyles. However, according to Ribot and Peluso (2003), access does not only involve the equal opportunities of resource use and life quality among individuals, but also the chance to co-create public life with cohesion and integration based on community interactions (Quayle, 1995), which has not been identified in the greenway experience. The reasons could be the early stage greenway development without communities organized and involved in or the social value of preventing disturbances to others.

### **8.2.3 Greenway visits to raise environmental awareness: Home-based ecology literacy (R6)**

Feedback loop *R6* shows a similar logic with *R3* from the greenway experience to environment appreciation, environmental concern, and finally environmental awareness, which promoted pro-environmental behaviors or habits, including revisiting greenways. Moreover, environmental awareness encouraged visitors to improve their home surrounding environments.

Within this feedback, people changed their unconscious anthropocentric values to eco-centric ones. They understood ecological values so as to live with, cherish, and respect nature. This indicates that the greenway visits promoted the ecology literacy of visitors.

Ecology literacy, as previously reviewed, refers to the ability to create sustainable city or community characters according to one's understanding of natural systems (Orr, 1992). In the current study, the environmental awareness reinforced the psychological ecology literacy and the physical ecological construction through improving the surrounding environment. Both dimensions of ecology literacy were achieved through greenway visits. However, the creation of sustainable places was mainly concentrated at home and few extended to the community or city level. For instance, many people had potted plants to extend the bio-system into their homes. Only one visitor reported that she moved to a community with greenways and proposed an eco-friendly facility back to her community after her greenway visits.

#### **8.2.4 Greenway visits to enhance social interactions: Place-based human ecology (*R7*)**

Modern alienation in urban areas occurs not only between humans and nature, but also among humans themselves. *R7* is a positive feedback loop that implies greenway visits influence visitors to become optimistic and cordial, thereby inducing them to be more open-minded and friendly to each other. Social interactions and cultural disseminations made the greenway a bridge to the outside such that people changed their travel patterns for more intimate interpersonal interactions through greenway visits. In this feedback loop, the human ecology regarding the symbiotic interaction of people with the environment (Burel & Baudry, 1995; Krumpe & Lucas, 1986) was developed.

Among the four qualities of human ecology, only sociability, human–environment interaction, and sense of place could be traced on the basis of the greenway experience. First of all, the social interactions promoted the sociability of people. They interacted with one another and strengthened their family relationships or friendships (Coutts & Miles, 2011; Quayle, 1995). Second, people appreciated the human involvements in the environment and developed the intimate affinity between the self and physical environment (Coutts, 2008; Dorwart, 2015; West & Shores, 2015). Moreover, with the environment appreciation, the greenway became a meaningful place for people to understand the outside world, which helped develop the human ecology regarding the “sense of place” in urban areas (Ryan et al., 1993). All those three aspects of human ecology are observed in the greenway space, thus concluding as place-based. Widespread community support and partnership were not identified due to greenway being a state-owned land and top-down project.

### **8.2.5 Greenway visits to urge eco-friendly consumptions: Travel-based green economy (R8)**

Regarding the green economy that emphasized economic development with less environmental impacts (Kahle & Gurel-Atay, 2014), the final feedback loop, *R8*, implies the positive influences of greenway visits on the green economy in two main ways. First, during the visit, people achieved an authentic self and were urged to enjoy a less consumptive life, such as changing travel patterns to become eco-friendly. The second development refers to the economic opportunities produced by the various needs created on the greenways, including bicycle rentals, retail, food, drinks, and accommodations. These two ways of consumptions were neither resource-based. Although the average cost on greenways was lower, the volume of visitors could be larger than that of mass tourist destinations because the greenway network spreads worldwide to connect different attractions. Moreover, people tended to revisit greenways, thereby improving the total capability of revenue generation on greenways.

Nevertheless, the two ways of green economy both depend on visits to greenways. Different from western countries where greenways were designed for non-economic reasons (Dawe, 1996), greenway projects in China enjoyed a tourism-oriented purpose. Therefore, the green economy on greenways was travel-based to promote the local economic development. The increased real property values were not identified yet.

On the basis of the above discussions, the systematic changes from the greenway experience to sustainable tourism could be abstracted as Figure 8-2. Unlike the previous product- or management-based assumptions and discussions in the literature (see Section 2.4.3), greenway travel leads to systematic value-based changes, thereby approaching the ideologies and ethics of sustainable tourism. First of all, other than claiming the protection of historic, cultural, aesthetic, and recreational resource (Timothy & Boyd, 2014), greenway visits promoted the ideologies of home-based ecology literacy, place-based human ecology, and travel-based green-economy, which concerned the physical, sociocultural, and economic “continuities”, respectively.

In the literature, the “way” in greenway tourism was conceptualized as a route to connect the tourism system (including transportation) into the travel experience (Lumsdon, 2000; Mundet & Coenders, 2010; Searns, 1995). Here, it was specified as visitors’ feelings of “integrality and spirituality” in relation to their travel experiences, namely the harmony between human and nature. This integrality of human and nature cultivated the formation of human-based land ethics, which supports the ideology of parallel development of growth and

continuity.

In the literature, greenway tourism was intended to meet different stakeholders' needs, including those of the public sector, for better quality of life, voluntary organizations for environmental protection, mass media for city images, industry for profits, host communities for involvements, and tourists for experience (Mundet & Coenders, 2010; Rabiah Wan Omar et al., 2012; Wolff-Hughes et al., 2014). Although this study did not separately investigate the different stakeholders, the findings indicated that the individual-based public access was achieved with various needs met better lifestyle taken, indicating the improved quality of life, community involvements, and tourists' experiences. In addition, underlying the public access are the economic growth and improvement of city images.

In summary, the people approached the ethic of sustainable tourism through value-based changes based on visitors' experiential learning from the greenway experience. Furthermore, as shown in Figure 8-1, time is necessary for different ideologies to change. Therefore, the systematic value-based changes may remain relatively stable over time and eventually strengthened during repeated visits.

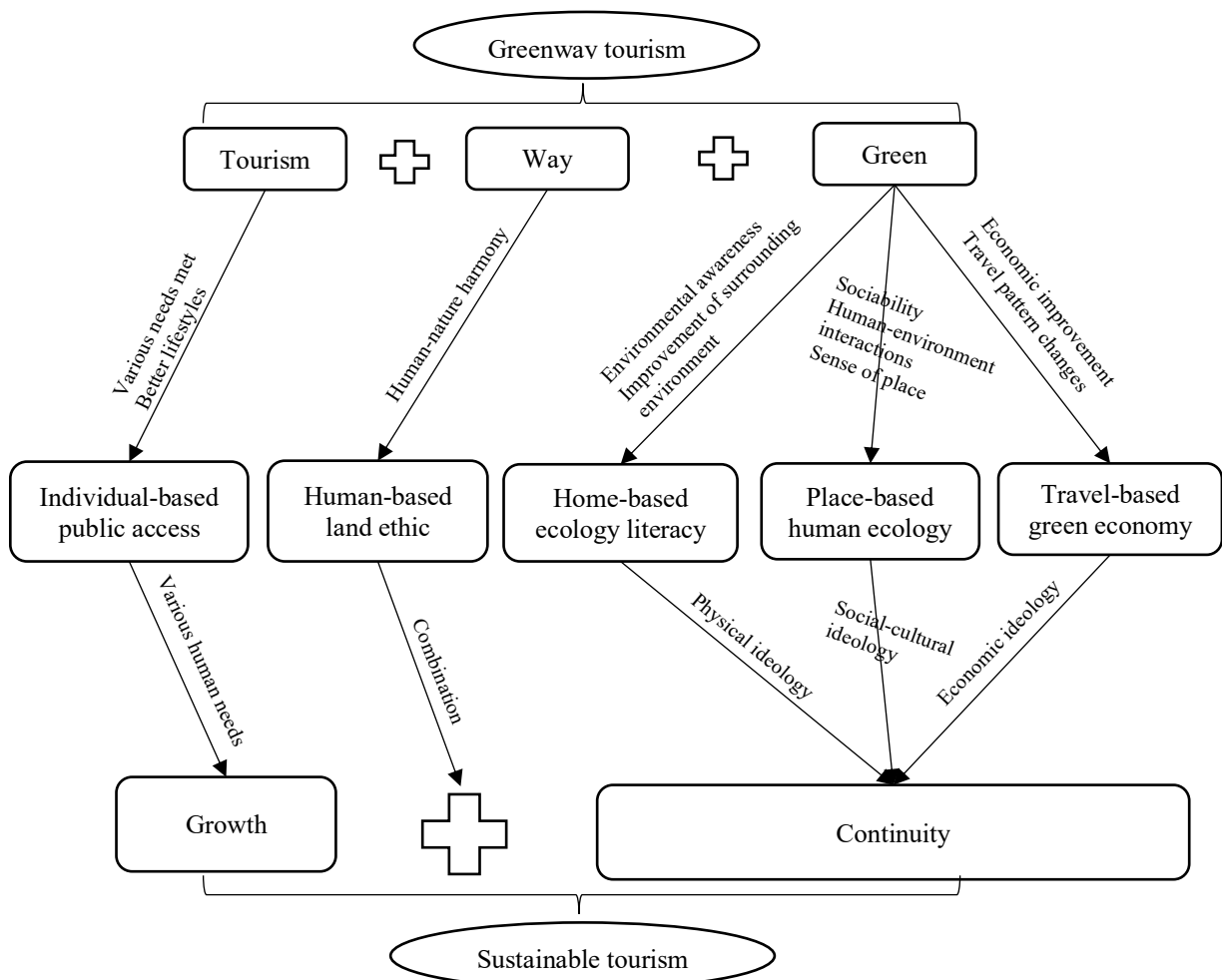


Figure 8-2. Experiential learning: from greenway to sustainable tourism (Source: author)

### 8.3 Sustainable tourism as an ethic: Never end to approach

Based on the definition theory, this study conceptualized sustainable tourism as a resource-concerned tourism development ethic that considers all stakeholders' needs and simultaneously maintains environmental continuity to support growth, particularly in the economic, environmental, social, and cultural aspects in a local–global context (Elkington, 1997; UNEP & UNWTO, 2005). Here, sustainable tourism is a concern-oriented concept rather than a specific practice or product, which means it approaches sustainability only if the actors gain concern on continuity while enjoying growth. For instance, the visitors identified that their concern for different aspects of continuity increased during the greenway visits while meeting their various needs. Thus, greenway visits led to the ethic of sustainable tourism on the basis of the value-based changes.

Nevertheless, the values and ideologies changed based on greenway visits were only halfway to sustainable tourism because the developed land ethics is human based, emphasizing the integrity of humans and nature rather than nature in itself. The improved public access focused on equal chances and multiple activities for individuals without the constructions of public life. The home-based ecological literacy gained from greenway visits enabled people to construct an eco-friendly environment at their homes, rather than at the community or city scale. The place-based human ecology appeared mainly onsite during the visits. Community integration and partnership are as yet to be formed. As for the green economy, the changes were greenway travel based. The multiplier effects in daily production deserve further development. Hence, greenway tourism constructs the way to sustainable tourism, but it is a never-ending story because the ethic of sustainable tourism itself changes over time. For instance, tourism itself was originally regarded as an ideal practice for sustainable development that embraced both growth and continuity, then was later identified as having cumulative negative impacts to be unsustainable (Wight, 1994).

Accordingly, the two contradicting views of sustainable tourism in literature could be addressed here. For the nexus between growth and continuity, the best “balanced” point always changes for humans because it is after all an ethic in the mind. The expected resilience levels of the natural, sociocultural, and economic systems, on which tourism depends, change all the time. As shown in Figure 8-3, people could have varying sustainable ethic along the growth-continuity continuum at different periods of time. For instance, people viewed economic development as the top priority in the 1990s (van der Straaten et al., 1996) such that a human-oriented sustainability was the focus in tourism development. The sustainable tourism ethic should be close to the growth side, which means the vertical needs axis located at the left side

of the horizontal axis. With the recent increasing concern on system continuity, sustainable tourism ethic may move towards the right.

Likewise, contradictions among diversified needs lead to difficulties in achieving a final balanced point. At different stages or in different cultural backgrounds, people prioritize different interested parties and thus locate at different points along the macro-micro spectrum (Hunter, 1997; Lu & Nepal, 2009). For instance, at the beginning of the open reform in 1978 in China, the whole country prioritized individual growth as the development strategy. At that time, the sustainable tourism ethic should be close to the micro-side needs, which means the horizontal axis located at the top side of the vertical need axis. In recent decades, with the realizations of the importance of reducing the rich–poor gap, the sustainable tourism ethic may move downward.

Figure 8-3 also indicates that sustainable tourism ethic has no end because it always changes. This is consistent with Hunter’s (1997) argument that sustainable tourism is not an end point but an adaptive paradigm. However, different from Hunter’s spectrum of very weak sustainability to very strong sustainability, which still assumed an end point that is difficult to achieve, sustainable tourism as human ethic is context-based in the current study. For every period of time, society has different ethics that is not strong or weak, but rather has different focuses. Thus, while the greenway visitors approach the current sustainable tourism ethics, the ethics itself is updating or moving around in the figure.

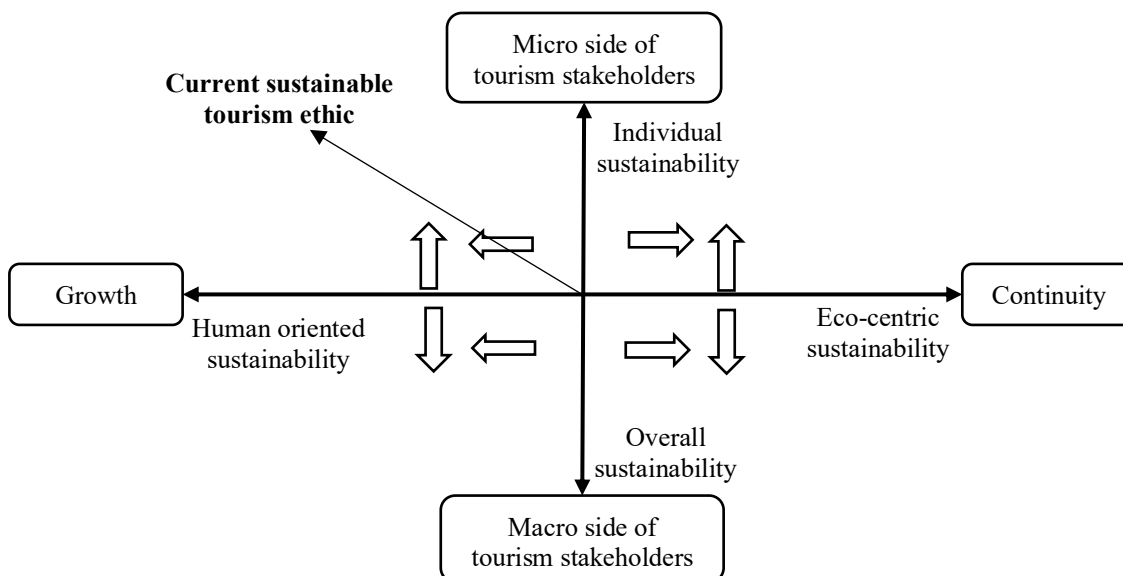


Figure 8-3. Continuum of sustainable tourism (Source: author)

The most important item to note is the disparity between the leading ethic proposed by elites or pioneers and the practical ethics of the public at the same period of time, which led to the theoretical and practical gaps. Therefore, the key for interpreting sustainable tourism should

start from understanding the global ideology for continuity and needs for tourism growth (Sofield, 2003). In any given period, the entire world shares the same ethic for sustainable tourism (Hall & Lew, 1998a). Encouraging the public to attain the global sustainable tourism ethic is important. Hence, apart from promoting sustainable tourism by focusing on managers and governments (Bramwell & Lane, 2010; Godfrey, 1998), other stakeholders should also be involved, particularly the tourists and communities comprising the mass population (Vellecco & Mancino, 2010). In other words, individual ideologies regarding continuity and their awareness of growth are the basis for unlocking the present sustainable tourism practices.

#### 8.4 Greenway travels between daily leisure and traditional mass tourism

On the basis of Elands and Lengkeek's (2000) tourism and recreation experience typology, Gisolf (2018) determined five main tourism-like experience modes, namely, amusement, change, interest, rapture, and dedication. Table 8-1 presents the different features for these different types of experiences. Accordingly, daily leisure activities, such as shopping, karaoke, and indoor exercises, can be classified into amusement because they provide opportunities to have short breaks in familiar and nearby places with familiar groups. Traditional mass tourism falls under the rapture and dedication types because of its main purpose of obtaining a different experience away from home and being open to the unknown world. Notably, traditional mass tourism has a slight overlap with interest type due to its additional purpose of pursuing stories. By contrast, greenway travels could be positioned between change and interest types, with a slight overlap with rapture. On the one hand, greenway travels require people to travel away but not too far from home. People can enjoy the experience as long as they could. On the other hand, visitors have no preferred spots on the destinations. At their leisure, people can stay at any available place on greenways, which are distinct from home environment. At times, greenway travels could also allow long-term visits.

Table 8-1. Key characteristics per experience mode (Source: Gisolf, 2018, adapted from Elands and Lengkeek, 2000)

	Daily leisure	Greenway travels		Traditional mass tourism	
Experience	Amusement	Change	Interest	Rapture	Dedication
Subjective Distance	Close by	Going away from	Going to	Far away	Immerse
Subjective Time	(Short) Break	Another sense of time	As long as possible	Unanticipated	Permanent
Space	Familiar, symbolic, and physical	Elsewhere	Vistas, Gaze, Liminal	Different, high level of liminality	Backstage world
Sociality	Familiar social groups	Free oneself from home environment	Stories	Open to the unknown	Authentic otherness



This experience typology clearly differentiates greenway travels from daily leisure and traditional mass tourism. Different from the technique definition that has been proposed according to cycling tourism (Lamont, 2009), greenway travels should be defined on the basis of experience because the distance is subjectively felt. Regardless of whether or not the distance was 40 km, people still enjoyed greenway travels with a liminal experience once they were free from the home environment and daily pressure. Certainly, a distinct environment should be provided for enjoying such a liminal experience. Moreover, the role of greenway travels should be emphasized here. Considering the time and cost constraints of traditional mass tourism, and the increasing need to escape from modern life, providing a greenway experience for the public is necessary. On the one hand, such experience has the advantage of daily leisure with high accessibility. On the other hand, its similar merit as of traditional mass tourism likewise provides a liminal experience from daily life. Hence, although greenway travels do not replace traditional mass tourism and daily leisure, they serve as an essential part of people's recreational lives, which has the potential to grow with the extension of greenway networks worldwide.

Correspondingly, greenway visitors can be distinguished from residents who visited greenways for daily leisure. Greenway visitors sought experiences that differ from their daily lives, whereas residents generally regarded greenways as routine spaces for daily practices or exercises. The varying uses and experiences may cause differences in experiential learning on greenways. As implied by the experiential repetitive learning feedback (*RI*), the differences between greenways and visitors' daily lives decreases with repeated visits. This means that the liminal and learning experiences have a glass ceiling. Residents living near the greenways could be regarded as the extreme repeat visitors. For residents, even though the distance and their time on greenways meet their requirements, the greenways could still be considered the same as their daily leisure because their extremely frequent visits no longer allowed them to appreciate the greenway for providing changes to their daily lives. However, these questions on how to retain the liminal space of greenways and how residents feel during greenway visits deserve further explorations.

### **8.5 Experiential learning for long-term goals**

This study's findings mainly indicate that people learn from their greenway experiences. In line with experiential learning theory (Kolb, 1984), people have reflective observations and abstract conceptualizations regarding their concrete experiences, thereby leading to their behavioral changes. As value system changes based on spontaneous learning, this process

shows a totally different approach from traditional information-based visitor education that promotes knowledge gain and conscious changes, which are inherent with huge attitude-behavior gaps. For one thing, knowledge tended to decay afterward; for another, the cognition changes were offset by numerous constraints in transferring into actual behaviors. For this reason, only the onsite ecofriendly behaviors were identified in ecotourism destinations (Cheng & Wu, 2014; Lee et al., 2015). Regarding experiential learning on greenways, although different levels of value changes were observed from different visitors, unconscious value changes were identified to induce overdue behavioral changes in daily life or other places.

Simultaneously, silent transformation in the form of unconscious value changes is not the only learning process occurring in greenway travels. According to the system dynamic model (Figure 7-8), the three different learning rationales interact to promote overdue and long-term transformations (Figure 8-4). Similar to information-based visitor education, learning starts from conscious changes (pseudo learning), which may promote environmental concern but not necessarily actual pro-environmental behaviors. However, the conscious changes may turn into unconscious changes (silent transformation) through repeat visits (repetitive learning). The silent transformation can also further promote repeat visits for a new round of learning. Thus, the process illustrates a virtuous cycle of greenway experience and human–nature relationship.

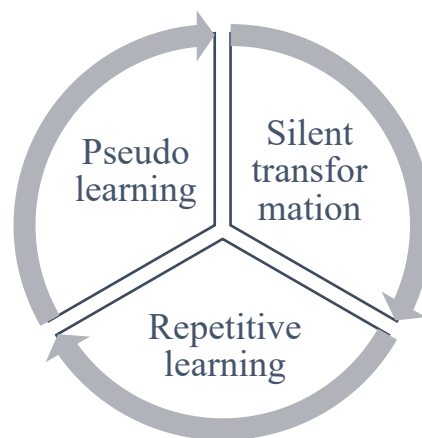


Figure 8-4. Systematic learning through greenway visits (Source: author)

The figure implies a systematic change of social values through the individuals' experiential learning. As Hall (2015) argued, effective interventions for long-term behavioral changes rely on the individuals' value system transformations and the social value system changes as a whole. The experiential learning of visitors facilitated the interplay of greenway experience, self-value systems, and the environment. The social values consist of all individual values (Dillimono & Dickinson, 2015; Hall, 2015). With increasing visitors' learning and

changing based on their greenway experiences, the social value system gradually changes and further promotes actual pro-environmental behaviors. Hence, governments and organizations should consider how they can maintain the environment on greenways and sustain or improve the elements that enable visitors to derive meaningful learning on greenways.

#### **8.6 China context: From an anthropocentric nature to original nature appreciation**

This study was conducted within a China-centric context. With sustainable tourism concerning the needs of different stakeholders and different aspects of continuity at the global scale, both the connections to global sustainable tourism development and the particularities of China's context should be discussed because the country is an integral part of the global tourism market.

Greenways in China are similar to those of other countries and are designed to provide public space for leisure and relaxation. The data (China Tourism Academy, 2017) show that China has reached an annual travel rate as “4” in 2018, which indicated the country's entry into the leisure stage of tourism development. The increasing leisure needs not only pose challenges to destination development for China, but also the world as a whole. Greenway development in China can certainly accommodate those needs, while also promoting global sustainable tourism development. For one thing, the greenway networks complement long-haul travels to relieve the pressure in traditional mass tourist destinations. For another, when people achieve eco-centric values on greenways, they tend to behave in an eco-friendly manner in other places, thereby improving the image of Chinese tourists in international mass media (Guo et al., 2017; Wei & Wen, 2015).

Current sustainable ethic was led by Western ideologies. Although visitors were found to have improved environmental awareness from their greenway experiences in China's context, the environment they appreciated was mainly anthropocentric and still deviated from the eco-centric view of Western ethic. In other words, the visitors appreciated the exploited nature rather than the original nature. In this regard, environmental protection is slightly different from ecological protection. Here, the environment refers to a holistic environment with human–nature harmony. Whether the appreciation will further develop into that of the original nature and ecological protection requires longitudinal observations.

Undoubtedly, contextual and cultural differences between China and the West make the same sustainable tourism ethic difficult to achieve. First, although China is experiencing rapid economic and tourism development transformations (China Tourism Academy, 2017), economic growth remains the top priority in this developing country. For instance, greenway projects in China were initiated for tourism purposes, whereas greenways in Western countries

were constructed for public leisure (Dawe, 1996). This difference induces significant explorations and human interventions in China's greenway constructions. Therefore, in many cities, the greenways were designed to be attractive for tourists across regions. Economic benefits could be an important goal for greenway development in China, which should be explored in future research. Correspondingly, a second difference of China from western countries is that the ecological process or corridors for habitats or migrations of creatures were less considered in the greenway projects. Moreover, the centralized power system in China hindered the public from assuming responsibilities and actual participations in advancing social development. In addition, the long-standing Daoist culture of "human and nature as one" in China has a deep influence on the whole population's psyche (Xu et al., 2008). Nonetheless, meaning-making on greenways over time seems to have the potential to promote original nature appreciation and to change the public ideologies towards environmental protection if the greenway practices in China further consider greater ecological aspects.

### **8.7 Interdisciplinary and systematic methodology**

As concluded in the literature review, an interdisciplinary approach is extensively encouraged due to the complexity of the tourism system and sustainability concept (Farrell & Twining-Ward, 2004). Particularly, research with psychological exploration was required due to the importance of individuals' attitudes and behaviors for sustainable tourism. To determine the underlying logic, this study adopted an interdisciplinary approach. Specifically, sociological, psychological, and behavioral theories were simultaneously adopted. Notably, interdisciplinary work does not mean simply application of theories from different disciplines, but also incorporates different disciplinary epistemologies and methods into a cohesive and integrated methodology. First and foremost, this study adopted the experiential learning epistemology from sociology to lay the philosophical basis. This foundation not only highlights the necessity for psychological analysis, but also challenges the traditional behavioral models. Then, the value-belief-norm theory and rational behavioral models were incorporated to interpret the travel experience, human psychological process, and behaviors.

Moreover, photographic techniques were used to elicit psychological analysis. In truth, photos were undervalued in past research. However, with the development of modern photographic technologies, photography techniques referring to participant-generated photos and photo elicitation emerged as important methods for capturing the dynamic interaction between humans and the environment (Dakin, 2003; Taylor, Czarnowski, Sexton, & Flick, 1996). With minimum researcher intrusion on the visitors' experiences, these photographs illustrate how visitors see and interpret the world and its people and places (Haywood, 1990).

Taking photographs requires mental processes and gives way to unconscious expressions that reflecting what are hidden from conversations or words, thus providing researchers with in-depth understandings and insights for pro-environmental behaviors and sustainable tourism (Miller & Twining-Ward, 2005).

The literature likewise implies the need for systematic changes towards sustainable tourism because sectoral strategies failed to fulfill the vision of sustainable tourism (Giddens, 2009). However, previous studies were not explicit about the scales of systematic changes. Thus, the present study implicated three aspects of systematic changes for approaching sustainable tourism: value system change, systematic change process, and tourism system integration. Value system change refers to the transformation of the individuals' value system and hence the social values for rooted changes, because sustainable tourism is not a specific product but rather tourism development ethics. Individual behaviors tend to be "locked into" social systems of consumption and provision (Higgins-Desbiolles, 2010). Sustainable tourism should thus be achieved through visitors' experiential learning and value system changes (Stumpf et al., 2016). The present study traces the promotion of sustainable tourism through visitors' environmental values changes to implicate theoretical advancements of sustainable tourism.

Systematic change process refers to the logics underpinning the achievements of sustainable tourism. Different from previous research, which reports the perceived tourism impacts as sustainability (Lu & Nepal, 2009), this study traces the inner logics of behavioral changes through a system dynamic analysis. For instance, although the impacts of greenway travels were reported, these were regarded as reflections of visitors on greenways and parts of the systematic process, rather than direct indicators for sustainable tourism. The underlying logics to behavioral changes were concluded as the system dynamic models Figure 7-7 and Figure 7-8. Likewise, the systematic process to approach sustainable tourism was constructed as Figure 8-1. From these systematic processes, the key links underpinning behavioral changes and sustainable tourism could be identified.

Finally, tourism system integration refers to the promotion of sustainability in the entire tourism system. Although transportation was implied as an integral part of the overall experience on greenways, no detailed examinations were conducted here and could be done in future studies.

## **8.8 Chapter summary**

This Chapter presented comprehensive discussions based on all the findings. According to the responses to the first three research questions from Chapters five to seven, the fourth

question “how could greenway tourism promote sustainable tourism systematically” was answered on the basis of the system dynamic analysis. A system dynamic model with five positive feedback loops was constructed to describe the transformation process from the greenway experience to sustainable tourism. The greenway experience with repeated visits and self-immersed activities was found to promote the land ethic of human–environment integrity, public access with high accessibilities and lifestyle changes, ecology literacy with improved environmental awareness, human ecology with intimate interactions on greenways, and the green economy based on marked changes in visitors' travel patterns. Although not yet fully conforming to the ideal ideologies of sustainable tourism, greenway visitors are on the way to become sustainable tourists through a longitudinal learning process.

In addition, discussions on sustainable tourism, greenway tourism, experiential learning, China's context, and interdisciplinary and systematic methodology were presented to provide responses to the questions raised in the corresponding literature.

A key proposition could be developed from this chapter:

(1) Greenway tourism promotes systematic value-based sustainable tourism through improving the human-based land ethic, individual-based public access, home-based ecology literacy, place-based human ecology, and travel-based green economy on visitor basis.

Besides, the following arguments could be further incorporated into previous findings:

(2) Sustainable tourism is the changing ethic between needs and continuity.

(3) Greenway travels could be classified between the “change” and “interest” experiences.

(4) It is a cyclic process from pseudo learning, respective learning to silent transformation to achieve the long-term goals of pro-environmental behavioral changes.

(5) Chinese visitors are learning to appreciate the original nature from greenway experience.

## **Chapter 9 Conclusion**

### **9.1 Chapter introduction**

This Chapter presents the conclusion of the whole study. Starting with an overview of the main findings and corresponding propositions, the Chapter emphasizes the theoretical contributions and practical implications of this research. Subsequently, limitations of the present study and potential future research are identified. Finally, the concluding remarks close this thesis.

### **9.2 Overview of the main findings**

This study aims to determine the potential of greenway travels to support sustainable tourism and its underlying logic with sustainable tourism as the main target, greenway tourism as the research object, and visitor education based on experiential learning as the perspective. A series of findings, including the visitors' interactions with greenways in detail and the underlying change process towards actual pro-environmental behaviors and sustainable tourism were achieved through in-depth explorations. This investigation was conducted via a two-step interview process with photographic techniques and a three-tier analysis procedure that includes thematic, semiotic, and system dynamic analysis. As such, the overall research question "if and how can greenways promote sustainable tourism through visitors' experiential learning" was thus addressed through the discussions in chapter 5 to 8, which answered the four specific research questions respectively. Various corresponding theoretical propositions were proposed for future numeric verifications. The following sections conclude the main findings.

#### **9.2.1 Sustainable tourism is defined as a tourism development ethic**

This study adopted etymological definition theory, against the definitional ambiguity, to trace the contextual and semantic etymologies of sustainable tourism. Unlike previous traditions to define sustainable tourism as a certain product or a management practice, sustainable tourism was interpreted in this work as a dynamic tourism development ethic that concerns the satisfaction of all stakeholders' needs, including the public sector, voluntary organizations, media, the tourism industry, the host community, and the tourists, while simultaneously considering continuity of environment, especially the economic, environmental, social and cultural systems, to maintain its capability to sustain longitudinal growth. The human needs for growth and ideologies for continuity are situated in a local–global context. Hence comes the first proposition:

***Proposition 1: A conceptual framework was constructed for sustainable tourism (see***

as Figure 2-5).

According to the conceptual framework, sustainable tourism is a nerve-ending ethic since it moves around the growth–continuity continuum and the individual–overall needs spectrum on the context basis (Figure 8-3). Correspondently, the theoretical constructions of sustainable ethic in greenway tourism were conceptualized from an interdisciplinary perspective:

***Proposition 2: Sustainable ethic in the greenway tourism incorporated the land ethic, public access, ecology literacy, human ecology, and green economy.***

Although these constructs of sustainable ethic, including the land ethic, public access, ecology literacy, human ecology, and green economy have been specifically discussed on a “green + way + tourism” basis, they were derived from the planning and management perspectives. Whether greenway tourism can incorporate this ethic depends on visitors’ ethics becoming sustainable through greenway visits.

### **9.2.2 An existential experience is constructed through self–environment interactions on greenways**

The greenway continues to be a new concept to the public in China and is regarded as regional green routes for human well-being. People have begun to discover the ease and convenience of visiting greenways owing to the short distance and high accessibility. As such, greenway experience has been identified as existential authenticity based upon self–environment interactions to support the following propositions:

***Proposition 3: The trips to the greenway in the visitors’ point of view range between traditional mass tourism and daily leisure.***

With regards to the subjective distance, time, space and sociability, the greenway visit is a type between traditional mass tourism and daily leisure activities. On the one hand, the greenway space is found to be different from daily life. Although the greenway settings are general and usual for visitors, the whole feelings resulting from greenway trips are different in terms of the provision of a liminal space for visitors. On the other hand, the greenway network brings nature close to home so that the accessibility is higher than traditional mass destinations. In Gisolf’s (2018) five main tourism-like experience modes, greenway experience lies between the daily leisure (amusement) and traditional mass tourism (rapture and dedication) to be change- and interest-focused (see as Table 8-1).

***Proposition 4: Greenway experience promotes the development of existential authenticity in self.***



The entire greenway experience is the process by which visitors can achieve their existential authenticity through self–environment interactions at the pre-, during-, and post-stages. The pre-stage motivations indicate a virtuous circle wherein people can make repeated visits on greenways. People are motivated to visit by their inner needs although such needs may change from initial self-driven ones, such as escape and relaxation, to experience-driven ones, such as the good experience on greenways (see as Figure 5-4). During the time spent on greenways, people can enjoy their existential self through self-immersed activities, existential feelings, and optimistic emotions. All the activities people engage in are based on their own interests and choices. People care about themselves and their connections with the authentic world. The corresponding positive emotional changes assist people in inspiring themselves and adopting optimistic attitudes toward daily life (see as Figure 5-5). After the trips, visitors' affection-based impressions strengthen their affinity with the environment so that they provide advisory evaluations and behavior intentions to extend the environment appreciation in self and others. That is, people are concerned with their inner self and their connections to the outside through greenway visits (see as Figure 5-6).

***Proposition 5: The liminality in greenway experience has less gap with daily life and the gap could be further reduced with repeated visits, which implicates changes of daily life.***

Greenways provide liminal experience to visitors since it is kind of escape from daily pressure and mundane life. However, the liminality is distinct from traditional mass tourism because it is affection-based and less of a gap is felt between the greenway experience and daily life. This means that the greenway experience is the middle way between traditional mass tourism and daily routine. The gap between spirituality in liminal space and the mundane in daily life is less on greenways than traditional mass destinations. Moreover, the greenway experience reveals decay effects over time. With repeated visits, the feeling of difference decreases and the liminality declines. Nonetheless, this decrease in liminality over time demonstrates the lifestyle changes.

### **9.2.3 From holistic environmental appreciation to environmental concern, visitors experience longitudinal and recursive value exchanges over greenway visits**

Greenway visitors were identified to have longitudinal values exchanges through greenway visits that supported by the following propositions:

***Proposition 6: Visitors' holistic appreciation of greenways, including the natural environment, the artificial environment, and the human involvements promote their concerns with their living environment, including the social, self and environmental aspects.***

Through interactions with greenway environment, visitors appreciated the holistic environment, including the natural and artificial environment and human involvement. Correspondingly, concerns regarding visitors' living environment were developed via reflective observations on greenways, others, and the inner self. The living environment concerns include the social aspect (e.g., social development trends), self-concerns (e.g., health, positive attitudes and quality of life), and the environmental aspect (i.e., human–nature harmony and ecological importance) (see as Figure 6-9).

***Proposition 7: Visitors construct new lifestyle visions on greenways, including human-friendly travels, psychological and physical health, bucolic living environment, and work-life balance.***

People reconstructed a human-friendly travel scheme based on the social concern. The greenway travels are irreplaceable with traditional mass tourism. Greenway visits could complement long-haul travels with high accessibility and repeatable visits. Different types of travels are important for people to meet their different needs. Meanwhile, the self-concern on greenways promoted conceptualization of self-concepts with lifestyle visions including physical and psychological health, work–life balance, and the bucolic living environment.

***Proposition 8: Visitors show longitudinal and recursive exchanges of environmental values, beliefs and norms over repeated visits on greenways, given an anthropocentric environmental concern in China.***

People obtained in-depth environmental values, beliefs, and norms exchanges with greenway experience. People's values change at different levels, including the conscious, preferred, and unconscious levels. Changes to conscious values were easier to obtain than changes to unconscious values. The conscious value is more about the environmental concern in rational thinking. Moreover, the environmental concern that people achieved through reflections and incorporated into their travel preferences and self-concepts is anthropocentric because the environment that people care about is the well-developed one rather than the original ecological system. This means that people are inclined to protect the environment for the sake of human needs rather than for the ecology itself. The transformation from conscious value to unconscious value could help to promote the achievement of environmental awareness on an eco-centric basis.

Besides, beliefs regarding the behavioral influences on the environment improved, although they rarely connect the impacts to themselves. In addition, the achievement of high norms of obligations was easier for people to achieve during the initial visits, whereas the

obligations were passive for human concern.

Stable value–belief–norm changes are a longitudinal and recursive process because the changes fade over time in daily life (see Figure 6-16). Aside from the constant increase of belief in general behaviors and the decrease of obligation on greenways, both conscious and unconscious values, as well as the belief in ecological worldview, belief in greenway behaviors, and obligations in daily life, all showed repeated increases on-site and declines after the visitors returned home. However, repeated visits on greenways assisted people in consolidating the effects of greenway experience on people’s pro-environmental constructs, particularly the unconscious value, which in turn, promoted the improvement of environmental awareness over time. The improved environmental awareness helped make the beliefs more practical so as to have less belief in control over time. Meanwhile, the gap between obligations on greenways and in daily life became narrower due to the increasing familiarity of greenway and environmental awareness over time.

#### **9.2.4 Four self-reported actual behavioral changes on greenway and seven in daily life after greenway experience are identified**

***Proposition 9: Though constraints existed, four actual behavioral changes on greenway and seven in daily life are reported after greenway experience with less intention-behavior gap***

People manifested behavioral changes in daily life after greenway visits. Similar to behavioral change intentions, people enjoyed better lifestyles, were more concerned with the authentic self, had positive attitudes toward life, engaged in pro-environmental behaviors, improved the surrounding environment, and paid more attention on the greenways. Moreover, people changed their travel patterns gradually to have less long-haul travels and slower pace activities during trips. People also revealed different behaviors on greenways compared with when they were in mass tourist destinations and daily life. They showed considerable human–environmental interactions, such as pro-environmental actions, self-focus activities, increased outgoing interactions, and repeat visits. Little gap between behavioral change intentions and actual behaviors changes was found even though constraints such as discouraging social values, poor public awareness, self-deny and effects limitation existed (see as Table 7-3).

#### **9.2.5 Three logics (appreciation logic, needs logic, and environment logic) and three experiential learning feedback loops (repetitive learning, pseudo learning, and silent transformation) are identified for behavioral changes on greenways and in daily life respectively**

***Proposition 10: Three logics exist for pro-environmental behavioral changes on greenways: the appreciation logic based on environmental appreciations, the needs logic upon human nature of hedonism and the environment logic in line to the environmental laws.***

The appreciation logic, needs logic, and environment logic were identified to promote pro-environmental behavioral changes on greenways (Figure 7-7). Similar to previous research, people protect the beauty that they appreciate. Human nature is inclined to appreciate the aesthetic element first. Beautiful sceneries with greenery and water on greenways were favored by visitors and, therefore, they were protective of it. Moreover, people showed eco-friendly behaviors on greenways owing to the human preferences for enjoyment in nature. In addition, the environment regulated people's behaviors through the spatial and policy normalization, the social norms to follow others and the physical regulation to maintain and appreciate the good environments.

***Proposition 11: Three experiential learning feedback loops promote the pro-environmental behavioral changes in daily life: the repetitive learning upon repeated visits, the environmental concern-based pseudo learning, and environment awareness-based silent transformation.***

We present the system dynamic model of people's pro-environmental behavioral changes in daily life (Figure 7-8), which comprises three groups of feedback loops. Each group contains one positive feedback loop and one corresponding negative feedback loop. The three groups of feedback loops represent the three experiential learning approaches: repetitive learning, pseudo learning, and silent transformations.

Repetitive learning refers to the process by which people learn about the existential self and human–environment affinity through repeated greenway experiences. However, the sense of difference from daily life decreases over revisits, which means a glass ceiling exists to limit the sense of liminality that promotes learning on greenways.

Pseudo learning means that people increase their environmental concern and, therefore, are more inclined to have pro-environmental behavioral intentions. Environmental concern is at a conscious level and people think the environment is beneficial to protect. The pro-environmental behavioral intentions usually give way to other beneficial considerations in practice; thus, an extremely large intention–behavior gap is formed.

The silent transformation includes the learning of environmental awareness from the greenway experience. People changed their unconscious values to eco-centric values and

regarded the protection of the environment as a necessity. Hence, the pro-environmental behavioral intentions based on environment awareness were transformed to actual behavior with few gaps. However, the silent transformation was a longitudinal and recursive process to achieve owing to the difficulties in unconscious value changes.

The three experiential learning approaches are mutually related and supported (Figure 8-4). Pseudo learning can be transformed to silent transformation with repetitive learning, whereas repetitive learning can be achieved through pseudo learning and silent transformation. Therefore, the glass ceiling of repetitive learning is the glass ceiling of pseudo learning and silent transformation. When the liminality in greenway experience decreases to a certain level, people can learn little from the experience.

#### **9.2.6 Five positive feedback loops are identified to achieve the systematic changes towards sustainable tourism through greenway travels**

***Proposition 12: Greenway tourism promotes systematic value-based sustainable tourism through visitors' experiential learning of the human-based land ethic, individual-based public access, home-based ecology literacy, place-based human ecology, and travel-based green economy.***

A system dynamic model with five positive feedback loops was constructed to describe the process from greenway experience to sustainable tourism (Figure 8-1). The first feedback loop illustrates the gaining of a human-based land ethics with self-immersed activities during the greenway (re)visits. Unlike the original land ethics that dealt with the integrality of the ecological system, the human-based land ethics focused on human–environment integrality. The second feedback loop shows the increase of individual-based public access with high accessibility to greenways and lifestyle changes. Public access is individual based because it includes the equal opportunities and multiple leisure activities for visitors, whereas no public life is created through community interactions. The third feedback loop demonstrates the achievement of home-based ecology literacy with improved environmental awareness. People are inclined to improve their home environment according their understanding of the ecological system and are less concerned with the community- or city-environment level. The fourth feedback loop displays the improvement of place-based human ecology with intimate interactions on greenways, rather than community partnerships after the return home. The last feedback loop depicts the advancement of a travel-based green economy that depends on greenway travels. Small multiplier effects were identified.

Together, these feedback loops show the systematic changes toward sustainable

tourism through visitors' experiential learning from greenway experience (Figure 8-4). The feedback loops demonstrated the value system-based changes in three aspects. For one thing, the improvements of ecology literacy, human ecology, and the green economy support the changes in ideologies of physical, sociocultural, and economic continuities. Second, the achievement of public access supports growth to meet various needs. Third, the increase of land ethic supported the combination of growth and continuity. Although greenway visitors did not fully conform to the ideal ideologies of greenway sustainable tourism, they approached the sustainable tourists through a longitudinal learning process. It means Chinese visitors are learning to appreciate the original nature from greenway experience. Instead of providing the results directly, the system dynamic model traces the underlying logic and the entire systematic process from greenway visits to sustainable tourism. In-depth understandings and insights can then be obtained for research and practice.

### **9.3 Theoretical contributions**

#### **9.3.1 Advancements in sustainable tourism research**

##### ***Proposed ethic-based conceptual framework of sustainable tourism***

This study contributes to the definitional clarification of sustainable tourism through the proposition of an ethic-based conceptual framework of sustainable tourism. Admittedly, in order to conduct a conceptual discussion against the overwhelming research on sustainable tourism is a great challenge. This study did not attempt to propose a superior definition of sustainable tourism by reviewing all existing discussions, but rather attempted to clarify the definition and thereby contribute to its effective communication and knowledge transfer in academia and practice. The adoption of definition theory revealed that previous definitions interpreted sustainable tourism as a specific form of tourism or management practice, thus leading to definitional arguments. The etymological definition technique based on the semantic and contextual interpretations increases the discussion from a particular practice to an ethic at the ideological level to be concerned with growth and continuity simultaneously. Such an ethic-based definition or conceptual framework pulled the sustainable tourism out of the circular debates as to "what forms of tourism are sustainable tourism." Sustainable tourism is concern-oriented rather than outcome-oriented, which means that all practices should contain this ethic. In this regard, the previous definitional debates of sustainable tourism can be addressed so that they all represent approaches to, or particular practices of, sustainable tourism rather than the concept of sustainable tourism itself. Moreover, numerous other derived concepts, such as sustainable products and sustainable behaviors can be clarified accordingly.

The long-term discussions on sustainable tourism can be advanced based on this ethic-based definition. Sustainable tourism as an ethic does not depend solely on the supply or the demand. The more the public have the ethic, the better it is to move forward. Sustainable tourism does not target parts of the tourism system concerned; rather, it focuses on the ethics to be held over the entire tourism process. The research needs to implant the ethic into considerable and widespread tourism practices. Given that sustainable tourism is an ethic, the key is to change people's values towards it. The gap between the theories and practices of sustainable tourism lies in the failure in, or deviation from, visitors' achievements with regards the leading sustainable tourism ethic.

### ***An approach to promote sustainable tourism on a mass basis***

People learnt to be eco-friendly and also gained the sustainable ethic during greenway travels. Greenway tourism can be regarded as an approach or a practice to put forward sustainable tourism on a mass basis because it accommodates the leisure needs of a mass population. The population that can be influenced by the greenway travels continues to grow with the increase of people's need for leisure lifestyles and the extension of greenway networks worldwide. This approach deserves further attention so as to promote sustainable tourism on a mass basis.

### ***An approach to promote sustainable tourism in urban areas***

This study offers a new approach to promote sustainable tourism in urban areas. A greenway is a network that connects resource across different regions, including rural and urban areas. Originally, a greenway is a leisure space provided in urban areas. Greenway tourism contributes to the achievement of sustainable tourism ethic in urban areas while simultaneously providing a bucolic urban life for the citizens and—as a topic—has been minimally discussed or applied in previous research and practice, respectively.

### ***Implication of a systematic view for sustainable tourism research***

This study contributes to a systematic view in sustainable tourism research and explores the visitors' value-based changes toward the sustainable tourism ethic through greenway travel. This systematic view provides a demand perspective that previous research lacked and is concerned with values, which may promote in-depth changes. The entire systematic change process is traced to reveal the underlying logic. This systematic view can assist in clarifying the key factors and elements that promote the achievement of a sustainable tourism ethic and can be used in other contexts. In addition, the greenway travel also implicates the systematic

change towards sustainable through incorporating the whole tourism system, particularly the transportation part.

### **9.3.2 Advancements in greenway research**

#### ***Exploration of the social aspects of greenways***

This research presents a social perspective exploration of greenways that differs from previous greenway research, which focused on planning issues and biological aspects. Specifically, the inner potential of greenways for sustainable tourism is examined on the basis of visitors' experiences and learning during greenway visits. The detailed greenway experience is described and posited between daily leisure and traditional mass tourism. The fruitful social meanings of greenways are implied to bridge the greenway research gap.

#### ***A social, psychological, and behavioral investigation of visitors is conducted***

This study contributes a visitor's view to greenway research. Previous discussions focused mainly on the urban landscape and planners' views. Certain research cared about the users and measured the visitors' perception and uses of the greenways. Few scholars examined people's inner thoughts. This research considers an in-depth investigation of greenway visitors through an exploration of their greenway experiences, the value exchanges of visitors, and their behavioral changes, thus providing a well-rounded exploration of greenway visitors—one that combines the social, psychological, and behavioral perspectives.

### **9.3.3 Advancements in visitor education research**

#### ***Introduction of experiential learning epistemology***

This study adopts an experiential learning epistemology to replace the traditional knowledge- or information-based paradigm in visitor education. Although experience can decay over time just like knowledge, people can obtain affection-based impressions on the experience and value changes during experiential learning. Specifically, experiential learning leads to the silent transformation of unconscious values aside from the pseudo learning that is similar to information-based education, which may lead to rational thinking regarding environmental importance. Moreover, pseudo learning can turn into silent transformation through repetitive learning. Therefore, experiential learning should be given more attention in future research on visitor education and not be limited to greenway tourism.

#### ***Provision of an investigation into the behavioral changes***

The previous studies on visitor education, mainly based on rational behavioral models, tended to investigate the pro-environmental intentions. This study, considering the attitude–



behavioral gap, contributes to the visitor education research by examining the behavioral changes of visitors through follow-up interviews and repeated visitors' interviews. Although tracing the behavioral changes is time-consuming and challenging, such work is meaningful and necessary so that actual behavior can be considered in the field of visitor education and sustainable tourism.

#### **9.3.4 Academic contributions in China's context**

This study was conducted within a Chinese research context. Thus, it contributes to the research on several topics concerning developing countries. First, China is a critical market for worldwide sustainable tourism development. However, previous sustainable tourism in China has shown pseudo sustainability on the basis of Western theories and practices. This study contributes to sustainable tourism research in China on the basis of Chinese practices.

Second, greenway development in China is at its beginning stage with slight empirical research. An empirical study based on the local practices is necessary for greenway research considering the different purposes of greenway development in China from Western countries. This study contributes to greenway research in the Chinese context and provides insights into the Chinese "comprehensive tourism" and "transportation + tourism" strategies.

Third, this study contributes to the identifications of different ideologies of Chinese and Westerners through explorations of the value exchange process of visitors and greenway experiences based on photographic techniques. Chinese tend to appreciate the exploited natural environment rather than the original natural environment; therefore, future research and practices can take this exact contextual difference into consideration.

#### **9.3.5 Methodological contributions**

##### ***An interdisciplinary attempt to sustainable tourism is made***

This study contributes to sustainable tourism with an interdisciplinary view by incorporating the social, psychological, and behavioral perspectives. This type of interdisciplinary work provides the social interactions of greenway visitors, explores the psychological changes of people, and implicates behavioral models to enlighten the field of sustainable tourism from a comprehensive perspective.

##### ***A qualitative approach in greenway research is conducted***

The majority of previous greenway research adopted quantitative approaches characterized by the macro-level measurement of satisfaction and physical activities. In-depth interpretation and analyses are rare. The current research thus contributes to the greenway

research with a qualitative exploration of the underpinning interaction process to generate further insights into greenway development and greenway visitors.

***Photography techniques are introduced***

Texts have a considerable number of meanings. In comparison, photos are unconscious expressions of people, but are undervalued. This study contributes to methodology by the introduction of two different photographic techniques in research. The participant-generated photos facilitate the discovery of unconscious meanings that hide behind languages. The photo-elicitation technique facilitates the discussions of participants in interviews. These methods are particularly useful in psychological studies and interviews.

***A system dynamic analysis is adopted***

Qualitative research is criticized for a lack of connective logical inductions and relationships among varying themes. This research contributes to qualitative research by adopting the system dynamic analysis method. This method helps in determining the logical connections between different themes and thus to depict the entire process. The system dynamic analysis can be used for quantitative simulations. However, this study stopped at the construction of the models. Future research can be performed to test the models with surveys.

## **9.4 Practical implications**

### **9.4.1 Implications for sustainable tourism practices**

***A four-step measurement of sustainable tourism practices can be adopted by practioners based on the conceptual framework purposed***

With reference to the conceptual framework, sustainable tourism has three main elements: The human need for growth, the continuity ideology, and their present context. Sustainable tourism practice measurements should follow a four-step process: (1) recognize specific contexts for practice; (2) clarify the different tourism needs of each stakeholder within a given context; (3) identify the corresponding social ideology for continuity considering every member; and (4) seek for the current point of sustainable tourism ethic. The practical deviation and reactionary rhetorical criticism associated with sustainable tourism may be avoided by adopting this process in conducting sustainable tourism practices.

***Planners and managers can develop sustainable tourism through provisions of comfortable natural environments and opportunities for self-immersed activities and human-environment interaction***

Implications can be achieved for the planning and management of sustainable tourism according to the conceptual framework of sustainable tourism and the effectiveness of experiential learning. Planners and managers should create natural environments that can provide self-immersed activities and human-environment interaction opportunities so that people can enjoy the existential self and human-environmental affinity and thus promote experiential learning towards sustainable tourism. For instance, greenery, water and ecological systems can further encourage the appreciation of nature to increase green vegetation. The experience-learning based planning and management are not limited to greenway tourism but can be extended to other destinations.

#### **9.4.2 Implications for greenway practices**

*Future greenway development can be combined with community planning and management so as to extend the environmental appreciation and environmental concern from individual to community level*

This study reveals greenway tourism's potential to advance sustainable tourism on the basis of visitors' value system changes. The community interactions and partnerships are not identified. Hence, future greenway planning and construction should take community involvement into consideration to foster public life through community interactions and human ecology at the community level.

*Environmentally well-designed greenways can promote usage and maintenance of greenways by visitors*

Although this study sheds light on the visitors' experiential learning on greenways, the implications of environmental enforcement can be provided for greenway practices, because the visitors' experience-based learning largely depends on the greenway environment they encountered: (1) The completion of the greenway network is important for people to enjoy a good, long trip on greenways. (2) The environment should be beautified with natural things, like trees, water, and ecological systems to strengthen the people's appreciation of nature. (3) A greenway environment should be designed so that it can meet different requirements according to the different ideologies and preferences for the environment. (4) Moreover, the maintenance of a good environment with well-developed facilities on greenways is important, because the environment itself has regulating effects on people's behavior. (5) Finally, planners and managers can refresh the environment regularly to revive livability of greenway experience and difference with daily life.

***Cycling tour is a promising market to be promoted in future based on greenway networks***

The potential of transportation tourism is implied by this study, although it is not the focus. People can cycle along the greenway from their home. There is no time cost reported regarding transit parts as the traditional mass tourism. Cycling is an important part of the entire greenway experience and during this activity, people can stop anytime they want. Hence, planners and managers should provide facilities, such as bicycle rentals and related services, to promote cycling tours.

**9.4.3 Implications for visitor education practices**

***Destinations can combine experience-based and interpretation-based approaches for robust visitor education***

This study highlights the effectiveness of the experiential learning of visitors. Implications for visitor education practices can be provided that destinations can emphasize the provisions of good experience and educate the visitors to be eco-friendly rather than the interpretation system only. A combination of the two approaches for robust learning outcomes is indicated rather than the cancellation of the interpretation system. For instance, while providing an interpretation of the ecological system, opportunities to stay or relax in the ecological environment should be provided to strengthen visitors' learning and reflection of the ecological system from an unconscious level, rather than just the conscious level.

**9.4.4 Implications for practices in China**

***Official regulations are necessary on greenways in China to promote sustainability***

This research reveals the anthropocentric environmental concern in China. Although greenway tourism can promote the transformation of the environmental concern into environmental awareness, such transformation is a longitudinal process. Prior to the formation of pro-environmental habits, the provision of official regulations, such as environmental guidance and rules on greenway usage in China, is necessary in facilitating the formation of eco-friendly behaviors because people follow the behavior of others and the environment.

***Greenway projects in China should involve more ecological processes, such as animal's habitats and migration corridors to promote natural environment appreciation and concern***

Fewer ecological processes are identified in the visitors' experience because Chinese greenway projects have a tourism purpose. These tourism-oriented greenway projects may

also lead to a human needs-based greenway experience and anthropocentric learning. Hence, the greenway projects in China should include substantial ecological processes to enhance the eco-centric reflections and learning of visitors.

## **9.5 Limitations and future directions**

### **9.5.1 Behavioral changes over time**

This research traces behavioral changes on the basis of comparisons between on-site interviews and follow-up interviews of visitors, thus limiting the behavioral changes as self-reported rather than actual ones. Future studies can perform longitudinal observation or technical monitoring of people to achieve actual behavioral changes over time. Moreover, in Chapter 6, the first-time visitors were considered to show short-time period changes, while the repeat visitors represent behavioral changes over time, which may induce sample bias because the first-time and repeat visitors have different demographic characteristics. The changes over lengthier time span of the same group of participants may provide considerably robust findings.

### **9.5.2 Challenges in photographic technique adoption**

This study uses photographic techniques to explore visitors' psychological actions and changes. Although the study provides useful insights for visitors' experiential learning, the adoptions of the photographic techniques encountered several challenges. For instance, the photos prepared for the photo-elicitation were selected by the author. Different people may have different interpretations of the same photos. Although the aim of the photo-elicitation is not to achieve visitors' interpretations of the photos, the selection of the photos may have a minor effect on the discussions. Moreover, during the data collection process, encouraging people to share the photos where they also appeared in the frame proved to be difficult. Therefore, the photos provided may not always be the participants' favorite ones. With regards photo analysis, the themes in the photos are also occasionally implicit. Thus, rigorous and professional psychological experiments can be developed in relation to the adoption of photographic techniques in future research.

### **9.5.3 Assumptions on relationships**

This research explored the systematic changes from greenway experiences to pro-environmental behavior and sustainable tourism on the basis of interviews. Although the system dynamic model was constructed, all the relationships and feedback loops were assumptions based on casual inductions. The role of the demographic factors was also excluded in the model.

Hence, an expanded survey for the verification of the general links among greenway

experience, value system changes, behavioral changes, sustainable tourism ethic and demographic factors can be conducted in future research.

## **9.6 Concluding remarks**

This study is an in-depth investigation—done from the visitors' perspective—to explore the systematic dynamic process from greenway experience to sustainable tourism. The experiential learning feedback is identified for visitors' pro-environmental behavior and the systematic process is constructed to reveal the inner logic of people who learn to be sustainable from greenway travel. The study provides theoretically, practically, and methodologically sound insights into sustainable tourism, greenway development, and visitor education. China's context has also been discussed. The following key findings should be highlighted:

- (1) Sustainable tourism is a tourism development ethic rather than a particular practice.
- (2) Greenway tourism is an experience between daily leisure and traditional mass tourism that deserves further attention.
- (3) Experiential learning is based on the recursive and longitudinal transformation process of people's conscious and unconscious values.
- (4) Visitor education based on experiential learning leads to a reduced intention–behavior gap.
- (5) Greenway experience can promote sustainable behavior and tourism over time.
- (6) Photographic techniques and system dynamic analysis provide insights for visitors' psychological process and systematic explorations.

## Appendix I Time plan for data collection

	Time	Target	Techniques	Sites
<b>Pilot trip</b>	Two weeks in November 2017	2-3 In-depth interviews both on-site/first and post-trip/repeat	In-depth interviews; observation; textual collection	Guangzhou
<b>Post trip work</b>	Two weeks	Transcripts; primary data interpretation; adjustments to design	NVIVO; Xunfei software	Hong Kong
<b>First field trip</b>	December 2017 to February 2018	12-15 In-depth interviews both on-site/first and post-trip/repeat	In-depth interviews; observation; textual collection	Guangzhou Shenzhen Zhuhai
<b>Second field trip</b>	March 2017 to May 2018	12-15 In-depth interviews both on-site/first and post-trip/repeat	In-depth interviews; observation; textual collection	Hangzhou Wenzhou
<b>Post trip work</b>	December 2017 to December 2018	Transcripts; data interpretation and analysis	NVIVO; Xunfei software	Hong Kong
<b>Supplementary trips</b>	May 2018 to June 2018	To ensure the completion of information	Interview and textual collection	Where required
<b>Post trip work</b>	June 2017 to December 2018	Transcripts; data interpretation and analysis	NVIVO; Xunfei software	Hong Kong

## **Appendix II Information list**

1. Field trip information in detail (research notes)
2. Description of greenway itself (secondary data and observation)
3. Description of visitors and usage (observation)
4. Participants' information (interview)
5. Participants' experience and mental actions (interview)
6. Participants' behaviors (observation and interview)
7. Photos from participants
8. Photo-elicitation from participants
9. Interview information (research notes)
10. Contact information of participants (interview)



### Appendix III On-site Interview Guide (updated version after pilot data collection)

#### Introduction

This research is being conducted to get to know the experience of greenway tourism. I am conducting this research for my PhD thesis at the School of Hotel and Tourism Management of Hong Kong Polytechnic University. I really appreciate your ideas about the greenways, the travel experience and your inner thought about the trips. Everything you tell me will only be used for the research project in an anonymity way. Do you have any questions before we begin?

本研究旨在了解绿道旅游体验，是本人在香港理工大学酒店与旅游管理学院的博士毕业论文。非常感谢您分享有关绿道旅行的体验和思考。所有搜集数据仅作为研究之用，并以匿名形式出现在论文中。

#### Background information

No. of interview (受访者编号):                      Location for interview (受访地点):

Age: (younger than 18; 19-35; 36-55; 56 or above)

年龄 (18 岁以下; 19-35; 36-55; 56 及以上)

Educational status: (High school or below; Vocation; Bachelor; Master; Doctorate or above)

教育水平: (高中及以下; 职业教育; 本科; 硕士; 博士及以上)

Income level (RMB/M) : (0-5000; 5001-10000; 10001-20000; 20001-50000; more than 50000)

收入水平 (元/月): (0-5000; 5001-10000; 10001-20000; 20001-50000; 50000 以上)

Occupation (职业):

Family status (婚姻状况):

#### Screening questions

1. What are the distance and time for the whole trip?  
您本次旅行的距离和时间分别是多少?
2. Do you think this trip is kind of routine activity or a short haul? Photo or not?  
您认为自己的此次出行屬於日常活動還是一次小型的短途旅行? 有拍照嗎?

#### Opening questions

3. Could you describe your trip to me?  
Probe: when, where, why, who, how long, how, activities, places, expenditure  
可以描述一下您这次绿道之行的具体情况吗?
4. How do you feel about this greenway trip?  
Probe: three keywords, impressive things, design, walking and cycling, communication (partners and others), comparing to other places, favorite parts  
可以描述一下您对于此次绿道之行的主要感受吗?
5. Do you have such kind of experience before? (*any special, only for repeaters*)  
您之前有过类似的旅行体验吗? (其中有什麼特別的經歷嗎, 仅对重游者)

### Questions about mental and behavioral reactions

6. Have you found anything special with this greenway trip?  
Probe: environment, people, self and others? Feeling ? Thought? Any similar feeling before ? Any special meaning for you? Will this trip change others' image on you?  
在綠道上，您有感觉到什么特别的吗？
7. What will you do when facing with these feelings?  
Probe: Take photos? Send WeChat? Continue pay attention to it? To understand it? Search? Share with others?  
当感受到这些特别之处时，您会做些什么？
8. Do you have any behaviors that you did on the greenways while not at other places (like at home or some famous destinations)?  
Probe: educate children or your partners, communicate or share with others, and observe others' lifestyle?  
您在绿道上是否会做一些在其他地方(如在家或在其他有名的旅游目的地)不会做的事？

### Questions about value, belief and norms

9. What kind of lifestyle or values do you think the greenways convey?  
Probe: Is this consistent to your dream of life ? Is this a chance to realize your dreaming lifestyle or change your lifestyle?  
您觉得绿道传递了什么样的生活方式或价值观念？
10. What aspects do you like or dislike your greenway trips?  
Probe: towards yourself, others, ecology, society, destination and economy?  
您喜欢绿道旅行的哪些方面，不喜欢哪些方面？
11. How important do you think environment protection is in your daily life?  
/Greenways  
Probe: the degrees (10 points ranking), some examples  
保护环境在您的日常生活中有多重要？在绿道旅行过程中有多重要？
12. What are the impacts of greenways on environment protection? Why ? How about greenway trips?  
您觉得绿道对于环境保护有什么影响？为什么？绿道旅行呢？
13. Do you feel your obligation to protect the environment increased during greenway trips?  
您是否有感到保护环境的责任感在绿道旅行过程中得到了加强？
14. Whether the greenway trips will push you to make some changes in your daily life? Why or why not ?  
Probe: littering, water reuse... Habitual Barriers?

绿道旅行会促使您在日常生活中作出一些改变吗？为什么？

### **Questions about tourism pattern change**

15. Will greenway change your tourism pattern? If yes, how?

Probe: frequency, places, activities, length, is greenway tourism part of your travel plan?

绿道会不会改变您的旅行方式？如果是，如何改变的？

16. What are the similarities or difference between greenway tourism and other tourism patterns? (e.g. long-haul travels)

Probe: transports, activities, communication; decision-making on them (past greenway experience), more greenway trips in future?

绿道旅游和其他旅行(如长途旅行)方式对于您而言的主要区别是什么？

### **Closing questions**

17. What do you think you have learned from greenway travel?

Probe: nature, people, self

您觉得您在绿道旅行过程中学到了什么？

18. Do you think greenway tourism is more sustainable than other forms of tourism?

Probe: why, how, in what aspects?

您认为绿道旅行相比其他旅行方式更可持续吗？

19. Is there anything else you want to tell me about your greenway trip?

关于您此次绿道执行，您是否还有什么想要告诉我的？

### **Photography (Appendix V)**

## **Appendix IV Follow-up Interview Guide**

### **Opening questions**

1. What is the most impressive thing for your greenway travel? Could you recall the five scenes you are most interested in? Why?

Probe: people, scenery, events

上次绿道旅行对您来说印象最深的是什么? 能否回忆五个您最感兴趣的场景? 为什么?

### **Questions about mental and behavioral reactions**

2. Have you shared your greenway experience with family members or friends?  
您有和家人或朋友分享这次绿道之行的体验吗?
3. What changes do you have after the greenway trips?

Probe: thoughts, behaviors, self, resource use, habits

绿道旅行之后您的生活中有些什么变化?

### **Questions about value, belief and norms**

4. What do you usually do for protecting environment in your daily life? When did you start this?

Probe: nature, resources

您日常生活中通常会做一些什么有利于环境的事呢? 从什么时候开始?

5. Are the lifestyles or values the greenways convey consistent to your dream?

Probe: leisure style

您觉得绿道传达的生活方式或生活理念符合您的理想吗?

6. Do you feel your obligation to protect the environment increased after greenway trips?

您是否有感到保护环境的责任感在绿道旅行后得到加强?

7. What impacts do you think your greenway trips could have?

Probe: towards self, others, ecology, social values, cultural and economy

您认为您的绿道旅行会有什么影响?

### **Questions about tourism pattern change**

8. What kind of travels do you prefer? Long-haul or short-haul greenway trips?

Probe: length, frequency, places, activities

您更倾向于什么样的旅行方式? 长途旅行或者是短途绿道旅行?

9. What is the meaning of greenway travel in your daily life?

Probe: environmentally friendly behaviors, habits, travel pattern.

绿道旅行在您的日常生活中有什么样的意义?

## **Photography (Appendix V)**

## Appendix V Photography

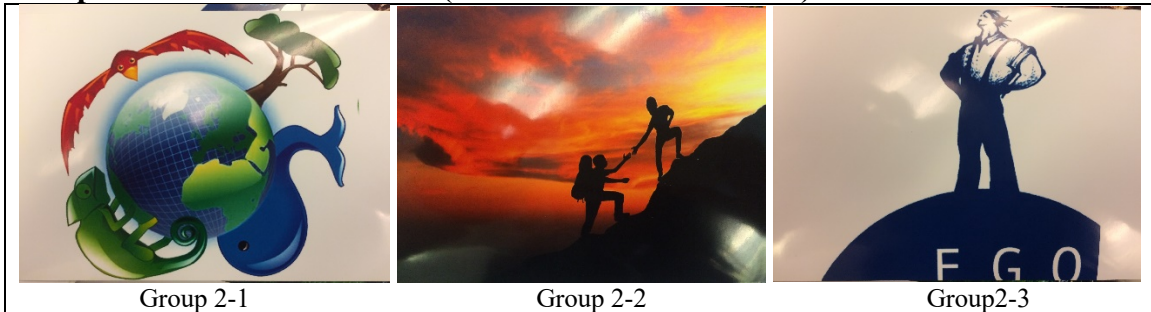
### Participant-generated photography

#### **Group one: Interview about photos from participants**

1. Could you please show five most important **photos** for the greenways experience?  
能分享您绿道体验最重要的五张照片吗？
2. What do they mean for you?  
这些照片分别对您来说意味着什么？

### Photo-elicitation method

#### **Group two: value identification (both rounds of interviews)**



**Biosphere (生态)**

**Altruism (利他)**

**Egotism (自我)**

1. Could you please order these three pictures in terms of the importance in your life? Explain why? (or the importance of the earth, others and self)  
这三张照片在您生活中的重要程度排序是怎样的？为什么？

#### **Group three: belief identification (both rounds of interviews)**



**Climate change (气候变化)**

2. Could you talk about these pictures? What are they expressing?  
能否谈论一下您对这些照片的理解？他们表达的是什么？
3. Do you think your behaviors are related to them? What behaviors? Greenway trips? Long-haul travels?  
您觉得您的行为和这些照片有关系吗？什么行为？绿道旅行？长途旅行？
4. Do you think these could be changed or improved? Do you have responsibilities to change them? Or its others' or the governments' responsibilities?  
您觉得这些情况能改变或改善吗？您认为您是否有责任来改变它们？还是其他人或者政府部门的责任？

**Group four: norm identification (both rounds of interviews)**



5. How do you think about these scenes on greenways?  
您如何看待这些绿道上的这些场景？
6. Do they change your mind to life or behaviors? (like public life, transports, water reuse, lifestyles)  
他们会改变您的生活观念或行为吗？（如公共生活，交通方式，水循环，生活方式）

**Note:** the photos presented here are samples come from common experience and literature. They will be tested in pilot investigation. Actually, the main aim for them is to stimulate the discussion and identify the differences of them between two rounds of interviews. Therefore, the photos themselves are just stimulus.



## Appendix VI Recommendation Letter



THE HONG KONG  
POLYTECHNIC UNIVERSITY  
香港理工大學

School of   
Hotel & Tourism Management  
酒店及旅遊業管理學院

### Recommendation Letter

Shiqin ZHANG is my PhD student. She is conducting this research for her PhD thesis at the School of Hotel and Tourism Management of Hong Kong Polytechnic University. This research is being conducted to get to know the experience of greenway tourism. Your ideas about the greenways, the travel experience and your inner thought about the trips will be really appreciated. Everything you provide will only be used for the research project in an anonymity way.

Eric S. W. Chan, Ph.D., M.M., CHE, MIH  
Associate Professor  
Undergraduate Program Director  
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THE HONG KONG  
POLYTECHNIC UNIVERSITY  
香港理工大學

School of   
Hotel & Tourism Management  
酒店及旅遊業管理學院

## 推荐信

张士琴是我的博士研究生。她正在进行她在香港理工大学酒店与旅游管理学院的博士毕业论文的调研。该研究旨在了解绿道旅游体验，非常感谢您分享有关绿道旅行的体验和思考。所有搜集数据仅作为研究之用，并以匿名形式出现在论文中。

陈少华博士  
副教授  
本科生课程总监  
酒店与旅游管理学院  
香港理工大学  
香港九龙区尖沙咀东部科学馆道 17 号



## Appendix VII Confirmation of Receipt of Souvenir

### Confirmation of Receipt of Souvenir

#### 紀念品接收確認簽名表

Dear Mr. /Ms.,

A souvenir from PloyU is prepared for appreciating your assistance in my data collection for Doctoral thesis: *From Greenway to Sustainable Tourism: Experiential Learning*.

Please sign below to confirm your receipt of the souvenir. Thank you so much again!

(Shiqin ZHANG)

尊敬的先生/女士：

為感謝您對於本人博士論文研究（從綠道到可持續旅遊：體驗性學習）數據收集的幫助，致以香港理工大學紀念品一份，以示感謝。請與如下表格簽名確認已收到該紀念品。再次致以誠摯的感謝！（張士琴）

No.	Name	Signature	Date

## **Appendix VIII Reflections on the interview guide after pilot data collection**

1. During the pilot data collection (pilot trip) from 6 Dec. to 17 Dec. 2017, the interview guide was found to be efficient. The whole process took about one hour. The only problem with the questions could be that participants will feel repetitive when answering question 5, 7, 8, 9 and 11 if they connected environmental protection with greenways very early on. However, considering the possibilities of giving other answers for those questions, the researcher did not delete those questions but adjust them in the interview process to avoid repetitive conversation. For instance, to ask more details (how) and underpinning reasons (why) for their connecting greenways with environmental protection instead of asking original questions in case of getting the same answers. After all, this is a semi-structured interview guide.

2. According to the practice, although there are difficulties to have 100% responses for follow-up interviews. 50% participants got involved in the follow-up interviews. Therefore, the comparison between on-site experience and after-trip experience (strategy one) is possible.

3. Meanwhile, it is found that those who did not attend the follow-up interviews are mostly repeat visitors. One main reason could be that their on-site responses have already been based on their previous experience. They have learnt from the greenway experience for a long time. There are little differences between their on-site experience and after-trip responses. In other words, on-site interviews with them could not only be the on-site experience of this trip, but also be the after-trip responses regarding previous trips. It means, strategy two (to compare first-time visitors and repeaters) is not exclusively with strategy one. By the contrary, interviews with repeaters represents longer time learning experience of visitors. It means, strategy one and strategy two could be combined into one interview guide. Then both of them could be conducted in the study so as to have more sounded insights on behavioral changes. And to have more unbiased conclusion, the author will try to do follow-up interview with all the participants. So, for the main round data collection, there is only one same interview guide for both first-time and repeat visitors. Only conditional changes will be made during the interview process for the two different groups. For instance, for question 4, one further question will be asked to repeaters about their impressive experience in previous trips.

4. Regarding photography, both techniques will be used for on-site interviews. They can stimulate some talking about values.

5. However, for follow-up interview, to avoid tracing back to the previous conversation as photos will bring back memory to them, the researcher will ask the participants to describe the five most impressive scenes during that trip at the beginning but ask them to offer photos again by the end. For the photo-elicitation method, the same process will be carried out to compare their value-belief-norm changes during these two different stages.

6. Translations have been revised to make the two editions more consistent to each other.

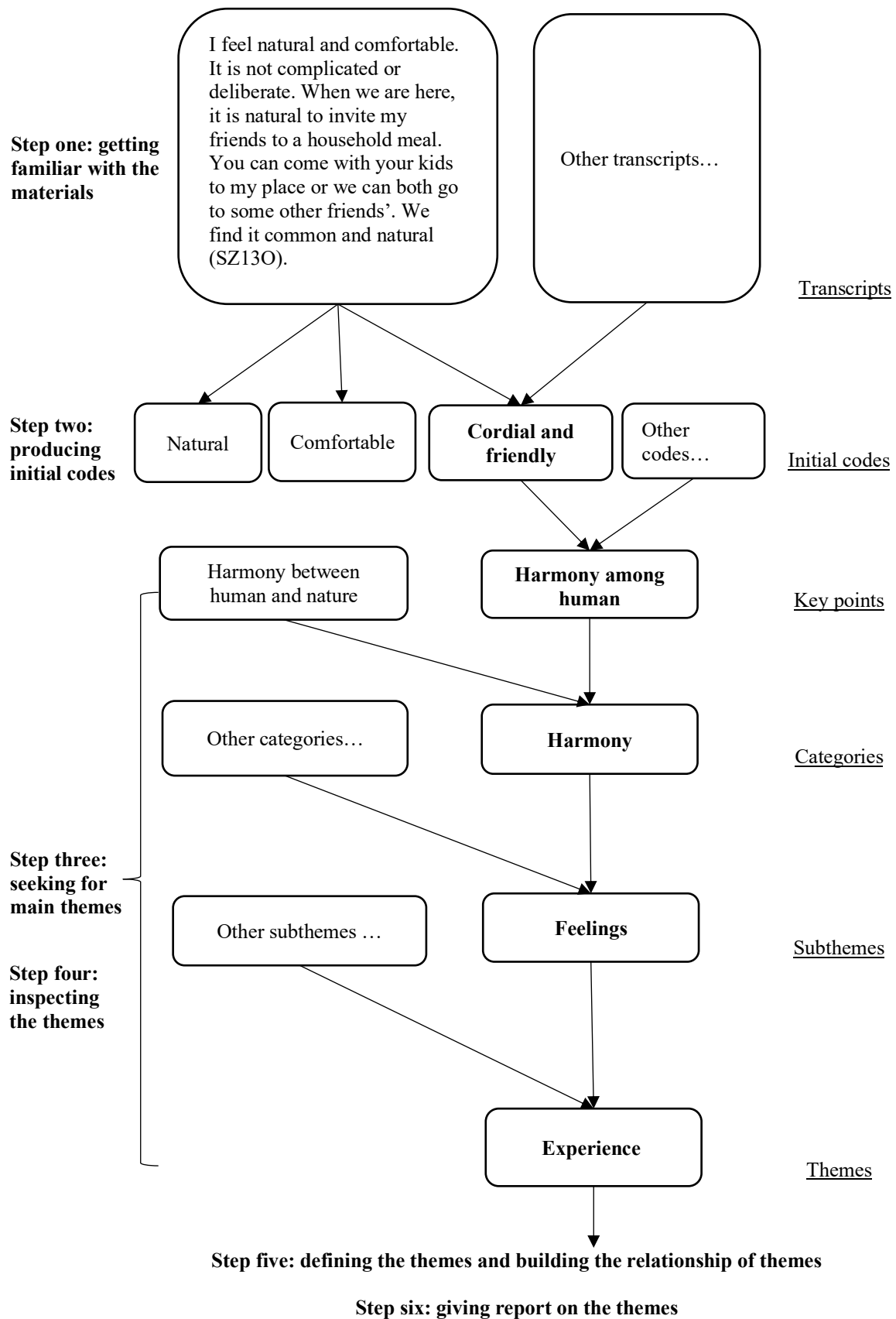
## Appendix IX Participants

No.	Age Group	Country of origin	Duration	Education	First or Repeat	Income level	Marritus	Occupation	Gender	Site for trip	Follow-up
SZ01	19-35	Hong Kong	Daytour	Doctorate or above	Repeat	10001-20000	Married	Student	Female	Luohu	Yes
GZ02	19-35	Guangzhou	Daytour	High school or below	First time	5001-10000	Married with children	Merchant	Female	Donghaochong	Yes
GZ03	19-35	Guangdong	Daytour	Bachelor	First time	0-5000	Single	Student	Female	Donghaochong	Yes
GZ04	36-55	Guangzhou	Daytour	Training	Repeat	10001-20000	Married with children	Merchant	Male	Zengcheng	
GZ05	36-55	Xintang	Daytour	High school or below	Repeat	5001-10000	Married with children	Blue-collar	Female	Zengcheng	
GZ06	36-55	Dongguan	Daytour	High school or below	First time	0-5000	Married with children	Blue-collar	Female	Zengcheng	Yes
GZ07	56 or above	HongKong	Overnight	Bachelor	Repeat	10001-20000	Married with children	Retired	Male	Zengcheng	
GZ08	19-35	Xintang	Daytour	Bachelor	Repeat	5001-10000	Single	Blue-collar	Female	Zengcheng	Yes
GZ09	19-35	Guangzhou	Daytour	Bachelor	First time	0-5000	Single	Blue-collar	Male	Zengcheng	Yes
GZ10	36-55	Xintang	Daytour	Bachelor	Repeat	10001-20000	Married with children	Merchant	Male	Zengcheng	
GZ11	19-35	Xintang	Daytour	Bachelor	Repeat	5001-10000	Engage	Blue-collar	Female	Zengcheng	Yes
SZ12	19-35	Shenzhen	Daytour	Training	Repeat	5001-10000	Married with children	Blue-collar	Female	Luohu	Yes
SZ13	19-35	Shenzhen	Daytour	Training	Repeat	0-5000	Married with children	Housewife	Female	Luohu	Yes
SZ14	19-35	Shenzhen	Daytour	High school or below	Repeat	5001-10000	Married with children	White-collar	Male	Luohu	
SZ15	younger than 18	Shenzhen	Daytour	High school or below	First time	0-5000	Single	Student	Male	Luohu	Yes
SZ16	36-55	Shenzhen	Daytour	Training	First time	5001-10000	Married with children	White-collar	Female	Wutong	Yes
SZ17	36-55	Shenzhen	Daytour	Bachelor	Repeat	10001-20000	Married with children	White-collar	Male	Wutong	
SZ18	36-55	Shenzhen	Daytour	High school or below	Repeat	5001-10000	Married with children	White-collar	Male	Wutong	Yes
GZ19	56 or above	Guangzhou	Daytour	High school or below	Repeat	5001-10000	Married with children	Retired	Male	Liwan	
GZ20	19-35	Zhuhai	Daytour	Doctorate or above	First time	10001-20000	Single	Teacher	Male	Liwan	Yes
GZ21	19-35	Guangzhou	Daytour	Training	Repeat	0-5000	Single	White-collar	Female	Liwan	
GZ22	19-35	Qingyuan	Overnight	Bachelor	Repeat	0-5000	Engage	Student	Female	Liwan	Yes
GZ23	36-55	Xintang	Daytour	High school or below	First time	0-5000	Married with children	Blue-collar	Female	Zengcheng	
GZ24	19-35	Xintang	Daytour	Training	Repeat	5001-10000	Single	White-collar	Female	Zengcheng	Yes

GZ25	56 or above	Guangzhou	Daytour	High school or below	Repeat	20001-50000	Married with children	Merchant	Male	Zengcheng	
GZ26	19-35	Zengcheng	Daytour	Bachelor	First time	0-5000	Single	Student	Female	Zengcheng	Yes
GZ27	19-35	Guangzhou	Daytour	Training	First time	0-5000	Single	Student	Male	Zengcheng	
ZH28	36-55	Zhuhai	Daytour	High school or below	First time	0-5000	Married	Blue-collar	Female	Qinglvlu	
ZH29	19-35	Shenzhen	Overnight	Bachelor	Repeat	0-5000	Engage	Student	Male	Qinglvlu	
ZH30	56 or above	Zhuhai	Daytour	Bachelor	Repeat	5001-10000	Married with children	Retired	Male	Qinglvlu	
ZH31	19-35	Zhuhai	Daytour	Bachelor	Repeat	5001-10000	Single	White-collar	Female	Qinglvlu	Yes
ZH32	36-55	Zhuhai	Daytour	Master	Repeat	5001-10000	Married with children	White-collar	Female	Qinglvlu	Yes
ZH33	19-35	Guangxi	Daytour	High school or below	First time	0-5000	Engage	White-collar	Female	Qinglvlu	
GZ34	36-55	Zengcheng	Daytour	Training	Repeat	5001-10000	Married with children	White-collar	Male	Zengcheng	
ZH35	56 or above	Beijing	Daytour	High school or below	First time	0-5000	Married with children	Retired	Male	Qinglvlu	
ZH36	19-35	Xi'an	Overnight	High school or below	Repeat	5001-10000	Engage	Merchant	Female	Qinglvlu	
ZH37	19-35	Zhuhai	Daytour	Bachelor	Repeat	10001-20000	Single	White-collar	Male	Qinglvlu	Yes
SZ38	36-55	Shenzhen	Daytour	Training	Repeat	5001-10000	Married with children	White-collar	Male	Luohu	Yes
SZ39	36-55	Shenzhen	Daytour	High school or below	Repeat	20001-50000	Married with children	Merchant	Male	Wutong	
HZ40	36-55	Heilongjiang	Overnight	High school or below	First time	10001-20000	Married with children	Merchant	Male	Wentao	
HZ41	19-35	Hangzhou	Daytour	training	Repeat	5001-10000	Married with children	White-collar	Female	Wentao	Yes
HZ42	19-35	Hangzhou	Daytour	Bachelor	Repeat	20000-50000	Married	White-collar	Male	Wentao	Yes
HZ43	19-35	Guangzhou	Overnight	Bachelor	Repeat	10001-20000	Single	White-collar	Male	West Lake	Yes
HZ44	19-35	Hangzhou	Daytour	High school or below	Repeat	10001-20000	Engage	Merchant	Male	Xiang Lake	
HZ45	19-35	Hangzhou	Daytour	Master	Repeat	10001-20000	Single	White-collar	Male	Middle East River	
HZ46	19-35	Sichuan	Overnight	Bachelor	First time	5001-10000	Single	White-collar	Female	West Lake	Yes
HZ47	36-55	Hangzhou	Overnight	Master	Repeat	10001-20000	Married with children	White-collar	Male	Qiandaohu	Yes
HZ48	19-35	Guangxi	Overnight	Training	First time	0-5000	Married with children	White-collar	Female	Qiandaohu	Yes
HZ49	19-35	Qingdaohu	Daytour	Bachelor	Repeat	over 50000	Single	White-collar /merchant	Male	Qiandaohu	Yes
WZ50	56 or above	Wenzhou	Daytour	High school or below	Repeat	5001-10000	Married with children	Retired	Male	Oujiang	

HZ51	19-35	Zhejiang	Overnight	High school or below	First time	5001-10000	Single	White-collar	Male	Qiandaohu	
WZ52	19-35	Wenzhou	Daytour	Training	Repeat	0-5000	Married	White-collar	Female	Oujiang	Yes
WZ53	19-35	Wenzhou	Daytour	Bachelor	Repeat	5001-10000	Married	White-collar	Female	Daluoshan	Yes
WZ54	19-35	Wenzhou	Daytour	Bachelor	Repeat	0-5000	Married with children	Housewife	Female	Daluoshan	Yes
WZ55	19-35	Wenzhou	Daytour	Bachelor	Repeat	5001-10000	Engage	White-collar	Female	Daluoshan	
WZ 56	19-35	Wenzhou	Daytour	Bachelor	Repeat	0-5000	single	Student	Male	Daluoshan	Yes
WZ57	19-35	Wenzhou	Daytour	Bachelor	First time	0-5000	Single	Student	Male	Daluoshan	Yes
HZ58	19-35	Hangzhou	Daytour	Bachelor	Repeat	5001-10000	Single	White-collar	Female	Wentao	
HZ59	19-35	Hangzhou	Daytour	Bachelor	Repeat	5001-10000	Single	White-collar	Male	Wentao	Yes
HZ60	56 or above	Hangzhou	Daytour	Training	Repeat	5001-10000	Married with children	Retired	Female	Xiang Lake	Yes
HZ61	56 or above	Chengdu	Overnight	High school or below	First time	0-5000	Married with children	Retired	Female	Xiang Lake	
WZ62	19-35	Wenzhou	Daytour	Bachelor	First time	0-5000	Married with children	White-collar	Female	Oujiang	
HZ63	19-35	Hangzhou	Daytour	Training	First time	5001-10000	Single	White-collar	Male	Xiang Lake	

## Appendix X A sample of theme development



## Appendix XI Samples for semiotic analysis (Photography)






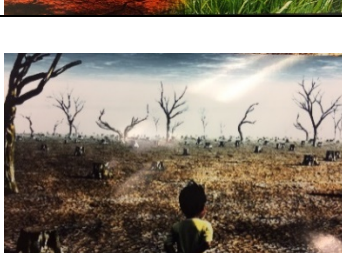
### Group 1





Code	Photos collected	Interview	Theme in photos
SZ15O-1		<p>特殊内容没想那么多，没有上升到那个高度，就是觉得拍照角度很好。</p> <p>Regarding special content inside, honestly, I did not think that much. It is not taken for that high level thinking. I just feel it is good angles for photo taking.</p>	<p>water</p> <p>green trees</p> <p>sky</p>
SZ15O-2			<p>green trees</p> <p>sunshine</p>
SZ15O-3			<p>green trees</p> <p>modern buildings</p>
SZ15O-4		<p>多一张可以吗，那就 6 张。我喜欢这些好看的花，看到这些心情会很好。</p> <p>Could I provide one more? I like the beauty of flowers. I feel good when see them.</p>	<p>flowers</p>
SZ15O-5			<p>flowers</p>
SZ15O-6			<p>flowers</p>

SZ15P-1		<p>这几张图都拍自大望，因为景色的优美，所以能够调动人们对景色的欣赏热情。继而激发人们生活的热爱。为了能继续拥有这样的景色，人们会慢慢地开始尽自己的能力去保护环境甚至是改善环境</p> <p>These photos were taken from Da wang. Because the beautiful scenery could activate human's passion in appreciating them so that to inspire their love for life. Gradually, people will begin to make their efforts to protect the environment or even improve the environment.</p>	green trees modern buildings
SZ15P-2			flowers
SZ15P-3			flowers
SZ15P-4			flowers
SZ15P-5			green trees sunshine
SZ15P-6			water green trees sky



## Group 2-4

Code	Photos elicitation	Interview (SZ13)	On-site	Follow-up	VBN items
Group 2-1		On-site interview for previous ranking as an example:  Based on the importance, which is more important, protection of the environment, being yourself and being helpful to others?	<b>Eco-centric 132</b>	Egoism 312	Previous rank (unconscious value)
Group 2-2		The environment first. Now being myself.	Eco-centric 132	Eco-centric 132	Initial rank (Preferred value)
Group 2-3		I think I can only be myself when I live in a good environment, and then I will be able to help others. Being myself comes before being helpful.	Eco-centric 132	Eco-centric or Egoism 132 or 312	Second rank (Conscious value)
Group 3-1		On-site interview for belief in daily life and belief in control as examples:  Do you think they are directly connected with your daily life? For example, is there any connection between what you do in your daily life and what the pictures show us?	Yes	Yes	Awareness of climate change
Group 3-2		Yes. There must be. Because every little thing we do matters.	Eco-centric	Anthro-eco-centric	BEW
			<b>Yes</b>	Yes	BB-daily life
			Yes	Yes	BB-travel
			<b>Yes</b>	Yes	BC
Group 3-3		But do you think we can do something to improve it?  Of course.	Yes	Yes	Norm (sense of obligation in general)
			Yes	Yes	Norm (sense of obligation on greenway)

Group 4-1		On-site interview for preference of greenways as an example:  Do you like this green way? Yes, I like it. It is quite clean. Do you like this green way? Not really. Why? This is designed for cyclists, outdoor sports, not in a leisure homely way. But isn't it natural? It is natural. But this is more of a wild style. I don't think we have this kind of wilderness in China. Is it taken in some foreign country? I am more into this one. That one is not easily accessible. We have to go out with the whole family, kids. Some prefer to ride a bicycle, while some would sit on the grass, feeling relaxed, for a whole day or most of the day. This place is so far-reaching. It takes long to arrive, so it does not fit my needs.	Yes	Yes	Improve on greenway
Group 4-2			10	-	Grading in everyday life
			10+	-	Grading on greenway
Group 4-3			<b>Exploited</b>	Exploited	Preference on greenways
Group 4-4					

## Appendix XII Themes for participant generated photos

Themes	On-site interview (375 photos)		Follow-up interview (170 photos)	
	Frequency	Percentage	Frequency	Percentage
Trees	192	51.08%	94	55.30%
Water (River or Lake)	163	43.55%	62	36.47%
Mount	85	22.58%	25	14.71%
People play	77	20.43%	42	24.71%
Greenway road	69	18.28%	40	23.53%
Buildings (like bridge, cultural, historical, artistic buildings)	62	16.67%	42	24.71%
Lawn	34	9.14%	6	3.53%
Flowers	32	8.60%	13	7.65%
Sky	28	7.53%	21	12.35%
Cycling	24	6.45%	7	4.12%
Group photo	24	6.45%	5	2.94%
Self	20	5.38%	1	0.59%
Sign of place	16	4.30%	2	1.18%
Overview of city	14	3.76%	4	2.35%
Beach	12	3.23%	5	2.94%
Bicycle	12	3.23%	1	0.59%
Children play	12	3.23%	4	2.35%
BBQ	10	2.69%	1	0.59%
Boat	8	2.15%	8	4.71%
Sunshine (sunset)	8	2.15%	8	4.71%
Wild animals (fish)	8	2.15%	4	2.35%
Food	6	1.61%	3	1.76%
Camping	4	1.08%	1	0.59%
Kite flying	4	1.08%	3	1.76%
Farms	4	1.08%	0	0.00%
Leaves	4	1.08%	0	0.00%
Pet	4	1.08%	3	1.76%
Interpretation	4	1.08%	0	0.00%
Cloth	2	0.54%	0	0.00%
Island	2	0.54%	2	1.18%
Parking	2	0.54%	1	0.59%
Fishing	2	0.54%	0	0.00%

Play bubbles	2	0.54%	0	0.00%
Records of cycling	2	0.54%	0	0.00%
Stone	2	0.54%	2	1.18%
Cooking bench	2	0.54%	0	0.00%
The well	2	0.54%	1	0.59%
People teaching	2	0.54%	0	0.00%
Communication	0	0.00%	1	0.59%
Home	0	0.00%	4	2.35%
Spacious place	0	0.00%	2	1.18%
Night	1	0.00%	1	0.59%

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