
Place Identity for City Sustainability in a Traditional Settlement of Taiwan

Hsiu-hui Lin and Weii Lee

Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/48712>

1. Introduction

The impact of globalization on the built environment is a transnational interconnection in every aspect of economy, society, culture and spatial developments. In response to the needs of the economical and industrial developments, this interconnectedness changes interactions between the people, the urban and the natural landscape. These changes not only include the transformation of people's attitudes toward lives, but also comprise the alteration in physical environments. Either types of change, whether physically or sensationally, are closely related to the lifestyle of local residents, the construction of the living space, and the attitude toward the man-made environment. With increases in pace and the scale of changes the tension to the daily life and the relationship between the city and the landscape has gradually formed. Accordingly, the pressure in the traditional city is largely extended due to the irreversible transformation caused by the spatial practice during the process of globalization and urbanization. Just as all environmental developments and redevelopments are embedded in their local context, the pressure stemmed from both the global and the local developments provides the linkage between the global and the local context. Consequently, re-examining people's thinking about their own city has become a key issue for the future development of a contemporary city under the pressure of globalization and localization.

In response to such an issue some Asian cities, *e.g.* Tokyo, Seoul, Beijing and Singapore... *etc.* have thrown much attention on the early developed area in the city while taking the sustainability into consideration over the past decade. Through the strategy of "re-growth" and "redevelopment", they attempted to carry out the new image integrated by the natural landscape and the man-made environment. By employing various innovative methods echoing the past history of space, those cities are able to retain the memory of the place and the spatial culture, which have been realized as the symbols of modern urban civilization.

The results of the spatial practice not only highlight the characteristics of urban culture, but also led to the development of the city tourism.

Under the influence of the global information, meanwhile, the issue of Taiwan's landscape is also beginning to receive attention. Subsequently, the goal of the government conducted Townscape Renaissance Project is to actively improve the quality of the local environment. The environmental movement has gone through more than ten years of promotion and implementation since 1998. Confronting with changes in the industrial structure and the pressure of the global economic development in recent years, people in Taiwan has no choice but to re-examine the functional satisfaction in the local life, as well as the reading and the approval to the local environment, while considering the environmental redevelopment.

In the process of globalization, during the process of redevelopment, it is also clear that considerations of local context are not just concerned with the city in a sense of place, but also with the people that live in and create the built environment. Accordingly, more and more studies pay much attention on the man-made environment as well as on people's reading of the city. Therefore, the exploration of redeveloping a traditional settlement should contemplate the authenticity of settlement space based upon the demand of people's life, and rethink the public expressions of place identity toward the city context as well.

Embarking on studying the traditional settlement in the historical trajectory, along with fruitful dialogues between people and the physical environment, there are three questions that concern us about the redevelopments of Zuoying Settlement, a historical settlement in Kaohsiung, Taiwan (Figure 1) How the redevelopments in the city are carried out to maintain the regional sustainability in the process of globalization and modernization? How the locals begin to rediscover the hidden meaning of the physical elements of the city facing the transition of the environmental changes? How tourists really feel about the differences in lifes and spaces, and accumulate their memories of a place in the process of traveling between cities?



Figure 1. Location of Zuoying Settlement in Kaohsiung, south of Taiwan

These three questions closely related to a sustainable redevelopment of a historical city such as Zuoying Settlement in the tread of globalization are quite complicated. Zuoying Settlement features two essential components in its environmental redevelopment in the twenty-first century. One is the public expressions to facing the impact of the global

economy and to representing the value of culture, which relate to the preference of physical elements in the transition of a city. It corresponds to the basic human needs, the attachments and the developments of the existing environment to meet with the functional satisfactions of local life and the redevelopment (Maslow, 1987; Lang, 1987, 2010). Another is the attempt to dialoguing with the city's historical contexts in order to make a new image concerning the existing physical features of the city. It concerns peoples' perceptions of the city, the meaning and the significance of the place for its inhabitants and users (Lynch, 1960; Rapoport, 1977; Norber-Schulz, 1980; Colquhoun, 1991). The former links up with the design evaluation of the architectural redevelopment, and the later with the design process in the architectural redevelopment. Both originate in the interaction between peoples' needs and collective preferences, the natural landscapes and the artifacts of the city. In addition, they involve the corresponding relation between the live-in experience and the sense of place in the transformation of the city during the process of globalization, which is closely related to the development of the local culture and the environmental sustainability.

Our research aims at dealing with the physical elements -- the artifacts and the natural landscapes that play important roles in human preference and in individual interpretations to the context of a city in the trend of globalization. We also attempt to discern between the habitants' and the tourists' preference judgments relating to the role of the natural landscape and that of the artifact in the enhancement of the authentic sense of place. We begin the article by exploring ideas of city sustainability in the context of globalization. Then, a field survey is carried out for analyzing the physical changes in Zuoying Settlement. Subsequently, a questionnaire seeking the place identity of Zuoying is present and followed by our analysis on the data. Lastly we summarize our findings in the conclusion section.

2. Exploring the ideas of city sustainability in the context of globalization

The ideas of rising living standards and improving the quality of the city have constantly occupied a privileged place in the dream of people. With respect to history, the redevelopment always depends on peoples' interest in the new images of the new development integrated with the existing context, which represents not only the preference judgment of the existing physical environment (Rapoport, 1977, 2005), but also the specific changes to fit the future prospect. All the new images of the physical environments are associated with the topic of peoples' functional needs toward the physical environment. In fact, the new image is the essence of the city transition embracing the place identity. Recently, this view of place identity is also emphasized by Hauge (2004:7) who stated that "the place identity is formed through milieus of feelings, meanings, experiences, memories and actions that, while ultimately personal, are substantially filtered through social structures and fostered through socialization." As a consequence, the fulfillment of people's needs toward the city with place identity is a significant thinking of environmental characters. This concern has been taken into account for redevelopment and re-growth of a traditional city.

2.1. The basic needs of the human beings to the environmental practice

The complicated needs of life survival, goal pursuance, and value establishment motivate people to constructing the environment, developing the city, and trying to redevelop the place that people feel inappropriate. The development and redevelopment embedded in the local context constitute the basic logic of the environmental evolution. Thus in the process of redeveloping a city, the environment not only should fulfill the functional needs of life, but also should meet the practice of art. The spatial practice to satisfying the needs of daily life is the main purpose of the architecture development, which should be of “*utilitas, firmitas, venustas*” as considered by Vitruvius. In terms of environmental development, the functional satisfaction should meet the basic requirements for safety and protection as what has been done by a building to us. The issue has become the key to the development of the modern functionalism in the beginning of the 20th century.

In the realm of psychological studies, Abraham Maslow (1987) has advocated a theory of a five-stage hierarchy of basic human needs -- physiological, safety, social, esteem, and self-actualization. His theory has provided a framework for studying the environment behavior. He considers the human needs as a hierarchical structure of pyramid. The level of aesthetics will rise up only when those bottom needs are satisfied. The five basic needs can be divided into two categories according to the motivation. The deficiency needs, also known as the D-needs, comprise four bottom needs relating to the feeling of absence. The being needs, a.k.a. the B-needs, refer to the satisfaction of cognitive and aesthetics. This classification offers a structure for exploring the needs of people towards the physical environment.

Many architects have tried to link the functionalism with the the nature of the art of building since the onset of the modernism. They expect that the architecture not only should fulfill physical needs, also should meet psychological needs (Frampton, 1976 ; Lang, 1978 ; Norber-Schulz, 1978). These ideas are consistent with the essence of Maslow’s theory. In the essay ‘On Reading Heidegger’ (1974), Kenneth Frampton defines the building task as ministers to the self-realization of man in nature and mediates as an essential catalyst between the three states of his existence an essential interface to the self-realization of man in nature and mediates as an organism of primal need, a sensate being and finally status as a cognitive and self-affirmative consciousness. Lang (1987) integrated many of the theories of architectural practices and human behaviors, and developed the theory of environmental design. Lately, depended on Abraham Maslow’s theory of human motivations, Lang’s extended framework for the study of environmental design is concluded that the function of the new as a shaper of its environment in his recently work (Lang and Moleski, 2010, p.291-312).

Based upon the practical experience and the economic reality, a settlement is a part of a specific terrestrial context where people live. According to Maslow’s theory of hierarchical needs, a city should fulfill the basic needs of the survival and the social life of the resident (the D-needs), and respond to the needs of self-actualization through the traveling experiences of the tourist (the B-needs), within the global flows of people and information. In this research, we employ the framework of Maslow’s theory to understand people’s reading on the townscape elements of a city. The consequence of the reading can be viewed

as a multiple interpretation to a city, which is given rise of the interaction between the people, the artifacts, and the geographical features in the process of globalization. The interpretation is closely related to the regional redevelopment. The outcome of the interpretation is helpful for us to understand how people construct their place identify from a view of the functional satisfaction. Moreover, integrating the two different levels of functional needs in a city will provide a more inclusive perspective of the regional redevelopment in the concept of environmental sustainability.

2.2. Place identity and sense of place

The public expressions are always closely relating to people's preference judgment of the reformation of the city. The preference of the physical elements concerns not only people's experiences and perceptions in the city, but the identity and the memory of the city. Since 1960s, different urban theorists have been exploring the ideas of city image, considering the topic of, "preception, identity and meaning" which, as pointed out by Lynch (1960), concerned the legibility and the structures of the physical environment (e.g., Cullen, 1959; Lynch, 1960; Colquhoun, 1967; Bacon, 1969; Norberg-Schulz, 1984; Colquhoun, 1991). After 1975, several studies on this subject speculate on local people's preference judgment and designers' environmental evaluation (Canter, 1977; Nasar, 1988; Rapport, 1977).

As Rapoport (2005:52) states, "the preference of cultural landscape is concerned with not only the expression of the collective choice and model of design, but also the value of lifestyle and social activity." Therefore, the preference can be characterized as several attitudes towards the adaptation of the city's physical features, the code of historical memory in the city, as well as the city's presentation of cultural value. Furthermore, the preference deals with a variety of factors which concern the architectural characters with its own identification, legibility, aesthetics, and tectonics, as well as meanings.

Facing the challenge of globalization, academia tends to view the physical elements of a city not only as a base of the city's redevelopment with respect to its historical settings (Kallus, 2001), but also as a generator of place identity in the cultural dimension (Castells, 1989; Hall, 2000; Hague, 2003). These approaches focus on the city's historical settings and its cultural significance, both of which find expressions in the forms of the city. The identification with physical elements in the traditional city are seen as the collective memory of place identities and localities (e.g. Rossi, 1982; Rowe & Koetter, 1984; Colquhoun, 1991). It is important when the traditional settlement is concerned with the physical features in order to contribute the authentic sense of place for the traditional cities facing the globalizing world.

2.3. The framework of the study

From these perspectives, the redevelopments of the historical city must reflect its authentic city context, such as its historical background, cultural characteristics and physical features. Our study explores people's interpretations of the city context with natural landscapes and artifacts that play important roles in human preference in the city of Zuoying. Based on Maslow's theory of hierarchical needs -- physiological, safety, social, esteem and self-

actualization (Maslow, 1987), we investigate the issue of city sustainability in the framework of globalization and disclose the intrinsic relationship between people and the city context(Figure 2). Utilizing public accounts as the mechanism of investigation, this study combines current operative values and conceptions with the meaning of individuality or oneness as the interface of the city redevelopment in Zuoying Settlement.

3. The physical change of Zuoying Settlement

Located in the grand Kaohsiung area Zuoying, named by the meaning of camping on the left, used to be the barracks in Ming Zheng era in southwestern Taiwan (1662-1683). It was

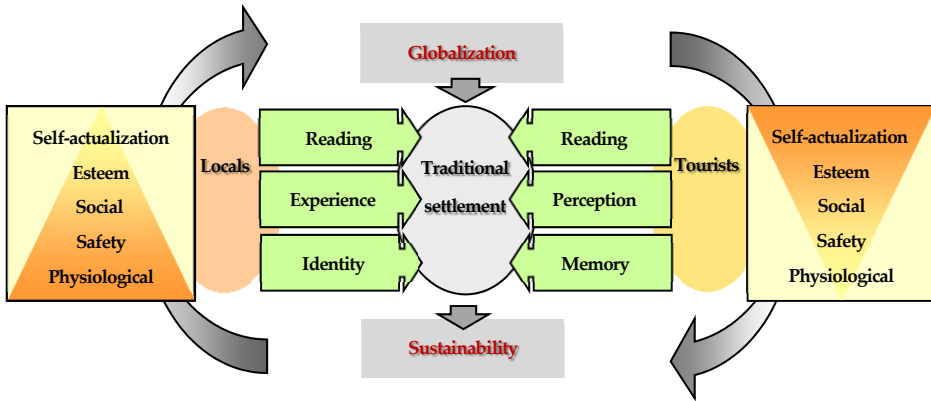


Figure 2. The framework of the interaction between people and the environment

first constructed and developed in the eighteenth century, and was established in the nineteenth century. Zuoying was famous for its walled-city which used to be the first critical city-wall made by stone in Taiwan in late Qing Dynasty. Since Ming Zheng era, Zuoying is not only a critical node in the old water network of Kaohsiung, but also a major juncture on the way from the city of Tainan to the southern area of Taiwan. The traditional Chinese city of Zuoying Settlement was growing up around the north gate outside the old Feng-Shan walled-city, remained relatively undeveloped until the late period of Qing Dynasty. Today, it is the biggest traditional Chinese settlement in south Taiwan.

The city situates one-block away from the station of Taiwan high speed rail and the entrance of Freeway No. 10, within Zuoying District. The traditional Zuoying Settlement is surrounded by the natural barriers of Zhouzai wetland to the east, the Turtle Mountain to the south, Mt. Panping to the north, and the Taiwan Strait to the west. The famous Lotus Pond is laid on the center of the site. There are two highly visible and vibrant communities lying on both sides of the pond, where the architecture modeling is grand and solemn. The city is famous not only for its history of development since late Ming Dynasty, but also the pavilions and pagodas of temples in the Lotus Pond. With the development of tourism in the era of globalization, today, Lotus Pond has become the most famous scenic spot in south Taiwan.

The townscape of Zuoying Settlement with Lotus Pond, temples and streets was first developed by Qing Dynasty in the nineteenth century. The settings of the old Feng-Shan walled-city and the Zuoying Settlement are integrated with the natural landscape of mountains and lakes with traditional concepts of feng-shui. The old streets along the water edge were extended incrementally on private land since Japanese colonial period. The core area of the settlement used to be constructed surrounding the Confucius temple which is located by the waterfront. Most of the cultural heritages are constituted by the historical alleys within the core area along the water edge, such as the Yuan Di Temple, Cing Shuei Temple, Tian Fu Temple and. The living quarters with temples and squares are important areas in Zuoying Settlement. The living quarters are well-known for the courtyard houses constructed by the traditional Chinese ideas.

With the sovereignty changes, the city has been left out from the process of modernization during the last seven decades since World War II. Till now, the physical evolution of the historical Zuoying contains the crucial characters relating to the framework of natural landscapes and the pattern of Chinese organic evolution. Today, Zuoying Settlement is recognized not only as the most important historical settlement, but also an important Navy base in Taiwan. In the trade of economic integration and transpiration development, the landscapes of Zuoying Settlement have not been invigorated by the rapid modernization. The population in the settlement presents a state of out-flowing, and the livelihood also gradually goes down. In most of time, there are only the elderly and the youngsters in the settlement. Only on weekends or holidays the city is packed with tourists.

Through the twentieth century from the emergence of urban planning, the restriction of building construction has caused not only the housing to have fallen into a serious state of decay, and also the spatial form to have become irrelevant to the settlement's context. Meanwhile, it also gives rise to the danger of public safety and the loss of identity of the place. At the turn of the 21st century, the historical Zuoying has faced various problems of sustainable development, such as the demolition of the historical buildings, the water pollution, and the declination of the population. Motivated by the sustainable perspective and the ecological movement, the redevelopment of the wetland around the historical Zuoying has become the major element for reconstructing the city since 2000. Before the World Games 2009 in Kaohsiung, a lot of redevelopments relating to the notion of ecological conservation and to the local economic developments have been carried out around Zuoying Settlement.

Like most of Chinese traditional cities, both elements of the local geographic environment and the spatial concepts of feng-shui have been encoded in the unique context of Zuoying Settlement. The townscape of the city is constructed by monuments, temples and geographical features, which provide a unique sense of the present Zuoying (Fig 3). The monuments, *e.g.* the Ancient Gate, the Earth God Temple, the Historical Trail and the Confucian Temple, are not only the evidences of the city history, but also the objects of the collective memory (Rossi, 1984). The natural landscapes comprise both original and contemporary ones. The Lotus Pond, the Trutle Mountain, and the Panpingshan Natural Park are examples of the original landscape, while the Zhouzai Wetland, the Primitive Plants Park, and the Park of Scenic Administration are some of the contemporary landscape

which can be easily identified. The formers are the fundamental elements of the environmental development, and the latter are illustrations of the various landscape ideas in the past thirty years. Both of them play the key role in the spatial evaluation of Zuoying Settlement. In addition, the temples (including the Ci-mi-tang, and the Dragon Tiger Tower are) are not only symbols representing the symbolic meanings of the traditional Chinese living, but also the social stages for the public life of the city. Though playing quite different roles in the past, the monuments, the natural landscape elements and the temples all provide specific functions for supporting modern city life. Moreover, in terms of the ideas of sustainability, these monuments, natural landscapes and temples contain different meanings regarding the sense of Zuoying Settlement.



Figure 3. The townscapes of the Zuoying Settlement along the Lotus Pond.

4. Seeking the place identity of Zuoying Settlement

The research started from June 2010. We conceived of the existing physical elements of townscapes as a preference result of evoking tradition value, and as a material of people learning to improve the existing landscape. Therefore, our questionnaire addresses on two main faces of the expressions of Zuoying Settlement's environmental values in the changing of time. Firstly, for the existing physical elements, the selection of the examples was taken into the consideration of the typological differences of landscape in today's Zuoying Settlement. Secondly, for the preference results of the physical elements of townscape, the questionnaires were taken into the consideration of the different expressions of different people in the city.

Referring to the physical elements of the townscape as representations of both the place identity and the tradition of the city, we focus on the historical monument, the cultural heritage and the natural landscape in Zuoying Settlement. These elements with characteristics derived from the precipitation of the history, the locality of building types, the function of activities and the setting of natural landscapes are critical to the city. Therefore, the questionnaire provides interviewees with a list of four historical monuments, six ecological landscapes and six cultural heritages (Figure 4). All samples are selected from the official webpage of the city of Zuoying Settlement. The historical monuments under consideration are related to the city development: Ancient Gate, Confucian Temple, Earth God Temple and Historical Trail. The ecological landscapes selected, which are all

reconstructed by 2009, represent the characters of the townscape: Lotus Pond, Turtle Mountain, Panpingshan Natural Park, Zhouzai Wetland, Primitive Plants Park and Park of Scenic Administration. The six cultural heritages are emerged from the townscape of the Taiwanese tradition: Yuan Di Temple, Cing Shuei Temple, Tian Fu Temple, Cheng Huang Temple, Ci-mi-tang, Dragon and Tiger Pagodas.

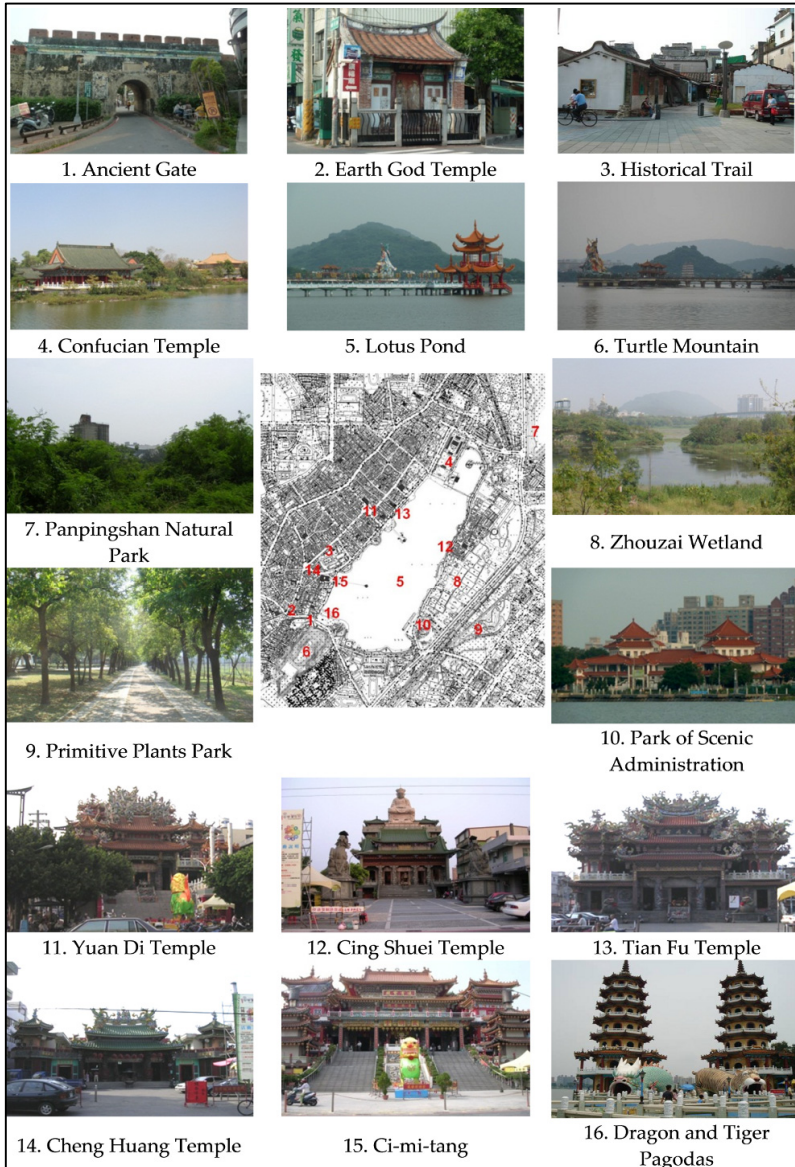


Figure 4. The map and the examples of the questionnaire.

Because the city is an important tourist spot in southern Taiwan, the questionnaire targets on the locals and the tourists which are two main groups of people in the city. Since the place identity involves a user's experiences and memories of the city, the preference expressions amount to the collective reading, current operative values and conceptions with the meaning of the architectural change. Moreover, the preference expressions represent not only the adaptation of physical elements, but also a critical foundation for sustainably developing a city. Accordingly, we analyze preferences of the physical elements of the locals and the tourists toward the historical settlement of Zuoying Settlement that can be imaged respectively as a living organism and travelling heterotopias. We then clarify the differences in meanings of these landscape elements with respect to the locals and the tourists. The questionnaire survey is addressed to four age groups of inhabitants and tourists: (1) 8-20 years; (2) 21-40 years; (3) 41-60 years of age, and (3) people over the age of 60. As a consequence, the questionnaire survey targets on two main categories of users in the historical settlement: (1) the inhabitants, including the youngsters; and (2) the tourists. The study is carried out by a total of 261 interviews, among which 133 interviewees are the inhabitants and 128 the tourists (Table 1).

Age	under 20	20-39	40-59	over 60	Total
Locals	20	27	53	33	133
Tourists	22	45	32	29	128
Total	42	72	85	62	261

Table 1. Numbers of inhabitants and tourists in four age groups

To explore public responses to the city monuments, cultural heritages and natural landscapes as well as Zuoying Settlement's environmental quality today, two standardized questionnaires are developed under a framework adapted from Maslow's model of hierarchical human needs incorporating with the concepts of place identity and sense of place. Each questionnaire consists of three parts, and each part comprises two questions. The questions in the first part are related specifically to the image of the city: one for the impression of Zuoying Settlement and the other for the characters of the city which may identify the existing role of the place within the city. The questions in the second part are designed to compare the differences in preference regarding the sense of the place and the aesthetic or self-cognitive characters of the place. The questions in the third part address the issues for the city redevelopment.

As a consequence, the questionnaire has two versions, locals and tourists. There are:

1. The image of the city
 - a. Which is the most important element to provide a unique sense of Zuoying Settlement? (choose one only) Its artifacts? Its specialties? Or its geographical features?
 - b. Which of the listed samples gives you a sense of the best representative of Zuoying Settlement? (choose one only) Why?

2. The sense of the city
 - a. Which of the listed samples is the most beautiful place in Zuoying Settlement? (choose one only) Why?
 - b. For inhabitants, which of the listed samples would you show your friends around when they come for a visit? (choose one only) Why?
 - c. For tourists, which of the listed sample is your most favourite places in Zuoying Settlement? (choose one only) Why?
3. The perspective of the city
 - a. Which issue do you think is the most important one concerning the modernization course of Zuoying Settlement? (choose one only) Issue of historical preservation? Issue of environmental implementation? Issue of tourism?
 - b. Which place do you think can be served as the best example for the future redevelopment in Zuoying Settlement? (choose one only)

5. Results and discussion

5.1. The Image of Zuoying Settlement

Usually, the image of a city is constructed by peoples' experiences of the city. Usually, the image of a city is constructed by both the activity and the architectural form of the city. As a consequence, the question of 'the most important element to provide a unique sense of Zuoying Settlement' deals with the identifying characters of the city that depend on the perceptions relating to the artifacts, the specialties and the geographic features. The other question centrally focuses on the place which gives a sense of the best representative of the city. Both of the questions reflect the mental constructions of the physical elements of Zuoying Settlement through their personal experiences. During the process of city redevelopment, the images of Zouying Settlement cloud be in conserving the urban experience without losing the existing authentic architectural features, and be the comparatives to understand how the locals and the tourists identify the existing role of read the townscape of the city.

5.1.1. *The most important element to provide a unique sense of Zuoying Settlement*

Responses to the first question of Zuoying Settlement were compared in terms of the artifacts, the specialties and the geographic features. The percentages of choices made by both of groups of interviewees are presented graphically in Table 2. According to these data, the preferences of interviewees for the three local characteristics providing the sense of the city are irrelevant to their identities as a resident or a tourist ($p>.05$, $n=261$). The orders of the favorite local characteristics from all groups of residents and tourists are identical, though the ratios in the degrees of preference are not the same. Both categories of interviewees believe that the "artifacts" is the central reason to provide the sense of place in Zuoying Settlement (66.0% of the total respondents, including 63.9% of local residents and 67.2% of tourists), and the "natural landscape" is the second most important factor (26.7% of the total respondents, including 27.1% of local residents and 25.8% of tourists).

In contrast, the responses from various age groups of both residents and tourists to those three local characteristics are quite different. There was a statistically-significant difference in preference between the four age groups of both categories of the interviewees ($p < .05$, $n = 261$). Younger people with the age under 20 prefers the “artifacts” the most. Furthermore, the degrees of preference upon the “artifacts” from groups of tourists with age greater than 20 is proportional to the increase in age. On the other hand, the degrees of preference upon the “natural landscape” from the residents grow with age, and peaks in the group of the elderly with age beyond 60. However, the degrees of preference on the “natural landscape” in different age groups of tourists, except for those young tourists with age under 20, decrease with age. The results show a clearly distinction in between the age groups of residents and tourists.

Characteristics Elements		Local (n=133)				Local Total (%)	Tourist (n=128)				Tourist Total (%)
		under 20	20-39	40-59	up 60		under 20	20-39	40-59	up 60	
Artifacts Total		12.03	12.78	24.81	14.29	63.91	14.06	21.88	17.19	14.06	67.19
Artifacts	Monuments	6.02	6.77	7.52	5.26	25.56	5.47	10.16	7.03	3.91	26.56
	Traditional Housing	1.50	0.75	5.26	3.01	10.53	2.34	3.91	2.34	1.56	10.16
	Temples	4.51	5.26	11.28	3.76	24.81	6.25	7.03	7.03	7.03	27.34
	others	0.00	0.00	0.75	2.26	3.01	0.00	0.78	0.78	1.56	3.13
Specialities Total		2.26	3.01	1.50	2.26	9.02	1.56	0.78	0.78	2.34	5.47
Specialities	Traditional crafts	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.78
	Military foods	0.00	2.26	0.00	0.00	2.26	0.00	0.00	0.00	2.34	2.34
	Traditional snacks	2.26	0.75	1.50	0.75	5.26	1.56	0.00	0.78	0.00	2.34
	others	0.00	0.00	0.00	1.50	1.50	0.00	0.00	0.00	0.00	0.00
Geographical features Total		0.75	5.26	12.78	8.27	27.07	1.56	12.50	7.03	4.69	25.78
Geographical features	Panpingshan Natural Park	0.00	0.75	0.00	1.50	2.26	0.00	0.78	0.00	0.78	1.56
	Lotus Pond	0.75	3.01	10.53	5.26	19.55	1.56	10.16	7.03	3.91	22.66
	Trutle Mountain	0.00	1.50	1.50	0.00	3.01	0.00	0.78	0.00	0.00	0.78
	others	0.00	0.00	0.75	1.50	2.26	0.00	0.78	0.00	0.00	0.78
Others Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56
Total		15.04	21.05	39.10	24.81	100.00	17.19	35.16	25.00	22.66	100.00

Table 2. Percentages of the most important element to provide a unique sense of Zuoying Settlement.

The preferences of both residents and tourists for the most important element to provide a unique sense of the city are essentially the same – artifacts, especially for cultural heritages and temples play the most important rolls here. In addition, the preferences of different age groups in both categories for the type of artifacts linking to the sense of the city are somehow different, though those for cultural heritages are all grow with age. In contrast to the discrepancy in preferences for cultural heritages and for traditional architectures between various age groups, both residents and tourists consider the Lotus Pond the most critical spatial element of geographical landscapes in providing the sense of place for Zuoying Settlement. Through the artiufacts, both the locals and the tourists develop their feeling of attachment to the oldest settings of the city.

5.1.2. The place provide a sense of the best representative of Zuoying Settlement

In terms of the sense of the best representative of Zuoying Settlement, the preferences of residents somehow slightly deviate from those of tourists ($p < .05$, $n=261$). The percentages of choices made by both of groups of interviewees are presented graphically in Table 3. For the locals, the gender plays a significant role in determining the place which provide a unique sense of the city ($p < .05$, $n=133$). In addition to commonly regarding the Lotus Pond as the best representative of the city statistically, Ancient Gate and Ci-mi-tang are, respectively, the second and the third favorite choices to the resident, while Dragon and Tiger Pagodas and Ancient Gate are those to the tourist. Tourists' age have little influence on their preferences. However, the age difference does play a more important role to affecting residents' choices. Resident's groups with age less than 39 prefer Ancient Gate as the best representative to the city, while those groups with age beyond 40 favor the Lotus Pond.

Considering to the answers of the reason "why", both residents and tourists all consider the history as the major reason leading to their primary choice for the best representative of the city. Most of the interviews are detected with the senses as a unique symbol by the geographical features in the historical city. But the causes of the second and the third choices in both categories are somehow different. To list in order respectively, they are the natural landscape and the street furniture for residents; the building type and the natural landscape for tourists. Interesting enough, such an order of choices for the tourist is identical to that made by the resident group with age under 20.

From the response to the question of the listed place of providing a sense of the best representative of the city, two traits can be inferred. First of all, the spatial cognition from both residents and tourists toward the Lotus Pond involves the historical and the geographical aspect of the place equally. The resident concerns the influence on the spatial development in Zuoying Settlement brought by the Lotus Pond, while the tourist emphasizes the correlation in spatial structure between the pond and the temple. Moreover, the Lotus Pond has become the main geographical symbol of Zuoying to the loacals owing to the intimate connection between the social life and the major accessible natural place, and the unique cultural code the local townscape to the tourists consisting of temples, pavilions and pagodas nearby the pond.

	Local (n=133)				Local Total (%)	Tourist (n=128)				Tourist Total (%)
	under 20	20-39	40-59	up 60		under 20	20-39	40-59	up 60	
Monuments	6.77	9.02	9.02	5.26	30.08	4.69	12.50	4.69	3.13	25.00
Confucian Temple	1.50	2.26	3.76	0.75	8.27	1.56	2.34	1.56	0.00	5.47
Historical Trail	0.00	0.00	1.50	0.00	1.50	0.78	0.00	0.00	0.78	1.56
Ancient Gate	5.26	6.77	3.76	4.51	20.30	2.34	9.38	3.13	2.34	17.19
Earth God Temple	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.78
Cultural Heritages	3.76	4.51	13.53	4.51	26.32	4.69	10.16	10.94	6.25	32.03
Yuan Di Temple	0.75	1.50	3.01	3.01	8.27	0.78	0.00	0.78	0.78	2.34
Cheng Huang Temple	1.50	0.00	1.50	0.00	3.01	0.78	0.00	0.00	0.00	0.78
Ci-mi-tang	1.50	2.26	7.52	0.00	11.28	0.78	2.34	3.91	0.00	7.03
Dragon Tiger Tower	0.00	0.75	1.50	1.50	3.76	2.34	7.81	6.25	5.47	21.88
Geographical Features	4.51	7.52	15.04	12.78	39.85	7.81	12.50	9.38	11.72	41.41
Panpingshan Natural Park	1.50	0.75	0.00	0.00	2.26	0.00	0.78	0.78	0.00	1.56
Primitive Plants Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.78
Lotus Pond	3.01	6.02	15.04	12.03	36.09	7.03	10.16	7.81	7.81	32.81
Park of Scenic Administration	0.00	0.00	0.00	0.00	0.00	0.78	0.78	0.78	3.13	5.47
Trurtle Mountain	0.00	0.75	0.00	0.75	1.50	0.00	0.78	0.00	0.00	0.78
Others	0.00	0.00	1.50	2.26	3.76	0.00	0.00	0.00	1.56	1.56
Total	15.04	21.05	39.10	24.81	100.00	17.19	35.16	25.00	22.66	100.00

Table 3. Percentage of the choices that provide a sense of the best representative of Zuoying.

5.2. The sense of Zuoying Settlement

In the second part, the questions of 'beautiful' and 'favorite' deal with the preferences regarding the sense of the place and the aesthetic or self-cognitive characters of the place. The differences of the preferences concern the legibility and the functional satisfaction of the place. Both of the questions are designed to compare the differences in order to understand the meanings of the elements in Zuoying Settlement.

5.2.1. The most beautiful place in Zuoying Settlement

The types of selected place by the interviewee are nothing to do with the categories, the gender and the age of the interviewees ($p>.05$, $n=261$). Most of the residents and tourists regard the Lotus Pond as the most beautiful place in Zuoying Settlement (46.3% of local residents and 41.4% of tourists). The percentages of choices are presented graphically in Table 4. The order of the most favorite beautiful place in Zuoying other than the Lotus Pond varies with identity. The list of the local resident is Ci-mi-tang · Yuan Di Temple and Dragon and Tiger Pagodas, while that of the tourist is Dragon and Tiger Pagodas · Park of Scenic Administration and Confucian Temple. In addition to the primary choice, the Lotus Pond, being a natural landscape, temples preferred by residents (especially by those with age greater than 20) are cultural heritages. The preference of the tourist varies with age. The building types favored by the tourist usually belong to the monument, except Dragon and Tiger Pagodas.

	Local (n=133)				Local Total (%)	Tourist (n=128)				Tourist Total (%)
	under 20	20-39	40-59	up 60		under 20	20-39	40-59	up 60	
Monuments	3.01	1.50	2.26	1.50	8.27	3.13	3.13	3.91	3.13	13.28
Confucian Temple	1.50	0.75	0.75	0.00	3.01	0.78	1.56	3.13	0.78	6.25
Historical Trail	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.78
Ancient Gate	1.50	0.75	1.50	1.50	5.26	2.34	0.78	0.78	2.34	6.25
Cultural Heritages	1.50	6.02	11.28	5.26	24.06	4.69	7.81	7.81	5.47	25.78
Yuan Di Temple	0.00	2.26	2.26	1.50	6.02	0.78	0.78	0.78	0.78	3.13
Cheng Huang Temple	0.75	3.01	6.77	0.75	11.28	0.00	2.34	1.56	0.78	4.69
Ci-mi-tang	0.00	0.00	0.75	0.00	0.75	0.00	0.00	0.00	0.00	0.00
Dragon Tiger Tower	0.75	0.75	1.50	3.01	6.02	3.91	4.69	5.47	3.91	17.97
Geographical Features	9.77	12.78	23.31	18.05	63.91	9.38	24.22	13.28	12.50	59.38
Panpingshan Natural Park	1.50	0.75	0.75	2.26	5.26	1.56	0.78	0.00	0.00	2.34
Zhouzai Wetland	0.75	0.75	0.75	0.00	2.26	0.00	1.56	0.78	0.00	2.34
Primitive Plants Park	0.75	0.75	2.26	0.75	4.51	0.00	1.56	0.00	1.56	3.13
Lotus Pond	6.02	8.27	18.05	14.29	46.62	6.25	15.63	10.94	8.59	41.41
Park of Scenic Administration	0.00	1.50	1.50	0.00	3.01	1.56	3.13	1.56	2.34	8.59
Trurtle Mountain	0.75	0.75	0.00	0.75	2.26	0.00	1.56	0.00	0.00	1.56
Others	0.75	0.75	2.26	0.00	3.76	0.00	0.00	0.00	1.56	1.56
Total	15.04	21.05	39.10	24.81	100.00	17.19	35.16	25.00	22.66	100.00

Table 4. Percentage of choices that samples is the most beautiful place in Zuoying Settlement.

Considering to the answers of the reason “why”, the natural landscape occupies the largest portion in both categories of residents and tourists to account for their choices of the most beautiful place in Zuoying Settlement. In addition, the choice of the place obviously depends upon the identity and the age of the interviewee. For example, the history is the primary concern in the resident’s group with age under 20, the building type is that with age 40-59, and the street furniture is those with age 20-39 and beyond 60. The ratio of preferring the building type, which is the major reason why a tourist with age beyond 60 would choose the favorite beautiful place, in the tourist’s groups grows with the age. The history, however, is the most important factor for most of the tourists with age under 20 to select the most favorite beautiful place.

The reason for the resident to choosing the most beautiful place in Zuoying is that it should serve as a place of exploring the visual aesthetic perception while fulfilling the functional meaning of the public life. In addition to recognizing the coexistence of heterogeneous things around the Lotus Pond, however, the reason for the tourist to choosing the most beautiful place in Zuoying is to outline the uniqueness of the local floating landscape. Moreover, various spatial types with strong traditional Chinese architectural features, such as Park of Scenic Administration and Confucian Temple, not only intensify tourists’ memories about the spatial culture of Zuoying Settlement, but also enrich their experiences in tasting the environmental aesthetics when strolling in the waterfront park.

5.2.2. The place for inhabitants’ friend and the favorite place of tourists

The types of selected place by the interviewee are nothing to do with the categories of the interviewees. The Lotus Pond is the place that residents would desire their guests to visit, and the place where tourists prefer visiting the most in Zuoying Settlement (Table 5). In addition to the Lotus Pond, the resident’s responses to the other choices vary with age. The resident’s next most favorite places are, respectively, Confucian Temple for age groups under 39, Ci-mi-tang for the age group 40-59, and Yuan Di Temple for the age group beyond 60. On the other hand, the tourist’s responses are quite consistent regardless their age. The next most favorite places for the tourist when ranked according to the proportion from high to low are Dragon and Tiger Pagodas, Ci-mi-tang and Ancient Gate.

Considering to the answers of the reason “why”, the natural landscape, to most interviewees, is the critical factor for answering this question, except for residents with age beyond 60 whose major concern is, instead, the street furniture. For the resident, the ratio of this preference decreases with age. Moreover, the reasons for the residents’ choice of the next favorite place in Zuoying are somehow different to different age groups. For instances, the history and the street furniture are, respectively, the important factor to contemplate for resident’s groups with age under 39 and that of 40-59. To the tourists, however, they favor the history and then the building type.

	Local (n=133)				Local Total (%)	Tourist (n=128)				Tourist Total (%)
	under 20	20-39	40-59	up 60		under 20	20-39	40-59	up 60	
Monuments	2.26	3.76	4.51	0.75	11.28	3.13	5.47	1.56	2.34	12.50
Confucian Temple	1.50	3.01	0.75	0.00	5.26	0.78	2.34	1.56	0.78	5.47
Historical Trail	0.75	0.00	0.00	0.00	0.75	0.00	0.78	0.00	0.00	0.78
Ancient Gate	0.00	0.75	3.76	0.75	5.26	2.34	2.34	0.00	1.56	6.25
Cultural Heritages	0.75	3.01	7.52	8.27	19.55	4.69	10.94	7.03	4.69	27.34
Yuan Di Temple	0.00	0.75	1.50	3.76	6.02	0.78	1.56	0.00	0.78	3.13
Cheng Huang Temple	0.00	0.75	0.00	0.00	0.75	0.00	0.78	0.00	0.00	0.78
Ci-mi-tang	0.00	1.50	5.26	2.26	9.02	0.78	3.13	3.91	0.78	8.59
Dragon Tiger Tower	0.75	0.00	0.75	2.26	3.76	3.13	5.47	3.13	3.13	14.84
Geographical Features	10.53	11.28	23.31	14.29	59.40	9.38	18.75	14.84	14.84	57.81
Panpingshan Natural Park	0.75	1.50	0.75	0.75	3.76	0.78	1.56	0.00	0.00	2.34
Zhouzai Wetland	0.75	0.75	0.75	0.00	2.26	0.78	0.78	0.00	0.00	1.56
Primitive Plants Park	1.50	0.00	0.75	0.00	2.26	0.00	2.34	0.78	2.34	5.47
Lotus Pond	6.77	7.52	20.30	12.78	47.37	7.03	10.16	13.28	11.72	42.19
Park of Scenic Administration	0.75	1.50	0.75	0.75	3.76	0.78	3.13	0.78	0.78	5.47
Trurtle Mountain	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.78
Others	1.50	3.01	3.76	1.50	9.77	0.00	0.00	1.56	0.78	2.34
Total	15.04	21.05	39.10	24.81	100.00	17.19	35.16	25.00	22.66	100.00

Table 5. Percentage of choices that the place for inhabitants' friend and the favorite place of tourists in Zuoying Settlement.

The preference, the cognition, and the pride on the place are the keys to account for the resident's recommendation. The cross-comparison between the priority and the reason of choosing the favorite place to visiting shows that the Lotus Pond is very meaningful in the sense of nature and history for residents under the age of 39. For residents over the age of 40, the uniqueness of the Lotus Pond's geographical feature and the improvement on the street furniture around it further strengthen their cognition of the place.

The locals possess a strong sense of place reflecting the historical backgrounds of the city, which can be interpreted as a pride in the city, while the tourists maintain an enjoyable experience of the city representing the nature of the typological evolution of the city, which can be regarded as a catalyst of city redevelopment. Both act as central roles in a historical city going global.

5.3. The perspective of Zouying Settlement

5.3.1. The most important issue concerning the redevelopment of Zuoying Settlement

The issue of tourism turns out to be the most important issue concerning the redevelopment of Zuoying for both residents and tourists. The percentages of choices made by both of groups of interviewees are presented graphically in Tabel 6. The issue selections of the interviewee are strongly influenced by their ages ($p < .05$, $n = 261$). It is especially so for tourists under the age of 20. For instances, residents under the age of 20 emphasize the issue of environment and that of tourism equally; residents with the age of 20-59 prefer the issue of history to that of environment; and residents beyond the age of 60 address equally the issue of environment and that of history. Tourists under the age of 20 and those with the age of 40-59 express more concern about the issue of history than that of environment. However, the exactly opposite trend is shown in the group of tourists with age of 20-39. Tourists beyond the age of 60 pay equal attention to the issue of tourism and that of history. In specific, the issue of history is more concerned in the group beyond the age of 60 than any other age groups of the tourist.

	Local (n=133)				Local Total (%)	Tourist (n=128)				Tourist Total (%)
	under 20	20-39	40-59	up 60		under 20	20-39	40-59	up 60	
Historical issue	3.008	6.015	9.774	5.263	24.06	4.688	7.813	6.25	7.813	26.56
Environmental issue	6.015	4.511	9.774	5.263	25.56	3.125	8.594	4.688	3.906	20.31
Tourist issue	6.015	10.53	18.8	11.28	46.62	9.375	18.75	12.5	7.813	48.44
Others	0	0	0.752	3.008	3.759	0	0	1.563	3.125	4.688
Total	15.04	21.05	39.1	24.81	100	17.19	35.16	25	22.66	100

Table 6. Percentage of the most important issues for the city redevelopment.

5.3.2. The place served as the best example for the future redevelopment

The Lotus Pond is considered by all interviewees under the age of 59 as the best example for the future redevelopment in Zuoying. The percentages of choices made by both of groups of interviewees are presented graphically in Table 7. The preferences of place as the best example for the future redevelopment are significantly different for both categories of the interviewees ($p < .05$, $n = 261$). Remarkably, residents raise many other possibilities in response to this question. A significant amount of residents (22.6%) proposes a number of suggestions, *e.g.* infrastructure investment, local character construction, and old street renew... *etc.* Twenty-seven percent of them are the elderly over the age of 60, who have questioned and expressed the negative views on the development. Preferences of all interviewees depend upon both the identity and the age. Residents under the age of 59 favor

the natural landscape, while some of senior residents over the age of 40 chooses “the others”. On the other hand, the analysis on tourist’s choices shows that the cultural landscape is the collective preference among various age groups of the tourist. Furthermore, tourists under the age of 59 prefer the natural landscape to the monument, while those over the age of 60 show the exact opposite.

	Local (n=133)				Local Total	Tourist (n=128)				Tourist Total
	under 20	20-39	40-59	up 60		under 20	20-39	40-59	up 60	
Monuments	1.50	3.01	3.01	4.51	12.03	2.34	7.03	2.34	7.03	18.75
Confucian Temple	0.75	1.50	1.50	1.50	5.26	1.56	0.00	1.56	0.78	3.91
Historical Trail	0.00	0.00	0.00	0.00	0.00	0.00	3.91	0.78	1.56	6.25
Ancient Gate	0.75	1.50	1.50	3.01	6.77	0.78	3.13	0.00	4.69	8.59
Cultural Heritages	0.00	1.50	3.76	4.51	9.77	3.91	4.69	3.91	3.91	16.41
Yuan Di Temple	0.00	1.50	0.00	1.50	3.01	0.00	0.00	0.00	0.78	0.78
Cheng Huang Temple	0.00	0.00	0.75	0.00	0.75	0.78	1.56	0.78	0.00	3.13
Ci-mi-tang	0.00	0.00	2.26	1.50	3.76	1.56	0.78	0.78	0.00	3.13
Cing Shuei Temple	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.78
Dragon Tiger Tower	0.00	0.00	0.75	1.50	2.26	1.56	1.56	2.34	3.13	8.59
Geographical Features	11.28	13.53	23.31	7.52	55.64	10.16	23.44	16.41	10.16	60.16
Panpingshan Natural Park	1.50	0.00	0.00	0.00	1.50	0.00	0.78	0.00	0.00	0.78
Zhouzai Wetland	0.75	1.50	2.26	0.00	4.51	0.00	3.13	0.78	0.00	3.91
Primitive Plants Park	0.75	2.26	0.75	0.00	3.76	0.78	3.13	1.56	1.56	7.03
Lotus Pond	4.51	7.52	16.54	6.77	35.34	7.03	12.50	12.50	7.81	39.84
Park of Scenic Administration	3.76	2.26	3.76	0.00	9.77	1.56	3.13	1.56	0.78	7.03
Trurtle Mountain	0.00	0.00	0.00	0.75	0.75	0.78	0.78	0.00	0.00	1.56
Others	2.26	3.01	9.02	8.27	22.56	0.78	0.00	2.34	1.56	4.69
Total	15.04	21.05	39.10	24.81	100.00	17.19	35.16	25.00	22.66	100.00

Table 7. Percentage of the places served as the best example for the future redevelopment in Zuoying Settlement.

5.4. Discussion

The result of the unique sense for the locals represents the symbolic meaning within the city. Moreover, the result may be interpreted that the historical monuments for the locals is used to refer to the importance of reflecting the authenticity of the settlement. On the other hand, the result of the unique sense for the tourists not only implies the purpose of traveling, represents the identifying characters of Zuoying Settlement. The identifying characters in Zuoying Settlement attach to the historical settings based on the combination of activity, attentiveness and emotion. For some of the tourists, the historical settings include not only the artifacts, but the geographical features including the pond and the mountains.

The exploration into the interviewee's cognition of Zuoying Settlement indicates two features. In resident's cognition of the settlement, the construction and improvement in both the quantity and the quality of environmental facilities signify a symbol of progress which, by associating with the imagination on the environmental aesthetics of a modern city, makes some residents proud of their habitation. To the tourist, the preference of travelling place is closely related to the travel motivation and the destination image. The natural expression, the historical atmosphere, and the temple scenery of a townscape not only create distinctive characteristics of the place, but also fulfill the expectations of tourist experience.

Accordingly, the social meanings of the recent physical redevelopment in Zuoying Settlement can be explained in the light of preference judgements of the locals and tourists. Moreover, the preference judgment is relevant to not only an attitude of the historical mountains, cultural heritages and geographical features of the evolving Zuoying Settlement, but also an expression of people's vision of the city in the changing of time. That is to say, how people learn to rethink the transformation of their living place-- e.g., form, material, function, spatial structure and spatial character -- for fitting into the transition of a city.

6. Conclusion

As Fisher-Gewirtzman *et al.* (2003) has mentioned about the physical environment, "spatial configuration has a great impact on perception, as it is more direct and more elementary than individual details.", the results of this study can serve as a foundation not only to understand the meanings of the artifacts and the geographical features relating to the existing context, but also to bring out various ideas about developing in Zuoying Settlement. The ideas of improving the quality of the settlement fall in both of the locals' and the tourists' readings in the juxtaposition of the elements of townscape. Such a reading of the city referring to the experiences of human needs and the existing physical context can facilitate a public discourse that is the goal of responsible improvement in the 21st century. This public discourse will bring meaning back into the development of the city. In recognizing these interactions it is critical to have a strategy to carrying out a vision of making a sustainable city.

According to the resident's reading on the townscape of Zuoying, our investigation clearly shows that the local needs for residents' survival and living amount to the D-needs in Maslow's theory, *i.e.* physiological, safety, social, and esteem needs. Residents' cognition of current status and future expectations reflect the satisfaction of the needs of survival. Furthermore, residents' concerns about the street furniture and the natural landscape in the local development plan reveal the satisfaction of the needs of living.

On the other hand, the tourist's reading on the townscape of Zuoying discloses the motivation of knowledge learning and aesthetic needs in their experiences, which are equivalent to the B-needs in Maslow's theory, *i.e.* the needs of self-actualization. Tourists' preferences of historical and cultural landscapes and their future expectations show the needs of knowledge learning. Moreover, tourists' concerns about the building type and the natural landscape reflect the needs of aesthetics.

Since a historical monument or a cultural heritage is usually embedded in a natural landscape, they form an inseparable compound landscape. The diversified meaning of the

Lotus Pond to the resident and the tourist can only be read off by an integrated survey on it if one treats it as a proper compound system. This compound system not only describes the townscape of Zuoying Settlement at a scale experienced by people, it describes the townscape at the grain of people's experience. For example, the typology of cultural heritages that would have represented a translation of people reading the natural context of the city also could be validly described in terms of a clear hierarchy of spatial structure (Lin and Lee, 2010). The inseparability of such a compound landscape is the key to understand the legibility, the coherence, and the complexity of a city.

Based on these data, the preference judgment can explain people's attitudes toward the architectural redevelopments in Zuoying Settlement. As a consequent, the preference judgment is a mixture of perception and cognitive attitudes, affective responses and the driving force for redevelopment. We therefore conclude that the characters of the cultural heritages and the historical monuments associating with the natural landscape under consideration are capable of reflecting the authenticity of the historical settlement. In addition, the strong preferences of the cultural heritage and the natural landscape are capable of characterizing the relations between people and the meanings of the historical Zuoying, as well as assessing the value of the physical elements within the city. Moreover, people's reading of these elements of the city can serve as the visualization tools, which enables us to translate the results into the guidelines for fitting into the transition of city redevelopment, and carrying out the logic and the meaning of the changing city in the process of globalization (Figure 5). This, in turn, provides an interface not only for reinforcing the place identity of the traditional settlement, but fitting into the era of city seeking for sustainable development.

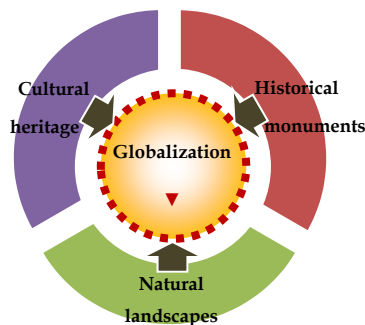


Figure 5. The framework for the sustainable development of a city in the trend of globalization.

We have come through a long period where development has been reduced to globalized forms having no particular meaning. An alternative is to return to architecture and urbanism as an art rather than as a mechanism. The difference is that the priority of art is elucidation of meaning and the development of a language to convey meaning. We do not have to choose between engineering and art, but we do have to focus on development that intends to engage in a public discourse of ideas and to include a greater complexity of idea in the making and remaking of our cities.

Author details

Hsiu-hui Lin and Weii Lee

Kun Shan University of Technology, National Taiwan University of Technology, Taiwan

7. References

- Canter, D. (1977). *The Psychology of Place*, ISBN 0851395325, Architectural Press, London.
- Castells M. (1989). *The informational city: information technology, economic restructuring, and the urban-regional process*, ISBN 0631179372, Oxford: Basil Black well.
- Cullen G. (1959). *Concise Townscape*, ISBN 0750620188, London: Architectural Press.
- Colquhoun A. (1991). *Modernity and the Classical Tradition: Architectural Essays 1980-1987*, ISBN 0262531011, Cambridge: The MIT Press.
- Fisher-Gewirtzman D., et al. (2003). A 3-D visual method for comparative evaluation of dense built-up environments. *Environment and Planning B: Planning and Design*, vol. 30, pp. 575-587, ISBN 0 47198546 5.
- Frampton K. (1976). On Reading Heidegger in *Oppositions Reader*, M. K. Hays, (Ed.), ISBN 1568981538 (ed.) (Princeton Architectural Press, New York, 1998).
- Hauge. C. (2003). 'Planning and Place Identity' in *Place Identity, Planning and Participation*, Hague, Cliff and Jenkins (Ed.), ISBN 0415262410, Paul. London: Routledge.
- Hall P. (2000). Creative cities and economic development, *Urban Studies*, 37, pp. 639–649.
- Kallus R. (2001). From Abstract to Concrete: Subjective Reading of Urban Space. *Journal of Urban Design* 6(2):129-150, ISSN 1469-9664.
- Lynch K. (1960). *The Image of the City*, ISBN 0262620014, Cambridge: The MIT Press.
- Lang J. (1987). *Creating Architectural Theory- The Role of Behavioral Science in Environmental Design*, ISBN 0442259816, New York: Van Nostrand Reinhold.
- Lang J. & Moleski (2010). *Functionalism Revisited*, ISBN 1409407012, Burlington: Ashgate Pub Co.
- Lin H. & Lee W. (2010). "Visual Thinking as a Strategy for City Sustainability", *International Journal of Human and Social Sciences*, World Academy of Science Engineering and Technology, Volume 5 Number 1, pp.38-43.
- Maslow, A. (1987). *Motivation and Personality* (3 Sub edition), ISBN 0060419873, New York: Harper & Row.
- Nasar J. L. (1988). *Environmental Aesthetics: Theory, Research and Applications*, ISBN 0521341248, New York: Cambridge University Press.
- Norberg-Schulz, C. (1984). *Genius Loci: Towards a phenomenological approach to architecture*, ASIN B001O008NE , Rizzoli, New York.
- Rapoport A. (1977). *Human Aspects of Urban Form: Towards a Man-Environment Approach to Urban Form and Design*, ISBN 0080179746, Pergamon Press, Oxford.
- Rapoport A. (2005). *Culture, Architecture, and Design*, ISBN 0974673609, Chicago: Locke Science Publishing Company, Inc.,.
- Rossi A. (1966). *The Architecture of the City*, ISBN 0262680432, Cambridge: The MIT Press.
- Rowe, C. & Koetter, F. (1984). *Collage City*, ISBN 0262680424, Cambridge: The MIT Press.
- Zouying District Office, Kaohsiung City. <http://kcgtdo.kcg.gov.tw/english/index.php>