

RELATIONSHIP BETWEEN RESORT LIFE CYCLE AND RESIDENTS' PERCEPTION AND ATTITUDE —A Case Study of Putuo Mountain

YANG Xiao-zhong¹, LU Lin¹, ZHANG Guang-sheng², LU Song¹, XUAN Guo-fu¹

(1. Department of Geography, Anhui Normal University, Wuhu 241000, P. R. China;

2. School of Biotechnology, Jiangnan College, Wuxi 214036, P. R. China)

ABSTRACT: The change in residents' perception and attitude and resort life cycle are the basic problems in the course of resort evolution. This thesis sets up the dynamic model of residents' perception and attitude, analyzes the linkage between residents' perception and attitude and the influential factors of resort life cycle, and finally, with a case study of Putuo Mountain, preliminarily discusses the relationship between resort life cycle and residents' perception and attitude. The research findings show that, although within development stage of life cycle, Putuo Mountain has already presented some signs of mature stage. The on-the-spot survey also indicates that, the local residents' positive perception is stronger than their negative perception. But compared with residents in some other coastal resorts such as Haikou and Sanya, negative perception of residents in Putuo Mountain is more evident, as the result of the smaller tourism carrying capacity in Putuo Mountain. There are some influential factors that have great impact on tourism carrying capacity in Putuo Mountain: tourist-resident number ratio, residents' benefit-cost ratio and characteristics of tourism resources. And the less influential factors are residents' demographic character, tourist behavioral character and cultural differences between local residents and tourists. Therefore, effective measures should be taken to adjust the structure of tourism product for the purpose of expanding tourism carrying capacity, lowering its pressure, lessening residents' environmental cost and enhancing their positive perception, which is the most essential prerequisite for the maturation of life cycle in Putuo Mountain.

KEY WORDS: residents' perception and attitude; resort life cycle; Putuo Mountain; Sanya

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Residents' perception and attitude towards tourism are essential to the resort development. It has become the important fields of study in foreign tourism geography and tourism sociology, whose research has produced some satisfactory results (DOGAN, 1989; JOHN and JOHN, 1993; BRUNT *et al.*, 1999; ELIZABETH and BILL, 2000; DAVID and LAURA, 2001). Recently, related research in China has been under way. The life cycle, as the basic evolving law of resort, has also attracted much attention of scholars at home and abroad. Research shows that residents' perception and attitude varies with the different stages of tourism development (DOGAN, 1989; LU, 1996), and that there is a certain connection between residents' perception and attitude and the resort life cycle, but little research has been conducted on the relationship deeply. This paper,

based on the analysis of life cycle of Putuo Mountain, and the questionnaire about residents' perception and attitude, attempts to discuss and explore the characteristics, the causes of residents' perception and attitude, and the relationships between the resort life cycle and residents' perception and attitude.

1 MOTIVE MECHANISM OF RESIDENTS' PERCEPTION AND ATTITUDE AND RESORT LIFE CYCLE

The research on the motive factors of residents' perception and attitude has always been the main object attracting foreign scholars' attention and has produced some results. The dynamic model of residents' perception and attitude can be illustrated in Fig. 1. The main

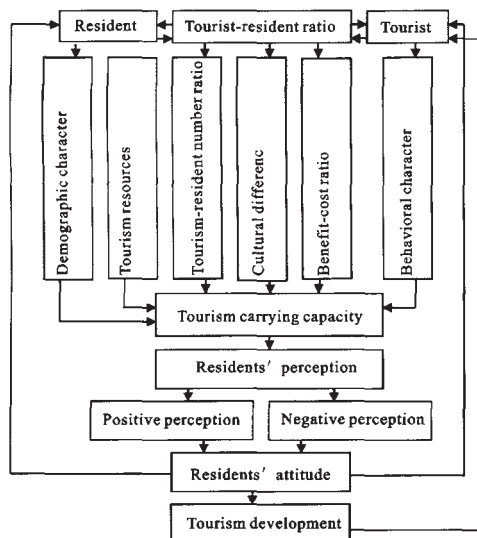
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Biography: YANG Xiao-zhong(1969–), male, a native of Lu'an City, Anhui Province, master, specialized in tourism geography and tourism planning. E-mail: yxzxx2003@yahoo.com.cn

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change of residents' perception and attitude can illustrate the law of resort life cycle, and the combined research on both will help probe into the law of the resort evolution. This paper, based on the case study of Putuo Mountain, and its comparison with some other coastal resorts such as Haikou and Sanya, analyses the relationship between the change in residents' perception and attitude and life cycle.



2 CASE ANALYSIS OF PUTUO MOUNTAIN

2.1 Life Cycle of Putuo Mountain

The research on resort life cycle has been attached much importance to both scientists at home and abroad. It is typical in BUTLER's (1980) research, in which, he held that, the destination, generally speaking, experiences successively in the stages of exploration, involvement, development, consolidation, stagnation, decline or rejuvenation, and summarized the characteristics of each stage. Compared with BUTLER's phased characteristics, and with reference to the domestic research results (LU, 1997), the life cycle of Putuo Mountain is divided. It has been discovered that tourism development of Putuo Mountain is closely related to Buddhism. Since "Unwilling-to-leave Guanyin Temple" was built, early in the Tang Dynasty, the devoted Buddhists have pilgrimaged to Putuo Mountain. Besides, many celebrities and scholars also have traveled to Putuo Mountain, which marked the beginning of the exploration stage. In the 13th year of the founding of the Republic of China (in 1924) the provincial government of Zhejiang Province issued a public announcement that Putuo Mountain would be planned as one of the scenic areas within the province. This marked the governmental involvement in the tourism development and also labeled the ending of the explo-

Comparatively speaking, there are more and more complicated factors that influence resort life cycle. The change of residents' perception and attitude can be regarded as an important part of social effect of life cycle motive factors. Resort life cycle reflects the relation between resort evolution and tourist number. The change of residents' perception and attitude is a dynamic changing mechanism between tourists and residents. Both resort life cycle and the change of residents' perception and attitude are caused by the change of the number of tourists. So, to a certain extent, the

ration stage and the beginning of the involvement stage. The latter stage went on until the late 1970s, when the development stage of Putuo Mountain started, which can be illustrated by the sudden surge of tourists to Putuo Mountain. This stage can be further divided into two periods: the period of 1979–1987 witnessed rather a quick increase of tourists, with an average increase rate of 32.3% annually; during the period of 1988–2001, the rate decreased to 3.5%, which clearly shows that the increase rate slowed down and fluctuated, even with negative increase in certain years (Fig. 2). As a traditional resort, existing tourism products of Putuo Mountain is becoming out-dated, which indicates that Putuo Mountain has already presented some signs of the stage of consolidation. But as far as its exploitation degree is concerned, Putuo Mountain can be thought still within the development stage of its life cycle. Fig. 3 shows the model of Putuo Mountain life cycle. On-the-spot investigation of residents' perception and attitude supports the above judgment.

2.2 Residents' Perception and Attitude in Putuo Mountain and Influential Motive Factors

2.2.1 Residents' perception and attitude

The information of residents' perception and attitude were obtained by questionnaire. The extent of residents' perception was quantitatively measured with a 5-score scale in which 5 is used to stand for "strong agreement", 4 "agreement", 3 "neutralism", 2 "disagreement" and 1 "strong disagreement" respectively. The content of questionnaire includes the demographic character of the residents surveyed, the residents' perception of tourism economy, culture and environment and their attitudes towards tourism development, etc.

Two ways are adopted for the distribution of questionnaire. The first is that the questionnaires are handed out to the pupils by their headmasters and teachers of local primary schools, and filled in by their parents, and the second is that questionnaires are handed out and taken back on the spot in the residential areas. The survey was conducted from June 10 to 16, 2001. Four

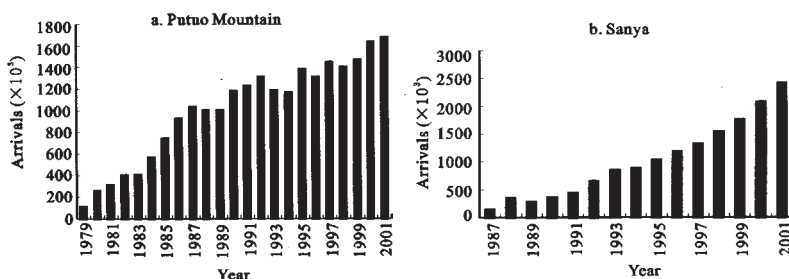


Fig. 2 Increasing of tourists in Putuo Mountain and Sanya

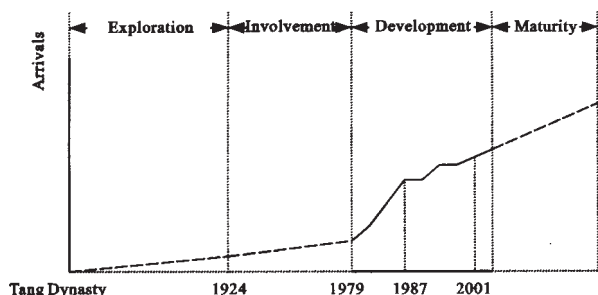


Fig. 3 Model of Putuo Mountain life cycle

hundred questionnaires were handed out and 244 valid questionnaires were taken back. The response rate is 61%. The software SPSS and EXCEL are used for the statistical analysis of the questionnaires.

The findings of the residents' perception of tourism economic, cultural and environmental effect and their general attitude towards tourism are indicated as mean score, rate of agreement, and rate of disagreement.

Mean score represents the strength and weakness of the residents' perception and attitude to survey items, and rates of agreement and disagreement show the difference of the residents' perception and attitude.

The survey of residents' perception of effect of tourism on economy shows that the residents' positive perception is strong while their negative perception is weak. In positive perception, the mean scores of survey items "Promote local economic development" and "Increase employment opportunity" respectively are 4.65 and 4.45, with the rates of agreement up to 94.3% and 93.5%, which indicates that the local residents have the same strong perception of tourism's positive influence over the local economic development and employment. In negative perception, there are respectively 30.1%, 42.3% and 39.9% of residents who think that "The tourism development only benefits the minority", "It may cause inflation" and "It may cause wealth polarization".

The findings of cultural perception are similar to those of economic perception, in which the residents' positive perception is stronger than their negative perception. Respectively 94.3%, 70.9% and 67.5% of residents believe that tourism "is good for raising local reputation", "is helpful to learn exotic culture" and "promotes cultural relics conservation and utilization". The residents have lower rate of agreement with the statement that tourism increases both individual and group crime rates.

The findings of environmental perception are generally similar to those of economic and cultural perception. In its positive perception, the mean scores of all items are more than 4 and their rates of agreement are higher and tend to be the same. Respectively 74.8%, 79.5% and 78% of residents think that tourism "improves the traffic condition", "increases the residents' awareness in environmental protection" and "raises the construction standard and rate of utilization of infrastructure". In its negative perception, there are bigger differences among all items, in which 72% of residents believe that tourism "destroys their peaceful living atmosphere", 48.7% of residents think that tourism "severely pollutes the beach and sea water" and 33.3% of residents think that tourism "reduces the opportunity for residents' use of relaxation facilities such as park, beach, etc."

The findings of the attitude towards tourism development show that the residents' perception of economy, culture and environment has connection with the attitude. And 78.9% of residents think that "tourism development has more advantage than disadvantage"; but only 33.3% of residents believe that "positive influence of tourism development over local economy excels its negative influence in culture"; 57% of residents oppose the statement that "the economic benefit of tourism industry is more important than environmental protection"; and 44.7% of residents think that "government should be concerned about ecology more, instead of encouraging more tourists to visit", which shows that some residents have already realized the importance of ecological and environmental protection to tourism development.

Table 1 shows overall mean scores of residents' perception of tourism in Putuo Mountain, from which it is found that their positive perception of economy, culture and environment are stronger than their negative perception. In the positive perception, the economic perception is the highest. In the negative perception, the perception of the environmental effect is the highest. Compared with the existing findings of residents'

perception of tourism in Haikou and Sanya, the new tropic coastal resorts (XUAN *et al.*, 2002), residents' positive perception of tourism in Putuo Mountain is weaker than that of Haikou and Sanya's residents, and the negative perception of tourism is stronger. With the annual average growth rate of tourist number up to 22.5% in 1987–2001 (Fig. 1b), Sanya is evidently in the development stage of life cycle. The difference of the residents' perception between Putuo Mountain and Sanya can be basically illustrated through the influential factors of residents' perception and attitude.

Table 1 Overall mean of residents' perception of tourism in Putuo Mountain

	Economy effect		Cultural effect		Environment effect	
	Positive	Negative	Positive	Negative	Positive	Negative
Mean	4.82	3.12	3.85	2.41	4.12	3.22

2.2.2 Influential factors of residents' perception and attitude

The fieldwork in Putuo Mountain shows that residents of different ages have almost the same perception of tourism's positive effects on economy, culture and positive environment while certain differences still exist in their perception of tourism's negative effect on environment, which can be mainly manifested by the fact that both residents of comparatively old age and young age have strong perception of tourism's negative effect on environment; and that residents of different sexes have no evidently different perception of tourism effects and attitude towards tourism; while residents of different educational levels have certain differences in perceptive strength in tourism effect, which is manifested by the fact that the higher the educational level of the resident is, the stronger his perception of tourism effect is. All these are similar to the findings of residents' perception and attitude in Haikou and Sanya (XUAN *et al.*, 2002). The study also indicates that the tourist behavior character does not produce evident effects on residents' perception and attitude.

Tourism capacity is a conceptual system. From the perspective of the community's response, tourism capacity is referred to the maximum number of tourists which the local community can accommodate before the negative effects on resort caused by tourism activities are experienced by local residents (WU, 2001). Tourism capacity can be classified into spatial capacity and social capacity. Spatial capacity directly reflects the number of tourists per square kilometer and social capacity can be reflected with the ratio of tourists to residents.

Table 2 shows the change of the average daily tourist-resident number ratio and the average daily tourist number per square kilometer of Putuo Mountain and Sanya in 1987 and 2000. Transverse comparison of these two areas shows that, in 1987 the average daily tourist-resident number ratio and the average daily tourist number per square kilometer of Putuo Mountain were respectively about 569 times and 1129 times as much as those of Sanya. In 2000, the ratios of the above in Putuo Mountain were respectively 40 times and 123 times as much as those of Sanya. It can be inferred that there are more tourists per square kilometer in Putuo Mountain than those in Sanya and that the ratio of tourists to residents in Putuo Mountain is higher. In other words, Putuo Mountain's tourists concentrate near the local residential areas. The greater intensity of their activities is likely to cause a series of environmental problems, which may in turn bring inconveniences to the living of local residents, even beyond the psychological carrying capacity of part of the local residents.

Besides, the spatial capacity of Putuo Mountain is greatly affected by the tourism resources character. As far as tourism resources space is concerned, Putuo Mountain is an island resort with an area of 12.5km², is limited in its space for tourists' and residents' activities, and also is severely lacking of fresh water. As far as the type of tourism resources is concerned, Putuo Mountain is a religious resort. According to a survey in 2001, 75.4% of the total number of tourists to Putuo Mountain stayed for one or two days there, which shows that most tourists are sightseers with great mobility, and their activities are concentrated on the main scenic spots. As viewed from the seasonal feature of tourism resources, Putuo Mountain, located in subtropical monsoon climate area, has clear seasons all the year round, and meanwhile it is affected by typhoon. Its natural season affects tourist flow season. The tourists come to visit Putuo Mountain mainly in April, May, July, August and October with evidently off and peak seasons. The seasonal concentrating index of tourist flow(*R*) in 2000 is up to 5.74(LU *et al.*, 2002).

Table 2 Average daily tourist-resident number ratio and average daily tourist numbers per square kilometer in Putuo Mountain and Sanya

	Putuo Mountain		Sanya	
	1987	2000	1987	2000
Resident number	4273	9530	329161	482296
Arrivals in one year	1030000	1630085	139892	2066177
Area (km ²)	12.5	12.5	1919	1919
Average daily tourist-resident number ratio	0.66	0.47	0.00116	0.01176
Average daily tourist number (tourists/(km ² ·d))	225.8	357.3	0.2	2.9

Sources: Data of area and resident number are from *Chronicles of Putuo Mountain*, *Local Chronicles of Sanya City* and Putuo Mountain Management Bureau; arrivals data are from Zhoushan Tourism Bureau and Sanya Tourism Bureau.

Social season (statutory holidays and religious celebrations) is also an important factor that affects the tourism capacity of Putuo Mountain. Table 3 shows average daily tourist-resident number ratio and average daily tourist number per square kilometer of Putuo Mountain in 2001 and "Golden Week of Oct.1" in 2001. Comparison shows that these two indexes are bigger than usual, except Oct. 7, due to the great increase of tourists in "Golden Week", in which the average daily tourist-resident number ratios from Oct. 2 to 5 are respectively about 3, 4.2, 3 and 3 times as many as that of the average of the whole year, and the average daily tourist number per square kilometer are respectively about 2.8, 4.2, 3.2, and 3.2 times as many as that of the average of the whole year. Putuo Mountain is a place for Guanyin Bodhisattva Sites. There are three great incense times in a year, i.e. on Feb. 19, June 19 and Sept. 19 in Chinese lunar year, during which the similar situation to the "Golden Week" also

occurs. The great increase of tourists in peak days may be an important cause of the acceleration of the local residents' negative perception of tourism. The increase of environmental negative perception acts as a role of hoodwinking on positive perception, which relatively weakens environmental positive perception and accordingly restricts or promotes economic and cultural perception.

The cultural differences between tourist and resident will have impact on residents' perception and attitude towards tourism. Under normal conditions, the cultural differences between foreign tourists and local residents are bigger, while the differences between domestic tourists and local residents are comparatively smaller. According to statistics, the domestic tourists of Putuo Mountain dominantly made up 97.9% of the total number of tourists in 2000. In the present stage, the cultural differences between tourists and residents have a slight influence on the perception and attitude

Table 3 Contrast of average daily tourist-resident number ratio and average daily tourist number per square kilometer in 2001 and Golden Week of Oct. 1 in Putuo Mountain

	Whole year	Oct.1	Oct.2	Oct.3	Oct.4	Oct.5	Oct.6	Oct.7
Average daily tourist-resident number ratio	0.48	0.91	1.43	2.00	1.43	1.43	0.59	0.21
Average daily tourist number per square kilometer		366	673	1031	1520	1162	456	160

Sources: Tourist number data of Golden Week are from tourism information report in China Tourism Newspaper in 2001, residents' data are from Putuo Mountain Management Bureau

of residents in Putuo Mountain.

The degree of contact between local residents and tourism can be defined by the special investigative question "Are you directly engaged in tourism". The investigation result is compared with the only 4.3% of the residents in Haikou and Sanya (XUAN *et al.*, 2002), up to 14.6% of the local residents in Putuo Mountain are directly engaged in tourism. The figures clearly indicate that Putuo Mountain's residents are in closer contact with tourism than residents in Haikou and Sanya. Therefore it can be inferred that, Putuo Mountain's residents benefit more from tourism than residents in Haikou and Sanya, but that, they have less positive perception of tourism. According to the Theory of Social Exchange, people's interactive behavior in their social contacts, similar to their behavior in economic exchange, is a kind of rational behavior, based on the calculation of loss and gain (ELIZABETH and BILL, 2000). Since all human interaction is in the pursuit of benefits, naturally, residents' perception and attitude towards tourism are influenced by the benefit-cost ratio. If the benefits brought by tourists' visits surpass the environmental cost, the local residents will have stronger positive perception than negative perception, and vice versa. The fact is that, although Putuo Mountain's residents benefit more from tourism than residents in Haikou and Sanya, yet they pay comparatively bigger environmental cost. Meanwhile, those who are directly engaged in Putuo Mountain tourism and those who are not, live relatively closer to each other, therefore, the former's high incomes will produce negative influence over the latter, which in turn will result in a stronger negative perception of tourism.

To sum up, the main factors that influence residents' perception and attitude in Putuo Mountain are tourist-resident number ratio, benefit-cost ratio, the tourism carrying capacity decided by tourism resources, while, the social and cultural differences between residents and tourists, demographic characteristics, the tourists' behavior character have slighter influence on their perception and attitude.

3 ENLIGHTENMENT

After the analysis of the relationship between tourism and local residents' attitude, JOHN Ap and JOHN L Crompton (1993) concluded that residents' attitude fall into four categories: embrace, tolerance, adjustment and withdrawal, which can coexist in a certain community. It could be one attitude in dominance with the rest in this kind of combination. We may call it "tourism attitude cycle", whose essence is that local residents' attitude towards tourism development, changing from "for" to "against". The evolution of tourism attitude cycle will gradually harm the resort image, accelerate its decline and thus shorten the resort life cycle. As far as Putuo Mountain is concerned, its residents' negative perception is stronger than that of other coastal residents. The main reason is that Putuo Mountain's tourism carrying capacity is smaller and its tourism development has greater influence on its residents' benefits. With the resort evolution, its tourism carrying capacity will bear greater pressure, and residents' negative perception tends to strengthen. Therefore, the adjustment of the structure of tourism products for the purpose of expanding carrying capacity, lessening its pressure and strengthening residents' positive perception of tourism, is essential to the sustainable development of tourism in Putuo Mountain, which is also one of the prerequisites for the maturation of the life cycle in Putuo Mountain (Fig. 3). Residents' perception and attitude, and tourism product are the two main forces leading to the tourism evolution in Putuo Mountain, which are independent as well as interdependent. The research on Putuo Mountain life cycle reveals that it is necessary to adjust the structure of its tourism products, and the research on residents' perception and attitude provides an important basis for its adjustment orientation. In view of the above two points, several proposals are made about the future tourism development in Putuo Mountain and its tourism research. 1) To adjust the structure of tourism product rationally. The continuous increase in the number of tourists and in the amount of tourism incomes is the ideal model for the life cycle in Putuo

Mountain. However, the increase in the number of tourists will greatly challenge its carrying capacity, which may result in the acceleration of its residents' negative perception of tourism. As an island resort, Putuo Mountain is relatively limited in its development space, so it is difficult to expand its carrying capacity. From now on, on the one hand, various tourism products should be further developed so as to increase tourism incomes through more consumption on the part of tourists. For example, tourism products related to Buddhism Art, Buddhism Involvement and Buddhism Experience should be developed. What's more, the tourism products should be diversified. With the Guanyin culture as the main product, the ocean culture-related products should be planned and programmed, such as Islet Tour, Marine Tour, Fishing Village Tour and Water-stockaded Village Tour, etc. The same is those of the tourism products related to leisure and relaxation, holiday, ecological protection, learning and exploration. Finally, dynamic tourism programme should be developed and tourism festivals be held such as Southern Sea Guanyin Festival, International Sand Sculpture Festival, Putuo Narcissus Festival and Marine Race Festival, etc. On the other hand, the tour space within the scenic area should be expanded at the opportune moment to receive more tourists. The local tourism administrative bureau has already realized the problem of the limited carrying capacity. Now, the original scenic region is already extended to Zhujiajian Island. In future, the Putuo Mountain scenic area should be further expanded to nearby islets, planned and developed as a whole. 2) To attach importance to the development of community tourism. Community tourism, with the local residents as the main force, offers a new way for the realization of the sustainable development of tourism (TANG, 1998). The local government should play the role of macro-control in developing community tourism; establish the mechanism of participation of local residents in tourism so that they can participate in tourism planning and management. In this way, more and more residents will benefit from tourism development and thus the social capacity of tourism will be increased. 3) To lay stress on the combined research on different tourism theories. Putuo Mountain has experienced a long history in its tourism development and many factors have impact on its tourism. Therefore, the research about related tourism theories, if combined, will more thoroughly bring to light the laws governing tourism development, and also will substantiate the related tourism theories, so as to strengthen

the guiding role of theory over practice. Meanwhile, the analysis of the relationship between Putuo Mountain life cycle and its residents' perception and attitude reveals to us that the combined research of related tourism theories would become an important orientation in tourism research.

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