

From “villages of longevity” to “villages of cancer”? The emotional geography of tourism development in Bama, China

Xiang Huang^{a,b}, Shuyuan Lin^a, Qingming Cui^{a,*}

^a School of Tourism Management, South China Normal University, Guangzhou, China

^b South China Ecological Civilization Research Center, South China Normal University, Guangzhou, China

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ABSTRACT

Studies on residents' attitudes toward tourism development either assume that residents are unemotional “home economics” or frame their emotions as forming rigid patterns. Following emotional approach, this study on Bama in China argues that residents' emotions toward tourism development and its environmental impacts are dynamic and ambivalent. Qualitative methods such as semi-structured interview and observation were used to collect data. The results show that during tourism development, interactions with outsiders encouraged the residents to realize the symbolic healing effects of their living environment and develop feelings of amazement and pride. However, continuous development had negative effects on the physical and symbolic environments, which induced complex emotional responses in the residents, including dislike, dissatisfaction, tolerance, anger, and fear. However, in this wealth-building stage, the residents' ecological grief is compensated by economic growth and has not evolved to resisting actions against development. The emotional ambivalence between eagerness to economic prosperity and concern of ecological loss still exists in Bama and was enhanced in the shutdown of tourism caused by the COVID-19 pandemic. Further research should explore whether, and how ecological concerns about a tourism location may override potential economic gains and encompass anti-development actions.

1. Introduction

Development is a critical agenda in contemporary societies. Many scholars have pointed out that mainstream development studies tend to focus more on structural and rational economic laws while avoiding emotions (Hardy, 2012; Humble, 2012; Wright, 2012; Clouser, 2016). However, humans live with emotions, feelings, and affects (Anderson and Smith, 2001; Bondi et al., 2007; Pile, 2010). Development projects inevitably generate or are shaped by emotions (Wright, 2012). Development and its effects cannot be comprehensively understood without considering emotions. As Wright (2012: 1114) claimed, “it is time to take on the intractable silence of and about emotions in development.”

Tourism has emerged as an important development strategy for both developed and developing regions (Sharpley, 2009; Holden, 2016). Following John Ap's (1992) influential article, most studies have viewed tourism development as a process of rational social exchange between community residents and other stakeholders (Nunkoo et al., 2013). However, the social exchange approach overlooks the feelings and emotions of the hosts toward tourism development (Jordan et al., 2019).

Another classical theory—the irridex model—considers hosts' emotions but simplifies their emotions as “euphoria, apathy, annoyance, and antagonism,” which evolve with the various stages of tourism development (Doxey, 1975; Şanlıöz-Özgen and Günlü, 2016). This model neglects the plasticity, complexity, and contradictory nature of residents' emotions in each development stage. Studies about tourism development also need to incorporate “a genuine consideration of emotions” (Buda et al., 2014: 112).

In this study, we attempt to identify residents' dynamic and paradoxical emotions toward tourism development and its environmental impacts in Bama County, China. Bama is famous as a “longevity town” (长寿之乡) because of the extremely high percentage of centenarians in its population. This reputation has led people to believe that Bama's natural environment is beneficial to health and has attracted millions of wellness tourists, many of whom are patients with chronic diseases or cancer (Huang and Xu, 2018). The rapid development of wellness tourism has generated substantial economic benefits and negative environmental impacts. Moreover, as more cancer patients gather in Bama County, some villages are being called “villages of cancer” by

* Corresponding author.

E-mail address: cuiqingming@m.scnu.edu.cn (Q. Cui).

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outsiders. The dramatic change from “villages of longevity” to “villages of cancer” has stimulated complex, fluid, and ambivalent emotions among Bama’s residents toward tourism development and the environment.

The literature does not fully explore the complexity and ambivalence of residents’ emotions toward tourism development and its environmental impacts. Studies of emotional geography have focused on criticisms of changes in the natural environment and nostalgia for the original environment (Kearns and Collins, 2012; Brugger et al., 2013; Tschakert et al., 2013) but have rarely considered the effects of economic benefits on emotions about such ecological changes (Komu, 2019). In less economically developed areas, people generally have an urgent desire to escape poverty and improve their living conditions. Accordingly, there remains room to discuss the emotional responses of local residents to environmental changes during economic development. This study of the situation in Bama contributes to the understanding of the emotional paradox between residents’ economic desires and environmental nostalgia.

2. Literature review

2.1. Emotional geographies of development and environmental changes

Emotional geographies of development explore how people emotionally react to the impacts of development on their place and space. Generally, people are optimistic about development, which usually means prosperity, job opportunities, material changes, and a more comfortable life. For instance, local residents in Finland’s Kolari hoped that the mining industry would improve their quality of life (Komu, 2019). Farmers in the Philippines hoped that the land reform would alleviate poverty (Wright, 2019). Development is characterized by many “not-yet-become” possibilities (Everingham, 2016).

However, the results of development are not always satisfying. For some, development implies changes in the landscape, environment, and lifestyles; increased external intervention and control; uneven economic distribution; unequal social relationships; and disempowerment (Clouser, 2014, 2016). These dark sides of development often trigger negative emotions, such as anger (Ransan-Cooper et al., 2018), suffering and despair (Wright, 2012, 2019), fear (Clouser, 2014), and a sense of loss and grief (Ey, 2018).

These emotions can be mobilized to organize social movements to resist development projects (Jasper, 2011; Murrey, 2016). Thus, development studies cannot ignore emotions or consider them irrelevant (Hardy, 2012). For example, Ransan-Cooper et al. (2018) reported that anger was the central emotion that unified people to take action against large-scale energy projects in Narrabri, Australia. Bailey and Osborne (2020) argued that people’s emotional links to places can fuel them to protect their homes and the associated environment and community. Development and emotions are strongly interrelated and influence each other (Wright, 2012; Clouser, 2016).

Studies of emotional geography have paid particular attention to people’s emotions in response to environmental changes due to development. Dramatic environmental changes in “treasured places” can induce environmental distress in local residents (Albrecht, 2005). Scholars have proposed theories to explain the emotions of distress caused by ecological loss. Albrecht (2005) used the concept of “solastalgia” to represent “the pain or sickness caused by the loss or lack of solace and the sense of isolation connected to the present state of one’s home and territory” (p. 17). Cunsolo and Ellis (2018) used “ecological grief” to describe humans’ emotional experiences in the wake of losses of physical ecology and environmental knowledge and anticipated future losses. Empirical studies have illustrated that distress can be induced by the loss of various types of ecosystems and landscapes. For instance, Tschakert et al. (2013) reported that the destruction of forests, depletion of water resources, and disappearance of beautiful scenery generated fear, anger, disappointment, and helplessness among the residents of

northern Ghana. Due to global warming, glaciers in many mountainous areas have started retreating, and therefore, the residents of these areas, who rely on glacial meltwater for survival, feel a sense of loss, crisis, and anxiety (Brugger et al., 2013). Coastline development, sea level rise, ocean acidification, and increased extreme weather events can damage coastal residents’ sense of belonging and attachment to the ocean (Hess et al., 2008; Kearns and Collins, 2012).

Ecological emotions are powerful resources that can be channeled to resist exploitive development and protect treasured places and environments (Askland and Bunn, 2018; Ransan-Cooper et al., 2018; Bailey and Osborne, 2020). Even so, people’s dreams of prosperity may be fueled by the benefits of development, plunging them into paradoxical and conflicting emotions (Komu, 2019).

However, research has revealed either residents’ positive emotions toward development or their negative emotions caused by failed development or environmental loss after development. Few scholars have explored residents’ ambivalent emotions in response to both economic success and environmental damage due to development in a single study. Moreover, studies have focused more on residents’ emotional reactions to physical environmental changes, rather than on symbolic environmental changes. Studying the emotions of Bama residents, who face both economic growth and ecological damage due to tourism development, can bridge this research gap.

2.2. Emotions and tourism development

Emotions have been neglected in tourism studies (Buda et al., 2014), especially those that explore hosts’ perceptions of tourism (Jordan et al., 2019). Social exchange theory is the dominant theory used to understand residents’ attitudes toward tourism development (Nunkoo et al., 2013). The social exchange approach regards tourism development in a community as a series of exchanges between residents and tourists, corporations, and other stakeholders (Ap, 1992). Each actor seeks satisfactory rewards from the exchange according to the rational choice principle. Only in a case in which tourism generates more benefits than costs will residents be willing to engage in tourism projects. This theory, as Lawler (2001) commented, assumes that the actors “are unemotional, instrumental information-processors, who respond to and anticipate future rewards and punishments.” Recent studies have incorporated emotions into the exchange process in tourism. However, these studies have mainly used quantitative methods to measure emotions and test how residents’ emotions affect their support or commitment to tourism (e.g., Woosnam, 2011; Li and Wan, 2017; Ouyang et al., 2017; Zheng et al., 2020). Although most of these quantitative studies have classified residents’ emotions as positive or negative, few have revealed the specific emotions elicited by tourism development.

The irridex model theory (Doxey, 1975) considers residents’ emotions in response to tourism development and divides them into four stages: euphoria, apathy, annoyance, and antagonism. As the negative impacts of tourism development gradually surface, the residents become more unsatisfied, hostile, and angry (Okulicz-Kozaryn and Strzelecka, 2017). However, as Getz (1994) pointed out, emotions do not evolve linearly. Residents’ emotions are more complex than the irridex model has portrayed. Emotions are blurred states that are difficult to be clearly and precisely staged. For instance, Lepp (2007) argued that many residents feel anxiety, suspicion, and fear rather than euphoria in the initial stage of tourism development. Şanlıöz-Özgen and Günlü (2016) found that after 10 years of tourism development, the residents of two villages in Antalya felt disappointed rather than irritated. Despite these studies, the rich emotional world of residents facing tourism development remains underexplored.

Tourism development can have various negative ecological impacts on destinations (Holden, 2016). Local residents develop complex and contradictory attitudes toward such environmental changes (Nyaupane and Thapa, 2006; Lalicic, 2020; Gössling et al., 2020). Some residents may reduce their support for tourism because of environmental

degradation, even if they affirm the economic contribution of tourism (Robinson et al., 2019), but others would be willing to sacrifice the environment to obtain economic benefits (Lepp, 2007). However, attitudes are different from emotions. Few tourism studies have explored how tourism development affects local residents' environmental emotions.

Therefore, an exploration of residents' paradoxical and nonlinear emotions toward tourism development and the environment can amend and enrich the quantitative and linear understanding of emotions in the tourism literature. In the following sections, we study Bama County in China to reveal the complex and contradictory emotions of its residents.

3. Methods

3.1. Study site

Many places in China have been nominated as "Longevity Towns" by different institutions. Among them, Bama is one of the earliest sites to receive this designation, and the most famous such site in recent years. As early as 1991, Bama County was given the title of the "Fifth World Longevity Town" by the International Society of Natural Medicine in recognition of its high percentage of centenarians. Thereafter, the title of "Longevity Town" was used to brand Bama's green mountains and rivers, harmonious and pure folk customs, and simple lifestyle to attract wellness tourists, including patients with chronic or fatal diseases (Huang and Xu, 2018; Yan and He, 2020). In 2011, China Central Television launched a TV program on Bama's centenarians, which further advertised Bama's reputation and boosted its wellness tourism development. Official statistics show that in 2010, the number of tourists visiting Bama County was approximately 147,000. By 2019, this number had increased by almost 6 times to 825,000 (Fig. 1). Tourism has become the leading industry in Bama County. Rapid tourism development has had dramatic local economic and environmental effects and induced complex emotional responses in local residents. Accordingly, Bama, as a typical case, is useful for exploring residents' emotional changes under development.

Bama County is located in the northwestern part of Guangxi Autonomous Region, China. Wellness tourists in Bama mainly gather in the Poyue, Ping'an, Jiazhuan, and Baima Villages along the Panyang River (Fig. 2). The most popular tourist attraction is Baimo Cave, which is known for containing extremely high levels of airborne "negative oxygen ions." Bapan Hamlet is another famous scenic spot, where many centenarians live. Many wellness tourists often visit Baimo Cave to "breathe in oxygen", meditate, and drink spring water. They also visit the centenarians in Bapan Hamlet, take photos with them, and give them red envelopes to pray for their longevity (Huang and Xu, 2018).

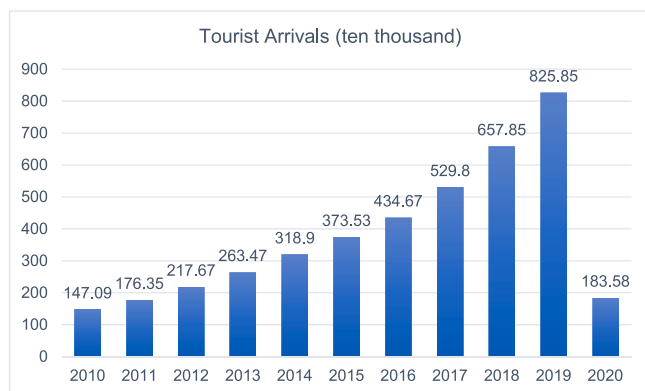


Fig. 1. Tourist arrivals in Bama between 2010 and 2020. Credit: the authors. Data source: Bama Tourism Bureau (the 2020 statistic is from January to May).

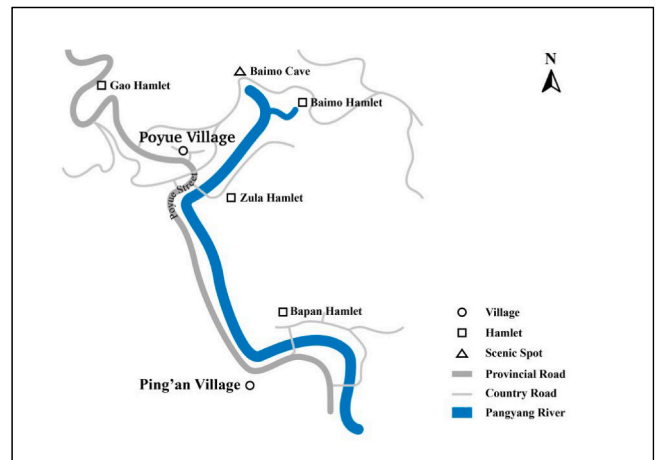


Fig. 2. Map of the upper reaches of Panyang River. Credit: the authors.

3.2. Data collection

We conducted the first fieldwork in Bama between August 19 and 25, 2019. Between July 1 and 9, 2020, we conducted the second fieldwork, aiming to understand how the residents responded emotionally to the COVID-19 pandemic. We collected data using qualitative methods such as interviews and observations. Qualitative interviewing is a key method used in the social sciences to obtain knowledge about others and understand the meanings that they construct about their lives and worlds (Brinkmann, 2014). The local residents of Bama were the interview subjects. A semi-structured interview format was used because this method can provide basic frames and themes, allowing us to lead the conversation with the residents and avoid including too many irrelevant topics. In contrast to a structured interview, however, a semi-structured interview enables us to catch residents' complex emotional expressions as new potential topics for expansion (Brinkmann, 2014). The interview themes included the residents' perceptions of tourism development and its environmental impacts, their emotions toward the therapeutic landscapes and impacts of tourism on the therapeutic nature of the area, and their thoughts on the name "villages of cancer" and cancer tourists.

We interviewed 101 local people, including 86 villagers, 12 county and town officials, and 3 village officials. In the second fieldwork, we re-interviewed 13 people with whom we became familiar during the first investigation to ask about their lives during the pandemic. Generally, more female residents participated in tourism, and female residents were more willing than male residents to share their ideas. Consequently, the investigations included more female interviewees. Each interview lasted 15–70 min. All of the interviews were recorded with the informants' permission and were anonymized. The interviewees were marked as "residence address (PY/PA/B/D/S/J/C) + gender (M/F) + number," where PY, PA, B, D, S, J, and C represent Poyue Village, Ping'an Village, Baima Village, Daluo Village, Songji Village, Jiazhuan Village, and Bama County urban area, respectively.

Observation is a powerful tool used to discover things about which interviewees are unaware and unwilling to discuss (Patton, 2015). Direct observation "offers an opportunity to move beyond the selective perceptions of others" (Patton, 2015: 502). Hence, non-participatory observation was used to observe local daily life, the physical environment, tourists' activities, and host-guest interactions. A large number of field photos and field notes were obtained.

3.3. Data analysis

We adopted "thematic analysis" (Braun and Clarke, 2006) as our analytic strategy. First, we familiarized ourselves with the interview and observation data. We then established an initial impression through

reading and reviewing the transcribed data multiple times. Second, we performed coding, as “codes identify a feature of the data (semantic content or latent) that appears interesting to the analyst” (Braun and Clarke, 2006: 88). Two co-authors coded the data independently with the aim to identify the economic and environmental changes caused by tourism development and residents’ emotional responses to these changes. Many codes related to these changes and emotions were obtained. Third, the two analysts generated themes by categorizing the identified codes and discussed and compared these themes to achieve a consensus. Fourth, a third author reviewed the candidate themes by comparing them with the data and refined the themes to ensure precision, validity, and logic. Two main themes on environmental changes were identified: physical environment and therapeutic nature (the symbolic dimension of the environment). The residents’ emotions about the environmental changes and development were also identified. As a comparison, we also explored whether these emotions were enhanced due to the COVID-19 pandemic. The research results are presented in the following sections.

4. Residents’ emotions toward environmental changes in tourism development

4.1. Emotions and physical environment

4.1.1. From attachment to dislike

Tourism development in Bama has led to the influx of a large number of tourists, which has caused significant physical changes to the environment. The most important river in the county is polluted from the local residents’ viewpoint. Panyang River is the mother river of Bama, and it nourishes the local residents. When tap-water supply was unavailable, the residents used the Panyang River to bathe, wash, fish, play, and fetch drinking water. “Panyang River is our mother river. We relied on it for washing, cooling, and cooking. In the past, living conditions were simple, and Bama people bathed in Panyang River.” (PY-F-62). For many Bama residents, Panyang River is a gift of nature. Panyang River has created a unique production and consumption space for Bama people:

Panyang River used to be very clear. Stones at the bottom of the river could be seen clearly. We directly took water from the Panyang River to drink and picked up green snails and caught oil fish (an indigenous fish) in the river. Oil fish is particularly delicious. (B-F-12).

The locals’ emotional memories from childhood have long been associated with the landscape of Panyang River, and the people are strongly attached to the river.

This emotional attachment to the mother river has gradually disappeared since the beginning of growth in wellness tourism. The locals have mourned their lost childhood memories and have missed the happiness and joy that the Panyang River brought them. The influx of wellness tourists has put huge environmental pressure on Bama. Poyue Village and Ping’an Village, which are located in the upper reaches of Panyang River, serve as bases to large numbers of tourists. With the increasing population and accelerated development of the tourism economy, domestic wastewater, garbage, excrement, animal carcasses, and other pollutants are being dumped into the Panyang River at will, polluting its waters.

In terms of the current situation of the Panyang River, complex expressions of helplessness, worry, boredom, and disappointment were identified in the conversations with the locals. The vast majority of residents stated that they no longer drink water from the Panyang River. A typical response was as follows: “The water in Panyang River is not what it used to be. We can’t drink it directly, nor can we go swimming or washing clothes. Some cancer patients go to the river to soak their feet and spit on the streets. I am worried that I will be infected, but I cannot prevent tourists from entering Poyue Village.” (PY-F-39). The loss of their clean and peaceful

living environment has damaged Bama residents’ sense of belonging and attachment and induced “ecological grief,” which echoes the findings from previous studies (Cunsolo and Ellis, 2018; Hess et al., 2008; Kearns and Collins, 2012; Tschakert et al., 2013).

4.1.2. Tolerating noisy construction

Wellness tourism has promoted the economic development of Bama and set off dramatic changes in the built environment. To meet the increasing accommodation needs of tourists, villagers or investors have constructed houses, hotels, apartments, and other tourism real estate. Frequent use by various types of vehicles has caused serious road damage and aggravated dust, air, and noise pollution. Bama’s tourism construction has destroyed the tranquility of the countryside, and some local residents were troubled and worried as a result: “The environment used to be better, but now there are more people, more houses, and more pollution. There were loud and disturbing noises like ‘Dong Dong Dong’ when the houses were being built. The houses in Poyue Village are disorderly, dense, and crowded now.” (PY-F-39). In the perception of the local residents, the development of wellness tourism has damaged the physical living environment, and some tended to blame the tourists for the environmental damage.

Even the tourists who live in Bama for relatively long durations cannot bear the construction noise in their surroundings. According to a local official,

“some tourists are really sensitive to environmental changes. When villagers or investors build houses in the village, these tourists have complained to the village committee that the construction is noisy, dusty, and polluting the environment. In fact, if we don’t build these houses, there’s not enough room for tourists to live in.” (J-M-38).

However, new construction means new economic opportunities and better living conditions. The residents have chosen to tolerate the noisy, chaotic, and disturbing construction. Some residents expressed hope and optimism about the future. A resident claimed “I can accept this situation. Now the government has created a plan for Poyue Village. The chaos is only temporary. I firmly believe that Poyue Village will be a clean and beautiful place a few years later.” (PY-F-91). The dream of prosperity can increase people’s patience with messy development projects (Komu, 2019).

4.2. Emotions and therapeutic nature

4.2.1. Doubt, amazement, and pride

Gesler (1993) pointed out that some landscapes are believed to help restore and promote health. The high percentage of centenarians has led to a constructive belief that the landscapes of Bama have therapeutic effects (Huang and Xu, 2014; Yan and He, 2020). We attribute the healing effect of Bama to the symbolic dimension of the environment, in comparison to the above-described physical dimension.

Many people with severe diseases, such as cancer, cannot bear the pain, financial burden, and mental pressure of hospital treatment. Then, they seek alternative medicine. Bama’s reputation as a “village of longevity” and “miracle of recovery” give hope to these patients. They imitate the diet and routine of the long-living elderly people in Bama with the hope of prolonging their own lives (Huang and Xu, 2014). According to an employee of Bama County Longevity Museum (C-F-15).

The fact that Bama has more centenarians is the result of comprehensive factors. One is because the natural environment here is good, geomagnetism is high, water quality is good, air is good, and the negative oxygen ion content is high. Second, their diet is light, they eat more cereals, and their character is peaceful, indisputable. Third, the people of Bama respect the old and love the young, have a harmonious neighborhood, and are particularly concerned about the lives of centenarians.

These elements in Bama’s landscapes led outsiders to construct healing functions and add novel symbolic meanings to the local

environment (Huang and Xu, 2018).

Unlike these tourists, many locals do not perceive any healing effects. They think of Bama as a place without any distinguishing features, and some deliberately do not visit Baimo Cave for recuperation. Even now, some local people express their doubt: *“I think Bama’s healing effect has been exaggerated. Those old people (referring to the wellness tourists) meditate in the Baimo Cave all day long. Aren’t they afraid of rheumatism?”* (C-M-53). Those residents who are doubtful about the therapeutic effects of Bama’s natural environment are usually not directly involved in the tourism industry.

However, with increasing news-based propaganda and personal interactions with patients, the people of Bama are increasingly believing in the healing effect of their living environment. A local resident (PY-F-98) who sells specialty products in Baimo Hamlet shared her experience: *“One of my tenants was a young man who suffered from blood cancer. He came here to recuperate for several years. After his physical condition improved, he went to Sanya with his family. Before long, he died in Sanya. Many sick tourists are afraid to leave Bama for the fear of relapse.”* The locals have assimilated the cultural construct of therapeutic landscape from their interactions with outsiders. Another resident (PA-F-29) described a similar experience: *“One of my guests had been suffering from diabetes for many years. He stopped taking injections and medicine after coming to Bama.”*

Tourism development provides novel opportunities for local residents to reexamine their natural environment. These stories of tourists recovering and maintaining their health leave some local residents feeling amazed at the healing power of their living environment. As the local residents witness more cases of recovery among tourists, their faith in the healing nature of their environment will become stronger. Many residents have expressed pride in their living environment. A local man who sells mineral water (PA-M-76) said: *“The climate in Bama is temperate with four seasons like spring. The natural conditions in Bama are very rare. I used to live in a big city, where I felt the air quality was terrible, so I went back to Bama. I’ve witnessed many patients being cured. Bama belongs to the people of the world. We should let more people enjoy the natural environment here.”*

4.2.2. Denial, anger, and fear

The stories of wellness tourists have enhanced the local people’s beliefs in the therapeutic effects of nature, but ironically, the tourists subsequently become “destroyers” of that therapeutic nature. With the rapid development of wellness tourism in Bama, millions of sick tourists visit this destination. Some media outlets have started to label Bama’s villages as “villages of cancer,” as exemplified by the following news headline: “Longevity Towns” in Guangxi attract a large number of sick people and turn into “villages of cancer” (Zhao, 2014). Wang et al. (2020) argued that the name “villages of cancer” represents a type of spatial stigmatization of Bama. Local officials have denied this stigmatization. A typical answer is

“Actually, the name of ‘villages of cancer’ is a misunderstanding of Bama. Many tourists who visit Bama are not cancer patients; in fact, most of them are healthy elderly people or patients with chronic diseases, such as skin diseases, asthma, and insomnia. Only a small number of cancer patients live in a few villages.” (C-F-71)

Bama residents expressed anger about this stigmatization of their town. In the interviews, one of the authors clearly sensed the residents’ anger and dislike of the name “villages of cancer,” and she had to carefully choose her language to sustain the conversations with the residents on this topic. An owner of a foot massage shop (PA-F-47) expressed dissatisfaction with this statement:

“I totally disagree with that. ‘Villages of cancer’ originally means that many local residents have cancer, rather than outside tourists living here have cancer. In fact, most of the local people are in good health.”

The anger of local residents has further morphed into residents’ fearing the wellness tourists who visit their town to recuperate. Out of care and sympathy for the sick tourists, the villagers do not publicly criticize them, but they intentionally avoid the places where cancer patients gather or refuse to let cancer patients live in their houses. Many local residents fear close interactions with the sick tourists. Therapeutic landscapes such as Baimo Cave and Panyang River have become “polluted” landscapes in the eyes of the local people. The vast majority of villagers believe that the water quality of Panyang River is not as good as it used to be. Many patients swim and bathe in the river, which makes the locals feel that the water is even more disgusting. Hence, the locals have started to drink mountain water or groundwater instead of water from the river. The villagers’ perceptions of Baimo Cave are also negative. A woman living on Poyue Street said *“I think these patients are raising a stink in Baimo Cave, where the air smells of old people!”* (PY-F-91). *“Now I rarely go to Baimo Cave. Although cancer is not contagious, I still feel the air would be worse when the patients are in the cave.”* (PA-M-37). A local man (B-M-98) even stated that *“There are a lot of smooth stones at the gate of Baimo Cave Scenic Area, you must not sit on these! Many different kinds of patients have been sitting on those stones.”*

The fear and avoidance of the spaces frequented by sick tourists illustrates that local residents treat them as polluted spaces. “Pollution” in this sense is different from the pollution of the physical environment; instead, it is more like the pollution of notions. Although proximity between the locals and sick tourists may not infect the locals, the gathering of large numbers of sick tourists causes the locals to believe that Baimo Cave is no longer suitable for leisure or recreation. These attitudes (fear and avoidance) toward the patients also represent a kind of stigmatization. According to Goffman (1963: 3), the term of stigma is usually used to refer to “an attribute that is deeply discrediting.” There is no strong evidence that locals will become infected through interactions with sick tourists. Hence, the notion that some patients “pollute” Bama’s therapeutic landscapes represents a false imagination and discrediting of these patients. Although the residents hated the stigma placed on their hometown by outsiders, some of them, intentionally or unintentionally, also began to stigmatize others.

4.3. Emotional paradox of development and environment

The residents’ ecological grief, nostalgia, and anger regarding stigmatization did not evolve into actions against tourism development. In contrast, most of the residents still enjoy the increased income brought by tourism development.

The general economic level of Bama County remains relatively low, and it was only officially withdrawn from the “Poor Counties” sequence in 2019. Although the development of wellness tourism has caused environmental damage, it has also improved local economic conditions. Poverty has generated a sense of oppression and pain among the people of Bama. When talking about their lives before tourism development, the residents seemed helpless and sad. A typical response was:

“The previous life was very bitter ... we had repeated hard work, such as farming, growing corn, picking manure, and harvesting and drying rice. It was really tiring and depressing.” (PY-M-89). The villagers hoped to live a modern life. *“Some tourists came to ask me if I had any authentic houses to see. I knew they wanted to sense the original Bama, but it is impossible for us to return to the old life. It is more important for us to live in a house that does not drip and leak.”* (PA-F-26).

From the above quotations, we observe an obvious emotional ambivalence toward development and the environment. On the one hand, the locals were heartbroken and regretted the damage to their physical and symbolic environment; on the other hand, their ecological grief and nostalgia have been diluted by economic growth and better material lives. Unlike cases from the West (Jasper, 2011; Murrey, 2016; Ransan-Cooper et al., 2018), these negative emotions did not develop

into a social movement to resist development among the residents of Bama. Many villagers even became numb and insensitive to the degraded environment because they were busy making a living. They expressed a strong desire to improve their lives and did not want to go back to the aesthetically beautiful but hard living era of economic backwardness.

“Where there is economic development, there will be environmental damage. There is no best of both worlds. The natural environment used to be good, but you couldn’t get enough food to eat. If it were you, would you like to go back to the former life?” (PA-M-30).

Bama has only recently moved beyond poverty and toward a slightly richer life. In this phase, a better material life is obviously more important to the residents. From the perspective of social exchange theory (Ap, 1992), the residents are more willing to exchange economic benefits for ecological loss. However, the residents’ emotions regarding tourism are not as simple as euphoria, as predicted by the irridex model (Doxey, 1975). Rather, emotions of ecological grief, nostalgia, anger, and fear lurk beneath a surface of prosperity. Residents’ emotions to tourism are, thus, overlapped and blurred in each tourism development stage. The emotional paradox regarding development and the environment exists only in the minds of residents and has not reach a point where residents feel the need to take actions against tourism development.

5. Enhanced emotions in the COVID-19 pandemic

5.1. Enhanced pride in therapeutic nature

In response to the COVID-19 pandemic, the local government took strict measures to reduce the flow of people and avoid interpersonal infections, which also led to the stagnation of tourism development. The residents appreciated the strict actions of the government and actively participated in activities to stop the spread of the virus. The responses have created a sense of security and alleviated anxiety about viral infection.

In addition to the government’s measures, some people from Bama attributed the success of the COVID-19 prevention measures to the healing properties of the natural environment. A female resident (PY-F-18) stated that *“A woman with medical history of COVID-19 visited Bama. Her COVID-19 relapsed after she returned to Hunan Province. The government checked all of the people she had close contact with, but not one of them was infected with the virus. I think it must be thanks to the air and water here. Everyone is safe.”* Another resident believed that the natural environment has played a positive role in controlling the epidemic. *“There is no confirmed case at present in Bama. Bama is really a magical place.”* (PA-F-47).

In this manner, the pandemic motivated the residents of Bama to re-evaluate their living place, strengthened their belief in the healing effect of Bama, and enhanced their pride in the therapeutic nature of Bama.

5.2. Economic anxiety and the desire for tourist arrivals

However, the successful local control of this pandemic disease has not alleviated local people’s anxiety and panic due to economic pressures. In Bama, the number of tourists has greatly decreased, and many businesses have closed or have been operated in a breakeven state or at a loss. During July–August 2019, the magnetic therapy area in Baimo Cave was overcrowded. In July 2020, very few tourists visited this area. Public gatherings such as dining together, gathering to chat, and playing cards together have considerably decreased.

The haze of the pandemic has enveloped the “survivors” of Bama’s tourism industry, who are facing unprecedented pressure and anxiety. The owner of a restaurant (PY-F-33) complained that *“This time last year, I would have been too busy to chat with you ... now many business owners are*

out of business. As you see, there were not many customers at my restaurant. The loss has been too heavy!” Most of the residents who make a living from the tourism industry expressed eagerness to receive more tourists. This accidental stagnation of tourism proves that people living in Bama have more urgent needs related to economic development than to ecological conservation. Thus, rather than acting against tourism development, residents choose to coexist with the pollution of the physical environment and the stigmatization of the symbolic environment.

5.3. Fear of potential infection from tourists

Although the arrival of tourists can resuscitate the local economy, it may also increase the risk of infection because the pandemic disease has not been eliminated in China.

In early June 2020, a regional outbreak of COVID-19 occurred in Beijing. A tourism employee was unable to hide her irritation and helplessness when she talked about this pandemic wave in Beijing: *“During the Labor Day Golden Week, tourism business recovered a little. However, because of the Beijing emergency, our business declined again”* (PA-F-32). In another case, a tourist with COVID-19 visited the tourism villages in Bama in June 2020. This incident caused pressure and fear among the local people. A villager (PA-F-37) felt a sense of discrimination: *“The people who live in the county urban area heard that I live here, and the expressions in their eyes changed immediately.”*

This fear of being infected by the COVID-19 virus was stronger and more “real” than the fear of being infected by tourists with other diseases who shared local tourism and leisure spaces. Infections in the former situation are perceived as more silent and fatal, whereas infections in the latter situation stem more from residents’ false imagination and stigmatization of sick tourists.

The pandemic has intensified the emotional paradox among the residents. On the one hand, the pandemic induced a stronger belief in the healing nature of Bama’s environment. On the other hand, the economic loss in the pandemic reminded the residents the crucialness of tourism industry. The locals must face the dilemma between limiting tourism to cherish their environment or developing tourism but enduring consequent environmental changes.

6. Conclusion and discussion

This research sheds light on the emotions of Bama residents toward the environment while under the influence of tourism development from the perspective of emotional geography (Bondi et al., 2007; Pile, 2010; Wright, 2012). This emotional approach enriches the understanding of hosts’ attitudes toward the impacts of tourism, and is strongly shaped by social exchange theory (Ap, 1992; Nunkoo et al., 2013). Residents are not unemotional, rational, and economic beings, as assumed in the social exchange approach. Moreover, their emotions do not evolve rigidly and linearly, as described by the irridex model (Doxey, 1975). This study proves that tourism development can cause multidimensional environmental changes and dynamic and ambivalent emotional responses.

This research shows that the impact of development on environmental emotions is not necessarily as negative as suggested by previous studies (Ey, 2018; Brugger et al., 2013; Hess et al., 2008; Kearns and Collins, 2012), but may also be positive and heuristic. For villagers, development leads to more contacts and interactions with outsiders, which can endow the villagers with a novel perspective from which to re-examine their surrounding environment. Because of wellness tourism development, the local residents in Bama have witnessed the recoveries of many cancer patients, which has increased the residents’ awareness of the healing effects of the local environment and further strengthened their belief in its therapeutic nature, which has induced feelings of amazement and pride. This novel awareness of the environment as a therapeutic landscape is difficult to emerge from the residents’ past relatively isolated life.

Development affects not only the physical environment but also the

symbolic environment. The emotional reactions to environmental changes are, therefore, complex and multidimensional. Tourism development has damaged the physical environment in Bama and elicited negative emotions among the residents, such as disliking the pollution of the mother river and dissatisfaction with and tolerance of noisy construction. Tourism development has also altered the symbolic image of the villages from “villages of longevity” to “villages of cancer,” causing the residents to develop heterogeneous emotions such as denial and anger about the stigmatization of “villages of cancer,” fear of close contact with cancer patients, and avoidance of the spaces used by wellness tourists. Some of these identified emotions echo the findings of previous studies on emotional responses to physical environmental changes (Cunsolo and Ellis, 2018; Kearns and Collins, 2012; Tschakert et al., 2013). However, emotions toward changes in the symbolic environment have seldom been addressed in existing studies.

Residents' emotions toward economic development and environmental changes are paradoxical, and significant tension exists between economic development and ecological conservation. Previous studies have illustrated the ability to exploit various negative emotions such as grief, disappointment, fear, anger, and helplessness to mobilize efforts to resist development, as in extractive industries (Ransan-Cooper et al., 2018; Bailey and Osborne, 2020). However, this study argues that residents' ecological grief and nostalgia can be compensated or covered by economic growth, especially if the residents are beginning to move out of poverty and yearn for modern affluent lives. In the wealth-building stage, economic gains seem to be more important than physical and symbolic ecological losses. However, negative environmental emotions may still exist under the cover of economic prosperity, and may evolve to become resisting emotions that motivate actions against development. In other words, the balance between eagerness to economic prosperity and concern about environmental loss remains tense.

The COVID-19 pandemic and local outbreak have strengthened this emotional paradox. The rapid decline of Bama's tourism industry has further complicated the local residents' attitudes toward tourism, as they hope the industry will recover soon. If wellness tourism does not resume, many locals will become economically distressed. However, if it revives too quickly, it will burden the local government's pandemic prevention and control efforts and increase the risk of infection. Therefore, further exploration of the subject is necessary to achieve a balance between the restoration of tourism and the prevention and control of the pandemic.

Residents' participation in tourism is not a pure rational calculation of its benefits and costs, but rather involves an emotional component (Jordan et al., 2019). Tourism growth is accompanied by changes in the material and symbolic environment. Consequently, complex environmental emotions, such as hope, desire, grief, tolerance, doubt, amazement, pride, denial, anger, fear, and anxiety, can occur. Economic benefits may partially compensate for emotional grief, but if the emotional deprivation that people suffer is far greater than the psychological compensation from economic profit, the role of profit may become negligible. The question remains: when and how will ecological concerns override economic gains and evolve into anti-development actions? In this study, we made a preliminary exploration of this topic. We hope that future research will further this work.

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