Health & Place 66 (2020) 102448

Contents lists available at ScienceDirect

Health and Place

journal homepage: http://www.elsevier.com/locate/healthplace

The co-evolution of therapeutic landscape and health tourism in bama longevity villages, China: An actor-network perspective

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ARTICLE INFO

Keywords:
Therapeutic landscape
Health tourism
Relational thinking
Tourismscape
Actor-network theory
China

ABSTRACT

Many locales featuring therapeutic landscapes have seen a rise in health tourism recent years. This study introduces an actor-network perspective to examine the co-evolution of therapeutic landscapes and health tourism, and its inherent dynamism. We argue that therapeutic landscapes and health tourism are emerging out of an integrated actor-network, and thus are in continuous processes of (re)ordering and co-evolution. We also propose a typology of dynamics for the study of such an actor-network, substantiated with an empirical study of the Bama longevity villages in China, in which four interrelated and cascaded dynamics are closely scrutinized: tourists as part of the therapeutic landscape; tourism's impact on the landscape; the heterogeneous therapeutic perceptions of tourists; and the extension of the therapeutic network by health tourism. This study contributes to the relational thinking of therapeutic landscapes and health tourism, and enriches the understanding of their interlacing dynamics from the vantage point of the tourismscape.

1. Introduction

Since its initial inception in 1992 (Gesler, 1992), the therapeutic landscape has developed into a vibrant, capacious and heterogeneous field of research. Various landscapes associated with treatment or healing have been examined under the therapeutic landscape concept, beginning with natural landscapes with a reputation for healing (like hot springs, lakes, mountains, rurality and pilgrimage sites), quickly expanding to a broad variety of subjects, ranging from places for the delivery of medical care, such as hospitals, birthing rooms and clinics (Kearns and Collins, 2000; Fannon, 2003; Gillespie, 2002) to such daily landscapes as the home, libraries and activity clubs (Brewster, 2014; Glover and Parry, 2009; Williams, 2002), to urban landscapes, such as the city and street (Wakefield and McMullan, 2005), and most recently into social networks (Chakrabarti, 2010).

Drawing upon theories of cultural ecology, structuralism and humanism, Gesler emphasized **dynamics** as a critical concern in the therapeutic landscape. As Gesler (1992) argues, landscape formation is dynamic, meaning that the therapeutic landscape is "a constantly evolving process", and studies should focus on how "the healing process works itself out in places". He later notes that "what is therapeutic must be seen in the context of social and economic conditions and changes" (Gesler, 2005) – a consideration that entails examining the evolution of the therapeutic landscape, i.e., how the therapeutic landscape changes over time.

In recent years, the therapeutic landscape concept has featured increasingly in the burgeoning health tourism sector. Against the background of an aging population, environmental pollution, climate change and other health-endangering factors, the promotion of health has escalated into a global movement. The proliferation of different locations with various features that are said to promote healing has brought about an increase in health tourism, including but not limited to, hot spring sites (Ladeiras et al., 2015), spas (Leandro et al., 2015; Dryglas and Salamaga, 2018), yoga places (Hoyez, 2007), rural areas (Hjalager et al., 2016), coastal areas and sea (Foley, 2010), natural heritage (Kim et al., 2015), wildlife environments (Lee et al., 2014), longevity settings (Huang and Xu, 2014). Such places have become significant components of the currently popular health or well-being tourism market segments (Smith, 2014). Tourism in these therapeutic landscapes is rooted in the particular natural, social and cultural context of the place in question. As Leandro puts it, the health, landscape, tourism, welfare and economic interests are "deeply intertwined" in

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https://doi.org/10.1016/j.healthplace.2020.102448
Received 3 June 2020; Received in revised form 31 August 2020; Accepted 17 September 2020
Available online 1 October 2020

these places (Leandro et al., 2015).

This study thus aims to analyze how therapeutic landscape and health tourism co-evolve. Therapeutic landscape and health tourism are mutually affected: The therapeutic function associated with a place is central to health tourism, while tourism has been widely argued to have profound impact on destination landscape in economic, environmental, social and cultural dimensions (Comerio and Strozzi, 2019; Dyer et al., 2007; Garcia et al., 2015; Zhong et al., 2011). The construction of tourist reception facilities, various infrastructure and tourism activities can change the physical and socioeconomic settings of the location out of which the therapeutic function emerged, either positively or negatively. Such changes to the therapeutic landscape will inevitably counteract health tourism, and vice versa. These links enact in subtle manners and vary between different types of therapeutic landscape and health tourism (Smith and Puczkó, 2008). Also For instance, people's perception of wellbeing benefits could encourage pro-environment policies (Kelly, 2018). This necessitates an integrated understanding of the dynamics of the therapeutic landscape and health tourism by taking heed of their co-evolution. Despite the large amount of literature on therapeutic landscapes and health tourism, their co-evolution has seldom been investigated, and questions still remain, such as: How does health tourism change the therapeutic landscape? And in turn, how does the changing therapeutic landscape affect health tourism? Finally, do they form a vicious or virtuous circle? The answers to these questions are important for both tourism management (Page, 2007) and the sustainability of landscape (Wu, 2013).

In this paper, we make **an actor-network analysis** of the co-evolution of therapeutic landscapes and health tourism. Tracing how social order emerged out of the actor-network relationship, the Actor-Network Theory (ANT) has been widely used for examinations of social dynamics (Latour, 2005; Law, 1992), and has been adopted by a limited number of scholars for the study of the therapeutic landscape (e.g. Conradson, 2005; Duff, 2011, 2012; Foley, 2011, 2015) and tourism studies (e.g. Van Der Duim, 2007; Van Der Duim et al., 2013, 2017; Franklin, 2004; Jóhannesson, 2005). Grounded in the relational thinking of ANT, we construct a conceptual framework to bridge the understanding of therapeutic landscape dynamics and health tourism development. These ideas are then explored with reference to the case of the Bama longevity villages in China to showcase the usefulness of relational thinking when investigating the complexities of the co-evolution of therapeutic landscapes and health tourism. The reasons for choosing Bama as the study case are two-fold: first, therapeutic landscape is insufficiently explored in non-western context; second, Bama has a large number of seasonal health migrants who spend a much longer time there, usually a few months every year for several years in a row, than ordinary sight-seeing tourists, therefore their changing perception of the healing function of local landscapes can be used to trace the co-evolution of therapeutic landscape and health tourism.

This study makes three major contributions to the existing body of literature. Firstly, it contributes to bridging the studies of the therapeutic landscape and health tourism; secondly, it develops the relational thinking of the therapeutic landscape based on Cornadson's (2005) work, and enriches the understanding of therapeutic landscapes as dynamics (Gesler, 1992, 2005); and thirdly, it expands the actor-network perspective to studies of the ordering and multiplicity of health tourism.

In section 2, we review the actor-network theory and its application in the field of the therapeutic landscape and tourism, and then build a conceptual framework of the co-evolution of the therapeutic landscape and health tourism. Section 3 introduces the Bama longevity villages; while section 4 examines the co-evolution of the therapeutic landscape and health tourism in the case of Bama. Section 5 offers some discussions and concludes the study.

2. Rethinking the therapeutic landscape and health tourism through actor-network theory

2.1. Actor-network theory

Actor-Network Theory started out in the sociology of science and technology, arguing that knowledge is a product of a network of heterogeneous materials rather than something generated through the operation of a privileged scientific method by scientists. The idea was later extended to consider all of social life as patterned networks of heterogeneous materials (Law, 1992). This intellectual agenda, closely linked to thoughts of Deleuze and Guattari (1988) and Foucault (1970), largely challenges the traditional thinking of society and has brought about a deep change in many disciplines (Latour, 2005).

Its challenges to traditional thinking can be understood from the reinterpretation of the three keywords of "actor," "network" and "theory" (Latour, 1996). **Firstly, the "actor" should not be restricted to human agency.** Rooted in poststructuralism thought, ANT emphasizes the agency of actors, contrasting with such notions as structure-functionalism (Parsons, 1951), which treat actors merely as "placeholders" in the social structure. Transcending other post-structural thoughts, ANT takes non-human actors into account and treats them equally as human actors in the formation of social order. Non-human actors, such as the natural environment, technology or tools, once thought of as merely something employed by human actors, now are approached together with human actors to understand social order. In this sense, ANT scholars claim that the term "actant" is more appropriate than "actor" (Latour, 1996, 2005). Equating human and non-human actors is one of the most important tenets of the principle of symmetry of ANT (Latour, 1996), demonstrated also by Callon (1986) in his classical work on the decline of the scallop population in St. Brieuc Bay. Human and non-human actors are connected when they take action, and thus bring the second keyword of ANT – "network" – to the fore.

Secondly, the "network" should not be understood in technical terms. The modern world has become intensely connected by various networks, such as trains, airlines and the Internet, but these technical networks are not the focus of ANT. Concerning the social process, ANT uses the term "network" to depict how various human and non-human actors are connected by their actions. ANT scholars use the term "translation" to illustrate the agency of the actants in the network (Callon, 1980, 1984). During the translation process, the identity of actants, the possibility of interaction and the margins of maneuver are negotiated and delimited (Callon, 1986). It is not the technical network, but the work, the movement, the flow and the changes that should be stressed. For Latour (2005), "work-net" is deemed a more appropriate term than "network", as social order should not be thought of as a noun, but a verb, which is dynamic and multiple. The center of ANT is the analysis of the network ordering (Law, 1992).

Thirdly, the "theory" is actually a study approach. ANT insists that social structure should be studied by tracing the transition process of the network ordering, instead of relying on prepositioned theoretical constructs. As such, ANT is not a theory in the traditional sense, but rather an approach to guide the investigation of the dynamics of social order (Law, 1992; Latour, 1996).

As a relational and process-oriented approach, ANT has had a profound influence on a wide range of research fields in recent decades, including health (Garrety, 1997; Bilodeau and Potvin, 2018), landscape (Murdoch, 1998; Allen, 2011) and tourism (O'Neill and Whatmore, 2000; Van der Duim et al., 2017), and has also stimulated the "relational turn" in human geography (Jones, 2009). Below we review the application of ANT in a therapeutic landscape and tourism context to explore how ANT can be employed in an examination of the coevolution of the therapeutic landscape and health tourism.

2.2. A relational thinking of therapeutic landscape

There is a fundamental conceptual divide in therapeutic landscape studies as to whether landscapes should be viewed as inherently therapeutic or relational (Kearns and Milligan, 2020). Although various types of therapeutic landscapes in multiple settings have been researched, most studies treated the therapeutic function as an inherent property of the landscape. These studies have focused mainly on the special characteristics of the landscape and how they provide physical, social and symbolic support for human health (e.g. Nagib and Williams, 2018; Marsh et al., 2017; Völker and Kistemann, 2015; Moore et al., 2013; Marcus and Barnes, 1999). They hypothesize that people benefit from the therapeutic influence when physically present within the landscape, while ignoring the fact that different people experience the landscape in quite different ways.

To address these theoretical deficiencies, David Conradson (2005) firstly explained the need to look beyond the landscape qualities, and proposed a relational thinking of the therapeutic landscape. Both of his theoretical foundations – ecologies of place and the relational self – are closely linked to ANT. On subject of ecologies of place, Thrift (1999) argued places as emerged interactions between human and non-human, people and things (e.g. machines, texts, vehicles), as well as people and other biological entities (e.g. microbes, animals and trees). For the relational self, it should be considered as a dynamic actor in the social network. The self is not an autonomous or tightly bounded entity, but rather something that emerges within and through its relations with other people and events (Barwick and Hazler, 2001). Drawing on a case study of a respite center in southern England, Conradson (2005) argued that the therapeutic landscape experience is best interpreted as a **relational outcome of a "self-landscape encounter**", highlighting the therapeutic function as emerging from an intimate web of networks between people and the broader socio-environmental setting, in which various non-human actants are co-equally important as human actants. Thus, the therapeutic function is not constant but by nature in a continuous process of (re)ordering as a result of the dynamic relations between actants. To understand therapeutic landscape is to unravel these complex and dynamic relations from where therapeutic functions emerge, rather than describing the principal characteristics of healthy places and the various processes and phenomena that might explain the healing effects (Hartig and Staats, 2003).

Since Conradson (2005), several studies have applied and further developed the relational thinking of the therapeutic landscape. For example, Foley (2011) highlighted swimming as an emplaced and performed therapeutic encounter in a study of Ireland. Drawing on Latour (2005), Duff (2011, 2012) further developed Cornadson's idea and proposed a conceptual logic of enabling places grounded in the notion of enabling resources, illustrating how the social, affective and material resources support health and the manifold ways how these resources are generated and utilised. Duff (2014) also developed the idea of "aseemblege of health" from a Deluezian perspective, treating health as a discontinuous process of affective and relational becoming in which the quality of life is advanced through the provision of new affective sensitivities and new relational capacities.

However, these studies focus mainly on understanding the therapeutic landscape in a specific spatial-temporal setting, i.e., the dynamics between different actants at a given time. **Longitudinal studies of the therapeutic landscape, i.e., how the therapeutic landscape changes over time, are few and far between.** The study of the blue space of Rotoroa Island by Kearns et al. (2014), which adopts Duff's idea of "enabling places" and elaborates how the actor-networks result in changing therapeutic functions when the island is transformed from an alcohol treatment facility to a recreation site, provides inspiration for applying the ANT in examining temporal changes of therapeutic landscape. Against a background of global health challenges, many therapeutic landscapes have been accompanied by rapid health tourism development, which necessitates the investigation of the changes to the therapeutic landscape in the temporal dimension.

2.3. Interpreting health tourism through the lens of tourismscapes

ANT has been introduced into tourism studies covering a variety of topics since 2000 (O'Neill and Whatmore, 2000; Rodger et al., 2009; Paget et al., 2010; Ren et al., 2010; Beard et al., 2016; Dedeke, 2017; Jørgensen, 2017). Among the diversified interpretations of tourism using ANT, Van Der Duim (2007) coined the term "Tourismscapes" to reconceptualize tourism, which views tourism as a process involving the (re)ordering of the relations between people and things dispersed in time-space-specific patterns. This idea offers a new ontology of tourism that contrasts the long-existed structuralist accounts in tourism studies (Franklin, 2004).

Along with other scholarly works, Van der Duim's idea of "Tourismscapes" stresses three key aspects of tourism. The first is the **ordering of tourism.** Tourism studies have long established the binary structural distinctions of home/away, i.e. the routine everyday life from which people want to or need to get away and the social space of tourism overturning the routine and offering extraordinary experiences (Franklin, 2004). Inheriting the critique of prior assumptions of social grouping (Law, 1992; Latour, 2005), this distinction in tourism is questioned. As Franklin (2004, 2007) and Van Der Duim (2007, 2013) argue, the structure of tourism should not be treated as a noun, but a verb, meaning that tourism studies need to go beyond acknowledging the home/away distinction and piece together how tourism emerges. The structure of tourism keeps changing in parallel to networking among various actors, and so "ordering" is more appropriate than "order" for the representation of the dynamics of tourism. The idea of "Tourismscapes" calls for studies on the ordering of tourism, investigating such issues as the identity of the actors, how they are connected, and the process and tactics of translation.

The second is the **materiality of tourism.** Based on the principle of symmetry of ANT (Law, 1994), the idea of "Tourismscapes" subverts the usual distinction between the human and non-human actors. It argues that material objects are not merely carriers of social and cultural meaning, but should be on an equal footing with human actors when considering the ordering of tourism. The materials include not only various tourism facilities, but also information and media (Van Der Duim, 2007).

The third is the **multiplicity of tourism.** An ANT perspective of tourism draws attention to the heterogeneous ordering work underlying what seem to be the more or less stable features of tourism. As tourism is a process of ordering, tourism of any form is precarious, and depends on the particular setting. Tourism is thus multiple, and there is no final ground or root order on which ordering work is based (Van Der Duim, 2013). The idea of "Tourismscapes" necessitates the study of the multiple modes of ordering in tourism by following the processes of tourism ordering as they stretch through space and time.

Health tourism has become a novel and burgeoning industry in recent years. There have been many studies examining the healing demand of tourists, the characteristics of the healing function in a destination and the associated effects on the political economy (e.g. Peris-Ortiz, 2015; Wang et al., 2020; Mueller and Kaufmann, 2001; Hall, 2011; Lee et al., 2014). However, these studies tend to be based on the structuralist construction of the home/away in tourism (Franklin, 2004), while **analyses from the actor-network perspective are rare**.

Tourismscape offers a vantage point for the examination of health tourism, in that it taps into the continuous process of ordering. Many health tourism destinations, such as lakes and coastal areas, are not traditionally associated with the healing function (Medina-Muñoz and Medina-Muñoz, 2013), and some types of places have only recently been functioned as health tourism sites. A typical example of this is hot deserts, which bring to mind painful experiences, but which are now believed to have healing properties (Wang et al., 2018). Moreover, health tourism involves intense and dense networks between human and

non-human actants. Its early definition by the International Union of Tourist Organizations (the forerunner to the United Nations World Tourism Organization) was "the provision of health facilities utilizing the natural resources of the country, in particular mineral water and climate'' (IUTO, 1973), emphasizing the role of non-human actants, while later studies came to explore the healing functions of spas, sun, coasts, forests, etc. The networks between human and non-human actants in health tourism bring about frequent shifts and interactive ordering, producing the multiplicity of health tourism. Hence, characterizing (re)ordering, materiality, and multiplicity, health tourism would be more productively inquired from an ANT perspective.

2.4. Conceptualizing the co-evolution of health tourism and the therapeutic landscape

The ANT approach permits the adoption of a relational conceptual framework for the linking of the therapeutic landscape and health tourism, and an examination of their co-evolution. Fig. 1 details the non-relational and relational thinking of the therapeutic landscape and health tourism. The traditional structural constructs of tourism emphasize the distinction between tourism demand and tourism supply, and especially how destinations offering extraordinary experiences convince tourists to leave their daily routines. The non-relational thinking of the therapeutic landscape treats the therapeutic function as an inherent property of the destination, linked weakly to the tourist experience. The simplified linkages between health tourism and the therapeutic landscape allow little space for investigations of their co-evolution.

In contrast, relational thinking of health tourism treats the tourists and the various elements in the destination as a network, rejecting the structuralist binary division between the tourists and the destination. Relational thinking of the therapeutic landscape treats the therapeutic function as a relational outcome of the self-landscape encounter. By connecting the tourists with the destination and the self with the landscape, an integrated actor-network including the multiple actants in health tourism and therapeutic landscape is constructed, which opens up the possibility of unpacking the dynamics of the co-evolutionary therapeutic landscape and health tourism.

Various human and non-human actants are involved in this actor-network. "Self" and "tourists" are both human actants but defined from different perspectives, and there is a need to distinguish how different tourists are transformed into many concrete "selves" who perceive therapeutic function differently. "Landscape" and "destination" are also defined from different perspectives, yet both include a wide range of human and non-human actants, such as the natural environment, local residents, government, developers, tourism workers, tourism facilities, transportation and other infrastructures, media, local culture, and religions.

Multiple types of relations are involved in the construction of this actor-network. The scoping review by Bell et al. (2018) has presented a detailed summary of the physical, social, spiritual, and symbolic dimensions of the therapeutic landscape. For health tourism, the economic, social, environmental, and cultural relations between tourists and tourism sites are also frequently examined. These variegated relations usually connect various human/non-human actants and affect health in different ways, as illustrated in Duff's (2011) useful distinction of social, affective, and material resources promoting health. Moreover, two or more types of relations usually overlap in therapeutic landscapes and tourism sites, requiring an integrated and comprehensive interpretation.

A study of the co-evolution of health tourism and the therapeutic landscape should begin with an examination of how tourists and destination, and self and landscape are dynamically interrelated (the vertical and diagonal arrows in Fig. 1). It should then be investigated how these dynamics feed back to the tourists-destination relations in tourism, and self-landscape relations in the therapeutic landscape (the horizontal arrows in Fig. 1), after which an exploration can be made of the more cascaded changes leading to the reordering of the therapeutic landscape and health tourism.

In practice, there are many possible entry points for a study of the actor-network (Law, 1992; Latour, 2005). For analytical purposes, we proposed here a typology of dynamics demonstrating how the therapeutic landscape and health tourism could be mutually affected. These four types of dynamics represent the bilateral linkages (network) between tourists and destination and self and landscape (actants). Together with the tourists-destination relations in tourismscape and self-landscape relations in the therapeutic landscape, they constitute the multiplicity of an evolutionary actor-network of tourism and the therapeutic landscape.

- Tourists-Self dynamics: According to the relational self concept, the self should be thought of in terms of its relations to other people and events (Conradson, 2005; Barwick and Hazler, 2001). When tourists enter a landscape, they should not be reduced to a homogeneous

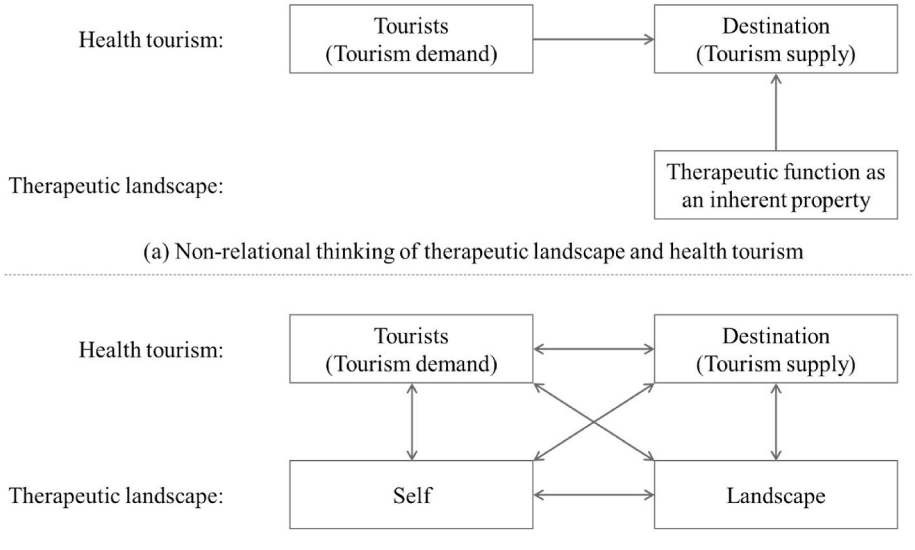

Fig. 1. A simplified comparison of non-relational and relational thinking of the co-evolutionary therapeutic landscape and health tourism (by the authors).

group of people who are attracted by the therapeutic landscape in the same way. Instead, there is a need to examine the process of how different tourists become the "self" that may perceive therapeutic function in different ways. For instance, tourism studies place identity issues at the heart of tourism and travel, and emphasize that the relations with significant others (e.g. families, friends, colleagues) have compelling implications for self-definition, self-evaluation, and self-regulation, which can further determine tourists' travel behaviors (Hibbert et al., 2013).

- Tourists-Landscape dynamics: From a relational perspective, the landscape is a product of the interactions between various human and non-human entities (Conradson, 2005; Thrift, 1999). As tourists undertake various activities in the landscape, the actor-network perspective reveals that tourists are not just the "self" who perceives the landscape, but are also integrated into the relationships that formed the landscape. Many studies, including those analyzing tourism for leisure and entertainment purposes, have found that tourism destinations could be performed and defined by tourists (Edensor, 2000), highlighting that the production and consumption of tourism are hybrid and mutually constitutive processes, thus challenging the dichotomy between tourists on the one hand and the tourist places on the other (Jóhannesson, 2005).
- Destination-self dynamics: As emphasized in the tourismscape concept, tourism should include not only the materials within the destination, but also the array of objects that extend tourism in time and space, such as airplanes, the railway, media and tourism information (Van Der Duim, 2007). Hence, the self perceives the therapeutic function not only from the angle of the actors in the bounded landscape, but also from the various actants in the tourism network that may be far away from the landscape. In Duff's (2011) writing, the material resources that promote health also include diverse objects circulating in and through the place, such as financial benefits, welfare transfer, and provision of transportation, as people's experiences are made possible by these objects, machines, and integrated technologies (Haldrup and Larsen, 2006).
- Destination-landscape dynamics: Tourism is in a continuous process of ordering (Van Der Duim et al., 2013; Van Der Duim, 2007), which could change the relationships from which the landscape emerged (Conradson, 2005; Thrift, 1999). Hence, the landscape should not be considered only as a constant and inherent part of the attractiveness of the destination, as there is a need also to study how tourism development reshapes the landscape, i.e. the impact of tourism on the landscape (Comerio and Strozzi, 2019; Dyer et al., 2007; Garcia et al., 2015; Zhong et al., 2011). As ANT ascribes much significance to the non-human actants, special attention should be paid to how the material network of the landscape is changed by the tourism sector. As illustrated by a study on the First Nation in Canada, the attitude of local people to their Mother Earth has changed after the land was contaminated, and they chose only those healing places that they still considered as "somewhat healthy" to build their relationships with Mother Earth (Smith et al., 2010), which underscores the threat of environmental contamination and the negative impact on therapeutic landscape brought by excessive tourism development. For migrants, studies have reported a positive effect of the disadvantageous material settings in stimulating therapeutic networks among them (Chakrabarti, 2010; Egoz and De Nardi, 2017), which suggests the potential changes in therapeutic landscape when more facilities or services are available.

This typology does not aim to isolate different dynamics. In reality, these four types of dynamics are interrelated and cascaded on most occasions. The co-evolution of the therapeutic landscape and health tourism results from the combined effects of different dynamics, and this typology of dynamics offers different possible entry-points for the study of the co-evolution of the therapeutic landscape and health tourism. Each type of dynamic could be the starting point of an investigation to be connected with other types of dynamics.

As a means of grounding this ANT approach to the scrutiny of the co-evolution of the therapeutic landscape and health tourism, we turn to the specific case of the Bama longevity villages in China.

3. Study area and methodology

Bama is a Yao Autonomous County located in the Guangxi Zhuang Autonomous Region. Despite being deeply hidden in Western China's mountainous areas, Bama has a long-standing national reputation for longevity that dates back to the Qing dynasty, based on the high proportion of centenarian residents. According to Bama government statistics, within the 300,000 residents in Bama in 2018 were 109 centenarians, i.e. 36 centenarians for every 100,000 residents – more than five times the UN standard for longevity.

Health tourism in Bama has started to flourish since 2008, when the longevity of its residents was reported on Chinese Central Television (CCTV) – the most authoritative media outlet in China. Consequently, the tourists visiting the region swelled from 646,000 in 2008 to 5.26 million in 2018, representing an annual increase 21.08%, and resulting in tourism becoming a pillar industry of this national-level poor county. As Fig. 2 shows, the most famous tourism destinations are the villages of as *Poyue, Baimo* and *Pona*, which locate along the *Panyang* River, which used to be among the least developed villages in China, but have been transformed into hot health tourism in recent years. Bama has also attracted some scholarly interest. There have been several studies on its longevity landscape and health tourism respectively (eg. Huang and Xu, 2014, 2018; Wang et al., 2020).

Besides those who come for sight-seeing, the longevity landscape has also attracted a large number of seasonal health migrants who stay in Bama for no less than one month every year, and return for at least two years. Bama government estimates that there are 10,000 seasonal health migrants in Bama, most of whom are elderly or sick, retired, have some savings and used to live in cities. They leave their home towns and move to Bama, hoping that this land of longevity can benefit their health. The activity spaces of sight-seeing tourists and seasonal health migrants are highly overlapped, same as such tourism facilities as hotels, restaurants, and shopping stores, all clustering in the villages. When compared to the sight-seeing tourists, seasonal health migrants have a greater impact on Bama, in that they spend much longer, consume more products and services, perform many more activities, and enter into more social interactions with the local inhabitants. In the present study, we focus mainly on the seasonal health migrants and their relationships with the longevity villages in Bama to examine the co-evolution of therapeutic landscape and health tourism.

For the collection of data, three different approaches were employed to capture the roles of various actants and their relationships in the (re) ordering of the therapeutic landscape sand health tourism.[1] In first approach, a field study in Bama was made in December 2018, including non-participant observation and in-depth semi-structured interviews. For seven days in a row and from the morning to the evening, the first author visited various activity sites of seasonal health migrants and sight-seeing tourists in several villages, observing and recording the characteristics of people and their activities. A total of 41 respondents were interviewed, covering a variety of stakeholders in Bama. In addition to sight-seeing tourists (N=6) and seasonal health migrants (N = 13), we also interviewed: villagers (N = 3), tour guides (N = 3), hotel managers (N = 4) and local non-profit social organization heads (2); as well as government officials in the bureaus of tourism (N = 3), urban and rural planning (N = 2), housing and construction (N = 2), land resources (N = 1) and environmental protection (N = 2). Respondents were

[1] Ethnical approval for conducting this research had been obtained from our home institution (ref no.: EA1706026) and that this research had adhered to ethical norms.

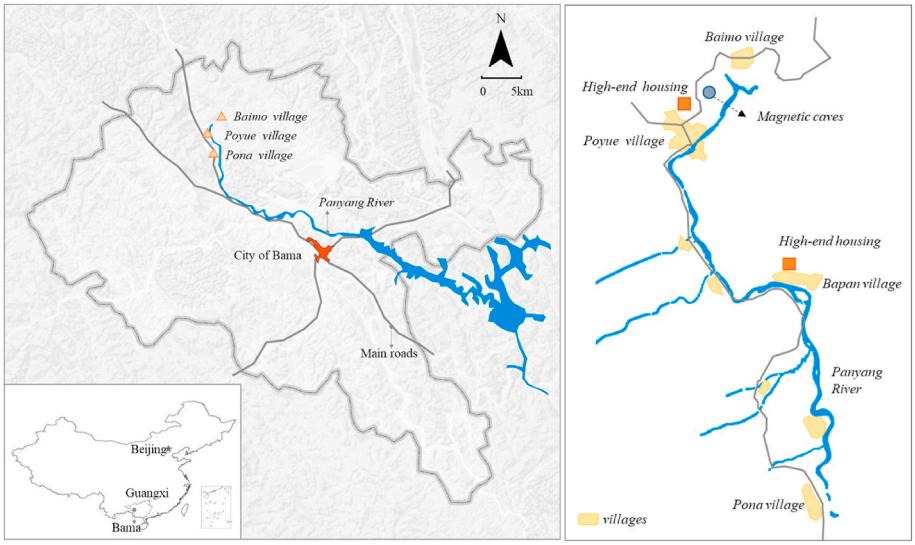

Fig. 2. Location of Bama and the main tourism villages (by the authors).

invited to talk about their daily life (or work) in Bama, their perception of therapeutic functions and their changes, and the development of health tourism and its impact on Bama. Their observations provide important empirical evidence to trace the longitudinal co-evolution and reordering of the therapeutic landscape and health tourism. Most of the interviews were conducted in the villages of *Poyue, Baimo* and *Pona*, while others were conducted in the county of Bama and elsewhere. During the fieldwork, we remained aware of Gesler's emphasis on the simultaneous engagement with all social, physical and symbolic dimensions (see the quote by Kearns and Milligan, 2020), and strived to examine a broad range of actants in Bama.

Secondly, the first author joined a non-profit social organization of seasonal health migrants in Bama named "Blue Ties", and continuously observed their activities online for one year, from January to December 2019. Established ini 2012, Blue Ties is the largest non-profit organization in Bama, with about 3000 members, and aims to enhance the mutual relationships among seasonal health migrants and improve their livelihood in Bama. It organizes diverse activities, fosters social networks among seasonal health migrants, provides assistance to those in emergent need of care, and offers charitable support to poor local villagers. Most of their activities are posted on a WeChat forum (a common application for online communication in China). The first author accessed the WeChat groups, observed their activities and associated discussions, and occasionally joined the discussions, especially when topics were related to their perceptions of changes in Bama. Using the same questions for face-to-face interviews conducted in Bama, we also interviewed 15 additional seasonal health migrants through the Internet between January and April 2019.

The third approach is the questionnaire survey. With the support of Blue Ties, we distributed online questionnaires to seasonal health migrants in Bama, to be filled out on a voluntary basis, to collect their views on the therapeutic landscape and health tourism. By comparing the factors that attracted them to Bama, and the factors that they valued after living in Bama, we explore the changes in self-landscape relations under the effects of health tourism. We targeted only seasonal health migrants in this section, asking filtering questions on the time they spend in Bama to identify those who stay for no less than one month every year, and repeat for at least two years. A total of 250 questionnaires were distributed in August 2019, and 202 of these were used for the final analysis.

Drawing on these comprehensive empirical materials, our analysis started from examining various linkages between therapeutic landscape and health tourism in Bama, especially those caused their co-evolution. We then categorized these linkages into different themes and traced how they were connected. Finally, we portrait a full picture of the integrated actor-network of the therapeutic landscape and health tourism, featuring multiple relations between various human and non-human actants during a dynamic process.

4. Co-evolution of the therapeutic landscape and health tourism in bama longevity villages

Resonating with the four types of dynamics that exist in the relationship between the therapeutic landscape and health tourism, four major themes are identified amid the evolution of the Bama longevity villages over time: tourists as part of the therapeutic landscape (tourists-landscape dynamics), tourism's impact on the landscape (destination-landscape dynamics), the tourists' relational self (tourists-self dynamics), and the extension of the therapeutic network through health tourism (destination-self dynamics). In the following text, we use the first theme as the entry point to investigate the other dynamics in the co-evolution of the therapeutic landscape and health tourism.

4.1. Tourists as part of the therapeutic landscape

The most evident dynamic in the Bama longevity villages is in the tourist-landscape relationship, in which the tourists have become part of the therapeutic landscape in both the social and symbolic dimensions, and then their activities contributed to the tourism attraction.

The poor state of the economy in Bama meant that tourists had to confront various inconveniences and difficulties in their daily lives, such as less-than-desirable entertainment facilities, underdeveloped transportation and low-quality healthcare (Fig. 3). These non-human actants shaped social relations in Bama significantly. Seasonal health migrants organized various collective activities to entertain themselves, such as dancing, singing, making music, *Taichi*, hiking, swimming, chess and card games (Fig. 3). Nearly all of the seasonal health migrants interviewed agreed that these activities had provided them with a healthier lifestyle. They also had come to take care of each other as a result of the poorly developed healthcare services. For example, the Blue Ties organizes volunteers to help patients get to higher level hospitals far away in Nanning, the capital city of Guangxi, in cases of emergency. Furthermore, some seasonal health migrants provide voluntary care to others,

Fig. 3. (A) Housing in *Poyue* village, usually multi-storey or high-rise buildings with a high density hidden in the mountainous areas (b) A street in *Baimo* village, where low-end restaurants and hotels, small shops, and some daily service businesses are located (c) A flyer attracting people to visit centenarians, which is an essential activity for most sight-seeing tourists (d) Dancing activities of seasonal health migrants in the public square (e) Charitable activities for local poor pupils by *Blue Ties* (f) Tourists' healing activities in a magnetic cave. (Authors' copy right).

contributing to their own mental health. Zhao,[2] a 63-year-old woman from the Xinjiang Uygur Autonomous Region, looked after her seasonal health migrant neighbor who was afflicted with a severe disease and who used to be a stranger to her. As Zhao wrote in her blog:

> "This neighbor used to be taken care of by another seasonal health migrant. I began to take care of the neighbor after she left. I am also a patient, but when I offer help to others, I feel energized and sometimes forget my sickness."

The underdeveloped economy also stimulated the intensification of connections between the seasonal health migrants and the local villagers. In recent years, seasonal health migrants have not only come to celebrate festivals together with the local villagers, but also help them to combat poverty with financial donations (Fig. 3) and developing e-commerce platforms for the sale of local fruits and vegetables online. As a vice president of Blue Ties commented, "*These activities not only assist in the creation of a more harmonious social atmosphere, but are also good for the participants' mental health.*" (Interview, December 24, 2018).

These activities and mutual assistance enhance social ties and have created an atmosphere of "a home away from home" for seasonal health migrants. In the questionnaire survey, 48 percent said that they had more friends in Bama than in their home towns. As a result, the poorly developed tourism sector has provided the seasonal health migrants with unique experiences that cannot be found in developed tourism sites. For example, seasonal health migrants interviewed talked about the Hainan province, one of China's most popular health tourism destinations, where diverse and highly developed service industries could provide excellent daily services, rendering the daily communication and mutual assistance among the seasonal health migrants less necessary.

Tourists became part of the therapeutic landscape not only in the social dimension but also in the symbolic dimension. When the tourism sector opened up, many tourists were attracted by the symbolic power of the centenarians (Huang and Xu, 2018). Nevertheless, new health idols later emerge within the seasonal health migrants themselves. Those who succeeded in overcoming severe diseases such as cancer, instilled health confidence in many tourists, and thus became additional symbols of the health benefits of Bama. For example, Cui, the president of Blue Ties, was previously stricken with a rare form of cancer, but succeeded in staying healthy after coming to Bama in 2011. Such stories have prevailed in Bama and strengthened the symbolic power of the therapeutic landscape. Shen, a 40-year-old female with breast cancer, said:

> "I was very lucky to meet Cui during my first week in Bama. I am greatly encouraged by Cui's anti-cancer experience. His success gave me great confidence in my own life"
>
> (Interview, December 26, 2018)

These new dimensions in the therapeutic landscape, in turn, strengthened the tourism attractiveness. In recent years, many tourists

[2] All of the names used in the paper are pseudonyms.

have come to Bama after hearing the stories of people regaining their health, and the friendly social environment. According to the results of the questionnaire survey, up to 12.4% of seasonal health migrants cited the "successful tales of recovery to health in Bama" as the top reason attracting them to Bama. Jiang, a 56-year-old woman from Northeast China, commented on the function of social ties in tourism attraction:

> "I like to live in Bama. My son and daughter-in-law asked me to return home, but I prefer Bama because I have many friends here. I can feel socially bonded with other seasonal health migrants and local villagers, while in my home city I usually feel alone. Last year I went back to hometown for a few months, but I decided to come back"
>
> (Interview, December 27, 2018)

4.2. Tourism's impact on the landscape

In destination-landscape dynamics terms, tourism development has brought about significant impacts to the landscape in terms of environmental pollution and tourism facilities, which not only affects people's perception of healing functions, but also changes tourism itself in turn. This dynamic further underlines the important role of non-human actants in the reordering of the therapeutic landscape and health tourism.

Contrasting the unpolluted and attractive nature spurring early tourism development, environmental contamination has become a serious problem in recent years. The solid waste and sewage produced by the burgeoning health tourism has largely exceeded the carrying capacity of the poor local infrastructure. The severity of the pollution even captured the attention of CCTV in 2014, which published a report entitled "The polluted river, and the severely contaminated environment in Bama."[3] During our interviews, some of the seasonal health migrants recognized that the natural environment was not as good as before, and that tourism development had thus been hindered. A local housing intermediary said:

> "I used to be a tour guide in Bama. After the negative report by CCTV in around 2014, tourism in Bama quickly went down. Tourists did not come. Some seasonal health migrants also left. Some of my colleagues and I resigned our positions as tour guides at that time. "
>
> (Interview, December 26, 2018)

Although being benefited from the tourism economy, local villagers strongly agreed that the natural environment had been degraded to some extent, leading to some to doubt whether they could survive as centenarians in the future. Tourists assumed that the skepticism among the villagers would diminish the symbolic influence of the therapeutic landscape in the long term.

Intertwined with the first theme, the upgrading of tourist facilities in recent years has had a two-sided effect on the therapeutic landscape. On one hand, living in Bama has become much easier for tourists; while on the other, the therapeutic social ties stimulated by the less desirable facilities were diminished. As one of the vice presidents of Blue Ties worried:

> "The underdeveloped tourism facilities was an important reason why organizations like Blue Ties came into being. Many members actually joined us due to their need for services, such as transfers to hospitals … while Bama is upgrading the tourism sector, the functions of these mutual supports will be supplemented by the tourism services. I am afraid that the current home-like social atmosphere will gradually diminish"
>
> (Interview, December 27, 2018)

Another effect on the therapeutic landscape resulting from the upgrading of tourism facilities was social segregation. Previously, the houses (Fig. 3) developed by villagers and some individual investors were affordable for most seasonal health migrants, costing only 600–1200 CNY per month to rent a 20–30 square-meter room. However, a number of high-end communities have been built in recent years, with a high selling price of 12,000–15,000 CNY per square meter, and this created a segregated tourism market. The seasonal health migrants who would seldom recognize the rich/poor disparity, and thus retained peace of mind, now began to be aware of the disparity, affecting the social ties. Song, a seasonal tourist lived in *Poyue* village, said:

> "Living in Bama was affordable for most of the seasonal health migrants in the past. People here only care about health, and only compare who is healthier. Now, some places have begun to serve only the rich. People have begun to compare not only their health, but also who is richer … The new communities contain various activity spaces, people in there even do not need to come out … The social atmosphere here has changed, and I do not think that is good for some people's mental health."
>
> (Interview, December 26, 2018)

4.3. Tourist's heterogeneous therapeutic perceptions

The idea of the relational self, put forward by Conradson (2005), suggested that different people perceive the therapeutic landscape in different ways. A major distinction found in Bama is between the tourists with severe diseases and those who are relatively healthy, whose heterogeneous therapeutic perceptions affect both the therapeutic landscape and tourism development.

Despite the shortage of qualified healthcare in the region, Bama is home to a number of tourists with severe diseases. Many of these have failed to be cured by modern medical techniques and have settled in Bama pinning their last hopes on the "magic" power of the longevity villages, and especially due to the strong symbolism of the anti-cancer heroes mentioned in the first theme. This belief, however, is questioned by many of the other seasonal health migrants, who believe the longevity culture and clean natural environment could be beneficial to health, but are skeptical of the existence of a "magic" power that is able to cure diseases that modern medicine could not.

These different perceptions of the therapeutic function of the region have affected tourism through the stigmatization brought by the over-concentration of cancer patients in Bama, and some reports claim that the longevity villages have been turned into "cancer villages".[4] These news stories and reports, combined with frequent encounters with severely diseased patients in Bama, has resulted in an inflated fear of disease and a questioning of the therapeutic functions of Bama. A local tour guide of Yao ethnicity warned the first author not to enter the restaurants run by seasonal health migrants:

> "Lots of seasonal health migrants are sick, and you do not know what kind of illness they have. What if you go into one of these restaurants, eat something and then get sick? I have been giving tours for five years in Bama. We always take the tourists somewhere else for lunch

[3] Adopted from the *Overall Planning of Ecological Environment Protection in Panyang River Basin in Bama,* issued in 2016.

[4] For news stories and reports documenting the over-concentration of cancer patients in Bama and the transition from "longevity villages" to "cancer villages", see: https://www.nytimes.com/2017/04/12/world/asia/bama-county-china-longevity.html; https://www.nationalgeographic.com/magazine/2018/03/explore-wellness-china-longevity-village-traditional-medicine/; http://env.people.com.cn/n/2014/0126/c1010-24228045.html, although our analysis of the members of Blue Ties identified only 9 percent of seasonal health migrants with cancer.

after sight-seeing in such villages. We go to places with much fewer seasonal health migrants and with restaurants run by locals"

(Interview, December 24, 2018)

There are several other pieces of evidence illustrating the heterogeneous perception of the therapeutic functions in Bama. Some tourists believe the magnetic caves have healing functions due to their strong magnetic intensity,[5] and so frequent them often, staying for several hours each time (Fig. 3). For others, however, the humidity and cold temperatures in the caves are harmful to health, especially for those elderly and those with chronic diseases. Some seasonal health migrants drink water from the Panyang River, believing the natural water to be more beneficial than the tap water, although the river water does not meet the local government standards for drinking water. Many others think this is unacceptable, especially when considering the pollution problem stressed in the second theme. The strong beliefs held in the healing properties of the magnetic caves and the natural water have been incorporated into tourism development. Some newly built communities have used magnetism as a marketing strategy, and bottled water has become one of the best-selling local products. These tourism marketing approaches and products, in turn, have strengthened the role of these non-human actants in shaping the region's therapeutic function.

4.4. Therapeutic network extended by health tourism

The idea of tourism cape emphasizes the importance of actants away from destination places in reordering tourism. In Bama, health tourism has brought actants to longevity villages from far away for the construction of their therapeutic function, making it necessary to go beyond the bounded area of the specific places to consider the extended therapeutic network.[6]

A typical example of this can be seen in the media. During our interviews with villagers, tourism industry workers and government officials, the significance of the two CCTV reports was frequently mentioned. Tourists' perception of Bama's longevity power was not only affected by the specific characteristics of the villages, but also strongly by such CCTV reports. As one local government official commented:

"Many of the seasonal health migrants are elderly. They have a strong belief in the report by CCTV, believing that the information provided by CCTV is the most authoritative. So to a large extent, the flourishing of health tourism in Bama was boosted by CCTV's positive report, while the decline of health tourism that began in around 2014 was also caused by CCTV, through a negative report"

(Interview, December 28, 2018).

The advances in information and communication technologies over the past two decades have given rise to many popular social media platforms. To some extent, the above three themes are all magnified by these media platforms, which not only facilitate the circulation of health tourists' "successful experience" and "miracles" in regaining health and thus attract more tourists, but also exaggerate the pollution problem and concentration of cancer patients that lead to the reduction of tourism attraction. There have also been platforms that take advantage of poor judgment in the elderly, giving unverified Internet information to sell fake products or carry out fraud, leading some tourists to doubt whether Bama is still the right place for health tourism. The media has thus become a key factor in the perception of therapeutic function and tourism development.

As the transportation infrastructure improved in Bama and its surroundings, some seasonal health migrants began to visit some of the other longevity villages around Bama that had retained their natural environment due to less subjected to the tourism impact. A few seasonal health migrants even relocated to these villages outside Bama. The perception among tourists of the healing function in these surrounding areas enhanced Bama's reputation of longevity, which directly triggered the Guangxi government's plan to develop a larger health tourism region, with Bama as the centerpiece.

Unlike some other types of tourism, in which the connection between tourists and the destination terminates after the tourists leave, many of the seasonal health migrants continue to be engaged in the activities in Bama, and thus contribute to its therapeutic function even after returning home. A proportion of the migrants keeps in frequent contact with people in Bama after leaving for the exchange of healthcare knowledge, donations to specific events, negotiations of housing rental, etc. Blue Ties has established representations in many of the country's provinces to market itself better, and to serve the seasonal health migrants who have returned home from Bama. As one of its vice presidents said:

"We do not limit our organization to the territory of Bama. We hope to build a national network, and to take advantage of the rapidly growing tourism. This national therapeutic network is good not only for the health of the seasonal health migrants inside and outside Bama, but also for health tourism"

(Interview, December 27, 2018)

Taking all this into account, the traditional distinctions between inside/outside, far/close, and large/small scale (Latour, 1996) have been dissolved under the dynamics of the therapeutic landscape and health tourism. The therapeutic function of the landscape has been shaped by outside factors such as the media, Bama's surroundings and the remote actants from other provinces, all of which have contributed to the therapeutic landscape, while large- and small-scale political--economic factors have worked together to (re)order the therapeutic landscape and health tourism. In short, the networked relations among these human and non-human actants are intrinsic to the entire process.

5. Conclusion and discussions

Against the background of global health challenges, recent years have seen a rise in health tourism and a strengthening of the link with therapeutic landscapes. Yet, little is known about the dynamics of the co-evolution of the therapeutic landscape and health tourism. Based on the ANT and its respective applications in studies of therapeutic landscapes and health tourism, this research introduces an actor-network perspective for the examination of the co-evolution of therapeutic landscapes and health tourism, and substantiates this conceptual framework with an empirical case study of the Bama longevity villages in China. Rather than making a structuralist reading of therapeutic landscapes and health tourism, we consider them to have emerged from an integrated actor-network in which they are in a continuous process of (re)ordering as a result of the dense interactions between the human and non-human actants. For analytical purposes, we put forward a typology of dynamics, i.e., tourists-self, tourists-landscape, destination-self and destination-landscape, for the determination of the actor-network, and to further analyze the cascaded changes.

Findings from the case of Bama longevity villages align well with the conceptual model. The therapeutic landscape and health tourism in Bama is closely interrelated and better understood as emerging from an integrated actor-network comprising of various human actants (seasonal health migrants, sight-seeing tourists, tour guides, centenarians and other local villagers, non-profit organizations such as Blue Ties, local

[5] According to materials presented in Bama Longevity Museam, the magnetic intensity in these caves is 0.58G, about two times than ordinary places.

[6] Our conception of the therapeutic network is slightly different to that of Smyth (2005), which focused mainly on the social network through which people gain support and care. In this paper, we use the term to refer to how various human and non-human actors beyond the specific place are involved in the formation of a therapeutic landscape.

government officials, tourism developers and other businessmen, etc.) and non-human actants (natural environment, magnetic caves, environmental contamination, healthcare services, low-end and high-end housing, transportation, media platforms, etc.). Various material, social, symbolic, and affective relations, being overlapped and interrelated, connect these actants in a dynamic way and thus keep reordering both the therapeutic landscape and health tourism. These relations are mainly presented under four themes, with tourists becoming part of the therapeutic landscape as the most evident one, which provides a good entry point to unravel other three themes. As the analysis suggested, these four themes are closely related rather than being isolated. For instance, the health effect of social ties under the first theme would diminish along with the upgrading of tourism facilities under the second theme; the heterogeneous perceptions of the healing function of Bama water under the third theme is intensified by the water pollution under the second theme; while the media reports magnified the effects of the first three themes. Taken together, these cascaded dynamics engender the multiplicity of the therapeutic landscape and health tourism and contribute to their co-evolution. This study, therefore, contributes to the relational thinking of the therapeutic landscape and health tourism, enriching the understanding of their interlaced dynamics from the vantage point of the tourismscape.

The ANT perspective reveals the complex relations that exist between the therapeutic landscape and health tourism, questioning their loose connections in existing literature. In most previous health tourism studies, the characteristics of the therapeutic landscape are often reduced to pieces of background information where focus is on tourism development (e.g. Peris-Ortiz, 2015; Mueller and Kaufmann, 2001; Lee et al., 2014). Such studies treat the therapeutic function the same way as resources are treated in other types of tourism, i.e. as a given and fixed quality of the destination. This simplified understanding of the therapeutic landscape prevents the better embedding of health tourism in its specific spatial-temporal context. Building on the idea of the tourismscape, our study reveals health tourism to be spatially-temporally sensitive. Health tourism in Bama in the early stage had little in common with that of the later stage, in terms of both tourist demand and tourist supply, underlining the multiplicity of tourism. Previous therapeutic landscape literature tended to focus on interpreting therapeutic function, and, in particular, how it formed in a bounded area. When viewing places as emerged interactions between human and non-human actants (Thrift, 1999), the external forces imposed on the therapeutic landscape should be taken into account. The impact of tourism is important, and there have been many studies illustrating the negative health effects in some landscapes (Wilson, 2003; Kearns and Collins, 2000; Wakefield and Mcmullan, 2005), in which some are a result of tourism itself (Foley et al., 2011; Medina-Muñoz and Medina-Muñoz, 2013). As our analysis of Bama longevity shows, the therapeutic landscape and health tourism are closely related, and studies of one should not be separated from studies of the other.

For the therapeutic landscape, temporality should be stressed to understand its dynamics. Returning to Gesler (1992), when he initially came up with the idea of the therapeutic landscape, he referred to it as "a constantly evolving process". But later, with the rapid expansion of the therapeutic landscape thesis to cover a wide range of subjects, the understanding of temporality in the therapeutic landscape came to lag behind. The importance of temporality is based not merely on the fact that the therapeutic landscape changes over time, but that temporality could be viewed as a quality of the landscape itself. In this sense, temporality is neither chronologically nor historically constituted by events as "isolated happenings, succeeding one another". Instead, as noted in Tim Ingold's (1993: 194) seminal work, temporality is "immanent in the passage of events", therefore "each event encompasses a pattern of retentions from the past and protentions for the future." In the case of Bama, we see the characteristics of the therapeutic landscape are not fixed, but rather evolved based on the past mode, and with the possibility of reordering in the future.

For health tourism, it is both helpful and necessary to address the complexities of sustainable tourism management by creating a link with the evolution of the therapeutic landscape. Some generally effective tourism development measures may lead to unexpected results. In Bama, the upgrading of tourism facilities not only reduced the importance of social networks, but also led to social segregation, negatively affecting the healing function. As the local government strives to make Bama a world-class longevity tourism destination, more actants from wider economic and institutional settings are expected to become involved in the (re)ordering of the therapeutic landscape, such as upper-level governments, external investors, highways, high-quality healthcare facilities, migrant service workers and landscape designers. It is necessary to carefully evaluate the impact of these human and non-human actants on the therapeutic landscape: What new therapeutic functions will be added? Which existing therapeutic functions will be reduced or enhanced? What groups of tourists will more likely perceive therapeutic functions being strengthened? To what extent will these changes affect the sustainability of health tourism?

From an ANT perspective, different types of therapeutic landscapes and health tourism could form very different relations. In this paper we focus mainly on a traditional type of therapeutic landscape, in which medical services play a minor role, and the connected development of health tourism. Due to the rapid expansion of the tourism sector, many other types of therapeutic landscape have come to engage with health tourism. Typically, hospitals, with biomedicine at the center, have started to get involved in medical tourism. Different from traditional therapeutic landscapes, hospitals as therapeutic landscapes are based mainly on the physical and technological setting rather than the natural or social setting. While medical tourism could be seen as an assemblage involving a wide range of actants, including physicians, medical technologies, medicines, transportation, the healthcare system, etc. (Connell, 2006; Wilson, 2011), studies have shown that such places are not intrinsically therapeutic, but are experienced differently by heterogeneous individuals (Oster et al., 2011), especially when people are exposed to various risks in seeking healthcare, traveling to and from hospitals, and recovering after being treated (Crooks et al., 2010). In this regard, the ANT perspective could be extended to study the relationships between hospitals/clinics and medical tourism, although that may require a different set of analytical tools to unpack the interlaced dynamics.

Credit authorship contribution statement

Xiang Yan: Conceptualization, Methodology, Data Collection, writing-original draft preparation; Shen-jing He: Conceptualization, Project administration, Funding acquisition, Supervision, Validation, Writing-reviewing and editing.

Acknowledgements

We thank the editor and anonymous revieweres for their valuable comments. This study is sponsored by the National Natural Science Foundation of China (Project No.: 41671153 & 41871165).

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