

Promoting conservation or change? The UNESCO label of world heritage (re)shaping urban morphology in the Old Town of Lijiang, China

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RESEARCH ARTICLE

Promoting conservation or change? The UNESCO label of world heritage (re)shaping urban morphology in the Old Town of Lijiang, China

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Abstract The UNESCO label of World Heritage can attract a high number of tourists to heritage properties for their *Outstanding Universal Values (OUV)*. Although international studies have demonstrated the World Heritage system can contribute to stimulating cultural tourism and boosting the local economy, how this heritage-led development process promotes urban conservation and morphological changes in cities is yet to be explored adequately. This paper aims to explore the urban morphology of a historic Chinese city after its inscription on the UNESCO World Heritage List, taking the Old Town of Lijiang as case. The methods of spatial plan analysis and discourse analysis are used to analyse the data. The research findings have demonstrated that, theoretically, the Conzenian approach of urban morphology can be an effective framework for World Heritage OUV-monitoring. Methodologically, the analysis of spatial plans and multi-stakeholder interviews can reveal local urban morphology from macro to micro levels. Case-specifically in Lijiang, urban physical characteristics and building structures have been well maintained while traditional social fabric and neighbourhood networks have almost vanished. This research has incorporated the urban morphology approach into (world) heritage management in China, as well as worldwide, in order to maintain the balance between urban conservation and economic growth.

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1. Introduction

In 1972, the United Nations Educational, Scientific and Cultural Organization (UNESCO) started to implement the Convention Concerning the Protection of the World Cultural and Natural Heritage, aiming to prevent the deterioration of heritage and spread the best practices in sustainable development, as cultural and natural heritage properties are in risky situations worldwide (UNESCO, 1972; Alberts and Hazen, 2010). To be inscribed on the UNESCO World Heritage List (WHL), a heritage property must meet the inclusion criteria of authenticity and integrity to demonstrate its *Outstanding Universal Values* (OUV) (Alberts and Hazen, 2010). In essence, the management practices of World Heritage properties follow an OUV-based monitoring and protection process in line with the highest international standard to preserve their heritage authenticity and integrity (Pereira Roders and van Oers, 2010; Li et al., 2020a).

With growing global capital accumulation and mobility, the UNESCO label of World Heritage can be used as an effective marketing tool in the promotion of the tourism industry, attracting a high number of visitors with the OUV of inscribed properties and their vernacular cultural uniqueness (Caust and Vecco, 2017; Li et al., 2019; Yang et al., 2020). This is more significantly manifested within towns and medium-sized cities (Caust and Vecco, 2017). The official authorisation and designation of heritage can also contribute to urban socio-economic development (Marcotte and Bourdeau, 2012). Heritage sites can also attract business investments that create economic revenues from the tourism market through the marketing of local traditional lifestyles (Zhu, 2018). Thus, more employment opportunities and financial benefits are produced in local communities to positively support the maintenance and protection of heritage attributes and properties (Caust and Vecco, 2017). But the higher flows of both international and domestic tourists also have negative impacts on heritage sites, including environmental pollution, social exclusion and cultural degradation (McIntosh and Prentice, 1999; Yung et al., 2017).

It has been recognised that the inscription of World Heritage becomes a catalyst in changing the nature of heritage properties in relation to local social, cultural, economic and environmental developmental characteristics (Marcotte and Bourdeau, 2012). Heritage resources can be touristified to improve local wealth and the community's economic survival (Caust and Vecco, 2017; Shao, 2017). In the case of Shuangyi in the Chinese Zhejiang Province, Oakes (2013) further emphasises heritage preservation sometimes means preparing it for urban (re)development, and heritage has been a key element used in economic growth by both officials and local communities. Criticisms including over-commercialisation and commodification are then targeted at some World Heritage properties such as the Sweden Laponia area and the Chinese Xidi village

(Palomino, 2012; Xu and Dai, 2012). However, more specifically, how this heritage-led developmental process triggered by the UNESCO label promotes urban conservation and morphological changes within World Heritage properties has yet to be explored adequately by international studies (Caust and Vecco, 2017; Wang and Gu, 2020). But this is an indispensable theoretical basis for World Heritage OUV monitoring with a multi-scale approach missing currently. Therefore, this paper aims to develop a theoretical framework to further reveal the physical and socio-economic transformation of World Heritage properties at multiple scales through the urban morphology approach.

Based on the theoretical framework of urban morphology, this paper explored the morphological characteristics and changes of a historic Chinese city, the Old Town of Lijiang, after its inscription on the UNESCO World Heritage List (WHL) in 1997. Since then, known as one of the most famous tourist destinations in China, it has experienced both rapid tourism development with massive tourists arriving annually and rigorous heritage monitoring practices supervised by (inter)national standards and the World Heritage Committee (Su et al., 2020). But some derogatory terms are still being used to describe this change, for example, over-commercialisation, heritage commodification and the reaping of economic returns (Su, 2011, 2015). It is valuable and interesting to reveal the transformation process of urban morphology in Lijiang under such a complex context. Therefore, this paper aims to explore the physical and socio-economic transformation of local urban morphology from macro to micro scales in the Old Town of Lijiang, shaped by local tourism-oriented development as well as (inter)national heritage protection standards.

2. Literature review

2.1. Urban conservation and morphological approach

Urban morphology is an interdisciplinary approach focussing on physical form to reveal the characteristics of transformation and replacement of urban areas over time on various spatial scales (Breitung and Lu, 2017). The morphological approach has developed to move beyond the purely physical form to cover its social and economic forces, as well as utilisation and functions on the societal level (Breitung and Lu, 2017; Qian and Li, 2017). The theories of urban morphology are well-developed through the academic establishment of three major schools: M.R.G. Conzen of German–British origin, Muratori of Italian origin and Versailles of French origin (Moudon, 1997). Conzen School and French School are prone to the focus of the morphogenetic, emphasising the historic-geography connections, while the Muratori School is originally from the typology of architecture style, which stresses the historic evolution of the

morphology period (Chen, 2009). They have remained various purposes for studying urban morphology, while the fundamental components that are explored to look into urban transformation, replacement and evolvement are parallel across the three schools, i.e., form, scale and time (Moudon, 1997; Breitung and Lu, 2017).

The urban morphology approach has been integrated into the international studies of urban conservation and (re)development, to document, monitor and manage heritage attributes and values in an ever-changing circumstance (e.g. Breitung and Lu, 2017; Wang and Gu, 2020). Relying on Conzenian theory, Whitehand et al. (2011) have studied the urban morphology of heritage areas, to explore the relationship between urban landscapes and societies. As shown in the traditional English town of Ludlow, the Conzenian approach aims to facilitate descriptive studies on urban forms while also taking into account building functions and land utilisation (Conzen, 1988; Breitung and Lu, 2017). The Conzenian approach can be employed to explore the historic environment constituting tangible and intangible heritage, the local population's socio-cultural practices as well as socio-economic development, moving beyond the extreme focus of physical material objects (Whitehand et al., 2011; Li et al., 2021). Conzen's conception also has direct relevance to dealing with the practical issues of clarifying, organising and integrating current urban landscapes into conservation strategies (Conzen, 1988; Whitehand and Gu, 2007a).

Within the Conzenia approach, the concept of landscape units is proposed. Landscape units denote plan units comprising groups of buildings, open spaces, streets and plots (Whitehand and Gu, 2006; Xie and Gu, 2015; Breitung and Lu, 2017). These morphological elements are cohesively united to form specific spatial orders, wherein "they were built at the same time", encountered similar developmental constraints or "underwent a common process of transformation" (Breitung and Lu, 2017). A method of plan analysis has been effectively introduced to reveal the characteristics and primary landscape units of urban form. For example, Breitung and Lu (2017) explored the urban form of Suzhou from macro through meso to micro scales, including the overall spatial grid structure, historic water blocks as well as smaller elements of land, waterways, piers, bridges and riverbanks. Furthermore, in a Guangzhou study by Whitehand et al. (2011), the urban landscape units were analysed through multi-scales of the city plan, including the street system, plot pattern, building form and land utilisation. Therefore, the urban morphological approach can provide frameworks to explore and understand the conservation and evolvement of historic cities and towns. But still, current international studies are insufficiently focused on the integration of the intangible environment including socio-economic, cultural and political activities, into the understanding of physical urban morphology (Wang and Gu, 2020; Xie et al., 2020).

2.2. World Heritage designation and tourism-oriented development

The departure point of the UNESCO World Heritage designation is to identify, protect and monitor the OUV of the

natural and/or cultural heritage of mankind (Pereira Roders and van Oers, 2010). To achieve so, authenticity and integrity are established to be essential concepts in the Operational Guidelines for the Implementation of the World Heritage Convention (Alberts and Hazen, 2010; Li et al., 2020a). Furthermore, as heritage protection is moving beyond physical material objects to cover historic environments and landscapes as a whole, World Heritage properties' continuity and compatible change are also embraced to develop a more holistic and inclusive management process (Khalaf, 2020). Therefore, World Heritage management practices need to recognise both tangible and intangible heritage attributes while also identifying and monitoring values, expressions and meanings associated with these attributes (UNESCO, 1972; Bwasiri, 2011).

While World Heritage designation has contributed to advancing urban conservation regulations and practices worldwide, it is also being used as a marketing tool to facilitate local socio-economic development (Caust and Vecco, 2017). As the UNESCO label cultivates cultural reputation and competitiveness globally, massive influxes of visitors and new business people are drawn to World Heritage properties for various living and visiting purposes (Kim, 2016). Booming tourism development positively improves local investments, job creation, incomes and monetary revenue (Cui et al., 2021), wherein an interdependent relationship is formed between residents, tourists and business people (Jones and Shaw, 2012). The rapid growth of tourism market can lead to the acceleration of negative change in residents' traditional lifestyles, social networks (Kim, 2016) and urban physical forms (Caust and Vecco, 2017).

Regarding global observations, a shift of local industry from the mixture of agriculture, construction and forestry towards tourism has been observed in the Japanese village of "Ogimachi" in the Shirakawa-go region after its World Heritage inscription (Jimura, 2011). Furthermore, the designation of Hoi An has facilitated the "Disneyfication" of the ancient town. The functions of the historical buildings in the town have been rapidly replaced by cafes, galleries and restaurants. Local people are then no longer living their traditional lifestyles but are staging an "ersatz" local life as a background for tourists to take pictures (Caust and Vecco, 2017). The most typical case worldwide is Venice, which is severely suffering from its tourism success. Especially over the last ten years, ever-increasing over-tourism in the city has influenced the city's both spatial and social structures. As a result, residents are facing the uncontrolled growth of the accommodation sector, a lack of services such as groceries, cinemas, and hairdressers, and also increasingly high living expenses (Bertocchi and Visentin, 2019). These morphological changes are considered to be irreversible and can lead to various problems, including littering, crime, robbery, vandalism, noise and overuse of natural resources, as complained about by residents in the historical centre of Amsterdam in Gerritsma (2019). Ironically, the degradation of heritage values can always decrease tourist flows and break local economic development (Caust and Vecco, 2017).

Indeed, the inscription of World Heritage attempts to better protect and maintain the local physical and social fabric for its long-term continuity of cultural uniqueness.

But the UNESCO label can also switch the *OUV*-based management process towards tourism-oriented development. This is often a local-based decision, in line with the priorities of local authorities and national legislations. How this process can be better understood through an elaborated theoretical framework is still limited, and it is attracting international scholars' wide attention.

3. Materials and methods

This paper first starts with a literature review to build a theoretical framework on urban morphology and World Heritage management. And then, the empirical case of the Old Town of Lijiang was analysed to show how local urban morphology has evolved since its World Heritage inscription. The Old Town of Lijiang was selected as the case because both its physical and social fabrics have faced heritage protection and (tourism) developmental pressures (Li et al., 2020b). However, within the state-of-the-art concerning Lijiang, international studies are mainly focusing on its natural environment (Cui et al., 2011), heritage tourism (Su, 2015; Su et al., 2020), heritage value identification (Shao, 2017) and participatory governance (Li et al., 2021). It is still insufficiently explored how urban morphology has transformed in Lijiang, especially since the World Heritage inscription in 1997.

In this research, collected data include secondary data sources, including historical maps, satellite images, town pictures, local planning documents, and primary data gathered from multi-stakeholder interviews. Research methods of spatial plan analysis and discourse analysis were employed in proceeding data analysis, elaborated as follows.

3.1. Spatial plan analysis

Spatial plan analysis is a research method advancing the understanding of the historic form and development of cities and towns, originally developed by the M.R.G. Conzen school (e.g. Whitehand and Gu, 2007b; Whitehand et al., 2011). In the analysis process, image-based data including the town's satellite images (in 2021, 2013 and 2005), conservation plan drawings and town pictures were taken into account. Three steps were taken to reveal local morphology evolution, zooming from macro to meso, then to micro levels. First, from the aspect of macro-level, three-year maps were drawn based on satellite images and then overlapped to demonstrate macro spatial features, continuity and change in the town plan of Lijiang old town. Second, at the meso-scale, Lion Hill and the surroundings, with massive new-built and demolished buildings observed, were analysed to reveal its morphological evolution process, especially focussing on the relocation project of public institutional buildings. Lastly, this research zoomed into the information of plots, building forms and functions, to reflect the use and renovation of traditional dwellings at the microscale of the Old Town of Lijiang.

3.2. Discourse analysis

This paper employed a discourse analysis (see Martínez (2020)), focussing on various stakeholder groups'

perceptions and experiences in local morphological development. The data was collected from the fieldwork in Lijiang between September and December in 2019, and between August and October in 2021. Open-ended interviews were conducted with local government officials, native residents, businesspeople and tourists selected through purposive sampling. Nine local administrators were first interviewed, and then they recommended several native residents and businesspeople who were familiar with local heritage practices and spatial characteristics. For example, three recommended native residents were born and raised in the old town and were still living here while the other 13 native residents had moved off but still had homes within the old town. Regarding businesspeople, they were retailers, restaurant owners or guesthouse owners who had been running a business for over a year within the old town, and tourists were interviewed at random.

Interview foci and questions were designed in two sets. The first set was about physical heritage structures and renovation while the second set focused on people's perceptions of local socio-cultural and economic development. The interviewees were asked the questions one by one while tourists only discussed the second-set questions based on their visiting experiences. The interviews were then transcribed to be substantial first-hand data. Interviews were originally conducted in Chinese and then translated into English texts. A qualitative system of open codes regarding both tangible and intangible characteristics of local morphology was applied to analyse interview transcripts. Various stakeholders' responses were compared and incorporated into the plan analysis results. In addition, the authors also collected government documents and institutional regulations of the old town's planning and conservation, as well as drawings of renovated heritage buildings, incorporated into the data of the discourse analysis, to reflect the "objectivation of the spirit the succession of societies that inhabits it" (Whitehand et al., 2011).

4. Targeted case study: the Old Town of Lijiang

4.1. A brief history

The Old Town of Lijiang is located in Northwest Yunnan province in Southwest China. It was built 800 years ago in the Chinese Song Dynasty and then reached its socio-economic prosperity in Ming Dynasty (Su, 2010). In 1986, Lijiang (City) was designated as a Chinese national historic and cultural city (*lishi wenhua mingcheng*). In 1996, the Old Town of Lijiang was severely damaged by a Ms 7.0 earthquake and the protection through reconstruction of local traditional dwellings was carried out following the guidance and standard of the UNESCO World Heritage Centre (Sun and Wang, 2012). In 1997, the Old Town of Lijiang was approved to be a World Heritage property in the 21st session of the World Heritage Committee by meeting inscription criteria (ii), (iv) and (v). The UNESCO World Heritage Centre states Lijiang is an exceptional ancient town set in a dramatic landscape which represents the harmonious fusion of different cultural traditions to produce an urban landscape of outstanding quality, as shown in Fig. 1.



Fig. 1 View of the Old Town of Lijiang, 2019 (Source: Author).

The Old Town of Lijiang attracts global attention and obtains a high reputation among competitive tourism markets. In 1994, around 0.22 million tourists visited the old town. After its inscription on the World Heritage List, the number of tourists reached 1.7 million, 9.1 million and 54 million in 1997, 2010 and 2019, respectively (Sun and Wang, 2012; Lijiang Bureau of Statistics, 2019). And in 2019, the local revenue from the tourism market was 107.8 billion RMB (around 16.7 billion US dollars), with an increase of 7.99 percent compared to the previous year (Lijiang Bureau of Statistics, 2019). As a World Heritage property, the protection and management of Lijiang old town are under the responsibility of the national and local administration, monitored by the international standards to protect its outstanding universal value. Meanwhile, the site goes through rapid local economic growth and tourism market booming.

4.2. Multi-level policies

After the inscription on the WHL, the local government of Lijiang established a heritage committee as a group of consultants to manage the daily activities related to the old town in 2001 (Su, 2010). The heritage committee then expanded to be a place-specific governmental agency, called the Conservation and Management Bureau of the World Heritage Lijiang Old Town (hereafter: the Management Bureau, *shijie wenhua yichan lijiang gucheng guanli baohu ju*) in 2005 (Su, 2010). The responsibilities of the Management Bureau include the protection of vernacular heritage attributes and values, the improvement of infrastructure and community life as well as the supervision of the local business market and tourism activities (Li et al., 2020b). Therefore, the morphological development, characteristics and changes of Lijiang old town are largely affected by how the Management Bureau follows and implements international and national policies at the local level.

Within the international policy document, the 2019 Operational Guidelines for the Implementation of the World Heritage Convention, some key concepts and requirements of World heritage protection, management and monitoring

are articulated, including heritage authenticity, integrity as well as community capacity-building and participation (UNESCO, 2019). The Chinese government has also issued a core policy document, the Administrative Measures for the Protection of World Cultural Heritage. This national policy document requests local governments and heritage managers to administer World Heritage sites following international standards and emphasises that local developmental activities should not damage the authenticity, integrity and OUV of the heritage site (Li et al., 2020a). In line with that, at the local level in Lijiang, the Management Bureau has issued two manuals, i.e., the *Conservational Governance of Lijiang Old Town's Landscape* and the *Protective Renovation of Lijiang Old Town's Traditional Dwellings*. The manual of the *Conservational Governance of Lijiang Old Town's Landscape* focuses on the protection of spatial characteristics, such as topographical conditions, street layouts and natural environments (Zhu and Wang, 2008). In the manual of the *Protective Renovation of Lijiang Old Town's Traditional Dwellings*, more architectural details of traditional dwellings are illustrated, including floor layout, building materials and structures (Zhu and Xiao, 2006). These two manuals are the legal guide for the Management Bureau to supervise and approve the renovation construction work of the old town's traditional dwellings and public spaces.

Drawing on these multi-level policies, it appears that the national and local regulations support the physical morphological characteristics of Lijiang old town towards the protection of local heritage and traditional dwellings. However, the socio-cultural and economic development and social fabric of the old town are less addressed. As the UNESCO state of conservation reports stated, the Old Town of Lijiang and the community's traditional lifestyles have been threatened by local tourism activities and businesses, because an integrated plan to balance urban development and conservation lacks (Jing and Nishimura, 2008; UNESCO, 2013). In line with these problems, as the director of Lijiang old town's market operation and management explicitly enunciated,

"Balancing the pressure of heritage protection and tourism development is always a challenge for us. To keep the World Heritage label, we need to protect our traditional dwellings, streets and waters with minimal change and damage, following national and international guidance. But still, because of financial problems, we have to promote tourism development and business activities. Otherwise, we would not have enough money for the maintenance works of local infrastructure and traditional dwellings."

As the director introduced, besides the two manuals for heritage protection, the Management Bureau has also issued a list of permitted business categories, controlling the application process when residents would like to start a new business. The list aims to ban unsympathetic commercial use and maintain the local social fabric. It includes four categories: encouraged, allowed, discouraged and forbidden business. The encouraged business includes ethnic-cultural businesses such as traditional paper-making, silver-smithing and Dongba character exhibition.

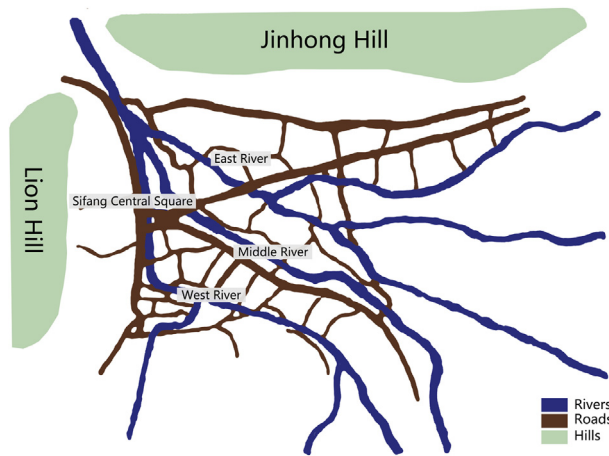


Fig. 2 General spatial structure of the Old Town of Lijiang. (Source: adapted from Zhu and Wang (2008) by Author)

The allowed businesses include traditional product selling such as woodcarving and tea, while bars and jewellery shops are examples of discouraged ones. But internet cafés, e-game rooms and tattoo studios are forbidden within the old town. Thus, in supporting global practices of World Heritage, the Old Town of Lijiang has made the main effort in the protection of heritage and traditional dwellings, while local socio-economic activities are also playing an indispensable role. In essence, how the World Heritage label brings to the urban morphology of the Lijiang old town is still yet explored, which is the hybrid results of local heritage conservation and socio-economic development.

4.3. Morphological characteristics

4.3.1. Macroscale: principal characteristics of the protected core zone

Retrospecting the evolvement of Lijiang's early settlements through historical maps and cartographic records, the character of the local urban landscape comprises of the mixed manifestation of historic streets, traditional dwellings, water landscapes, hills, and daily activities of local ethnic minorities. As native residents described, "the spirit of our old town is its co-existence with water and hills". Fig. 2 illustrates the general spatial structure of Lijiang's urban morphology, including the central square (*sifangjie*), the water-supply system, street layouts, radial pathways, Lion Hill and Jinhong Hill. This section presents the transformation and development of Lijiang old town after its inscription as World Heritage in 1997 by overlapping urban spatial plans in 2005, 2013 and 2021. Furthermore, local communities' perceptions of the transformation and development were also integrated into the plan analysis and discussion.

Spatial plans of the old town in 2005, 2013 and 2021 were overlapped, as shown in Fig. 3. Within the overlapped urban spatial plan, the continuation of the locations of *sifangjie*, cultural relics, traditional dwellings, and the networks of pathways and canals can be well recognised, indicating the Management Bureau has managed to maintain the general spatial structure of the local urban morphology. After

Lijiang's World Heritage inscription, the old town underwent several large-scale (or urban scale) urban conservation and renewal practices. For example, the post-earthquake renovation project of the damaged dwellings and the relocation project of public institutions on Lion Hill were the two representative practices (co-)conducted by the Management Bureau to protect local morphological characteristics. The renovation project of earthquake-damaged dwellings started in 2002, funded by the international organisation of Global Heritage Fund and the Management Bureau of Lijiang old town. During this project, around 300 native families received subsidies to renovate their damaged dwellings while they also had to meet the qualifications of living within the old town and preserving the authentic structure and layout of their homes. The initial attempts of these regulations were to support the maintenance of damaged heritage dwellings as well as the protection of the physical and social layout of the old town. Regarding the project of Lion Hill, the local government and the Management Bureau started to relocate the buildings of public institutions and dwellings in poor condition out of the hill in 2006, such as Traffic Police Station and City TV Station, to beautify the environment around the hill.

As shown in the overlapped plan (Fig. 3), even though hundreds of dwellings underwent maintenance or rebuilding during the post-earthquake renovation project, their spatial layouts and building scales were strictly controlled. Thus, the local morphological structure of (groups of) buildings has been well maintained. As a consequence of the relocation project, numerous buildings on Lion Hill also underwent demolition and then reconstruction. The initial objective of this project was to remove modern buildings while enhancing the atmosphere of Lijiang's traditional homes and lifestyles.

However, along with the booming of the tourism industry, the social fabric and land use of local urban morphology have dramatically changed since the 2000s. In the interview, a leader of a neighbourhood residential committee stated,

"Very few native residents are still living within the old town. If I have to give you a number, within my neighbourhood, that over 90%, or even over 95% of natives have moved away. Only some elderly people, or families whose property ownerships are not clear, choose to live within our old town."

Natives moved out of the old town because they could rent their homes to entrepreneurs for very high rents. This means that, in the meantime, over 90% of the land for residential use has been turned into commercial use including guesthouses, shops and restaurants. This has also been perceived by tourists and reflected in their visiting experience. A female visitor staying in a Lion Hill hotel said, "without a doubt, Lijiang is the best historic town in China, very ancient, attractive and well protected; but I can hardly find natives, so it is more like a short-stay destination for tourists than a living town for Naxi people". This has been pointed out by (inter)national experts, suggesting further actions to be taken. The local government issued some regulations to prevent local population replacement between 2002 and 2005. For example, the government

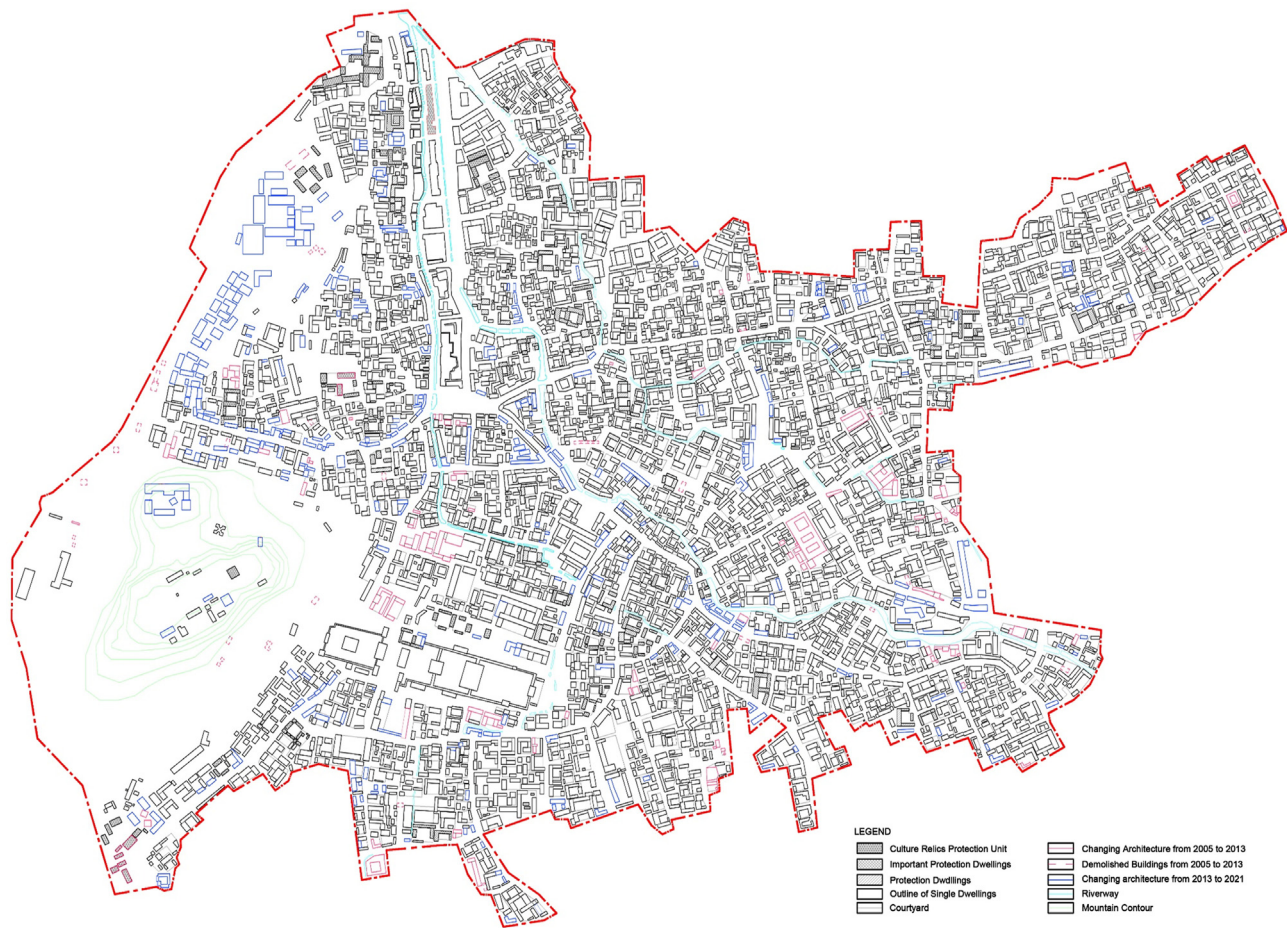


Fig. 3 Spatial transformation of Lijiang's principal plan between 2005 and 2021 (Source: Author).

offered subsidies to natives who kept living within the old town and shops and restaurants were required to hire natives (Shao, 2017). However, considering the differential between the subsidies and their homes' high rents, natives still insisted on moving out of the old town. Therefore, the Management Bureau has to then rent or buy dwellings from natives for non-commercial use, for example, exhibiting traditional tea making and Dongba characters. These efforts aimed to keep traditional business and cultural occupations from being replaced by current tourism businesses and non-native residents.

Regarding socio-cultural activities within the old town, including traditional festivals and rituals, local people got involved by the Management Bureau to serve for tourism business, as a native resident described:

"The Management Bureau has financed and organised various cultural activities in our traditional festivals, such as mooncake-making in Mid-Autumn Festival and collective dancing in the Torch Festival. These activities make me proud of ethnic culture, but sometimes, I also feel like these activities are more like shows to play for tourists as that is exactly what tourists expect to experience."

However, several tourists expressed their complaints while being interviewed, using phrases like "hard to find

natives and vernacular lifestyles", "always about money and business" or "not a living town but a touristic destination" to describe their feelings about the old town's morphological characteristics. In addition, a non-native guesthouse owner showed a positive attitude towards these cultural activities,

"Tourists, natives and we business people are invited to participate in local traditional cultural activities. This is a good way that new residents can learn from natives about vernacular culture. Then more tourists come to Lijiang to experience such authentic cultural activities, promoting economic development."

Therefore, after the inscription on WHL in 1997, the Management Bureau has endeavoured to maintain Lijiang old town's urban morphological characteristics. And based on the analysis of local town plans, local physical morphologic fabric and elements, including water landscapes, streets, dwellings and hills, have been well maintained or even "enhanced" by removing some non-vernacular-style public buildings. However, because of the rapid growth of tourism development, land use, local population and lifestyles have experienced numerous changes and replacements, influencing local social morphological fabric. In the following section, this paper focuses on the area around Lion Hill, as this area

experienced an environmental rehabilitation project. And many removed, demolished and rebuilt dwellings have been observed in the area within the overlapped urban spatial plan. Changes in land use and building functions were also integrated into the discussion section.

4.3.2. Mesoscale: Lion Hill and its changing surroundings

With topographical advantages, Lion Hill is a vital part of Lijiang old town's OUV for its natural landscape merits and aesthetic characteristics. Many historic cultural buildings and sites are around/on the hill, including White Horse and Dragon Pool Temple on the South, Wenchang Palace on the North, Mu Mansion on the East and Wangu pagoda on the top. To protect the value of Lion Hill, the Management Bureau has conducted and invested in several projects regarding environmental beautification and the demolition of non-local-style buildings. Therefore, this section has zoomed into Lion Hill and its surrounding areas, to analyse morphological changes at the mesoscale.

As Fig. 4 illustrates, a mass of buildings on Lion Hill was demolished before 2013, and their textures were different from local traditional dwellings. After 2013, buildings were then rebuilt on the same plots while their textures were more similar to local dwellings. These morphological results exactly reflected the "spirit" of the Management Bureau when conducting the relocation project of public institutions on Lion Hill. This project was initiated in 2006, and then until 2013, 12 public institutions (21,468 m²) and several dwellings (602 m²) had been demolished, in which more than 100 million RMB (15.6 million US dollars) were invested (The Government of Lijiang City, 2013). With many buildings demolished and land value rising, the Management Bureau introduced some real estate companies to invest money in building touristic facilities and beautifying public spaces. And these companies were then able to have chances to facilitate their own businesses and receive more economic benefits. Several guesthouse owners addressed their compliments on the relocation project. One of them said,

"Lion Hill is a vital touristic destination of good and open views within the old town, and this relocation project has made the environment much better so that more tourists come to book our guesthouses. At the same time, other business activities are also enriched, including cafés, restaurants and souvenir shops."

More specifically, buildings that were rebuilt in the Northwest between 2013 and 2021 have the functions of hotels or guesthouses, such as the Aman Dayan Hotel (see Fig. 5) and Wenyun Hotel. These hotels or guesthouses applied local construction materials and techniques to (re) building works, and the Management Bureau considered those to be acceptable,

"Before they start the construction work, we need to approve their design schemes, which must be in line with the characteristics of our Naxi traditional dwellings, including materials, colours, geometry, etc. Only by doing so, we can protect and retain the traditional landscape of our old town."

Therefore, land use and building functions in 2021 within the area of Lion Hill mostly were for commercial use,

including guesthouses, hotels, shops and restaurants. And because of natural merits and topographical advantages, land value continued to rise so real estate companies have built expensive hotels and entertainment facilities on the top of the hill. Although the characteristics of buildings have been well retained, controlled by strict construction regulations, building functions have largely changed within Lion Hill. There is almost no residential land use or building function for natives' daily living, and this is oriented to tourism development, deviating from the OUV monitoring requirements within the Lijiang old town.

4.3.3. Microscale: plots, building forms and functions

At the microscale, plots and buildings are the essential elements reflecting the morphological characteristics of Lijiang old town. Within a plot unit, a traditional dwelling is organised with a courtyard. Therefore, in the Old Town of Lijiang, a landscape unit, to some extent, is a courtyard house, which was occupied by a (big) family in the past. And now, a courtyard is still part of the land use or building function during heritage designation. Buildings within the old town are categorised as cultural relics protection units (*wenwu baohu danwei*), important protected dwellings (*zhongdian baohu minju*), protected dwellings (*baohu minju*) and ordinary dwellings (*yiban minju*), in sequence from higher to lower protection levels. Fig. 6 collected the information and pictures of various buildings at the four protection levels, demonstrating morphological characteristics in building forms and functions within the old town.

Zooming into the microscale of building forms and functions, this research has also observed several conservation and reuse strategies for the Lijiang traditional buildings strictly supervised by the Management Bureau. Lijiang buildings that have been designated on the list of cultural relics protection units are mostly public buildings with great cultural significance, for example, Wenchang Palace and Mu Mansion (Fig. 6:1a&1c). Essentially, they are mostly used as museums to disseminate the history of the old town. The Management Bureau thus has endeavoured to conserve building "authentic" structures and materials, and sometimes rebuilt several cultural relics for cultural protection and tourism development (Su, 2011). Therefore, only minor and slow changes have happened to cultural relics protection units within Lijiang old town after the inscription in 1997.

Regarding the protection levels of important protected dwellings and protected dwellings, these buildings generally are well-conserved and sustain historic significance. As Fig. 6:2 shows, the building forms of important protected dwellings are well-protected and their authentic morphological expressions are manifested to a high degree. Although their functions include guesthouses and museums, building owners tend to maintain their traditional features in various business activities, and this is also strictly controlled by the Management Bureau. The functions of the Hengyugong Museum (Fig. 6:2c) are both museum and residence while one of the house owners is the museum manager. And he said, "I am lucky as my courtyard is an authorised museum of traditional dwellings with annual subsidies provided by the government so I can continue living in the old town without financial worries". However, the use of protected dwellings is more varying in business

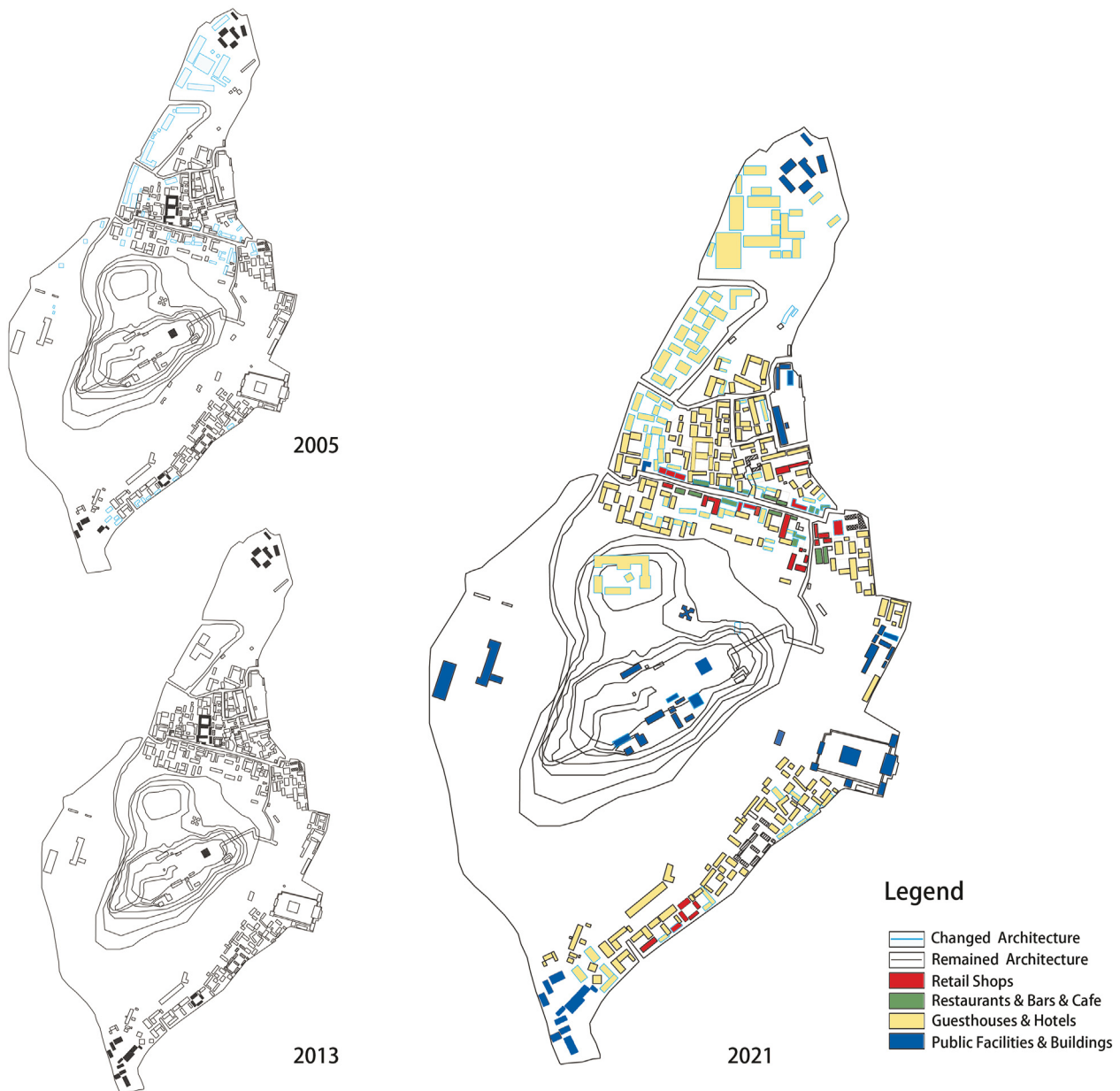


Fig. 4 Changes and replacements within the area around Lion Hill in 2005, 2013 and 2021 (Source: Author).

functions and building forms with a bit more flexibility. Some dwelling functions have been changed to be restaurants and cafés while building details are not vernacular such as Japanese-style wood and large panes of glass (Fig. 6:3b).

The forms and functions of ordinary dwellings, as observed, are more tourism-oriented, including bars, souvenir shops and internet-influencing restaurants (see Fig. 6:4). Their business can be copied from anywhere else, such as Sichuan hotpot, Japanese-style guesthouses and African instruments. While interviewing a business owner, he described the renovation process of his café and guesthouse,

"I do like the wooden structures of Lijiang traditional dwellings and vernacular culture. And I understand that,

to meet local construction regulations, my renovation work must use wood and bricks rather than steel and large-panel glass. So I invited a professional team from Shenzhen to do the design scheme following the Japanese guesthouse style of wooden structures and colours."

In general, at the microscale of building forms, Lijiang has well remained its traditional physical building structures and materials despite minor exotic invasion elements observed. However, while collecting the information on building functions, this research has hardly found many dwellings for natives' residences. And this is the biggest change in the social fabric after Lijiang's World Heritage inscription, as a guesthouse owner expressed his disappointment,



Fig. 5 Aman Dayan hotel in the Old Town of Lijiang. (Source: https://www.sohu.com/a/250374411_99936470, Accessed on October 28, 2021)

"I decided to move to Lijiang in 1995 when I travelled and found here was a land of peace and Naxi minority culture. I witnessed the change in the old town over the last 20 years. But now, Naxi people move away and all people around me are talking about how to do more tourism business rather than how to enjoy the Naxi lifestyle better. Maybe it is also time for me to leave."

5. Discussion: a landscape-based approach to urban heritage monitoring

While inscribed as World Heritage, the awareness of protecting heritage attributes and values can be raised in the national government, local governments and residents, and strict plans are implemented to maintain the UNESCO label, associated with international policies and standards. This is true in the Old Town of Lijiang, where multi-level policy documents and regulations have been issued and implemented for the conservation and rehabilitation of the site. As this research demonstrated, the physical morphology of Lijiang generally has been well maintained regarding the old town's spatial structure, streets, natural elements, building structures and materials. Although this appears to be a heritage-oriented management system, the case study of Lijiang still poses a more complex situation that is associated with rapid tourism development.

The UNESCO label of World Heritage has attracted millions of tourists to visit the Old Town of Lijiang, while its urban morphological characteristics have experienced an evolvement process of accelerated change. Especially, local social fabric and residents' living experiences are being promoted to meet tourism developmental requirements. Lijiang's development and its *OUV* protection are largely associated with the local tourism market. This could reduce the resilience of local heritage and the community. For example, because of travel restrictions affected by COVID-19, both international and domestic tourists cannot visit Lijiang as much as before. And then, around half of the guesthouses within the old town were closed while over 70 percent of restaurants were also closed in late 2021. Many business people cannot afford

high rents or did not feel optimistic about local short-term economic development so they chose to leave (indicated by an interview with several guesthouse owners and a local administrator in December 2021). Therefore, the UNESCO label has largely promoted the local tourism industry in Lijiang, but such booming tourism development has promoted a dramatic change in the traditional social fabric that could weaken the society's stability and resilience, resulting in a decrease in the structure of society and its connectivity to its parts.

Within such a dangerous and complex situation, how could we further think of the inscription of World Heritage, a political campaign of city branding or an international standard of heritage protection? As evidenced in Lijiang, despite the initial purpose that is to protect heritage attributes and values better, the inscription of World Heritage is a double-edged sword to local morphological characteristics, facilitating the revenue of urban development and also placing huge pressure on changing the place's nature in both spatial and social fabrics. A more holistic approach to heritage management is urgently needed, integrating heritage resources into sustainable urban development. The resource and environmental protection legislation should also be improved. Drawing on the international concept of authenticity and integrity, the management framework of heritage continuity and compatible changes are an indispensable part of this holistic approach, directly bringing to the fore traditional social-cultural and economic fabric and characteristics. Besides, World Heritage management requires a comprehensive and sustainable view to consider the efficiency of resource use, integrating economic, social, ecological benefits and cultural development, to maximise its comprehensive benefits. Meanwhile, the awareness education for the local residents and policy guidance for the government need to be strengthened. For example, more educational activities could be carried out so that local residents can truly realise the importance of inheriting local culture and protecting neighbourhood networks.

Current international approaches to urban conservation and heritage monitoring are moving beyond isolated heritage materiality towards a more inclusive management process of historic urban landscapes (Wang and Gu, 2020). In line with this, UNESCO (2011) published a document of the Recommendations on Historic Urban Landscape (HUL) to manage heritage incorporated into sustainable urban development. Within the HUL Recommendations, cities are regarded as the results of the evolvement of multiple urban layers while cultural, natural and human resources are all needed to take into account through a landscape-based approach (Rey-Perez and Siguencia Ávila, 2017). The urban morphology approach can help further categorise historic urban landscapes into small urban landscape units, bridging the HUL Recommendations' requirements by this targeted approach to urban heritage governance. For example, as discussed in this research, the components of the old town's urban landscape cover traditional dwellings, hotels, water landscapes, green areas, streets, squares and community traditional lifestyles. This can help further a holistic view and appreciation of cultural, natural and human resources as proposed in the HUL Recommendations. In addition, the Conzenian approach takes various local communities' experiences and expectations into account, to form a

1 Cultural relics protection units



2 Important protected dwellings



3 Protected dwellings



4 Ordinary dwellings



Fig. 6 Building forms and functions of four protection levels in Lijiang old town (Source: Author).

community-based process. This is specifically key for World Heritage properties; because World Heritage management is associated with the top-down process from the UNESCO World Heritage Centre to local governments and managers. In practice, local communities, as cultural bearers, know better their heritage and cultural identities than international experts; therefore, following the urban morphology theory, a landscape-based approach could be effectively applied in urban heritage monitoring, to achieve both local-based thinking and acting (Jones and Shaw, 2012).

6. Conclusion

The designation of UNESCO World Heritage has become an international label publicising the great significance and

values of heritage properties worldwide. And it leads to a more strict protection standard and also a competitive reputation in tourism development. Within such a complex situation, it is often brought to the table of international academic debates on how this label (re)shapes the morphological characteristics and values of World Heritage properties. Therefore, by applying the research methods of spatial plan analysis and discourse analysis and integrating the urban morphology methodology into World heritage studies, this paper develops a methodology to explore the morphological transformation of the Old Town of Lijiang, from macro to micro levels, after its inscription on the World Heritage List in 1997.

Through the exploration of urban morphology in Lijiang, the research findings have demonstrated that, theoretically, the Conzenian approach of urban morphology can be

an effective framework for World Heritage *OUV* monitoring. Methodologically, the analysis of spatial plans and multi-stakeholder interviews can help reveal the characteristics of local physical and social fabrics from macro to micro levels. And case-specifically in Lijiang, urban physical characteristics and building structures have been well maintained while traditional social fabric and neighbourhood networks have almost vanished since Lijiang's World Heritage inscription in 1997. Over the last 20 years, Lijiang's macro spatial structure has been well-protected, including its essential landscape elements of the central square, waters, streets, residential blocks and hills. And interestingly, the traditional morphological features of Lijiang old town have even been "enhanced". As evidenced in the mesoscale of Lion Hill and its surroundings, public institutional buildings with inharmonious building styles have been removed, to only remain or (re)build more Lijiang-vernacular-style hotels, touristic destinations and guesthouses. While zooming into the microscale of building forms and functions, traditional dwellings are seldom used for natives' residences but more for touristic requirements, including restaurants, hotels, shops and guesthouses. These continuities and replacement of urban morphological features, to some extent, are also the reflection of the "spirit" of the government and local heritage users. The Management Bureau has placed its main efforts on supervising the construction of the town's conservation and dwellings' renovation while the booming tourism market has produced huge revenue to support all these urban governance and protection practices (Li et al., 2020).

The application of the Conzenian approach in the Old Town of Lijiang recommends a more holistic and integrated landscape-based management process for urban heritage, going beyond the conservation of material structures and objects. As inspired by the morphological exploration in Lijiang, the *OUV*-based monitoring of World Heritage needs to cover both the tangible and intangible aspects of physical and social fabrics and characteristics. And following the core concept of authenticity and integrity, international standards need to articulate the importance of the protection of traditional social fabric more explicitly. In line with that, continuity and compatible changes also need to be integrated into the UNESCO World Heritage Convention, to better employ the UNESCO label in holistically protecting World Heritage properties. And the theory of urban morphology can be then further expanded, as a landscape-based management approach of urban heritage considering form, time and scale, to develop a theoretical framework in *OUV*-monitoring in China and also the whole globe.

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Declaration of competing interest

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