Construction and Application of a System for Assessing the Value of Non-World Heritage Tulou in Pinghe County, Fujian Province, Based on the Analytic-hierarchy Process

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Abstract

China’s Fujian tulou represent a valuable source of human heritage. With the exception of 46 tulou designated as World Heritage sites by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the tulou in Pinghe county, Zhangzhou city, which are classified among more than 3,600 non-World Heritage tulou, are the most representative of southern Fujian culture. However, as the Pinghe tulou have not been classified as World Heritage Sites by the World Heritage Committee, they lack financial support, receive minimal attention and have undergone little effective reconstruction. As a result, they are subject to structural deterioration. The goal of this article is to provide grounds for the functional repositioning of tulou by constructing an appropriate system for evaluating tulou in Pinghe county, based on the analysis of relevant factors such as value, location and material conditions. First, the general conditions and architectural characteristics of the Pinghe tulou are analysed, and their value composition is summarised. Next, a system for assessing the value of the tulou is developed, with rigorous use of the analytic-hierarchy process, the expert-scoring method and matrix calculation. Next, case studies of tulou in the town of Jiufeng, Pinghe county are outlined to illustrate opportunities to repurpose tulou through renovation. The aim of this article is to report on the construction of a system for assessing the value of tulou and contributing to related research on the conservation and reconstruction of the Fujian tulou.

Keywords: Analytic-Hierarchy Process (AHP); Pinghe Tulou; Evaluation system; Conservation and reconstruction

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1. Research background

There are 476 tulou in Pinghe county, Zhangzhou city, Fujian province. Of numerous tulou not classified as World Heritage Sites, the Pinghe tulou are the most representative of Fujian tulou. To date, 3,733 tulou in Fujian province have been officially recognised; they are distributed mainly in Nanjing county and Pinghe county, Zhangzhou city; Yongding county, Longyan city; and Huaan county, Quanzhou city. Forty-six Hakka tulou in Nanjing county, Yongding county and Huaan county were listed as World Cultural Heritage Sites by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in 2008, and are thus referred to here as ‘World Heritage tulou’. Pinghe county has the highest concentration of non-World Heritage tulou in Fujian province.

Unlike World Heritage tulou, the tulou in Pinghe county are numerous and widely distributed, reflecting a range of geographical relationships between the tulou and surrounding villages. Due to their variation in value, strategies for reconstruction are relatively flexible.

However, due to the sheer number of Pinghe tulou, their lack of World Heritage status and a weak local economy, efforts to conserve and reconstruct these buildings have long remained stagnant. Many valuable tulou have been neglected or even abandoned. Against this backdrop, the aim of this article is to construct a reasonable system for assessing the value of Pinghe tulou, and thereby to supplement and refine existing research on the protection and repurposing of non-World Heritage tulou.

2. Related research

2.1. Value and spatial characteristics of Fujian tulou

Previous studies of tulou in Fujian province mainly cover habitation patterns, construction features and spatial and architectural characteristics. Tulou construction strategies and types of spatial layout are summarised, providing historical insights into climate-adaptive architecture and the design of amalgamated dwellings (Hu Yang, 2012; Li Huasheng, 2013; He Xuanqiang, 2013; Zhou Hui, 2015). Researchers have also discussed the history of the development of tulou and assessed the buildings’ conservation value in terms of history, culture and construction technologies (Liu Meiqin, 2014).

2.2. Conservation and reconstruction strategies for Fujian tulou

Previous studies of the Fujian tulou provide an introduction to the process of applying for World Heritage status; some analysis of preliminary protection strategies; discussion of the current status, grades, targets, principles and scope of protection management; and proposals for methods of protection (Zhang Zucheng, 2010). In short, most researchers have addressed the current status of and problems with the protection of World Heritage tulou in Fujian, and proposed solutions to particular problems (Chen Danmei, 2013; He Xiaoxian, 2013). Some have analysed the positioning, resource development, products and infrastructure of cultural tourism in relation to World Heritage tulou in Fujian. Others have identified problems with the cultural tourism surrounding World Heritage tulou and recommended strengthening regional cooperation, integrating other natural and cultural resources and exploring Hakka culture in greater depth (Liang Haiyan, 2011; Xu Guifeng, 2013). In addition, some researchers have analysed the material, social and cultural features of tulou and considered the application of effective strategies for the protection and sustainable development of the buildings (Shao Wang, Su Yu, Li Shi, 2012). A model for the development of a cultural and creative tourism industry centred on tulou in Nanjing county has been proposed (Jiang, Zhenna, Jianga, 2011).

3. Analysis of current condition of Pinghe tulou and summary of problems

According to their shape, the tulou in Pinghe county can be categorised as square, round or multi-courtyard tulou; according to their population composition, they can be categorised as Hoklo tulou, Hakka tulou, etc.; and according to their planar layout, they can be categorised as unit-type tulou or corridor-type tulou.
