

## Research on the Evolution of Public Space in Tourism-Oriented Traditional Rural Settlements

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**Abstract :** The hundreds of years of slow succession of living environment in rural area is a crucial carrier of China's long history of culture and national wisdom. In recent years, the space evolution of traditional rural settlements has been promoted by the intervention of tourism development, among which the public architecture and outdoor activity areas together served as the major places for villagers, and tourists' social activities are an important characterization for settlement spatial evolution. Traditional public space upgrade and layout study of new public space can effectively promote the tourism industry development of traditional rural settlements. This article takes Qi County, one China Traditional Culture Village as the exemplification and uses the technology of Remote Sensing (RS), Geographic Information System (GIS) and Space Syntax, studies the evolution features of public space of tourism-oriented traditional rural settlements in four steps. First, acquire the 2003 and 2016 image data of Qi County, using the remote sensing application EDRAS8.6. Second, vectorize the basic maps of Qi County including its land use map with the application of ArcGIS 9.3 meanwhile, associating with architectural and site information concluded from field research. Third, analyze the accessibility and connectivity of the inner space of settlements using space syntax; run cross-correlation with the public space data of 2003 and 2016. Finally, summarize the evolution law of the public space of settlements; study the upgrade pattern of traditional public space and location plan for new public space. Major findings of this paper including: first, location layout of traditional public space has a larger association with the calculation results of space syntax and further confirmed the objective value of space syntax in expressing the space and social relations. Second, the intervention of tourism development generates remarkable impact on public space location of traditional rural settlements. Third, traditional public space produces the symbols of both strengthening and decline and forms a diversified upgrade pattern for the purpose of meeting the different tourism functional needs. Finally, space syntax provides an objective basis for location plan of new public space that meets the needs of tourism service. Tourism development has a significant impact on the evolution of public space of traditional rural settlements. Two types of public space, architecture, and site are both with changes seen from the perspective of quantity, location, dimension and function after the intervention of tourism development. Function upgrade of traditional public space and scientific layout of new public space are two important ways in achieving the goal of sustainable development of tourism-oriented traditional rural settlements.

**Keywords :** public space evolution, Qi county, space syntax, tourism oriented, traditional rural settlements

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