Space as Sociocultural Construct

Subjects: Architecture And Design
Contributor: Kangle Ding

Space as sociocultural construct means that the regional and sociocultural forces shapes and differs the space ordering in settlements and explains the potential projection mechanism. Space-embodied social purposes are easier to be comprehended than analyzed, but with the help of the calculation and stimulation by the software based on space syntax theory, clarifying the tacit sociocultural meanings embedded in the spatial configuration was possible. traditional residence; spatial form; space syntax; genotype; sociocultural factor

Keywords: traditional residence ; spatial form ; space syntax ; genotype ; sociocultural factor

1. Introduction

To embrace industrialization and modernization, China has been undergoing a thorough reform in rural construction for over a century. Since the regime stabilized in 1949, rural construction framework and methods have gradually narrowed down from governance mechanisms and economy transformations to the remolding of living environment. This process can be divided into four stages as presented in **Table 1**: Collectivization period (1949–1978); Household Contract System period (1978–2005); New Rural Construction period (2005–2013), and the period under the background of new urbanization (from 2013 to now) [1] (p. 123).

Figure 1 shows 7 typical ground floor plans of residences across different periods surveyed in Luzhangwan village in the north of Zhejiang Province with the most developed rural areas in China. A comparison between this series of plans shows an apparent continuity in spatial pattern, which is centered by an ambiguous space or courtyards (the dotted parts) and sustained regardless of building materials, structure and appearance. However, an abrupt mutation occurred in the latest proxy built in 2013 in a relocated collective settlement—the inner courtyard disappeared, which changed the orientation and sequence of the other spaces. This is not an individual case. In the fourth period, local governments almost assumed control of the execution of rural construction behaviors, supported by external design forces selected through bidding. Thus far, the users have completely lost control of their living spaces, with homes degenerating to houses that scarcely echo habitants' patterns of movement, which arise from people ordinarily conducting their routine activities.

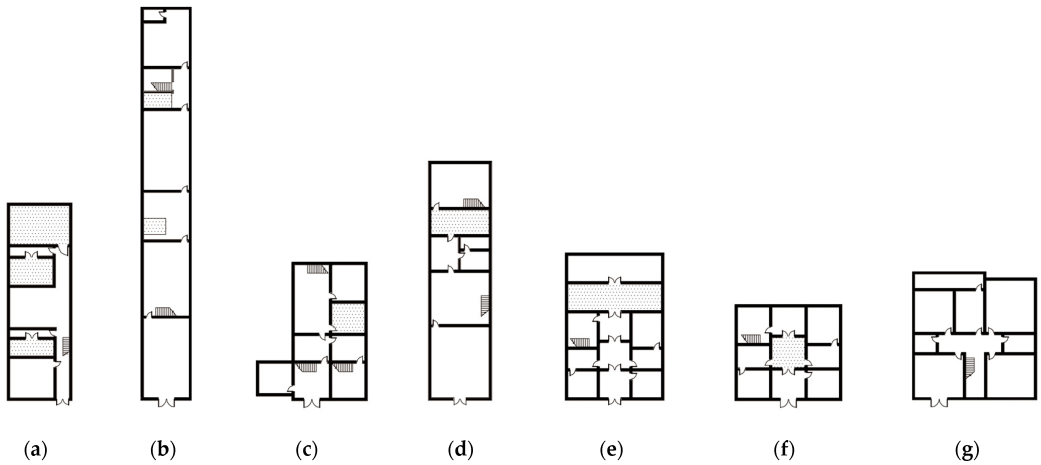

Figure 1. Typical ground floor plans of residences in different periods surveyed in Luzhangwan village. (**a**) is the ground floor plan of a house built before 1949; (**b**) is the ground floor plan of a house built in the 1970s; (**c**,**d**) are the ground floor plans of two houses built in the 1980s; (**e**,**f**) are the ground floor plans of two houses built in the 2000s; (**g**) is the ground floor plan of a house built in 2013.

Table 1. The four stages of rural construction after 1949 and their characteristics [1] (p. 200).

Stage	Subject	Object	Changes in Living Environment
1949–1978	Commune cadres	Commune	the influence is little, basically lies in ideology
1978–2005	Peasant household; Village collective organization	Individual dwelling; Infrastructure	The village expanded, the rural spatial mechanism and overall style have been changed to certain extent
2005–2013	Peasant household; Local Government	Relocated collective settlement; Municipal public service facility; Renovation of dilapidated buildings	Original village disappeared, new settlement adopted and copied urban style, development unbalanced
2013–	Local Government	Relocated collective settlement; Municipal public service facility; Village landscape; Commercial project	Original village disappeared, rural aesthetics is reviving, rural value is being recognized and reevaluated

Nevertheless, as early as 2003—the transition from the third to the fourth period—the CPC Central Committee formally presented and enforced sustainable development strategy in rural construction. However, to date, cultural and social welfare, which has been repeatedly acknowledged as one of the three fundamental dimensions of sustainable housing, was subjected to technicians' personal work ethics. Contrarily, requirements of ecological and economic sustainability have been standardized by an entire set of national and local standards issued in the ensuing decade.

If the administration and technicians are not to blame, the problem may lie in the issue itself. Indeed, the social logic of space is poorly understood, despite being pervasive in everyday experiences [2]. An empirical summary about surface properties and styles cannot be expected to succeed as a social discourse without a rational analysis because a summary does not concern the fundamental sociology of buildings. This theoretical gap has obsessed scholars in different fields for over 30 years, and several breakthroughs have been made. This study aims to supplement the academic culmination by researching the lawfulness of spaces created for human social purposes through examples in east China.

We believe rural areas in China will retain the vernacular characteristics of local society, at least in the coming decades, as the rural registered residence population in this country is more than 800 million, accounting for 55% of the total population, according to the latest census. Different from urban residents, rural residents are entitled to establish their homes in the allotted homestead based on the household unit, implying that regardless of the way they earn their living, their identities, social welfare, offspring's education and so on, are tied up with their native land. Therefore, the sociocultural pattern, including values, beliefs, conventions and shared interests of lineage society, will preserve and exert its influence on spatial behaviors.

2. Relationship between Traditional Residential Space and Social Circumstances

In the 1920s, Liang and Liu—who are the earliest overseas students with architectural backgrounds—initiated the research of Chinese traditional architecture based on Western theories. Through 10 years' arduous field survey and mapping, the publication of *A History of Chinese Architecture* in 1937 [3] marked the successful embedment of Chinese elements into the international academic framework. For attaining systematic soundness—as an indispensable part of the architecture—large-scale field investigations and mapping work have been conducted, comprehensively covering various residential buildings throughout the country.

However, in the 1980s, research on traditional residence was dominated by the processual paradigm with archaeological surveying, which was challenged by international "cultural turn" trend. Even though archaeology concerns itself with the excavation and interpretation of diverse domestic structures, the interpretation has been confined to descriptions with little explanations [4] (p. 2). The concerns were universal, and the most far-reaching publication can be traced back to *House Form and Culture* written by Rapoport in 1969, detailing the examination of social and cultural meanings of domestic use of space as revealed through local architecture. Afterwards, several books shared the fundamental principle that culture is an essential factor in understanding the local built environment, which addressed various themes concerning vernacular architecture worldwide (e.g., Bourdier and Alsayyad 1989; Duncan 1982; Glassie 1975; Oliver 1969, 1987; Seainon and Mugerauer 1985; Turan 1990). In the realm about China, Yu proposed that residential architecture is a prototype of the composition and image expression of various buildings, and he held the view that all kinds of local buildings shared an obvious isomorphism—a hall is the entity of the cultural core image, and a courtyard is the virtual body of space core [5]. Xie stated that despite the changes caused by advancements in economy, technology and materials, the internal layout and etiquette taboos continue to be potentially inherited, and the deep psychological mechanism shared by the villagers shows the strong conservatism and stability in China [6]. In 1991, Prof. Knapp published the *Chinese house: craft, symbol*

and the folk tradition, in which he elaborates the philosophy behind the location, structure, and surface decoration of Chinese dwellings and further discussed the belief and norms shaping the architectural space and the relationship between each part [7].

The importance of interpreting the architecture, especially the vernacular residences, in a sociocultural contextual framework was reinforced by the global demand for Sustainable Development proposed in the 1980s. The overlapping of the core values of sustainability and “culture turn” movement agreed on human habitation embedded in a system of interlocked spaces (physical, temporal, social and conceptual) [8]. In the last two decades, supported by the theoretical progress of sustainable development and computational analysis methodology, extensive research works exploring the potential interface between traditional vernacular and contemporary construction processes have been carried out in the area, faced with a rapid renewal of the built environment due to climatic, economic or political reasons. Kellett argued that contemporary construction can be regarded as a continuation of existing vernacular traditions by analytical frameworks, which address the broad spectrum of non-professionally produced environments and their relevance, demonstrated using data from a longitudinal ethnographic study of informal settlements in Latin America [9]. Elwerfalli revealed how the courtyard housing typology has been adapted and modified to address the current housing market and occupants’ lifestyles by analyzing the three new projects in Libya. The findings of the study demonstrated how vernacular logics of design are being appropriated to strengthen the cultural aspects of sustainable housing designs [10]. By exploring the traditional architecture and their cultural meanings in Najdi—the central region of Saudi Arabia—Alnaim argues that the core concepts and forms are not necessarily meant to describe or specify a form appearance, as the form can be a manifestation developed over time from different related components and constraints within the built form [11]. Miller investigated the dialectic relationship between Marshallese culture and the built-environment and uncovered the continuity of deep cultural patterns (DCP) in the production of the Marshallese built-environment. In addition, this study expanded DCPs by representing indigenous knowledge and should be applied to design frameworks for climate-forced displacement and resettlement to produce culturally supportive built-environments demonstrating resilience [12]. Zhao situated the scholarship between place, home and tradition and offered an understanding of the stability of tradition in the physical, psychological and social construction of home in rural China, in addition to providing guidance for the local practice of a new socialist countryside [13]. By thoroughly exploring the spatial design of villages in Jiangnan, Liu established a pedigree to support sustainable development, which integrated the dynamic (cultural changes over a certain period of time) and static (spatial features at a fixed time) of spaces with artistic features exhibited in traditional Chinese villages [14].

Notably, along with the empirical studies, another group of scholars continued to work on methodological approaches to explore spatial patterns to understand the underlying organizational principles. Steadman [15] and Hillier and Hanson [2] introduced the analyses of domestic space configuration through architectural morphology. This approach, later known as the space syntax, used spatial layout as an architectural variable to reveal social and behavioral patterns; it has since become a widely applied tool in various research disciplines and design applications. Aided by this method, Thungsakul accomplished a comprehensive analysis of spatial configuration to understand continuity and change in vernacular living spaces in the upper northeast Thailand [16]. However, with evolving theories and relevant software systems, most research continue to focus on the individual architecture examples.

To summarize, many scholars and researchers have argued that there is a close connection between the sociocultural context and physical form. Their approaches and interests may vary, but they are united in their beliefs in the vitality of vernacular traditions and its corresponding core forms and agree that its continuity acts as a dynamic mechanism in creating sustainable spatial and physical forms, in which people can express their identity. Nevertheless, further research is needed for establishing a universally compatible framework to elaborate and interpret how sociocultural factors are related to the pattern of spaces or spatial configuration.

References

1. Ye, L. Study on the Evolutionary Context and Design Intervention Mechanism in Contemporary Rural Construction; Tongji University: Shanghai, China, 2017.
2. Hillier, B.; Hanson, J. The Social Logic of Space; Cambridge University Press: Cambridge, UK, 1989.
3. Sicheng, L. A History of Chinese Architecture; SDX Joint Publishing Company: Beijing, China, 1937.
4. Plimpton, C.L. Ethnoarchaeology of Vernacular Dwellings and Domestic Use of Space in Egypt; Washington State University: Pullman, WA, USA, 1994.

5. Zhuoqun, Y. Chinese Traditional Vernacular Dwellings and Culture. In Investigation into the Subconsciousness in Vernacular Dwellings; Yuanding, L., Ed.; China Architecture Publishing & Media Co., Ltd.: Beijing, China, 1992.
6. Xiancong, X. Chen Liang's Learning of Utilities; Lanzhou University: Lanzhou, China, 2010.
7. Knapp, R.G. The Chinese House: Craft, Symbol, and the Folk Tradition; Oxford University Press: Oxford, UK, 1990.
8. Allen, A.E.G. Space as Social Construct: The Vernacular Architecture of Rural Samoa; Columbia University: New York, NY, USA, 1993.
9. Kellett, P. Contemporary Vernaculars: Informal Housing Processes and Vernacular Theory. ISVS E-J. 2011, 2, 2–12.
10. Elwerfalli, M. Contemporary Courtyard Houses of Libya: New Directions in Sustainable Housing Development; The University of Manchester: Manchester, UK, 2017.
11. Alnaim, M.M. Searching for Urban and Architectural Core Forms in the Traditional Najdi Built Environment of the Central Region of Saudi Arabia; University of Colorado at Denver: Denver, CO, USA, 2020.
12. James, M. The Continuity of Deep Cultural Patterns: A Case Study of Three Marshallese Communities; University of Oregon: Eugene, OR, USA, 2018.
13. Wei, Z. Home Beyond the House: The Meaning of Home for People Living in Yanxia Village, Zhejiang Province, China; University of Illinois at Urbana-Champaign: Champaign, IL, USA, 2015.
14. Qi, L.; Zaiyi, L.; Yongfa, W.; Dagmawi, M.D.; Yiwei, Z. Cultural sustainability and vitality of Chinese vernacular architecture: A pedigree for the spatial art of traditional villages in Jiangnan region. Sustainability 2019, 11, 6898.
15. Steadman, P. Architectural Morphology: An Introduction to the Geometry of Building Plans; Pion Ltd.: London, UK, 1983.
16. Thungsakul, N. A Syntactic Analysis of Spatial Configuration towards the Understanding of Continuity and Change in Vernacular Living Space: A Case Study in the Upper Northeast of Thailand; University of Florida: Gainesville, FL, USA, 2001.