

Research on the Humanistic Space of Haikou Qilou Cultural District from the Perspective of Sustainable Development

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Abstract: Haikou Arcade Cultural District is a subtropical coastal commercial historic area, and through the joint efforts of the people and places, a very rich system of humanistic spaces has been created. The three parts of sustainable development in this paper are cultural inheritance, social integration and spatial adaptation; thus, a combined analysis system has been established based on the "behaviour-form-meaning" model on the vertical axis and the short-term adjustable layer and the long-term stable layer on the horizontal axis. According to the spatial imprints of history in the superposition, this paper will examine the logic of association among street forms and humanistic expressions, as well as the multi-centred neighbourhood interaction network. The three adaptive logics are: the organisation of functions should be "reversible and legible"; a dual-cycle self-sustaining system for daily behaviour and spatial organisation; and a balancing strategy of time-staggering and gradual trial. Therefore, it can be concluded that the resilience of the district's humanistic space is the result of a bottom-up generative order and a clear layered superposition structure.

Keywords: Haikou Arcade Cultural District, humanistic space, sustainable development, spatial imprints, self-sustaining mechanism

Introduction

Research on the humanistic space of historic districts has moved away from the preservation of physical form and is now focusing on all aspects of behaviour and cultural inheritance. Most of the above studies have only done a static description or a single-factor analysis and have not combined spatial form, use behaviour and temporal sequence. After a long period of self-organisation, many humanistic elements have gradually appeared in the arcade areas, inner courtyards and alleyways of the Haikou Arcade Cultural District. The continuous operation of the district is based on its own life force and the balance of all kinds of interaction inside and outside. In order to promote sustainable development, this paper will study the structure and adaptation logic of historic districts for this purpose, define the concept of humanistic space, build a multi-level analysis system, discover the reasons for the persistence of spatial imprints, explore the resilience of neighborhood networks, and analyze the demand for functional restructuring; thus, it will provide a reference for the study of humanistic space in historic districts.

1. Theoretical Basis and Analysis Dimensions of Humanistic Space

1.1 Definition of the Core Connotation of Humanistic Space in the Arcade District

The humanistic space of the arcade district is not only formed by architectural connections and street scales in physical form; it is also a meaningful area that has been shaped by the long-term lives of people, economic activities and daily life. Over the years, many people's lives, emotions and cultures have been left here, and at the core of this place is continuous interaction among people and their environment. In the old area, such as the Haikou Arcade Area, humanistic spaces have been created through concrete construction and gentle organisation of space; for example, people can rest under the street-side colonnades, observe daily life from behind the second-floor windows, and have neighbourly talks in the inner courtyards. Over time, the above behaviours have gradually formed an organisational logic for space, and the arcade district is no longer just a group of buildings but has become a lively place full of the warmth of people.

At this time, we need to know that the idea of humanistic space is relative. There are some outdoor physical places, such as arcaded colonnades, inner courtyards and nodes of alleyways; there are also intangible social networks and behavioural patterns. The first attribute of humanistic space is that it has a bottom-up origin; that is to say, it is not planned in advance but rather develops gradually through a long period of adjustment and optimisation. Generally speaking, the various purposes of the Arcade Areas in Haikou include passage, recreation, rest on a rainy day, etc. Hopefully, some people will be able to find some spiritual comfort in it. Therefore, the idea of humanistic space can be considered a fluctuating system that arises from the interaction between people and places in all kinds of geographical and social conditions^[1].

1.2 Constituent Elements of Humanistic Space from the Perspective of Sustainable Development

In order to promote all-round development, the Structure of the humanistic space should meet the three basic demands of cultural inheritance, social integration and spatial flexibility. The degree of cultural inheritance is the proportion of intangible cultural heritage in a particular area of the district, such as inherited traditional crafts, festive culture and linguistic habits. Arcade's eaves galleries, overpass buildings, corner open spaces, and so on are often used to spread such culture. For example, the ancestral hall plaques and lime-sculpture patterns that can be seen on the arcade buildings in Haikou are also places of family memories and commercial ethics. At the same time, the range of social interaction refers to how often people meet and in what way they meet in public and semi-public places. A good interaction network will give some life to the area.

The first reason for expanding the range of spatial adaptability is the self-regulation of humanistic space. A courtyard plan, flexible partition walls, openable arcades at the intersection of arcades, etc., can meet some of the living and working needs of residents and businesses without disturbing the general character of the area. The goal of the development in the long run is to achieve flexibility. The three parts are not separate; cultural inheritance provides the material foundation for social interaction, and through such interaction, people increase their sense of culture, so neither will be lost over time. Learning about the relationships among all of them will help us understand the general situation of humanistic space^[2].

1.3 An Integrated Analytical Framework for the Study of Humanistic Space

Research on the humanistic space of the Haikou Arcade Cultural District should build a complete system of analysis that takes into account all aspects of spatial form, behaviour, time, etc., at the same time. The three levels of the structure are 'behaviour', 'form' and 'meaning'. The Behaviour Layer records the actual behaviour of different groups inside and outside the arcade area at various times, such as stopping places, movement paths and habits of boundary occupation. The Form Layer is for the shapes, materials and opening-closing scales of buildings and streets. The meaning layer interprets the values, sense of belonging and cultural memories of the people in their behaviour and form. The three levels are the places where the events took place, and they do not fall into the trap of being only formal analysis or only sociological description.

Given that the horizontal axis of the analysis framework is time, the division of humanistic space is into a short-term adjustable layer and a long-term stable layer. Short-term adjustable area refers to daily changes in the environment, such as altering shop signs, closing doors and windows, setting up temporary stalls, etc., all of which are in response to the immediate needs of the people. A long-term stable layer is used to reduce the variation of the spatial base map over time, and the components of the street skeleton, plot division and colonnade spacing provide support for short-term fluctuations. The continuous facades above the second floor and the ground-floor colonnade system in the Haikou Arcade District are in the long-term stable layer, and the business content and storefront decoration of the ground-floor shops belong to the adjustable layer. Based on the above division, we can find the roots of resilience and life in humanistic space and offer a direction for future research.

2. Structural Features of the Humanistic Space in the Haikou Arcade Cultural District

2.1 Trajectories of Human Activities and Spatial Imprints in Historical Superposition

Over the years, many different kinds of people have been using the Haikou Arcade District for various purposes. These paths are not a straight line in time; rather, they are spatial imprints that have

been left on the texture of the streets and buildings. Groups at different times have used the same arcade area, the same gable wall and the same old well in different ways. The latter will not entirely replace the former; rather, the two will be combined, alternated or partially integrated. For example, there are lime-sculpted shop signs and later-painted slogan traces on the facade of the arcade; although they are from different periods, together they form an unbroken record of human activities in the district. Therefore, the arcade space can be regarded as a text that has been repeatedly read, and each generation of residents has left an identifiable mark on it^[3].

Examples of the type of spatial imprint include the extent of ground wear, the location of hook holes on walls, traces of opening and closing doors and windows, water-stain marks in patios, etc. The stone steps at the foot of the arcade pillars in the Haikou Arcade District are often unevenly depressed due to a long period of sitting, leaning and dragging goods; there are also rope abrasion marks on the wooden beams inside the window sills on the second floor, which show that people used to hang clothes and other items there. They are not in writing, but they can still offer some information about people's lives in the past. To promote healthy development, superimposed trajectories and imprints have become a memory bank for humanistic space; they are still used or reactivated to some extent today and provide a foundation for the sense of identity of the district.

2.2 The Logic of Association Between Street and Lane Morphology and Humanistic Expressions

The Structure of Streets and Alleys in the Haikou Arcade Area is relatively regular. Most of the main roads are straight and have a relatively constant width; the arcades on both sides are continuous shaded areas, but the branch lanes are curved and narrow, and some alleyways are so narrow that only one person can pass at a time. Many different shapes have been used by people in many ways to express their culture. Humanistic expressions in the main streets are generally more outwardly focused, so they tend to have larger signboard fonts, more open storefronts and organised goods, etc., and are all within the line of sight of mobile crowds and potential customers. Most of the humanistic expressions in the branch lanes are modest and private, such as flowerpots in the corners, low seats near the entrance, and the sound of people talking from behind half-closed wooden doors. The two ways of expression do not need to be in a strict hierarchy; rather, together they make up the whole of the humanistic space in the district.

Based on the above observations, it can be concluded that turns, intersections and street ends are generally the most popular places for humanistic expression. In some triangular areas at the entrance of the alleys in Haikou, people have set up simple stone benches and sunshade cloths, and passersby will stop for a moment to rest or talk with their neighbours. Such spontaneous behaviour has not been included in any of the design drawings, but it naturally arises from the reduction of space and a sense of enclosure. At the same time, the accumulation of humanistic works over time will also change the street-and-lane area. Over a long period of time, fruit stalls have been set up along the sidewalks, the distance between adjacent colonnade pillars has been reduced, and small outward-protruding spaces for the entrances of courtyard gatherings have gradually appeared. The two-way shaping relationship shows that the shape of streets and lanes is close and has different humanistic expressions.

2.3 The Humanistic Organizational Mode of the Neighborhood Interaction Network

There is a clear spatial mosaic in the network of neighbourhood interaction of the Haikou Arcade Cultural District; that is, it is not distributed evenly according to plot boundaries or administrative areas but rather forms clusters of interaction around daily life nodes such as wells, tree-shade spots, steps and corner grocery stores. Most of the clusters have about ten to twenty households, and the members are close-knit; they often do things together, such as washing dishes in the morning, relaxing under the eaves in the afternoon, and taking out the trash in the evening. The density of interaction caused by the behaviour above is not the same everywhere; it is relatively high at the nodes and much lower in the middle of the lanes. The Model of the Organisation is a small-scale, multi-centre network for the humanistic space of the entire district, and it does not have a single main centre but is composed of many strong local connections^[4].

One of the characteristics of the humanistic organisational model is that the network of neighbourhood interaction includes both weak ties and strong ties. So-called "weak contracts" refer to the unwritten rules of neighbourly relations for using public areas, such as rotating seating under the eaves of a covered walkway, agreeing on the time to dry clothes, etc., and marking the boundaries for temporary stacking of various things. These rules are rarely written down, but they are voluntarily

followed by the large majority of the residents. Strong reciprocity can be seen in the quick provision of small daily assistance by people, such as helping neighbours with their belongings at the door, sharing homegrown spices, and helping each other carry clothes in the rain. Little by little, the small successes have added up to form a very ordinary but very lively support group. A group of such people-oriented organizations has been passed down through several generations in the Haikou Arcade District; although the buildings have changed, the structure of the interaction network remains the same.

3. The Adaptive Logic of Humanistic Space under the Guidance of Sustainable Development

3.1 The Path of Cultural Continuity and Reshaping of Spatial Functions

The cultural inheritance of the Haikou Arcade District should not be seen as the preservation of a particular form, but rather it will change gradually with the development of functions in all areas over time. Older people are more likely to use the area under the arcade eaves for daily life, such as household chores and talking with neighbours, and young people are more likely to use it for small cultural and creative activities or light food stalls. The two functions may be separate, but in fact, they are in the same place; the area under the arcade eaves has always served as a transition zone between the inside and the outside, and only the specific content of this transition has changed with changes in life. In fact, the purpose of changing this function is to get the initial space, not to destroy and then recreate it. After the old grocery store closes, the same bay will be converted into a handicraft workshop, and the remnants of the old shelves on the wall will be preserved and displayed next to the new workbench.

In the future, the Spatial Arrangement will need to meet the demand for "reversibility and legibility". Reversible means that changing the function will not harm the original place, so it is better to temporarily fix the fixtures to the pillars of the colonnade and avoid drilling directly. Legible refers to whether the new marks of use can be recognised; that is to say, layers of human activity at different times should still be discernible to future generations. In some courtyards of the Haikou Arcade District, people have turned the old patios into small vegetable gardens and used the original drainage channels and stone basins as planting containers; thus, new and old functions have been placed side by side instead of having one replace the other. Therefore, we can pass on the culture and offer a place for life for the people in the cities today. The first purpose of the reshaping path is to determine which of the functional changes are due to the surface modification and which are caused by changes in the deep structure; only functional changes that do not affect the deep structure can be considered continuous and not disruptive.

3.2 The Internal Mechanism of Self-Sustaining Life in Humanistic Space

The two linked cycles that provide the main sources of life for the humanistic space are the cycle of daily life and the cycle of spatial inheritance. A cycle of daily behaviour is a kind of phenomenon in which people make full use of space to create a reason for living; for example, if a corner under an arcade is frequently used for sitting and leaning, people will naturally clear debris from the ground and promptly repair damaged edges, and if an alley has a relatively high volume of pedestrian traffic in the morning and evening, residents on both sides will voluntarily keep their doorways clean to avoid obstructing the passage of people. Some of the narrow streets in the Haikou Arcade Area have not been cleaned by the municipal government for a long time, but they are still relatively tidy due to a joint self-management system that monitors passers-by and has residents spontaneously pick up some rubbish. This cycle of behaviour is not due to external factors but rather stems from people's basic need to feel safe in public places^[5].

The cycle of space maintenance is in fact the result of many small changes over time. One resident repairs a broken part of the steps in front of their home, tightens a loose handrail, clears fallen leaves from a drain, and so on; although these are minor problems in themselves, many such small repairs that have been continuously carried out over a long period can collectively maintain a relatively good general condition for public life. The usual traces of cement mortar patching, the homemade iron reinforcements on the wooden doors and windows, and the piled broken bricks at the corners of the wall in the Haikou Arcade District are all concrete evidence of this cycle. Maintenance will increase the life of the area and avoid serious demolition and construction. There is also a positive feedback loop between the two cycles: the more active people are in their daily lives, the more attention they pay to the space, and thus the higher the frequency of minor interventions; a good spatial condition can also

draw more people to stay and use it. For the reasons stated above, it has been continuously used by the public for many years in the humanistic area of the Haikou Arcade District without any major external changes.

3.3 Balancing Strategies of Humanistic Space in the Interaction of Multiple Stakeholders

All kinds of people who use the operation of the humanistic space in the Haikou Arcade Cultural District have different needs and behaviours. There is no need to argue about it; rather, we will be able to live together harmoniously and work well together. Long-term residents generally want the environment to be stable and have relatively fixed expectations about how far away roadside stalls can be, how noisy it is at night, and where to place miscellaneous items in public areas. Short-term tenants are more concerned about the convenience of life and may want to increase the area of outdoor display or extend the hours of lighting. Generally speaking, the interaction of the two groups in the arcade area is a gradual trial; one side will slightly cross the usual boundary, and the other side will respond with facial expressions or short words; after several rounds of back and forth, a new balance will be achieved. It will not be the same for everyone; rather, due to the different circumstances at different times and in different places, they will all be different.

The distribution of the scarce resource is also relatively even among the humanistic areas. Some narrow passages in the Haikou Arcade District have multiple functions and are used for different purposes at the same time, such as walking, hanging clothes and offloading small goods; different people use them for various ends at different times. Early in the morning, around seven or eight in the morning, most people are using these areas to wash and discard garbage; after nine o'clock, merchants start to display their goods, and from noon to evening, the passageways are quite crowded with pedestrians. There has been no official announcement of the time, but after a long period of adjustment, an unofficial schedule has gradually appeared. More care will be taken in the use of the shared node going forward. For example, a small open space in the corner can be used as a vendor's stall during the day, be a place for older people to sit and chat in the evening, and become a meeting place for young people after dark. The occupancy periods of different age groups and people from all walks of life in the same place are arranged one after another, so this limited humanistic space can be used for many different social activities. Generally speaking, the bottom-up correction method is relatively stable compared with all the other regulation plans.

Conclusion

In light of the aim of continuous development, this paper will carry out an all-round investigation of the humanistic space in the Haikou Arcade Cultural District and reach the following conclusions. In fact, the three parts of the system for the relations of Humanistic Space are cultural inheritance, social participation and spatial adaptability. The structure can be deduced from the signs of historical accumulation; there is an interaction between the form of the street and humanistic expression, and the organisation mode of weak contracts and strong reciprocity is typical of multi-centred, small-scale neighbourhood interaction networks. In light of the idea of sustainable development, the corresponding strategy is to adhere to the rule of reversibility and legibility in functional reshaping, build a positive-feedback self-sustaining mechanism for the cycle of daily behaviour and a spatial maintenance cycle, and achieve dynamic equilibrium by staggering time and gradually winning the approval of all parties. The above reasons show that together, the humanistic space of the Haikou Arcade District has had its own life for a long time and does not need strong external promotion. In the future, we will compare all kinds of self-sustaining abilities for humanistic spaces in different types of historic districts, quantify the conditions for the decay and revival of spatial imprints, and study the critical threshold between bottom-up generative order and the deep structure of humanistic space. Digital recording of behaviour and long-term, regular observation can also be added to increase the quality of evidence for long-term study in the humanities.

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