

**HUMANIZATION EVALUATION OF STREET SIDE INTERFACE OF HISTORICAL AND CULTURAL BLOCKS BASED ON SD METHOD
-- TAKING JINXIANGCANG DIZANG 'AN ALLEY AS AN EXAMPLE**

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ABSTRACT

Historical and cultural blocks are the material carriers of the historical and cultural memory of the blocks. In recent years, with the acceleration of urbanization and other reasons, people's material and spiritual needs have been rapidly increasing. Traditional historical and cultural blocks have gradually failed to meet human needs. In the current critical period of building a well-off society in an all-round way, the humanized design in urban construction is particularly important. As an article, on the basis of sorting out the protection and development of historical and cultural blocks, taking Jinxiancang Dizang 'an Alley as an example, the humanity degree of the street side interface is analyzed, and the humanized evaluation of the street side interface is obtained by using the SD method, and Corresponding transformation strategies are proposed in order to improve the humanization level of historical and cultural blocks and enrich the humanization theory of street side interfaces.

KEYWORDS: SD method; historical and cultural blocks; side interface; humanization; street

1. OVERVIEW

Jinxiancang Historical and Cultural District is in the south of Nanchang, the capital city of Jiangxi Province, and adjacent to Fuhe River in the west. It is about 400 meters away from The Shengjinta historical and cultural District in the south, about 300 meters away from the old site of the New Fourth Army Military Headquarters in the back, and about 2,400 meters away from Nanchang Railway Station in the east. Jinxiancang Historical and cultural District is the third approved historical and cultural district in Nanchang. At present, the main streets are Jinxiancang Lane, He Cao Street, Li Tou Zui Lane, Dizang'an Lane, Dizang Anzhi Lane, Nanchang Cang Lane. According to statistics, there are 4 registered immovable cultural relics within the planning area, 5 historical buildings recommended in the Protection Planning of Nanchang Historical and Cultural City (2010-2020), and 62 buildings with traditional features [1].

After a resident have moved away from blocks, the blocks internal basic closed the main channels are brick wall circumference, outsiders are not to enter, only external four streets (hid in temple lane, lane, lane recommending virtuous man storehouse, Nanchang storehouse ploughshares nozzle lane) available for passage, hid in the northeast of the lateral temple lane is located in the neighborhood, total length of 140 meters, the width is 4 meters, the status quo of concrete pavement. In the protection planning, Jinxian Cang Lane and Plough Toulouzui Lane need to be renovated and motorized vehicle

traffic capacity should be improved. From Dizang 'an Lane to Nanchang Cang Lane, motorized vehicle traffic is prohibited to be changed into walking road.

2. LITERATURE REVIEW

2.1 Application level of SD method

In 1957, SD method was first put forward by American psychologist C.E.Osgood, who is called the pioneer of psycholinguistics, the full name of SD method is Semantic Differential, and its application in urban planning has been relatively extensive and mature. Literally speaking, SD method refers to "analytic method of semantics", that is, using "speech" in semantics as the scale of psychological experiments, through the analysis of each set of scales, quantitative description of the concept and structure of the research object. Zhuang Weimin of Tsinghua University evaluated the architectural space environment through SD method, which is a preliminary attempt to apply SD method in China, enriching the investigation methods of urban planning and architecture, and expanding the means of quantitative analysis[2]. Under the theoretical background of organic renewal, Huang Ying used SD method to investigate and study the planning and transformation of a park, which provided certain participation value for the later adjustment and management[3]. Wang De of Tongji University used SD method to investigate and study the urban perception of some samples in Taizhou, which laid a theoretical foundation for the construction and creation of urban environment[4]. Liu Juan et al. evaluated and analyzed the landscape of Jiangdi Park, provided certain theoretical reference for the design of landscape garden, and also put forward suggestions and suggestions for the improvement of the case park [5]. Gou Aiping and Wang Jiangbo evaluated and studied the spatial vitality of streets by SD method, and finally concluded the factors affecting the spatial vitality of streets, and put forward planning and design strategies for street planning and design[6]. Zhu Jiefang et al. also applied THE SD method. Taking parks in Beijing as the research object, they selected 8 samples with recreation characteristics for investigation and analysis, focusing on the basic impression perception of parks, and finally concluded the key points and ways to improve recreation experience[7]. Taking the plant landscape of the strip urban park as the research object and using SD method as the method, Jiao Mingyang et al. analyzed and concluded that vegetation, cognition and activity were the three main factors that could affect people's impression of the park[8]. Taking Hangzhou urban community as an example, Chen Shibin and Huang Fei evaluated the green leisure quality and finally concluded that the perception factor was an important factor influencing the green leisure quality of the community[9]. Zou Hongfei and 5 others tried to apply THE SD method to the evaluation of the tourist landscape in the protection area, and took a certain protection area as an example to make a tentative evaluation and analysis, and finally concluded the factors affecting the tourist landscape and put forward reasonable suggestions for the protection and development of the scenic area[10]. Based on SD method and taking the external space of Kowloon Station in Hong Kong as the research object, Xu Yiran conducted correlation analysis between people's psychological behavior and the external space design, providing a favorable reference for improving the vitality of the external space of urban rail transit [11]. Based on SD method, Zhou Jiandong took Yangzhou gardens as an example and classical

garden rockery art as his research direction. He mirrored the data collection through on-site discussion and exchange and questionnaire survey, and analyzed the data [12].

2.2 Street humanization level

Following the principle of putting people first, Zhang Haichang and Peng Xiaolei made a field investigation and analysis of the commercial pedestrian street in Shenyang Middle Street and studied the current situation, and proposed humanized means of building from the aspects of spatial interface, walking network, street culture mining, street facilities, traffic organization and so on [13]. "Shanghai Street Design Guidelines" proposes to change the concept of human communication and lifestyle, which essentially advocates the concept of humanization of streets, and thus promotes the vitality of streets and improves the environmental quality of streets[14]. According to Tang Ruiqi, with the rapid development of urban traffic, people's experience of specific streets gradually pays less attention. Therefore, it is necessary to explore the humanized design and return to the people-oriented concept, and conduct theoretical analysis mainly through the dimensions of streets, peaceful design, openness and accessibility of architectural interfaces [15]. Taking the humanized reconstruction design of streets in Pingyang Town as an example, Tang Jing proposed corresponding humanized reconstruction methods according to the specific conditions of different streets, such as sorting out traffic needs, improving street safety, comfort and fun, etc.[16]. Chengshi explored the evaluation mechanism of humanized street space based on the technical means of emotion analysis, and provided quantitative psychological support for humanized street space modeling[17]. Zhang Dongliang proposed five principles of humanized design of urban streets, and studied the humanized strategy of urban streets on this basis [18]. Geng Yue believes that the key to stimulate urban vitality lies in urban streets. By reviewing the history of central streets in Melbourne, specific measures for humanized transformation are obtained, and suggestions are put forward for the renovation and reconstruction of streets in China.

To sum up, through sorting out the application of SD method and analyzing the street humanization research, it is concluded that the research on the street space side interface is feasible, and there is no research on the humanization of the street side interface at present. The reference of SD method provides the possibility for the quantitative analysis of the street side interface in historical and cultural blocks.

3. PRACTICE INVESTIGATION AND ANALYSIS BASED ON SD METHOD

3.1 Data acquisition

In this study, Jinxian Cang Gezang 'an Lane is selected as the research scope. On the one hand, the data source is the subjective feeling of the tested objects in the questionnaire survey on the humanized evaluation of the street interface. On the one hand, it is the basic situation of the street, including the building height data along the street, the ratio of street height to width, the highest building height, the types and quantity of street facilities, and the roadside trees.

3.2 The selection and basic information of the survey population

There are mainly two groups of people in this survey, one is local residents and tourists (10 people), the other is sophomore students of College of Urban Construction, Jiangxi Normal University: urban and rural planning major (10 people); Architecture major (10 persons). Local residents filled in the questionnaire on the spot. Due to the special situation of the epidemic, the students mainly filled in the questionnaire in the form of understanding the situation on the spot through the photos taken by the author in the field investigation (Fig 1: part of the scene photos). In this survey, 30 questionnaires were issued, 30 were actually recovered and 30 were valid.

3.3 Evaluation factor selection

According to the use method of SD method and the specific situation of humanized evaluation of street-side interface, 12 groups of adjective pairs are selected. Each group of words has a specific object and represents the value of two directions.① Interface uniformity (Neat--Messy);② Mental feelings (Secure--Dangerous);③Architectural appearance (Attractive--Inaesthetic);④Architectural color (Abundant--Monotonous);⑤Building height (Relaxed--Oppressive);⑥Architectural style (Historical--modern);⑦Street texture (Delicate--Rough);⑧Street planting (Ecological--Non-ecological);⑨Street planting (Consecutive--Discontinuous);⑩Spatial perception (Familiar--Distant); ⑪ Overall scene (Unified--Unordered);⑫Spatial openness (Open--Obstructive).

In order to enable the interviewees to evaluate the streets more accurately, this survey sets five evaluation scales: Quite (+2), Somewhat (+1), General (0), Somewhat (-1) and Quite (-2).

3.4 Evaluation procedure

First, some professional terms are difficult to understand for ordinary residents, so it is necessary to interpret and explain the terms to the subjects. Second, subjects were asked to evaluate each factor of the street side interface and feedback it on the questionnaire, to obtain the evaluation results of a single sample. Third, the 30 questionnaires were statistically summarized (Table 1) to obtain the average value of each factor at the street-side interface; Finally, the required statistical table and SD method are drawn according to the data to evaluate the line graph (Fig 2).If the score is regular, it is ideal; if not, it is poor.

Fig 1 Part of the scene photos



Data summary table of survey results

Project name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Average score	
01 Interface uniformity	0	-1	-1	0	-1	-1	0	0	-1	2	1	0	-1	1	-1	-1	0	0	-1	-1	-2	-1	-1	-1	0	-1	-2	-2	-2	-1	-0.63	
02 Mental feelings	0	-1	0	0	0	-1	-1	-1	-1	1	0	0	-1	0	-1	-1	0	0	-1	0	1	-1	-1	-1	-1	-1	0	-1	-2	1	-0.47	
03 Architectural appearance	1	0	0	-1	-1	-1	0	0	-2	0	0	0	-1	-1	-2	-1	0	2	-2	0	1	-1	0	-1	0	-2	-2	-2	-2	0	-0.60	
04 Architectural color	1	0	-1	1	-2	-1	-1	0	-2	0	1	1	0	-1	-1	1	1	2	-1	-1	-1	0	-1	-2	0	-2	-1	-2	-2	-1	-0.50	
05 Building height	2	1	-1	1	-1	-1	-1	-1	1	0	0	1	-1	0	1	-1	0	0	0	0	0	0	0	2	0	0	2	2	0	2	-1	0.23
06 Architectural style	2	1	0	2	1	1	2	0	0	0	0	1	1	1	1	1	1	2	2	2	0	0	1	0	-1	0	0	1	2	0	0.80	
07 Street texture	-1	-1	0	-1	-1	-1	-1	-2	-2	-1	1	-1	-1	-1	-2	0	-1	1	-1	-1	-1	0	-1	-2	0	-1	-1	-1	-2	-1	-0.90	
08 Street planting	1	0	-1	1	-2	-1	-2	-2	-2	0	1	0	1	0	-1	0	0	0	-1	-1	-1	0	-2	-2	0	-2	-2	-2	-2	-2	-0.80	
09 Street planting	1	-2	-1	-1	1	-1	-2	-2	-2	-1	1	-1	-1	0	-2	-1	-1	0	-2	-1	-1	-1	-2	-2	0	-2	-2	-2	-2	-1	-1.10	
10 Space perception	0	1	1	2	0	-1	0	0	-1	0	1	1	1	0	-1	0	1	1	0	0	1	0	1	0	0	0	0	1	-2	0	0.23	
11 Overall scene	2	-1	0	1	1	-1	1	1	-2	-1	1	-1	0	1	0	-1	1	1	1	2	0	-1	0	0	0	-2	1	-2	-2	-1	-0.03	
12 Spatial openness	2	0	0	1	-1	-1	1	0	-2	0	1	-1	-1	0	0	-1	-1	0	0	2	-1	0	-1	0	0	-2	-1	1	2	-2	-0.17	

Table 1 Data summary of survey results

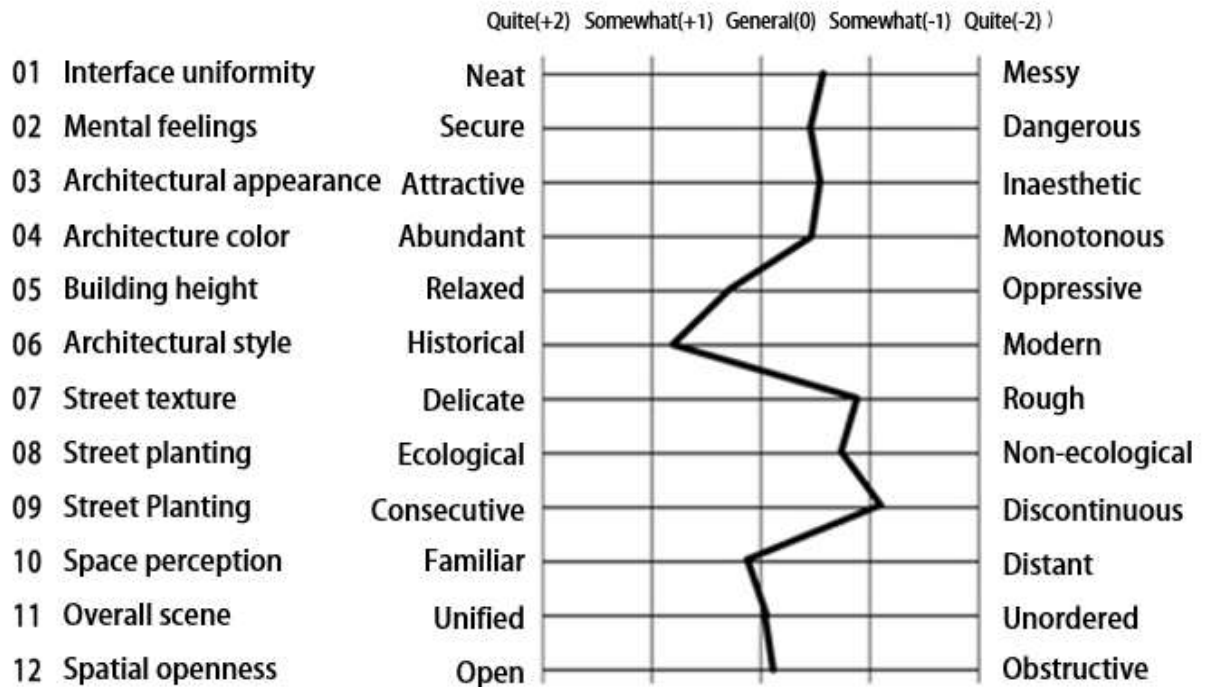


Fig 2 SD method evaluation line graph

4. FULL SAMPLE ANALYSIS FROM HUMAN ANGLE

According to data statistics, there are only 3 items with the average value greater than 0, and the scores from low to high are 06 Architectural style, 05 Building height and 10 Spatial perception. There were 9 items with an average value of less than 0, and according to the score from low to high, they were: 09 Street planting, 07 Street texture, 08 Street planting, 01 Interface uniformity, 03 Architectural appearance, 04 Architectural color, 02 Mental feelings, 12 Spatial openness, 11 Overall scene.

Medium class analysis. According to factor characteristics, it can be divided into three categories: 1. Architectural level (01 Interface uniformity, 03 Architectural appearance, 04 Architectural color, 05 Building height, 06 Architectural style, 07 Street texture); 2. Greening level (08 Street planting, 09 Street planting); 3. Psychological level (02 Mental feelings, 10 Spatial perception, 12 Spatial openness).

①Building level: only the building height and two value greater than 0 architectural style, building height is 0.23, give a person the sense with relatively easy street side interface, because the scene where buildings are about 1-3 layers, 3-9 meters high building roof, the roof is not higher than 10 meters high, meanwhile street width is 4 meters, plus the street on the east side building demolition of rectification, vision is more open. In terms of architectural style, the score was 0.8. The reasons may be as follows: cultural security buildings and historical buildings add historical atmosphere to the

block, and the historical block itself has a certain sense of history, while the low score is due to the existence of some sporadic modern buildings in the block.

②Greening level: The evaluation score of greening ecology and greening continuity was -0.8 and -1.1 respectively, and the score of greening space continuity was the smallest among all factors, which was caused by the low greening rate and discontinuity of greening in the historical block.

③Psychological level: score less than 0 in psychological feeling and space openness. The first factor is that some old buildings are not well preserved and are at risk of becoming dilapidated, so people feel insecure. The second reason is that there are construction barriers on both sides of the road within the block. Relatively speaking, the space will give people a feeling of closure, but it also gives people a certain sense of closeness to some extent, but it is not so close. This is also the reason why the spatial perception value is close to 0.

④Overall features: the overall features are separately classified here in order to verify whether the assessment results of the architectural level, the greening level, and the psychological level are consistent with the results of the overall features. The data results show that the overall feature score is -0.3, and the average score of the three categories is -0.35. On the whole, the overall appearance of Dizang 'an Lane is poor, and the humanization level of this historical and cultural block needs to be improved.

5. COMPREHENSIVE EVALUATION OF HUMANIZED STREET INTERFACE

Through the analysis of evaluation data to multiple perspectives, which can be concluded that, in line with the actual conditions of the various factors, our basic within the local temples lane on the problems existing in the humanized Angle some knowledge, insufficient here summing up several main aspects: (1) The street building preservation condition, the overall style and features to enhance although range has been designated as historical and cultural blocks, but the improper protection measures, building adopts one-size-fits-all protection method, the doors and Windows with brick wall plug to prevent outsiders to enter. To some extent, it does not play the display function of architectural remains of historical and cultural blocks, let alone meet the needs of humanistic consideration. (2) Insufficient Street planting configuration. According to the scene, the greening of Dizang 'an Lane is seriously unable to stop. There is not a single green plant in the whole block, only the weeds along the road are swaying in the wind. (3) Insufficient street security and interaction.

6. CONCLUSIONS

Through the evaluation and research on the street side interface of Jinxian Cang Dizang 'an Lane, the author has several experiences:(1) The protection of historical and cultural blocks must be precise and accurate, not a one-size-fits all simple and rough handling; (2) It is necessary to excavate the context of the block and let people participate in the historical dialogue of the block;(3) To improve the

environmental comfort, starting from the single building, the architectural renovation should focus on considering the facade style, degree of sophistication, material application, architectural color and degree of old and new that are in line with the historical and cultural blocks;(4) Improve the street facilities, planting plants consistent with local culture as street trees, and other street facilities, such as street lights, signs, recreation facilities, etc. The humanized street-side interface must be people-oriented. It is an important guarantee for street humanization to build the street-side interface of historical and cultural blocks from the perspective of human.

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