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Interactions among Trialectic Spaces and Their Driving Forces: A Case Study of the Xisi Historical and Cultural Block in Beijing

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Abstract: Urban spaces are constantly changing. H. Lefebvre's trialectic spaces are an analytical tool used to explain changes in urban spaces. However, in trialectic spaces, which space plays a leading role? What is the driving force of interactions in such spaces? At present, there is a lack of research on this issue. This paper, in response to the views of N. J. Babere, takes the Xisi historical and cultural block in Beijing as a case study to answer these questions and uses questionnaires, in-depth interviews, and follow-up surveys to analyze the interaction process of trialectic spaces within green spaces. Then, it analyzes the driving force of this interaction. The purpose of this study is to determine which space plays a leading role in interactions among trialectic spaces and what the driving force behind such interactions is. This paper draws the following conclusions: (1) Representational spaces play a decisive role in interactions among trialectic spaces.. This is consistent with Babere's findings. (2) In historical and cultural blocks, culture is the driving force promoting the interaction of trialectic spaces. (3) The direction of interaction among trialectic spaces can be either clockwise or counterclockwise.

Keywords: trialectic spaces; interaction; driving force; historical and cultural block

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1. Introduction

In recent years, a "spatial turn" has been seen in social science research, and research on space has drawn ever-growing attention. Therefore, one must ask, what is "space"? According to H. Lefebvre, a French philosopher, it is wrong for traditional epistemology to interpret space as a container or stage of social activities. With both social and historical attributes, space, rather than being empty, is always full of cultural significance and is the product of social relations [1]. In the book *Writings on Cities*, Lefebvre insists that a city's space is not a certain population, a geographic size, or a collection of buildings; nor is it a node, a transhipment point, or a center of production. A city's space is best understood as the preeminent site of social interaction and exchange [2]. In the book *Critique of Everyday Life*, Lefebvre notes that he believes that everyday life is a richer layer of society than productive activity [3]. In the book *The Production of Space*, Lefebvre argues that there are more than 60 types of spaces. He unifies these numerous and disorderly spaces using a certain strategy, providing a theme and structure for his expression of space. This strategy is termed trialectics, with trialectic spaces including "spatial practice", "representations of space", and "representational spaces". These spaces exist at the perceived, conceived, and living levels in terms of their spatial forms. In addition, Lefebvre believes that trialectic spaces are interactive and that the relationship among them is an interactive means of "regressive progress". The process of the constant interaction of trialectic spaces over time is the process of spatial production.

However, in the interaction among trialectic spaces, which space plays a leading role? What is the driving force of that interaction? Lefebvre holds a critical attitude

toward representations of space as a result of urban planning and a supportive attitude toward representational spaces as emotionally charged with "residents" and "users". He believes that representational spaces are the "truth of space" and are spaces with vitality and momentum. In E. Soja's view, although no space has a priority in trialectic spaces, Lefebvre prefers representational spaces because they have spatial imagination and are in a strategic position [4]. M. Gottdiener takes up Lefebvre's argument that lived space is the richest and most symbolic of spaces [5]. Ş.E. Okuyucu and G. Çoban analyzed Afyonkarahisar's urban square space in the context of Lefebvre's trialectic spaces approach and suggested that representations of space are the most dominant type of space in any society [6]. B. Sletto demonstrates the role of representations of space in influencing spatial practice through the resource conflict in the Nariva Swamp [7]. N.J. Babere, a scholar in the Department of Urban and Regional Planning in Ardhi University, investigated the production of informal livelihood activity spaces in Dar es Salaam, Tanzania. Mchikichini Market, Uhuru Road, and Msimbazi were the prime locations in Dar es Salaam. The municipality commissioned planners to design these spaces, which were often occupied by informal livelihood operators both day and night. Because these operators could not afford to rent storefronts in these prime locations to survive and generate income, they often occupied prime locations on the road, in the market, along the sidewalk, and so on, to set up their stalls. Using Lefebvre's spatial triad, Babere thus analyzed the gaming relationships among these informal livelihood operators, the municipality, and the planners in these spaces and the reasons for their conflicts. The planners designed the spaces. The municipality had the power to plan and transform these spaces; hence, during the municipality's representations of space, it ordered the informal livelihood operators to demolish their temporary buildings and move elsewhere. Regardless of how the planners and municipalities planned and managed these spaces, they were still occupied by informal livelihood operators, who had transformed the spaces into their living spaces. Hence, the spaces became the representational spaces of the informal livelihood operators. According to Babere's research, this informal space production replaced the spaces created by planners/architects; that is, in this interaction of trialectic spaces, the representational spaces were dominant. Babere thus believes that it is important for municipalities and planners to allocate the benefits of urban spaces more rationally by accounting for the lived experiences of informal livelihood operators [8]. Therefore, representational spaces play a leading role in trialectic spaces.

This paper, in response to the views of Babere, takes the area of the Xisi historical and cultural block as a case to analyze how trialectic spaces interact with one another and to determine the driving force for their interaction. The purpose of this study is to determine which space plays a leading role in the interaction of trialectic spaces and what the driving force for their interaction is.

2. Literature Review

2.1. About the City's Space

Urban planning often focuses on physical space, just like geographers' understanding of space in the early stages of geography, especially before the 1970s. For example, R. Hartshorne believe that space is a universal of human existence, an external coordinate, and an empty grid of mutually exclusive points, "a box" within which objects exist and events occur [9,10]. Some scholars believe that space is a geographical property related to distribution and refer to geometric terms such as distance [11,12]. P. Hubbard holds that space is more natural than social. Therefore, space is an absolute concept [13]. Geographers' understanding of space includes space as an absolute concept in which space is empty and as a relative concept in which it exists only where it is constituted by matter [14].

However, from the perspective of sociologists and philosophers, spaces in a city are no longer just physical spaces but spaces that can reflect social relationships. Geographers' understandings of space have changed alongside developments in geography since the 1970s. Lefebvre's theoretical thinking conceived of the city as an entity, as an organism,

and one whole among others even in the best of cases when it was being reduced to a partial phenomenon or to a secondary, elementary, or accidental aspect of evolution and history. The city always had relationships with society as a whole and with its constituent elements [15]. A. Paasi focuses on regions and nations and defines the concept of space from a political perspective [16]. A.R. Pred shares the idea of the spatial as a distinct element of social life, moving toward a concept of the social as being inherently spatialized. He argues for the importance of understanding spatial forms as a set of evolving historical-geographic processes [17]. D. Massey argues that space is the spatial form of particular and specified social processes and social relationships; it entails plurality and multiplicity [18,19]. D. Ley argues that space has history as well as a location and, above all, a range of meanings for the communities that live there. Space contains multiple factors: economic, political, social, personal, historical, and cultural factors [20]. N. Thrift believes that space is not a common-sense external background to human and social action. Rather, it is the outcome of a series of highly problematic temporary settlements that divide and connect things into different kinds of collectives that are slowly provided with the means that render them durable and sustainable [21].

2.2. The Concept of Trialectic Spaces

Lefebvre believed that representations of space refer to the conceptualized and conceived spaces for scientists, planners, urban planners, bureaucrats, and social engineers and that all representations of space refer to discourses on space [22]. A.C. Delaisse and S. Huot et al. applied Lefebvre's spatial triad to occupational science. He argued that people's occupation of spaces is usually restricted by dominant discourses [23]. Representations of space are constructed by discourse in any society [4]. They are dominant spaces (or modes of production) [1]. They can be regarded as tools of power. S. Halvorsen used Occupy London's territorial strategy as an example of how the representations of space reflect its dominance of that space. The movement depended heavily on the experience and knowledge of a small group of lawyers and activists. This showed that the spatial practice and representations of space in this small group predominated in Occupy London's territorial strategy. In addition, he argued that the domination of representations of space is inextricably tied to the spatial practice that produces and reproduces capitalist social relationships [24]. G. Newlands took the resistance among the couriers and their platform as examples and explored how the representations of space generated by algorithmic surveillance create a dominated space that is usually controlled by technology [25]. Representations of space are used as a code in practice [1]. Although they are abstract, they play a part in social and political practices. The relationship established between the object and people is a logic that will eventually be broken [1]. S. Kingma analyzed new ways of working (NWW) through Lefebvre's theory on the spatial triad. Representations of space were thus conceptualized through the construction of symbols, codifications, and abstract representations as imagined by planners and decision makers. In NWW, the author suggested that space virtuality represented a code made by various professionals and managers, who clearly formulated a dominant framework for their organization [26]. J. Carp thought that representations of space, with respect to perception, conveyed an incipient idea through thinking, imaging, analyzing, and so on, through either individual or collective activity [27].

Representational spaces are living spaces that belong to "residents" and "users" [1]. Unlike with representations of space, they are subjective spaces for expressing residents' and users' feelings and culture rather than spaces obtained through calculation [1]. D. Proctor considered representational spaces to be inversions of representations of spaces, which refer to what is physically in spaces in terms of their localized cultural meanings: state, gender, religion, class, or resistance. While representations of space are established through a structured knowledge system, representational spaces are driven by understanding, a less formal and more locally embedded form of knowledge [28]. A. Farmaki and P. Christou et al. considered representational spaces to be the experiences derived by people using the

meanings evoked in representational spaces, which are created by the interplay between spatial practices and representations of space [29]. According to some researchers, the subjects of representational spaces are divided into strong subjects and weak subjects. These two subjects resist each other [30]. Babere argues that representational spaces are dominant. He investigated the production of spaces for informal livelihood activities and concluded that informal ways of spatial production are replacing planners/architects' representations of space. In addition, the author advocated that operators should occupy lived spaces in completing their livelihood activities, such as using roads, markets, pavements, and so on. In addition, operators should find and maintain a position for themselves in urban spaces. Designers and planners should more reasonably distribute the benefits of urban spaces once they understand these lived experiences [8]. Lived experiences should not be disdained and nor should lived spaces [25].

Regarding spatial practice, Lefebvre believes that unlike with spiritual spaces and social spaces, it has a physical nature [1]. According to Proctor, spatial practice comprises daily routines involving people and things, and these routines divide spaces into different categories, such as work or leisure, over time [28]. Spatial practice refers to physical and perceived spaces, which can be directly sensed and measured and depicted within a certain range [4]. The subjects of spatial practice can be planners, designers, etc., as well as residents and users. G. Yu and Zhong S. proposed that the materiality of space informs practices [31]. G. Wolf suggested that spatial practice helps people produce dynamic uniqueness in daily life [32].

2.3. The Interaction among Trialectic Spaces and the Driving Forces for This Interaction

According to Lefebvre, trialectic spaces interact with one another to carry out "spatial production". In spatial production, spaces are both producers and products, and they are the results, causes, and reasons. Proctor argued that representational spaces and representations of space are mutually cooperative. This is because the conceived purposes of a space are to inform and organize its perceived spatial practices, just as these practices strengthen and recreate the space as representations of space [28]. One study analyzed a service space in London from the perspective of trialectic spaces and explained how the interaction among trialectic spaces and the production of space formed the present-day London [33]. D.R. Ford suggested that representations of space were inseparable from the spatial practice of producing and reproducing capitalist social relations. He argued that the spatial triad was the best theory for understanding and transforming space and should be applied to educational theories of space [34]. S. Kingma argued that the relationship among triarchic spaces entails that they interact with each other in contradictory dimensions. Representations of space do not stand alone but contain projections of representational spaces and spatial practice. In addition, spatial practice could also be in harmony with a fulfilment of representations of space [26]. Babere proposed that spatial triad theory is useful for analyzing how the occupation of space by informal operators is underestimated from the perspective of the generation process of the relationship among the people who are involved in the production of space [3]. Some scholars suggested that trialectic spaces interrelate and interact with each other. Representational spaces are important for physical textures; thus, they cannot be separated from spatial practice and spatial experience. Ş.E. Okuyucu and G. Çoban explored how the relationship between urban space and urban subjects is expressed in the form of dialog. The relationship among trialectic spaces is interactive and game-oriented [6].

In terms of the driving forces behind the interaction among trialectic spaces, some scholars have analyzed the production of the community space using a Muslim community in Sanya, Hainan Province, China, as a case study. They suggest that capital, power, and culture are the ultimate driving forces behind the production of space through trialectic spaces. The interaction of capital, power, and culture propels the production of space [35]. W.R.A. Cook investigated the production of space in two cafés in Ras Al Khaimah in the United Arab Emirates; they proposed that racism and language policy are the dynamics for

the interaction of trialectic spaces and that spatial practices are influenced by representations of space and representational spaces [36]. R. Mayers and T. Glover explored the production of cycling space by analyzing Lefebvre's trialectic spaces. According to their findings, space represents and demonstrates the knowledge and power in a particular place. For example, even when a region makes a planning decision at a policy level and is invested accordingly, cyclists still feel that their perceived space was being violated. Thus, culture is the driving force in the interactions among trialectic spaces [37]. Some scholars defined the path and mechanism for realizing the sustainable production of space through the perspective of production and interactive impact and the collaborative development of tourism space. They propose that power and capital are the internal driving forces for promoting the sustainable spatial production of rural tourism communities [38]. For example, Q. Zhang analyzed the situation of farmers' settlements in Jiading District, a suburb of Shanghai, with Lefebvre's trialectic spaces. He also analyzed the interaction among trialectic spaces, showing that policy and capital are the driving forces of the interaction [39]. Additionally, Q.C. Ming and C. Duan indicate that the combination of power and capital flow reflects the uneven development of cities and of different areas within a city [40].

3. Case Study Area and Study Methods

3.1. Study Area

Located in the northwest of the ancient city of Beijing, the Xisi historical and cultural block consists of 8 parallel east–west lanes (Figure 1) that were formed during the Yuan Dynasty. From the Yuan Dynasty to the Qing Dynasty, the well-organized quadrangle dwellings were always residences for officials or wealthy people. Currently, a number of well-preserved quadrangle dwellings and the accompanying traditional culture in Beijing can be seen here, making it a typical traditional quadrangle dwelling area in the old city of Beijing. In 1990, the Xisi historical and cultural block was included in the first list of protected historical and cultural blocks in Beijing. The block covers an area of nearly 30 hectares, with approximately 10,000 permanent residents [41].

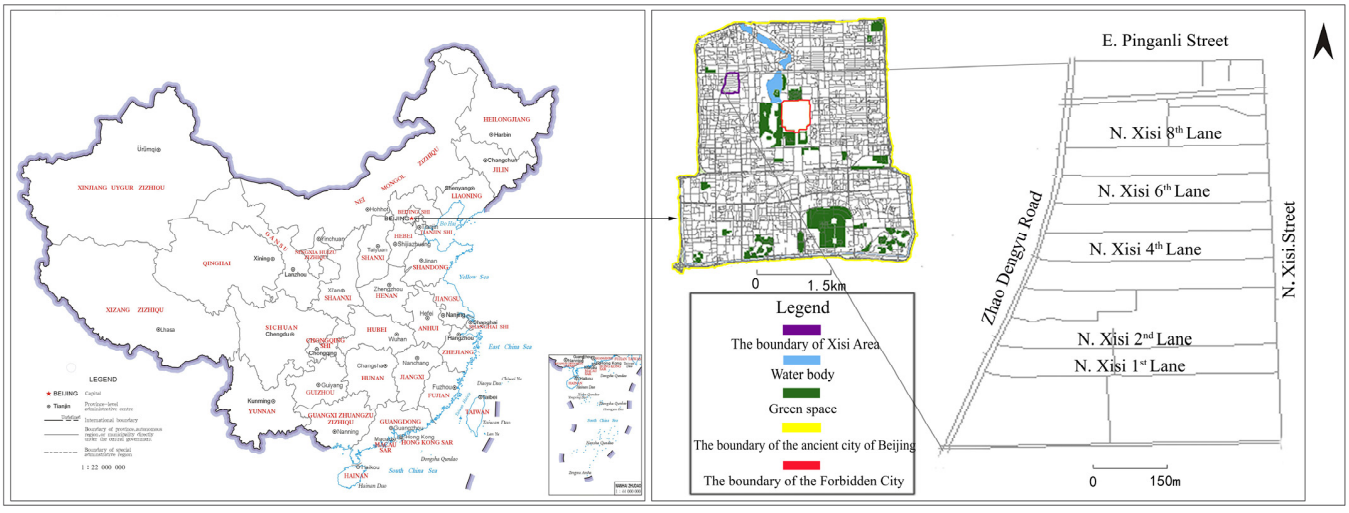

Figure 1. The location and scope of the Xisi historical and cultural block (drawn by Zhifen Cheng).

This paper takes the Xisi historical and cultural block as a case study because it has been one of the most traditional residential areas in Beijing since the Yuan dynasty. The representations of spaces by local administrators and urban planners, inhabitants' representational spaces, and urban administrators' spatial practice are fully shown here, and they interact constantly. Second, this historical and cultural block is one of the largest, most populous, and oldest historical and cultural blocks in Beijing, and it is one of the historical and cultural blocks recognized by the Beijing municipal government for its great importance in protecting the traditional residential culture. Therefore, a case study

of the Xisi historical and cultural block is representative of other Beijing historical and cultural blocks.

3.2. Study Methods

A logical flowchart of the study is shown in Figure 2. Starting from the green space in the Xisi area of Beijing, this paper analyzes the interactions within trialectic spaces. A questionnaire survey method, in-depth interview method, and follow-up survey method were adopted. First, the representations of space of the green spaces in the Xisi historical and cultural block were examined through the literature and documents. Second, the spatial practice of urban administrators in this area was explored through in-depth interviews. Third, residents' attitudes toward representations of space and spatial practice were investigated through a questionnaire survey and in-depth interviews. Fourth, residents' representational spaces of plants, the spatial practice of urban administrators, and residents' representational spaces originally occupied by flowerbeds were examined through a follow-up survey.

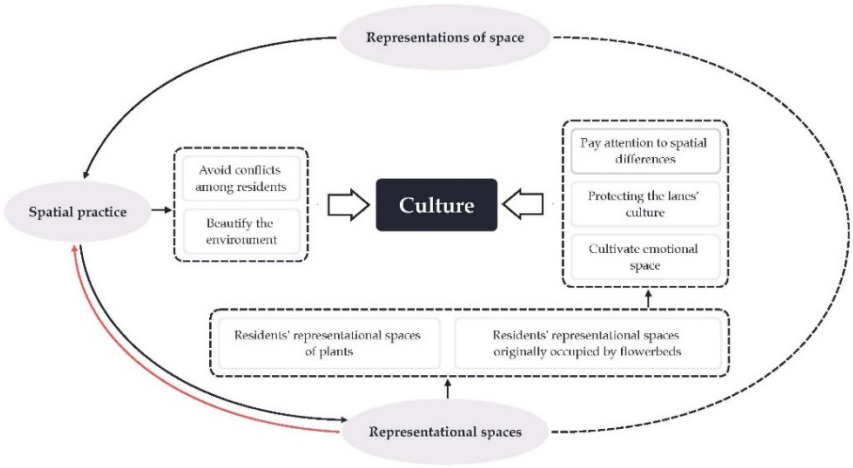

Figure 2. A logical flowchart of the study (drawn by Zhifen Cheng, Boning Fan).

The data were collected from March to May 2019. The questionnaire survey scheme was as follows. There are 576 total courtyards along the Xisi historical and cultural block. The paper divided 100 samples into eight lanes according to the number of courtyards along each lane. The survey was conducted by random sampling, but the following conditions were met. Only one questionnaire was distributed for each courtyard. In each lane, the ratio of locals to out-of-towners was equal, as was the ratio of men to women. Ninety-one valid questionnaires were collected. Second, 13 people were interviewed in depth. The interviewees are described in Table 1 (F for females, M for males).

Table 1. List of interviews in the Xisi area.

No.	Age	Living Address	No.	Age	Living Address
F1	45	The sixth lane in the northern area of Xisi	M4	61	The third lane in the northern area of Xisi
M1	73	The fifth lane in the northern area of Xisi	M5	63	The third lane in the northern area of Xisi
M2	67	The eighth lane in the northern area of Xisi	F5	82	The second lane in the northern area of Xisi
F2	70	The fifth lane in the northern area of Xisi	F6	50	The sixth lane in the northern area of Xisi
F3	64	The fifth lane in the northern area of Xisi	M7	73	The third lane in the northern area of Xisi
M3	61	The fourth lane in the northern area of Xisi	M6	70	The fifth lane in the northern area of Xisi
F4	61	The third lane in the northern area of Xisi			

4. Interactions among Green Spaces' Trialectic Spaces

4.1. Representations of Space

The urban administrators' representations of green spaces in lanes manifest as small green spaces, such as flowerbeds. These flowerbeds serve two purposes. First, they help beautify the environment. Second, they prevent traffic and drainage from the lanes from being affected by the randomly parked cars in the lanes and avoid conflicts between residents over parking (the number of motor vehicles owned by residents in lanes is increasing in the absence of fixed parking lots, and residents who have no motor vehicles are infuriated by private car owners parking in lanes, thinking that they are occupying public space; as a result, there are often conflicts between residents because of parking in the lanes). Thus, urban administrative managers establish green spaces as isolation zones in the lanes. In 2006, the Architectural Design and Research Institute of Tsinghua University (urban planners), under commission by local administrators, completed the *Renovation and Protection Planning for Xisi Protection Block (from Beitoutiao to Batiao)*, which included plans for "scattered and small green spaces" [42].

4.2. Spatial Practice

As part of the representations of space of urban planners and urban administrators, before the 2008 Beijing Olympic Games, the community committee, one of the local administrators, implemented spatial practices in eight lanes of the Xisi historical and cultural block, from Beitoutiao to Batiao, and successively placed flowerbeds on both sides of the gates of the larger quadrangle dwellings in each lane and at the side of the walls on both sides of the lane. Each flowerbed is approximately 60 cm long, 40 cm wide, and 40 cm high and filled with soil. Most were made of carved cement, metal, and stone although some were made of boards. As shown in Figure 3, the flowerbeds are usually arranged separately or as a group of 1–3 flowerbeds. In the spring, local administrators usually plant green plants in the flowerbeds, mostly vigorous herbal plants, such as irises, *Hosta plantaginea*, *Rohdea japonica*, *Rosa laevigata*, and *Allemanda neriifolia*.

Figure 3. Flowerbeds placed in the lanes by the local administrators (photographed by Zhifen Cheng).

4.3. Residents' Attitudes toward Representations of and Practice in Green Spaces

4.3.1. The Overall Situation

The paper classifies residents' attitudes toward representations of and practice in green spaces into five levels: very supportive, relatively supportive, no opinion, not supportive, and opposition or resistance. The study found that 55% of the residents have

an attitude of opposition or resistance to the representations of and practice in green spaces from local administrators and urban planners. Twenty-five percent of residents do not support them, 16% of the residents have no opinion, 3% of residents are relatively supportive, and 1% of residents are very supportive. It can be seen that most residents show an attitude of opposition or resistance. Specifically for residents with an attitude of "objection or resistance", this paper explores the opinions of residents on different subjects through interviews.

4.3.2. "Opposition" from Residents of Different Subjects

(1) Long-term residents' "Opposition"

Long-term residents believe that green spaces in lanes should continue to take historical forms, mainly planted trees in lanes. It should not be changed; otherwise, the lanes' culture will not continue. According to the requirements of the *Planning for the Scope of Protection and Control of Historical and Cultural Protection Zones in the Ancient City of Beijing* (1999), green spaces in "key protected areas" of the historical and cultural blocks should generally be maintained or restored in accordance with the style of the historical period in which they were built [43]. The *Planning for the Protection of 25 Historical and Cultural Protection Zones in the Ancient City of Beijing* (2002) specifically stipulates the green space planning of the historical and cultural block. It is believed that green space construction in historical and cultural blocks should mainly focus on streets and lanes and that priority should be given to tree planting. The traditional tree-planting method should be fully followed in terms of the greening of residential quarters [44]. In 2003, the *Overall Urban Planning of Beijing* also required the greening of lanes [45].

(2) Housewives' "Opposition"

Many housewives in the Xisi historical and cultural block were "against" the spatial practices of local administrators. The main reasons for their objections were as follows and, as Lefebvre believed, reflected the neglect of the differentiation of spaces in spatial practices. First, the spatial practice ignored the age difference between the residents in each lane. According to resident F1, the height of the flowerbeds, flowers, and plants was equal to that of the 3- to 6-year-old children. When the children ran in the lanes, they were easily blocked by the flowerbeds, and their parents thus could not always ensure that they were safe. Second, the spatial practices ignored the material characteristics of the residential bungalows along the lanes. Some residents believed that the water in the flowerbeds was not good for the surrounding bungalows. For example, according to resident F6, the greatest disadvantage of bungalows is that they are prone to moisture, and after the flowerbeds are rewatered, the water flows to the base of the wall, causing the bungalows to become more humid. As a substitute, small, wall-mounted flowerpots would have the same beautifying effect with little negative impact.

(3) Retired Elderly Residents' "Opposition"

The main reason for retired elderly residents' opposition was that this spatial practice ignored the scale of lane spaces. First, the flowerbeds occupy the originally limited lane space. For example, resident F2 thought that the lanes were too narrow for flowerbeds, and it would be better to plant a tree. Second, the flowerbeds encroach upon the activity space of elderly residents, as resident M1 complained. There are many cars and people in the lanes, and the flowerbeds are inconvenient. Elderly residents have no place to relax and enjoy the sunshine. Third, the flowerbeds seem to have affected the traffic flow of residents and vehicles in the alleys. As resident F3 said, "The flowerbeds do nothing but block our cars". Resident M5 said, "The current width of the alleys is not suitable for flowerbeds. They do not beautify the environment, and they affect the traffic". Fourth, the flowerbeds were regarded as wasteful. Resident M3 said that the flowerbeds are useless. They occupy land and waste human, material, and financial resources. Similarly, resident M6 said, "The flowerbeds are only beautification to improve the appearance, and they do not fundamentally solve the problem". Resident M4 said, "The flowerbeds are not good".

Resident M7 said that flowerbeds are a waste of resources. Echoing Resident M3, resident M2 said, "Flowerbeds are a waste of labor and money". Finally, resident F5 said, "What's the use of flowerbeds? It is better to improve the quality of life of residents".

(4) Unemployed Men's "Resistance"

Unemployed men held a resistant attitude toward the flowerbeds in alleys and thus adopted resistance strategies. This resistance might be not transformative, but it inheres in the everyday. As X. Guillaume suggests, resistance is not necessarily "progressive" or "transformative". Everyday forms of resistance include tactics, the art of doing, and the art of saying. Tactics are ordinary people's reaction to regulations or power, which are timely practices. The art of doing is a nondiscursive move and includes observation, body language, and so on. The art of saying, including telling stories or writing, expresses resistance by the imprints of language [46]. G. Yılmaz also researched micro resistance in daily life. Ordinary people who are not hegemonic power creators live daily in silent resistance. For example, some German Turks live in silent resistance in their everyday life. They use different grammatical rules for German and add some Turkish origin words into their everyday language to emphasize their differences. This micro form of resistance in everyday life reveals some the hidden and unseen parts of ordinary people's lives. Members of society are known for protecting their unique lifestyles by resisting power in their everyday lives [47]. M. Lilja and S. Vinthagen propose the concept of "dispersed resistance", which can be practiced by individuals or an unorganizationed way across the everyday lives of subaltern groups. The dispersed resistance may be expressed through passivity, theft, or even active damage, and such everyday resistance does not necessarily attract attention. It may be glaring or hidden. For instance, individual artists carry out resistance through their works of art. In addition, the acts of resistance might be executed by individuals and groups in local, national, or transnational spaces. Thus, dispersed resistance can have a major influence on societies, nations or whole regions [48]. Resistance is not equal to rejection and is not a violent revolutionary action. It particularly refers to the "weak" who, on the surface, appear to submit to the system but in actuality work to change the original meaning of the organization and resist it in a random, flexible, and creative way in daily life [49–52].

The unemployed men on the Xisi historical and cultural block have resisted the flowerbeds by moving them at will, urinating on them, etc. According to resident F4, sometimes, the flowerbeds are randomly moved due to parking, resulting in their irregular arrangement. Moreover, some residents have taken some indecent measures to resist flowerbeds. For example, resident M1 in the fifth lane of the Xisi historical and cultural block said, "I often see drunk men vomiting into the flowerbeds and some urinating in them. The sanitary conditions there are very poor." Here, Lefebvre's approach offers a possible explanation: the reason the idle men resist the representations and practice of the power of local administrators to place flowerbeds and adopt strategies of resistance on a micro level is that they believe that they do not have the right to green spaces and that these green spaces are not emotional spaces for them. As Lefebvre argued, representational spaces are the emotional spaces of residents, built by the residents' imagination and memory, so they are more likely to be protected by residents [1].

4.3.3. Residents' Representational Spaces of Plants

Most residents were not in favor of the flowerbeds. They continued to green the lanes in the same way they did before the flowerbeds were placed. This can be seen as the residents' reactions to the undesired flowerbeds. The greening methods were as follows. First, they planted some herbs in corner with small, water-proof plastic boxes and plastic flowerpots, etc.; these herbs included climbing plants, grass, and plants with a long flowering period. Second, they planted climbing plants on the rooves of the buildings, such as *Lablab purpureus*, *Pharbitis nil,* and *Anredera cordifolia*, which did not take over the lanes' spaces and formed a beautiful overhead arbor. Third, they planted green plants, such as *Impatiens balsamina* and *P. nil,* on the outer walls of the lanes to block unsightly equipment

(such as distribution boxes and air conditioners) and beautify the environment. Fourth, they planted green plants in living rooms, as shown in Figure 4.

Figure 4. Plants represented by residents themselves (photographed by Zhifen Cheng).

5. Local Administrators' Spatial Practices

Local administrators removed the flowerbeds from the lanes. Since residents' "opposition" and "resistance" to the flowerbeds on in regard to different subjects arose, the flowerbeds have often lacked flowers or other plants either because there are no plants added or managed, or no replacement plants are provided after old flowers and plants have died. In addition, the number of flowerbeds has been gradually reduced since 2019. In 2020, local administrators completely removed the flowerbeds from the lanes. The representations of spaces and spatial practice of placing flowerbeds in Xisi lanes eventually failed in the face of opposition from residents.

6. Residents' Representational Spaces Originally Occupied by Flowerbeds

Residents' representational spaces originally occupied by flowerbeds are mainly used to protect the excellent traditional culture of the lanes. The main manifestations of such representational spaces are as follows:

First, the spaces where flowerbeds were originally placed are now used by residents for the activities, such as walking and running. This way restores the historic function and use of the lanes and protects the pleasant environment of lanes. The results of the questionnaire survey confirm the residents' actions. In response to Question 1 (Does the lanes' layout convey the history and culture of the lane?), 29% of residents said doing so was almost impossible, 11% of residents said it was not likely, 20% said they could get some sense of it, 32% said they could get a decent sense, and only 8% of residents said they felt it a great deal. As for Question 2 (Are you satisfied with the environment of the lanes in the Xisi historical and cultural block?), 27% of residents said they were "very dissatisfied"

with it, 23% said they were "dissatisfied", 39% said they were somewhat satisfied, 10% said they were relatively satisfied, and only 1% said they were very satisfied. Therefore, most residents think that the lanes' layout in the Xisi historical and cultural block does not convey the lanes' history and culture and are not satisfied with the environment in Xisi.

Second, the spaces where flowerbeds were originally placed are used as leisure living spaces for residents, as they have become spaces for chatting, playing chess, reading newspapers, etc. These spaces are the scene of what American geographer D. Seamon calls "place ballet", where the harmonious culture of the neighborhood is maintained [53]. The results of the questionnaire confirm the residents' actions. The answers for Question 3 (Are you satisfied with the entertainment facilities in the Xisi historical and cultural block?) indicated that 26% of residents are "very dissatisfied" with the facilities, 15% are "dissatisfied", 48% are somewhat satisfied, 10% are relatively satisfied, and only 1% are very satisfied.

Third, a few areas where flowerbeds were originally placed were designed to place propaganda columns to promote the lanes' culture. The propaganda materials of the column are changed once a week and cover the history of the lanes, their place names, well-known individuals from the lanes, news about the lanes, etc. The richness of these materials enables residents of different ages, residential tenures, and educational backgrounds to find content that interests them, and they enable residents to gain a deeper understanding of the lanes they live on (Figure 5). In general, residents' representational spaces, originally occupied by flowerbeds, are based on the lanes' culture, and on the basis of protecting that culture, they can enhance the cultural identity of the lanes. Once again, the results of the questionnaire survey confirm the residents' actions. In response to Question 4 (Do you think residents' perception of the lane's residential cultures is greatly weakened?), 31% of residents fully agree, 43% agree, 22% are unsure, 4% disagree, and none completely disagree. As for Question 5 (Is it necessary to promote traditional residential cultures in lanes?), 63% of residents said this was necessary, and 37% of residents said it was not necessary. Therefore, most residents want to promote the traditional culture of the lanes and enhance residents' perception of them.

Figure 5. A space where flowerbeds were originally placed is designed to place propaganda columns (photographed by Zhifen Cheng).

7. Conclusions and Discussion

7.1. Conclusions

Based on the analysis, this paper draws the following conclusions:

(1) Representational spaces play a decisive role in the interaction of trialectic spaces. This is consistent with Babere's findings.

The local administrators and planners set up green spaces in the Xisi historical and cultural block, but ultimately, the residents' representational spaces for plants and rep-

resentational spaces originally occupied by flowerbeds were formed, prompting local administrators to remove the flowerbeds. Therefore, the representational spaces have played a key role in the development of the block. It is the contradiction and dynamism of representational spaces that drives changes in spatial practice and the representations of space. This is consistent with the findings of Babere. Similarly, E.J. McCann believes that the meaning of the representation of spaces is defined by planners, officials, management professionals, etc., and this meaning is likely to be inappropriate and incompatible with other activities, modes of production, and aesthetics in space [54].

(2) In historical and cultural blocks, culture is the driving force promoting the interaction of trialectic spaces.

According to the analysis in this paper, the lanes' culture is the fuse behind residents' opposition and resistance to the representations of space and spatial practices of local administrators and planners. In particular, the residents' representational spaces of plants are mainly created to protect of the lanes' culture, including the lanes' pleasant environment, harmonious culture among neighbors along the lanes, and the excellent traditional culture of the lanes. Therefore, in the historical and cultural block in this case study, the driving force promoting the interaction of trialectic spaces is culture.

(3) The direction of interaction among trialectic spaces can be either clockwise or counterclockwise.

In this case, green space starts from representations of space, acts counterclockwise on spatial practice, and then acts on representational spaces to produce space. Then, residents' representational spaces acts clockwise on spatial practice, carrying out space interaction and space production. Therefore, the direction of interaction among trialectic spaces can be either clockwise or counterclockwise.

7.2. Discussion

This paper highlights the following questions for discussion:

First, the original intention of Lefebvre's spatial triad was to criticize capitalism. However, when using this analytical tool, this paper does not emphasize that capital brings prosperity of some parts of the city and decline to other parts.

Second, several scholars have studied the driving forces behind interactions among trialectic spaces. They think that such driving forces are comprehensive factors, including the combined forces of capital, power, and culture; the combined forces of policy and power; and the combined forces of racism and language, etc. [20–25]. However, this paper finds that culture is a separate driving force of interactions among trialectic spaces. Therefore, there may be other separate driving forces or other combined forces behind interactions among trialectic spaces.

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