

The Re-danweilization of SU University During the COVID-19 Pandemic

Xiaohan Wei^{1,a,*}

¹*Department of Humanity, Shenzhen College of International Education, Shenzhen, China*
a. s20414.wei@stu.scie.com.cn

**corresponding author*

Abstract: During the COVID-19 pandemic, China restored the management strategy of linking societal administration with spatial territory to prevent and control the spread of the pandemic. This study focuses on the most basic spatial unit of urban segmentation, the danwei, which was first established during the planned economy period. Analyzing SU University as a case study, we examine the background, methods, and process of re-danweilization in China during the COVID-19 pandemic; we evaluate the impact of its reactivation on the overall society and explore whether possible adjustments could be made to improve the effectiveness of the danwei system while preserving urbanism.

Keywords: danwei, re-danweilization, COVID-19, public space, urban management, gated community

1. Introduction

The layouts of Chinese cities and their corresponding urban governance rely heavily on the views of contemporary authorities on how the desired social order can be achieved. In ancient China, for example, enclosed cities were divided into basic spatial units, lifangs, by central axes and checkerboard street systems, reflecting the rulers' reinforcement of supreme imperial power and Confucian ritual order. Each lifang is a spatial representation of an independent traditional Chinese community wherein people of the same profession live within fully enclosed walls with collectively used temples or an ancestral hall. Individuals tended to be bonded and localized to the lifang they lived (and often worked) in. This immobilized interconnection enabled the authority to control individuals by managing their lifangs directly. As a result, lifangs were not only the fundamental units in the spatial arrangement but also the grass-roots unit in organizing and managing the society. Up until 1949, a lifang structure was still visible in most typical ancient cities.

The cultural core of lifang collectivism and its practical utility of spatially confining the management of society to a specific area were adopted after the founding of the People's Republic of China, creating a unique urban phenomenon, the danwei [1]. Like lifangs, danweis are independent working units separated from their neighboring urban spaces by closed walls and gates, collectively dividing the city into numerous spatial units according to production needs. In the absence of market forces and with limited technology and financial resources, the danwei system enabled the state to utilize resources collectively and intensively to fulfill the government's production orders. To improve production efficiency, each danwei also offered accommodation and living facilities to its

employed workers [2]. The worker's source of income and daily life depended heavily on the danwei to which they belonged. The interrelationship between workers and danweis made it easier for the government to manage the constantly changing society and individuals by directly managing the fixed spatial danwei unit [3].

With its unique closed spatial morphology and well-equipped interior, the danwei reduced workers' needs to access and consume public urban spaces outside. Workers' activity spaces were heavily compressed to within their danwei. The remaining urban areas that were not a part of danwei were mainly used for transportation, and there were comparatively few places for social interaction outside of the danwei. Since urbanity is highly dependent on the communal use of public spaces, most urban areas were affected by the decline of urbanity

The reform and opening up has weakened the public sector. The danwei has also exposed its productive inefficiency and has to make structural adjustments [4-6]. This process is often called "de-danwei" (the removal of danwei and the danwei system) and is mostly understood from four main dimensions: In terms of production contribution, China transitioned to a mixed economy with less government involvement and interventions after economic structural reforms in 1980. The danwei's economic significance was gradually replaced by foreign and private companies in the free market [7]. As for the provision of housing, danwei is no longer required to establish a housing welfare system and provide free or discounted housing to its employees [8]; housing in the danwei region has become tradable in the open real estate market, and people who do not belong to danwei society can purchase and own it [9,10]. In terms of additional functions, the danwei has reduced the scale and variety of social amenities and social benefits for its workers. The consequential loss of these goods and services would now require workers themselves to independently purchase in a free market in the urban public spaces. This transformation has contributed to the dismantling of the closed walls of the danwei and the relaxation of population flow at danwei gates [11,12]. Finally, in terms of society and psychological perception, access to the market and the development of urbanism have reduced the material dependence of workers on the paternalistic support of the danwei and weakened their knowledge of and attachment and affiliation to the danwei [13]. The increasing heterogenization of housing has also largely eliminated the social stratification caused by danwei [14]. In summary, the danwei system has been severely attenuated in the process of economic transition, and the urban morphology has changed from an inorganic collection of production-based working units to a diversely shared, market-based city with modern communities and some remaining danweis.

However, scholars doubt that it would be too categorical to define de-danwei as a unilateral process or even a sudden elimination [15,16]. From the institutional point of view, China's economic reform has not completely transformed the economy into pure market capitalism; a significant proportion of public enterprises are still active [17]. The overall number and power of danweis have decreased, but because of the decisive role of some danweis or the national significance of the industries they serve (e.g., education, healthcare, research, and development), the remaining danweis still own the land and retain their dominant functions [18], including the renovation and development of internal facilities, the ownership and distribution of public resources and services owned by the danweis, and the implementation of territorial management [19]. In terms of housing reform, it is worth mentioning that danweis still have the right to regulate their housing market [20] and reserve some of the apartments for danweis themselves [21]. In addition, danwei residential properties often enjoy a positive social image and are highly favored in the housing market, as evident from comparatively higher housing prices. Despite the decline in social benefits compared with the danwei era, the existing danwei as a production organization still offers its workers relatively higher fringe benefits and greater job security compared with other types of enterprises and is generally more attractive in the labor market. These implicit individual choices reflect the public's positive psychological perception of the danwei phenomenon [22,23]. Taken together, these perspectives imply that danwei

has a continuing recessionary influence on society, that de-danwei is not a permanent or linear process, and that danwei remains a unity of "social-economic-spatial-psychology" in urban development [24,25].

The underlying reasons for the continued danwei spatial phenomenon were the lifang culture and the existence of the broader administration-space-responsibility system that each danwei subordinates. The administration-space-responsibility system was based on the linking of the hierarchy bureaucracy system with the corresponding spatial territory [13]. Parallel to the administrative system of the government, urban areas are systematically zoned and divided into stratified spatial levels, down to the smallest indivisible spatial unit. This structure was widely applied during the planned economy to strengthen government management and control over society; danwei was the smallest spatial and administrative unit in this hierarchy structure. When society can function smoothly under the forces of the market, this structure is not obvious, and its function and significance remain inactive. However, if the government wants to regain the power to pursue a collective goal [26], this system could be reactivated immediately, along with the reactivation of its basic cell, the danwei [27].

During the COVID-19 pandemic, China adopted a "Dynamic Zero COVID Policy", which requires monitoring the severity of the pandemic in different regions and minimizing cross-region population flows. As a result, the strict and precise "Spatial Territorial Responsibility System," the improved and modern version of the danwei-era administrative and spatial responsibility system, was introduced for this social emergency [28]. This system can facilitate the government to distribute its tasks through the administrative hierarchy system down to the basic levels, while the responses can be collected and reported upward in a timely manner. By linking administration and space, all cases found in a particular space can be traced back to those responsible. This mechanism has effectively put pressure on bureaucracies at each spatial level to prioritize pandemic prevention in their respective areas. As for the original danweis in urban areas, the return to a larger system of management and spatial responsibility encourages them to retain their once urbanized landholdings by restoring spatial differentiation with neighboring areas [29]. To reduce the potential risks associated with heterogeneous flow factors, some strong danweis have closed and taken complementary measures to maximize their independent operation without large urban participation [30-32].

The cultural and practical core of danweis have long integrated into China's urban management and become a long-existed urban phenomenon in China; without changing the fundamental essence of linking administration with spatial territory. This phenomenon has been repeatedly applied and constantly modify to adapt to evolving administration needs. Danwei's origin, establishment, attenuation, and recession have been analyzed and studied by past scholars, providing comprehensive insights into how societal needs reshape the usage of spaces and how danweis correspondingly modify society. However, limited research has examined how the danwei was reactivated to assist urban management during the COVID-19 pandemic, a national health emergency. Even if the danwei's unique characteristics of being spatially and operationally independent are unaltered in most circumstances, the causes and influences of its reactivation in post-pandemic society would vary greatly from how these characteristics were applied in the past. Therefore, to fill the gap, this study explores the backgrounds, methods, processes, and consequences of re-danweilization under the COVID-19 pandemic by considering a redanweilized danwei (SU¹) as a microcosm. Studying the reapplication of danwei in this circumstance will contribute to understanding the invariance of the system, its adaptiveness to society's needs, and how it can be modified to "take its essence while discarding its dross" in the future.

The essay is structured into the following four parts. After Section 1 (Introduction), Section 2 (Methods) includes a brief examination of the basic characteristics of the investigated danwei (SU),

¹ SU refers to a school. Because of the privacy principle, this article uses abbreviations.

references to sources of information in the paper, and a description of the study methodology. Section 3 examines in detail the background of SU, including its primal danwei structure in the planned economy period, the ongoing waning and waxing between attenuation and reassertion of its danwei characteristic after structural reform, and its final state just before the COVID-19 outbreak. Section 4 focuses on SU's re-danweilization under the pressure of pandemic prevention, further splitting into three minor sections explaining the backgrounds, methods, and outcomes. Section 5 concludes the essay by evaluating SU re-danweilization during the COVID-19 pandemic while suggesting how SU danwei could be improved and further modified in the future.

2. Methods

SU is a university, and it is the danwei investigated in this study; WS Street is the main urban area where SU is located. In 1950, residences of provincial organs set up in the WS region as enclaves. They formed a social area centered on WS Street, with most permanent residents being intellectuals.

SU has a typical layout of a university with the characteristics of a traditional danwei. Its main areas of activity include teaching areas, experimentation areas, dormitory areas, staff living areas, and commercial areas. Before the pandemic, SU was not completely closed to non-danwei members. Most of the intra-college roads were connected to the city road network, and the city infrastructure had also built roads that passed through the campus with three bus stops. The idea of integrating the campus of SU into the urban area of WS and making the campus available to all citizens as a public park was once highly promoted. However, because of COVID-19, pandemic prevention was prioritized, and SU adopted the logic and system of operating danwei; a spatial closure strategy was immediately adopted to minimize the population flow by building a closure wall, renewing the gating concept, establishing an admission permit system, etc. The spatial segregation and other corresponding interior managerial adjustments enable a highly effective epidemic prevention system to be established on the campus, and there has been no COVID-infection record in SU.

To visualize the SU re-danweilization process, official documents published by SU authorities were collected and analyzed; these publications provide instructions on what SU's various departments, colleges, staff, and students (etc.) should do during the COVID-19 pandemic. The two authoritative information channels were the SU Website and SU's We-chat Official account; relevant information was collected from these two channels from January 2020 to January 2022 chronologically.

To examine re-danweilization's impacts on society, urbanism, and individuals, semi-structured interviews were conducted using stratified sampling to achieve a balance in interviewee composition. Specifically, 20 interviews were conducted with people who had access to the SU campus, including eight staff members who both lived and worked within the campus, eight staff members who worked on the campus yet lived outside the campus, and four non-staff residents who worked outside the campus yet lived within the campus. Fifteen interviews were conducted with people who neither worked nor lived on the SU campus; they resided in the surrounding urban areas and were forbidden to enter the campus since the SU re-danweilization and spatial enclosure. To ensure the representativeness of the responses, the age composition of interviewees ranged evenly from 31 years to 76 years; the sex composition was relatively balanced with a female to male ratio of 2:3.

Permission to record the interviews was obtained prior to conducting them; interviewees were fully informed about the usage of their feedback. After confirming the interviewees' identities and categorizing these identities into one of four social groups, questions were asked that focused mainly on their comments about the closure of the campus; the interviewees were thanked after the interviews. Transcripts collected were uploaded on NVivo and coded and analyzed; the outcome was then integrated and incorporated into the discussion of societal influences of re-danweilization in Section 4.3.

3. The Structuring of SU Danwei and Its Process of De-danwei

3.1. The Structuring and Development of Danwei

SU was first established as a typical danwei responsible for producing higher education services and conducting agriculture-related scientific research. It possessed danwei characteristics and an independent system that marked and differentiated its territory and operation from outside: a spatially closed unit with walls and guarded entrances; a systematic, highly organized governing structure serving the implementation of two leading functions (teaching and scientific researching); providing accommodation and extensive social welfare to its staff members; carrying out localized administration within danwei territory, etc. The SU School Logistics Department was responsible for most supplementary management, including infrastructure construction and housing and family planning. Housing in the residential areas was provided for SU employees, and there was no opportunity for non-danwei members to purchase or own residential property within the campus. Social conflicts and day-to-day problems were usually solved internally by danwei departments, and the slogan "Contact the directors if you need anything" indicated the paternalistic care and support of danwei staff. Since the employment and livelihood of all employees were linked to SU, SU created a strong internal cohesion and sense of individual identity. In contrast, employees' external interactions with urban areas were relatively inadequate.

3.2. The Process of Both De-danwei and Re-danweilization

3.2.1. The Process of De-danwei

Since the reform and opening up in 1978, the government has loosened its control over economic activities and given more freedom to the economy. Danwei, as a product of the publicly owned economy, is allowed to directly participate in free markets and bear its own revenues and losses. SU began to employ commercial and specialized agencies to operate services such as markets, canteens, supermarkets, etc., within the closed campus. In 1981, the apartments in the residential areas of SU were released to the real estate market: The rights to use the apartments are no longer restricted to the employees of SU by direct SU provision or revocation; rather, the apartments can be freely bought and sold on the open market like other types of apartments. With its good campus environment, highly cultivated intellectual communities, and social security, SU has attracted many social buyers with different professions and backgrounds to purchase tangible assets within the campus. The complexity and diversity of residential constitution have increased significantly, which has contributed to greater population exchange between SU danwei and the urban area. To increase SU's efficiency in managing the increasingly heterogeneous campus, the SU "Neighborhood Committee" (an agency under the WS Street Urban Area Management Institution) was established in May 2001 to replace the original SU "Family Committee" (danwei's internal, independent, official housing department). The change in administration symbolizes that the municipal government has begun to wield power over the closed danwei, further eroding the closed and isolated state and leading to greater interaction and integration.

In addition to the internal changes in corporate governance, there was also a change in the vertical, subordinate institution of SU. Until 2000, SU, as an agricultural university, was directly under the management of the national Ministry of Agriculture, which meant that it had a relatively loose relationship with the local government. In 2000, the newly established "Provincial and ministerial Co Construction" mechanism stipulated that SU should report to the local government simultaneously. Guided by this policy, the People's Government of Local City Municipality gains the right to increase or reduce SU land available and alter its land uses, representing the interest of city-level development. Instructed by local authorities, much of SU's peripheral areas were involved in urban infrastructure projects and were quickly urbanized away from SU danwei. In 2004, the construction of one of the

city's main urban roads, the "HN Expressway," was through SU, which further divided the closed campus into three separate parts, resulting in a major urbanist "invasion."

From 2010 to 2018, SU launched a public campaign to allow all citizens free access to the university and encourage them to enjoy the beautiful campus environment. The slogan "Local City's SU" was promoted to increase the sphere of influence of SU. By removing access barriers at the same time, the campus of SU has gradually become a freely accessible public park. In 2018, an average of 200,000 non-danwei people visited the campus of SU every weekend, and the students of SU often say, "Our University, Citizen's park."

3.2.2. The Maintenance and Strengthening of Danwei Power During De-danwei

Despite de-danwei taking place in multiple dimensions, SU still possesses typical danwei characteristics. Danwei's role in providing social welfare and social security to its staff remains unchanged. For instance, SU would still offer free or discounted apartments within the campus to its young, single staff members for a certain length of time. Educational services such as "affiliated primary school" and "affiliated kindergarten" are offered only to SU staff's children as a form of social welfare, and only when there are spare quotas would the school accept non-danwei staff's children with payments. The campus hospital also serves mainly danwei members and offers a reasonable discount compared with the cost of services to non-danwei customers.

Noteworthy is the fact that while SU calls for sharing the campus with the city, the SU authority still reserves the right to decide whether to voluntarily share the land. SU also actively clarifies ownership of the land, especially on the periphery, which could easily be used for city developments. The campus planning essential issued by SU in 2004 was one evidence of its re-danweilization intention, "constructing on the edges while controlling the core." Two sub-regions named "QL campus" and "TS campus" have been established in the area separated by the HN Expressway from the main body; HS dormitories and YS postgraduate dormitories were constructed north-west and to the north edge of the main campus body, respectively. Besides a series of constructions explicitly defining its boundary, twelve multiple gates were established as the demarcation point between the interior of the SU campus and the urban areas.

3.2.3. Summary

To sum up, despite a series of actions that have shaken the original danwei system, it is too early to conclude that de-danwei has been completed. SU is still a totipotent danwei, and the university authority is still the fundamental resource allocator and the main organizer of most activities in its territory. SU employees (especially those who work and live on the campus of SU) still think like typical danwei people, with strong affiliations and feelings of identity. Therefore, at the end of 2019, SU continued to be in the transition phase between a danwei enclave and an integrated part of the urban public space.

4. SU's Re-danweilization under the Pressure of Pandemic Prevention

4.1. Application of the Spatial Territorial Responsibility System in SU

4.1.1. Spatial Territorial Responsibility System

In December 2019, the Chinese city of Wuhan was hit by the COVID pandemic, after which Wuhan was sealed off during the upcoming 2020 Spring Festival. To prevent further transmission of the virus, China initiated the "Dynamic Zero COVID Policy" and prioritized epidemic prevention, among other development goals. To ensure the precision and efficiency of pandemic prevention, and especially to

regulate and monitor population flows, China has developed a spatial responsibility system at the national level, in which the city is divided into numerous spatial units for management and monitoring so that there are always corresponding responsible persons for each area. According to spatial standards, the administrative hierarchy of Chinese cities can be divided into five spatial levels: province–city–district–street (township)–community (village) (danwei). Parallel to this hierarchy is a corresponding chain of leaders: provincial governor–mayor–district chief–street chief–neighborhood chief (danwei). The national pandemic prevention strategies are divided and passed from the upper levels to the corresponding lower levels in the region until they are assigned to the basic spatial units. Under the spatial responsibility system, the government system can distribute tasks and quickly receive feedback from the basic units. More importantly, during a pandemic, if a citizen is infected in a certain area, the people who are directly responsible for that area or whose governance includes that area, from the lowest to the highest level, would be punished for their dereliction of duty. Therefore, people in charge, especially those with the highest power and border governing territories, would prioritize epidemic prevention and devote more resources primarily to epidemic control to safeguard their job. By linking space, administrative power, and accountability, the national task of epidemic prevention can be effectively implemented practically in every region of China.

4.1.2.SU Response and Adjustments under the Spatial Territorial Responsibility System

After the COVID-19 outbreak, pandemic prevention instructions were quickly distributed downward in the "GD Province–GZ City–TH District–WS Street–SU" hierarchy. As the fundamental spatial unit, SU Danwei should directly negotiate with its upper-level WS Street Office and follow its assigned epidemic prevention tasks. To avoid holding higher-ups accountable, SU carefully adheres to the appropriate guidelines and responds quickly to assigned tasks. On January 8, 2020, the SU leadership held an emergency meeting, led by the Party Committee of SU, on how to practically and locally implement the published epidemic prevention instructions in the area. This meeting led to the creation of a "Campus Epidemic Prevention and Control Leadership Group," whose leaders and principal officers are the director and secretary of SU. With the hierarchical management system typical of SU inherited from the danwei era, the tasks of epidemic prevention can be further divided and passed to each of the 22 colleges. The college then became the basic unit in the hierarchy responsible for directly interacting with the individuals in the society (SU's staff members) and implementing the upper tasks, including gatekeeping, screening, approval of vacations, publicity, disinfection, and the collection and reporting of epidemic prevention statistics from individual staff members. On average, most colleges have completed approximately 400–500 tasks related to epidemic prevention from January 2020 to January 2022.

In addition to extending the system of spatial-territorial responsibility to the internal hierarchy, SU has also empowered several functional departments to ensure the independent operation of the campus after its spatial closure, including the Security Department, the Logistics Department, and the Campus Hospital. The Security Department is responsible for guarding the entrances to restrict population flow. The Logistics Department and the Property Management Company are responsible for "quarantine," "registration of residents," "control of population flow inside," "sanitation," "public relations," etc. The Campus Hospital is mainly responsible for vaccination, nucleic acid testing, and the admission, isolation, and transfer of suspected patients. These departments in the interior of the SU campus have taken over most of the epidemic prevention tasks of the city authorities and have become important for the SU residents. In addition, SU has maximized the use of its internal facilities and places during the pandemic, including canteens, supermarkets, banking services, and public places, to form a self-sufficient area. Therefore, even though the campus is closed and interactions with the city are interrupted, the campus continues to function smoothly.

Thus, SU, with its highly organized hierarchical management system and rich physical and social resources, is able to expand the Spatial Territorial System within its territory and spatially close the campus. The expansion allows for further localization of accountability and more sophisticated interactions, and embedded control over social individuals. Closing the campus reduces uncertainties and risks (such as contact with COVID-positive individuals) that originate from outside the closed danwei. By implementing these two measures together, SU significantly increases its efficiency in social management, enabling it to become the core force in the war against COVID-19.

4.2. Redanweilization of the Outer and Inner Space

4.2.1. Campus Closure

Before the pandemic, twelve gates were opened and citizen access was not restricted. During the pandemic, all gates were closed to "outsiders" who neither work nor live on the SU campus to minimize heterogenization of the population and reduce staff complexity and difficulties in managing the danwei. For danwei members (who work and/or live on campus), the gates are not always accessible, and they must prove their danwei identity to guards at the entrances. To inform danwei members of the regular adjustments to gate access times, the Security Department has published more than forty announcements from December 2019 to January 2022. As epidemic prevention routinizes, the identification process at entrances has become stricter. Access control includes not only school card authentication but also health codes, travel codes, and temperature testing. Since school cards could be lent to non-danwei members, traditional card authentication was replaced by face ID in December 2020. Cars authenticated as belonging to danwei members can enter the campus after their drivers are checked at the gates according to regulations. If non-danwei members want to enter the SU campus for formal affairs, they should fill up the "Application for entry and exit of personnel and vehicles" on the SU Website in advance and show their approvals to guards at gates. Besides entrance controls at gates, brick walls or barbed wires have replaced unconstructed or hedgerow boundaries to prevent illegal entrances.

There are also measures to control the outflow of danwei members. Under normal circumstances, students of SU are not allowed to leave the campus. If students need to leave the campus, they must apply for a leave permit on the official website of the SU and are not allowed to leave until the leave requests are approved by tutors, counselors, school offices, etc. To re-enter campus, students must present their leave permits to security guards. The extent of the restrictive measures depends on the severity of the pandemic and pressure from upper-level administrators.

The gate is the crucial point at which to control the flow of personnel and prevent the transmission of viruses into the campus. The regulations at the gates are crucial to the entire internal danwei system, and the corresponding workload is disproportionately high. The average working time per guard per day is up to twelve hours. To keep the overall system running smoothly, more authority has been given to the school guards at the gates, and most of the security guards on the school guard team have been immediately reassigned to guard the entrances. To minimize the risk of infectious agents entering the campus, and with increasing power and responsibility, quasi-military measures were carried out by the school guards at the entrance checkpoints, which inevitably led to some unnecessary entanglements and friction with danwei members or other citizens. Since June 10, 2021, SU has organized 235 young teachers to form a "Youth Teachers' Squad Against Epidemics" to assist in entry control. This action has reduced not only the workload of full-time security guards but also conflicts at the entrances due to the higher education of the teachers.

4.2.2. The Subdivision and the Strengthening of Interior Campus Spaces

SU campuses and uses can be divided into four main types: education, student residence, commercial and services, and staff residence. Each land use has different disease prevention obligations and accordingly has undergone different adjustments in management. Land use in education can be further divided into teaching areas (wherein classes on compulsory courses are conducted according to a timetable) and colleges (offices for staff members to carry out scientific research and where most tutorials occur). Regarding teaching areas, all course arrangements should consider the proximity between the teaching building and the dormitory to avoid unnecessary personnel flow on campus. For colleges that focus on scientific research, as they already possess their complete and independent hierarchy systems, the territory responsibility system is able to extend downward so that individual colleges become the minor units under danwei. The dean and general secretary have primary responsibilities in each college. With guidance and assistance from the Security Office, the Office of Logistical Affairs, the School Hospital, the District Committee, and other departments, each college is responsible for carrying out tasks and interacting with college employees, including approving leaves, investigating possible cases, raising public awareness, disinfecting, vaccinating, etc. To reduce the risk of infection within the college, all colleges have chosen to close their gates and employ entrance guards to check the temperature codes and authentication of participants. The minor gate applies a similar principle to the campus gate: people who do not belong to this college are prohibited from entering. Each college, as a functional unit, has shown spatial closure and introversion characteristics to varying degrees, like minor danweis.

Students are organized primarily by their college affiliation and secondarily by the location of their residence halls. The residence halls are the most densely populated areas on campus and are of the greatest importance in epidemic prevention. For this reason, the SU has implemented a spatial grid management system that locates student activities according to the location of their residence halls by ensuring that all daily use facilities (e.g., stores, canteen, sports fields) are accessible within each grid. On February 27, 2020, the campus was divided into five main grids: HS, TS, QL South, QL North, and YS. In each grid are trained grid officers and grid assistants who are responsible for implementing the disease prevention instructions in their region. Their primary responsibilities are to prevent non-grid personnel from entering the residence halls and to report the results of epidemic-related investigations to the appropriate colleges in a timely manner. Their work is supervised by three inspectors assigned by SU's management. The establishment of an effective organizational structure has ensured precise control over thousands of students and minimized the disruption of normal campus activities by the pandemic.

All commercial areas, such as stores and other establishments on campus, should primarily follow epidemic prevention regulations and be jointly managed by the campus authority. Only the Triangular Market Comprehensive Service Center for teachers and students and four sub-centers (TS, YJ, HS, YS mainly for students) are allowed to operate, while other smaller stores are prohibited. Gates are erected at the entrances of these commercial establishments, and people can enter only after a temperature check and health code inspection. In the event of a serious pandemic, some private commercial establishments will have to restrict customer flow or temporarily suspend service.

4.3. Segregation and Other Social Problems Caused by Re-danweilization

4.3.1. Neighboring Citizens' Dissatisfaction with Campus Closure

The SU campus is spread across 2.97 square kilometers and is located near the center of Local City. Its road network was once integrated into the city's road system. Many private cars and buses passed through the campus to enter the central and northern parts of the district TH. Since the access roads

were strictly closed and barrier walls were erected, the adjacent areas experienced significant traffic congestion. In addition, residents of CB Street used to frequently rely on the WS subway station and bus station, which they accessed by crossing through the SU campus. Because of entry prohibition into the SU, these people have to travel further to access another form of public transportation. In summary, the spatial closure of SU has had a negative impact on the accessibility of adjacent urban areas and has hindered the smooth operation of the urban transportation system.

Before the pandemic, SU was an open-campus university that generated and radiated its external benefits to the surrounding communities. The campus was used by local citizens as a public park where they could spend their free time, for example, taking care of children, walking dogs, socializing, enjoying the landscape, square dancing, fishing, etc. SU-owned sports hall and four sports fields are available to citizens. Commercial facilities are also open to citizens without price discrimination. With the cultural atmosphere of the university and interior amenities available to citizens, the housing developments at SU or around SU are more competitive than those at other gated communities in the real estate market. One example is WSG real estate near SU. When citizens' access to SU was not restricted, WSG's close proximity to SU enabled it to advertise itself as "the city's premier housing development within a university." and, under this slogan, the average price for a used home in WSG reached 7000 yuan per square foot on average. In the urban planning of WS, SU was also considered the main supplier of public goods for the residents of the adjacent areas. However, after the pandemic, citizens' access rights to the campus reverted to danwei's hands. Public and quasi-public goods such as green areas, sports facilities, and health services are available only to danwei members within the closed campus. The spatial closure hinders the regular access of neighboring communities to the campus, and this sudden segregation has lowered the living standards of surrounding residents. For example, the activity spaces of the residents of WS have been compressed into a square next to the "WS New World" shopping center. The square is often overpopulated by children on weekday evenings, and the residents of WS have to travel to SC Botanical Garden or TH Park on weekends for leisure activities, leading to increased commuting costs and traffic congestion.

Most residents in the area are unhappy with the closure of the campus. Some of them have even resorted to informal means to enter the campus, such as climbing the walls. Even though their daily lives have been affected, people still understand the rationality of closing the campus, which is to prioritize the interests of the members inside over others. Their understanding comes from the inherited danwei culture gene. Therefore, the majority only criticize the excessive degree of SU closure but rarely criticize the closure itself, which only leads to informal complaints and never to formal protests. From their perspective, SU could adopt the spatial strategy of "whole campus open, inner structure closed" during the pandemic. More specifically, instead of regulating the main gates, SU should focus its attention on the interior gates (dormitories, residential areas, and colleges) so that citizens can continue to enjoy the public spaces they are accustomed to. Residents also suggested that SU can distribute ID cards to the residents of the surrounding communities. As long as citizens with these IDs comply with the disease regulations, they should not be denied access to the campus simply because of their "non-danwei member identities."

If this strict closure strategy is maintained or strengthened in the long term, as it has been for the past two years, the identity differentiation and social segregation between "danweiers" and "outsiders" will be reinforced. Both social groups have already experienced a decline in mutual social activities and a loss of social capital. The long-term absence of these regular social contacts may build up psychological estrangements within or between communities.

4.3.2. SU's Staff Ambivalence about the Close of Campus

SU has assigned epidemic education courses, arranged compulsory meetings, and distributed tasks to its staff members to raise their epidemic awareness and understanding of danwei authority. Staff

members are fully aware of their epidemic prevention roles, duties, and responsibilities assigned by danwei. Since their full-time employment and salary depend on danwei, it is important that they comply with authoritative organizing actively and obey epidemic regulations and restrictions. This system and interconnection enable epidemic prevention activities to be carried out smoothly and effectively in the danwei system. SU has administrative foundations and complete sets of facilities inherited from the danwei era, which enable the campus to function independently. Together with danwei's comparative institutional advantages during epidemic prevention, SU's danwei reactivation can take place easily.

Nearly all SU employees (especially those who work and live on campus) support the closed campus strategy because it reduces the likelihood of infected individuals gaining access to their activity spaces. The closed campus also allows employees to enjoy a much more peaceful environment on campus while having less competition and crowding to access healthcare, public spaces, and facilities. Most employees believe that it is reasonable for SU to close the campus to non-danwei members and would like to see the current situation maintained. They also believe that "this is how a typical university should operate." In addition, SU's functional independence has led staff to affirm their identity more strongly, resulting in stronger internal cohesion and feelings of superiority. However, some of the employees are dissatisfied with the inconvenience of staff communication and the difficulty of commuting.

Since outside citizens cannot enter the campus, the people who often leave the campus have become the heterogeneous constitution within the overall homogenized campus and are sometimes distinguished. The non-student danwei members can be further divided into three main social groups: SU staff who both work and live on campus; SU staff who live off campus but work on campus; and non-members who live on campus. SU has managed the second and third groups more strictly because they have a more regular spatial flow, which could potentially bring insecurity back to campus. The distinguished and differentiated treatment of the third group demonstrates a similar structure to Xiaotong Fei's "concentric ripples," which metaphorically present the self-centered quality in the Chinese social structure, stressing on people's cognition and attitudes toward socialization that greatly prioritize the interest of themselves or the interest of their identified group. In this case, the second and third groups were differentiated against by the first group for their "unsafe risks caused by individual's spatial flow" under pandemic prevention pressure.

5. Conclusions

COVID-19 is a global health emergency that has infected millions of people. China, despite its remarkable population and the corresponding complex personnel movements, has managed to keep the infections at a considerably low level without triggering much social dissatisfaction. This study has analyzed China's effectiveness of pandemic prevention from the perspective of space, focusing on how space could be modified to serve social administration needs and how space modification could further impact society. The pandemic has restored the national management strategy that links administration and bureaucracies with space, which further leads to the reactivation of the smallest unit in this spatial segmentation, danwei. By examining the background, process, and impacts of SU re-danweilization, this study presents the spatial remodification that has occurred in China's post-pandemic society.

During the COVID pandemic, to ensure the precision and efficiency of pandemic prevention, China has applied the spatial responsibility system, in which urban areas are divided into numerous spatial units of different spatial levels parallel to the administrative hierarchy. After the outbreak of COVID-19, pandemic prevention tasks were quickly distributed down the Spatial Territorial Responsibility System through the "Province-City-District-Street-SU" chain. Inside the SU, the

tasks can be further passed down through the "University–College–Department–Individual" hierarchy system. These prevention tasks are treated as important as normal work. If a task is handled improperly or an infection is detected in the area, each level within the chain is held accountable and punished collectively. Therefore, most of the power and resources are deployed primarily in pandemic prevention. Under the system of spatial-territorial accountability in the SU, to reduce the likelihood of accountability or even dismissal, leadership must ensure that neither have SU indoor personnel been infected nor have infected individuals entered the campus. Under this pressure, SU issued measures such as "reinforcement of gates and walls," "danweilizing colleges," "dormitory grid zoning," and "regaining business space management rights," which has spatially restored the "semi-urbanism semi-danwei" campus back to full closure.

The spatial closure was effective in reducing danwei–urban interactions, thus minimizing associated risks of infection. However, this operation model could not be easily replicated as such closure requires a high degree of self-sufficiency as well as cooperation from its inner members. These preconditions are met by physical, institutional, and managerial characteristics inherited from the danwei era. First, the danwei can contain itself spatially with physical barriers; and second, the danwei is based on labor relations, which allows it to assign pandemic prevention tasks to its workers as compulsory labor. Since the workers' salary and power are tied to the danwei, it is their responsibility to perform these tasks, which results in greater importance being placed on pandemic prevention overall and greater efficiency being achieved. Third, the danwei has an independent management hierarchy and another unit division system that enable it to extend the system of spatial-territorial responsibility to inside its interior. Fourth, the danwei has independent facilities, material resources, and human resources that enable it to function independently and organically and reduce interactions with urban areas. Thus, even though both the community and the danwei are basic units in the urban segmentation system, bearing the responsibility of interacting with the remaining society with the least power in the hierarchy, the danwei, with its inherent features, can operate more effectively than the community. These features contribute to its remarkable performance in implementing government tasks and providing rapid feedback, making them highly organized during social emergency events. For instance, SU, as a campus with a population of 50000 having a zero incidence of infectious diseases, has been awarded the title of "Advanced Anti-Epidemic Danwei" for its contribution to pandemic prevention.

However, these danwei features and measures taken for re-danweilization have also led to urban decline and segregation. The transfer of municipal roads to school roads has caused traffic congestion and inconvenience for commuters. SU's "one-size-fits-all" entrance prohibition has reduced the public spaces available to neighborhood residents for recreation and social activities; the decline of social interactions has led to psychological alienation and loss of social capital. Exit regulations have narrowed the activity spaces of students and reduced their ability to access many city services. Urban businesses also face ongoing depression and uncertainty. Although staff can enjoy a better campus environment and a welfare society, the closure also leads to various inconveniences in their daily lives.

The self-sufficiency of danwei is largely due to the erosion of public space in cities and is often accompanied by the decline of urbanism. The closed spatial morphology inhibits mutual social interactions and the creation of urban commons. The long-term consequences of this spatial enclosure may even change people's psychological perceptions of urbanism and danweism. During the pandemic, the government increased its control over society to more effectively combat the spread of the disease, and one of the spatial agents is redanwei. After the pandemic, de-danwei may be carried out to return spaces to urbanism, but the effects of re-danweilization may still unconsciously affect society, especially in the form of psychological inertia. Even though danwei's anti-modernism and

anti-urbanism strategy could achieve effective management in the short term, they would reduce the diversity and vitality of a city and restrict its sustainable development in the long term.

Thus, even during a pandemic, it would be better to first distinguish the internal structures of danwei according to their ownership characteristics and then decide whether these structures should be closed or shared with urban areas. For example, teaching buildings, laboratories, and office buildings are club properties collectively owned by the danwei that should be closed during a pandemic. However, there are urban roads, sports facilities, and health facilities that are funded by the government. These should be open to local residents during the pandemic. Therefore, it would be better to replace the original "unit" closure strategy with the "open the campus gate; close the inner gate" strategy to achieve a balance between epidemic prevention and urban preservation.

Despite the similarity in applying danwei's operational and spatial independence in urban management, different societal backgrounds could potentially lead to distinct results for implementing even the same characteristics. Therefore, investigations on the danwei phenomenon should be advanced and matched with time to comprehensively evaluate danwei's applicability and performance. During the planned economy, the danwei was the work unit for centralized production targets set by the government. The organizational independence derived from the absence of both market and urbanism, so workers would have to rely heavily on danwei's paternalistic financial and material assistance; the corresponding spatial independence was thus due to the little need for individual workers to access the outside since most of the required living resources and facilities are well-prepared by their danwei. The purpose of reintroducing the danwei in post-pandemic society is primarily to reduce interactions between the community inside the danwei and that outside, thus retreating to the self-contained enclave segregated from the neighboring urbanized areas voluntarily. This study explored the reactivation of danwei in a social emergency event (the COVID-19 pandemic); the disparity in the societal background compared to danwei's primary introduction in a planned economy indicates that reintroducing danwei with a thorough replication of its organizational and spatial characteristics in a modernized and urbanized society would produce many unexpected side-effects. Generalizing re-danweilization during the pandemic to the previous ones in the danwei era could hinder the modification of the danwei system to better suit society's demand. For future events where the state may require strengthening control over the society again, space, as a crucial medium for this interaction, warrants a thorough analysis; danwei, along with other urban morphologies, should be evaluated and applied from the perspective of development aligned with society.

References

- [1] Curtis, T. Newness' in social entrepreneurship discourses: the concept of "danwei" in the Chinese experience. *J Soc Entrep.* 2011, 2, 198–217. DOI:10.1080/19420676.2011.621444.
- [2] Chai, Y.; Zuopeng, X.; Tianbao, L.; Na, T. *The Research of Danwei Community in China.* Nan Jing; Southeast University Press, 2016.
- [3] Bjorklund, E.M. The danwei: socio-spatial characteristics of work units in China's urban society. *Econ Geogr.* 1986, 62, 19–29. DOI:10.2307/143493.
- [4] Wu, F. China's changing urban governance in the transition towards a more market-oriented economy. *Urban Stud.* 2002, 39, 1071–1093. DOI:10.1080/00420980220135491.
- [5] Bray, D. *Social Space and Governance in Urban China: the Danwei System from Origins to Reform;* Stanford University Press: CA, 2005.
- [6] Romich, M.F. Decentralisation and the Danwei system: economic reform and its impact on social development in Chinese cities. *China Rep.* 1994, 30, 447–456. DOI:10.1177/000944559403000405.
- [7] Hassard, J.; Morris, J.; Sheehan, J.; Yuxin, X. Downsizing the danwei: chinese state-enterprise reform and the surplus labour question. *Int J Hum Resour Manag.* 2006, 17, 1441–1455. DOI:10.1080/09585190600804648.
- [8] Li, S.M. From work-unit compounds to gated communities: housing inequality and residential segregation in transitional Beijing. In *Restructuring in the Chinese City: Changing Society, Economy and Space.* Abingdon, Axon, Ma, L.J.C., Wu, F., Eds.; Routledge, 2005; pp. 172–198.

- [9] Wu, F. Rediscovering the "gate" under market transition: from work-unit compounds to commodity housing enclaves. *Hous Stud.* 2005, 20, 235–254. DOI:10.1080/026730303042000331754.
- [10] Zhou, M.; Logan, J.R. Market transition and the commodification of housing in urban China. *Int J Urban Reg Res.* 1996, 20, 400–421. DOI:10.1111/j.1468-2427.1996.tb00325.x.
- [11] Ta, N.; Chai, Y.-W.; Liu, Z. Hybridization of danwei neighborhood and the emergence of urbanism. *Hum Geogr.* 2012, 27, 39–43.
- [12] Zhang, C.; Chai, Y. The spatial dynamic of danwei community in transitional urban China: spatial response and land use renewal. *Urban Plan Int.* 2009, 24, 28–32.
- [13] Li, X.; Kleinhans, R.; van Ham, M. Ambivalence in place attachment: the lived experiences of residents in danwei communities facing demolition in Shenyang, China. *Hous Stud.* 2019, 34, 997–1020. DOI:10.1080/02673037.2018.1509948.
- [14] Ye, N.; Kita, M.; Matsubara, S.; Okyere, S.A.; Shimoda, M. Socio-spatial changes in danwei neighbourhoods: a case study of the AMS danwei compound in Hefei, China. *Urban Sci.* 5, 5. DOI:10.3390/urbansci5020035.
- [15] Li, H. The danwei phenomenon in China and the integration mechanism of urban communities. *Sociological Study.* 1993, 5, 23–32.
- [16] Wei, L. From "de-danweization" to "de-community": the "knot" and "solution" of the reintegration of urban grass-roots society. *Acad Forum.* 2011, 6, 63–68.
- [17] Huang, Y.Q. Collectivism, political control, and gating in Chinese cities. *Urban Geogr.* 2006, 27, 507–525. DOI:10.2747/0272-3638.27.6.507.
- [18] Li, X. The economic nature of danwei enterprises. *Econ Res J.* 2001, 7, 35–43.
- [19] Liu, P.; Wang, H.; Zhang, X. Changing in the work-unit and differentiation in the system: the large state-owned enterprise with restricted incorporation (LSOERI) as an example. *Sociological Study.* 2008, 3, 56–78.
- [20] Hou, Y.S.; Chai, Y.W. Research for the invisible action of danwei and its housing manifestation in China's housing reform: cases from several college staff neighborhoods in Beijing. *Hum Geogr.* 2014, 29, 19–24.
- [21] Du, C.; Chai, Y.; Zhang, T.; Xiao, Z. The comparative study of the unit yard and the housing estate from the perspective of the neighborhood theory. *Urban. Dev Stud.* 2012, 19, 88–96.
- [22] Wei, H. The return of the danwei system to the community system: 50 years of changes in the grass-roots management system in Chinese cities. *Strategy Manag.* 2000, 1, 86–99.
- [23] Goldman, M.; Perry, E.J. *Changing Meanings of Citizenship in Modern China*; Harvard University Press, 2002.
- [24] Cliff, T. Post-socialist aspirations in a neo-danwei. *China J.* 2015, 73, 132–157. DOI:10.1086/679272.
- [25] Li, D.; Wang, Y. Research on the effect of the "invisible presence" of danwei on community collective action: case studies of elevator installation projects for old residential districts in Guangzhou. *J Public Manag.* 2021, 18, 93–104.
- [26] Dickson, B.J.; Oi, J.C.; Pye, L.W.; Thurston, A.F.; Walder, A.G. What explains Chinese political behavior? The debate over structure and culture. *Comp Pol.* 1992, 25, 103–118. DOI:10.2307/422099.
- [27] Wu, F.; Zhang, F. Rethinking China's urban governance: the role of the state in neighbourhoods, cities and regions. *Prog Hum Geogr.* 2022, 46, 775–797. DOI:10.1177/03091325211062171.
- [28] Liu, H. Management or autonomy? Examining the role of grids in grass-roots governance. *Administration Reform.* 2021, 7, 89–99.
- [29] Lv, D. Community epidemic prevention mode and its operation mechanism. *Jinan J (Philos Soc Sci).* 2020, 11, 90–99.
- [30] Xu, M.; Peng, K.; Yang, Z. Local public resources and contractual community: a research framework of gated community based on the theory of polycentric governance. *City Plan Rev.* 2018, 42, 67–75.
- [31] Xu, M.; Yang, Z. Genesis and essence of gated community: from the perspective of spatial political economy. *Urban Plan Forum.* 2010, 4, 36–41.
- [32] Yan, T. Challenges and responses of community governance in the prevention and control of novel coronary pneumonia: from perspectives of urban-rural planning and public health. *Soc Sci Nanjing.* 2020, 3, 8–13.