

Awakening Urban Heritage and Retaining Urban Memory: Heritage Memory

Reconstruction under the New Urban Policy

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Abstract

Industrial culture has long been relegated to a marginal culture in some regions in China. A huge number of old industrial sites disappeared during urban development, leading to a memory crisis. In this research, we undertook historical field surveys, recorded oral history interviews and employed multidisciplinary methods to extract, store, and reloading the industrial memories for Shandong Plastics Testing Factory. By exploring the preservation methods of urban industrial heritage, this article presents various ways to re-appear the industrial memory in the period of the collective economy. The significance of the research is to wake up the memory of a generation of industrial production, although the government has not taken active actions under the new urban policy.

Keywords: Urban Industrial Memory; Architectural Relics; Preservation Method; Update Path

1. Introduction

After the founding of the People's Republic of China (PRC), a creasing number of factories were constructed. These factories that have made great contributions to the development of China's industrialization are changing their roles as the process of urbanization. As the precious industrial memory of a generation of people and the mark of urban civilization, these old industrial sites are increasingly valued to the whole society. The research object of this article is one of them, located in Jinan, Shandong.

Shandong is a province with the third largest economic output in China, and its modern industry has been rising rapidly since the middle of the XXth century. Jinan, the capital of Shandong Province, is a crucial city for the industrial development of China. With the continuous expansion of the city, in 2018, the Shandong Provincial Government issued the rule: "*Implementation plan for the replacement of old growth drivers with new ones in Shandong Province*". This document proposes that "Support Jinan to build a pilot zone for the replacement of old growth drivers with new ones, effectively resolve the superfluous production capacity, and free up more space for development... Promote relocation and transformation of the old industrial area, and accelerate the renewal of the city." Under this background, some old industrial areas in Jinan would be demolished.

2. Historical review—the pride of the industry in collective economy

As the economic, cultural, and political center of Shandong, Jinan has shown a pivotal position in modern industrial development.¹ Before the founding of the PRC, Jinan's industries were dominated by paper making, textile, and flour industries. In the first 30 years after the founding of the PRC (1949-1978), with economic development and productivity growth, as well as government policy guidance, increasing number of companies needed land to build more factories, so that Jinan's urban form was constantly changing. In 1950, the Urban Planning Committee established by the Jinan Municipal Government formulated the first "*Urban Planning Outline of Jinan City*", which guided the development of different functional areas in Jinan. In this context, industrial enterprises such as Jinan Food Factory, Shandong Construction Machinery Factory, Shandong Plastics Testing Factory, Jinan Iron and Steel Factory, Jinan Watch Factory, etc. have been successively funded to form three industrial zones in eastern suburbs, northern suburbs, Baimashan area.

Shandong Plastics Testing Factory (SPTF) was founded as Jinan Resin Factory, in August 1965, located on the north of Lujiazhuang, at the end of Gongyebei Road, Licheng District. After expansion, the factory area reached the peak of 22 hectares. During several decades, the main productions changed many times, detailed in Table 1. It is an important chemical enterprise in Shandong, and it carries the memory of a generation of people's industrial activities. It is not only the pride of Shandong industry development in the planned economic system, but also the driving force for the development of the market economy.

Table 1. Factory construction and development chronology

Time	Event	Name	Production
1965	Founded	Jinan Resin Factory	Phenolic resin, anticorrosive resin, etc.
1966	Rename and adjust production products	Shandong Plastics Testing Factory	Caustic soda, liquid chlorine
1971	Merged with Jinan Chemical	Jinan Second Chemical Factory	Caustic soda, liquid chlorine
1972	Separated from Jinan Second Chemical Factory	Shandong Plastics Testing Factory	Solid alkali, phosphate fertilizer, etc.
1995	Merged with Jinan Tannery Eastern Suburban Branch	Shandong Plastics Testing Factory	Solid alkali, soft polyurethane foam, etc.

3. Overview of the status quo—the outcasts of the new urban planning

When it comes to the XXIth century, with the expansion of the city, the Eastern Suburban Industrial Zone no longer assumes its original mission. Jinandong Railway Station was planned to be built in this area. The relocation of the aborigines started in 2015 and the construction of the station began in 2016. According to the latest urban planning, the landscape belt area will cover the staff dormitory area of the SPTF, as shown in figure 1. A small number of public buildings are planned around it and huge amounts of residential communities will appear. As of 2018, except for the staff dormitory area of SPTF, other parts of the factory have been mostly demolished. In 2018, we found that the buildings in the entire dormitory area were well preserved, but most of them have been idle for a long time during the on-site inspection. Only a small number of retired workers kept living there. From the state of the entire area, we can imagine the bustling life scenes there in the past decades, which are very precious industrial relics of the collective economy period.

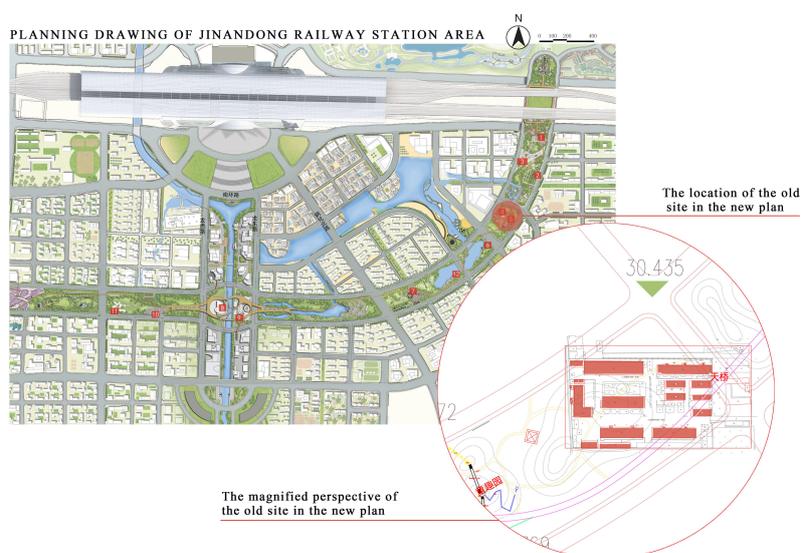


FIGURE 1 A part of the planning map for Jinandong Railway Station area, mapped in 2018 by Li Shuyi.

From 2018 to 2019, our efforts were intended to show more possibilities for heritage reuse to the government and urge to seize the silver lining for the preservation of the whole historical area. Unfortunately, the dormitory area was demolished in 2020, while large numbers of new buildings rushed to the sky and the new station has been put into use over short four years. Figure 2 shows the rapid changes since 2016, and the dormitory area is in the red boxes.

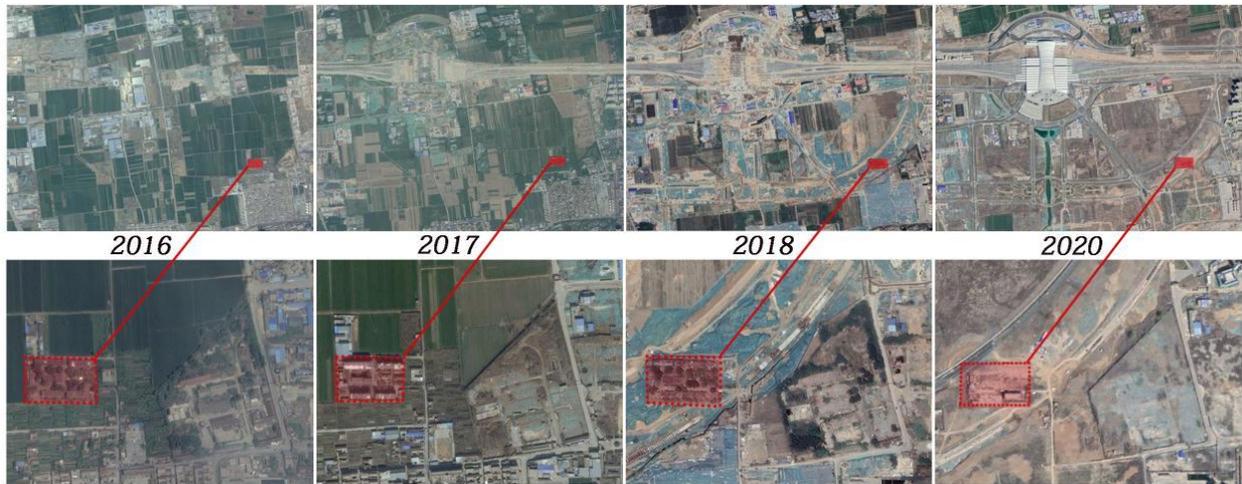


FIGURE 2 Satellite map of Jinandong Railway Station area (2016–2020), shot from Google earth in 2021 by Li Shuyi.

3. Architectures and space—living fossils recording the evolution of residential areas attached to factories

As shown in figure 3, before being demolished, the dormitory area of the SPTF maintained its original form, containing 5 multi-story residential buildings, a public building that was once used as a reading room and a kindergarten, and a group of bungalows. These buildings, built between the 1960s and 1990s, spanning more than 30 years, recorded the development trajectory of the industry and its auxiliary constructions. Such buildings are rarely seen in the urban area of Jinan.

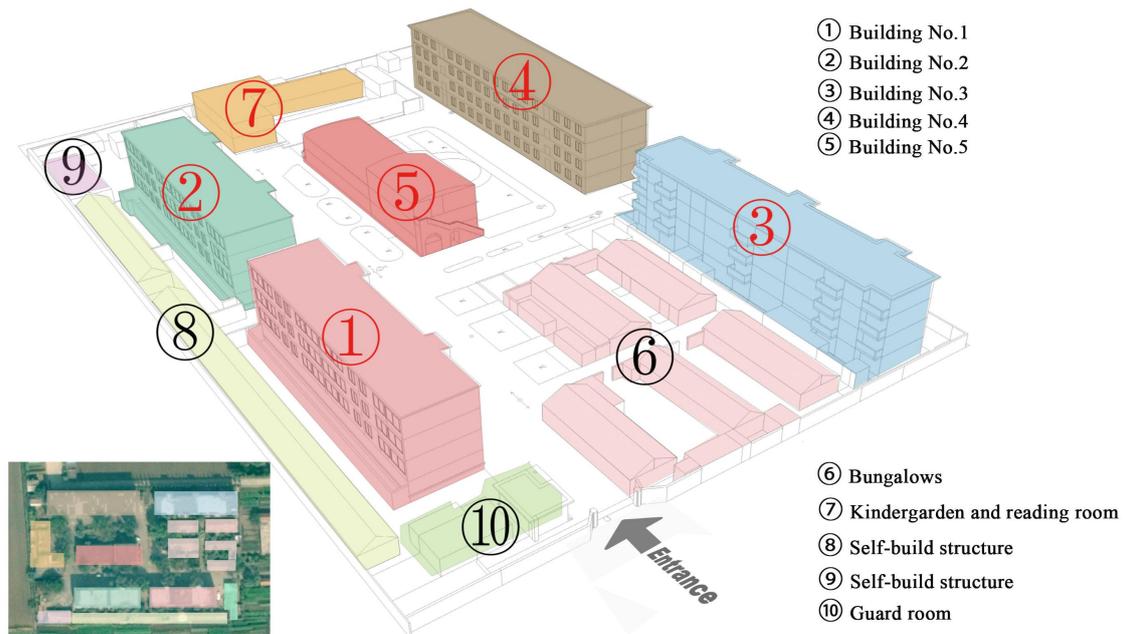


FIGURE 3 Site and building model, created in 2018 by Li Shuyi.

The entire yard embodies the characteristics of industrial subsidiary. Being only one street away from the factory brings great convenience to the employees. The enclosed courtyard not only includes dormitory, but also provides infrastructure for daily leisure and education of employees' children. In the era of planned economy, this was a very common kind of community structure with a strong atmosphere of work relationship society.² With the prosperity of the market economy, these communities have gradually faded away from the original sense and became a unique mark of that period.

The buildings in the yard demonstrate their regional and contemporary characteristics. In the past long period, red bricks were widely used as a traditional building material in many cities in China. While, today, when concrete buildings are scattered in every corner of the city, these mottled red brick buildings have been either abandoned or demolished.³ These buildings in the dormitory area of SPTF are precious urban heritage, as shown in figure 4. In addition to building materials, another architectural feature is reflected in the functional layout. Residential buildings designed after the liberation of China were usually located in line.⁴ The internal layout of the buildings gradually transitioned from the co-living dormitory under the "Soviet Standards" to family apartment. In 1950, Building No. 5 was constructed firstly, the dim corridor of which is on the inside of the building shared by all households on the same floor. In 1960s, the small apartments in Buildings No.1 and 2 were built with a living room and a kitchen, but four households sharing one bathroom. Until the 1980s, Building No. 3 was built with the apartments we are familiar with today. These unique red brick buildings constructed in different years in this dormitory area are the living fossils recording the evolution of the residential areas of Chinese factories.



FIGURE 4 The remaining red brick building, taken in 2018 by Li Shuyi.

4. Restrictions and predicaments

Reduction of the economic driving force

Economic factors have always been an important issue for heritage protection and reuse. Although a large amount of money has been spent on the relocation of the original residents during the construction of Jinandong Railway Station area, the government has not paid enough attention to the maintenance of the historical relics. The renovation of industrial heritage is always a huge cost project with high investment risk. There are quite rare investors willing to participate. Three crucial problems should be solved. The first one is how to carry out the reinforcement and maintenance of the industrial relics; the second one is how to attract more participants to make up for the shortage of funds; the third but not the least important is how to improve the awareness of the citizens for heritage protection.

Ignorance of the industrial memory

In the plan of Jinandong Railway Station area, there is a lack of systematic protection and excavation of the entire area of historical heritages. During the on-site inspection, we found most residents have already moved away from the old community. Some former employees had changed jobs even

before the factory was closed. The loss of a large number of indigenous residents has fragmented collective production and living memory. Furthermore, financial records, production-related drawings, and technical documents can no longer be found.⁵ These valuable memory resources related to industrial activities were being lost.

5. Exploration of industrial memory reloading

Extraction

The “historical witness” can be material or non-material, arising from industrial production activities. Ways to extract “industrial memory” include interviewing retired employees, searching for historical evidence on site, and consulting archives. Since the factory has been almost dismantled, there were few remains that can be searched on-site during the investigation. Therefore, we visited several retired employees and collected oral history. They introduced many fragments of industrial activities in the factory, especially the scenes of the collective lives at that time.

Storage

Although the tangible remains in the area are scarce, we formulated a comprehensive industrial heritage archive storage plan. For the remaining buildings in the dormitory area, we took photos and made surveys, and then built models in software to clearly show the decorative patterns and internal structure of the buildings, as shown in figure 5. In the process of collecting oral history, we also picked up a small number of tangible objects, such as work permits, badges, brochures, tools, packaging, corporate publications, etc. For the storage of oral historical materials, we designed a record sheet. The content includes major production events or important memories of the dictator him/herself, descriptions of production activities, and dictator’s job history; memory fragments of households related to collective life, introductions to the functional changes of each building, and the dictator's perception of the memories. These materials were sorted into categories and formed an archive database. Such actions provide the premise and guarantee for the reconstruction and reappearance of industrial history.

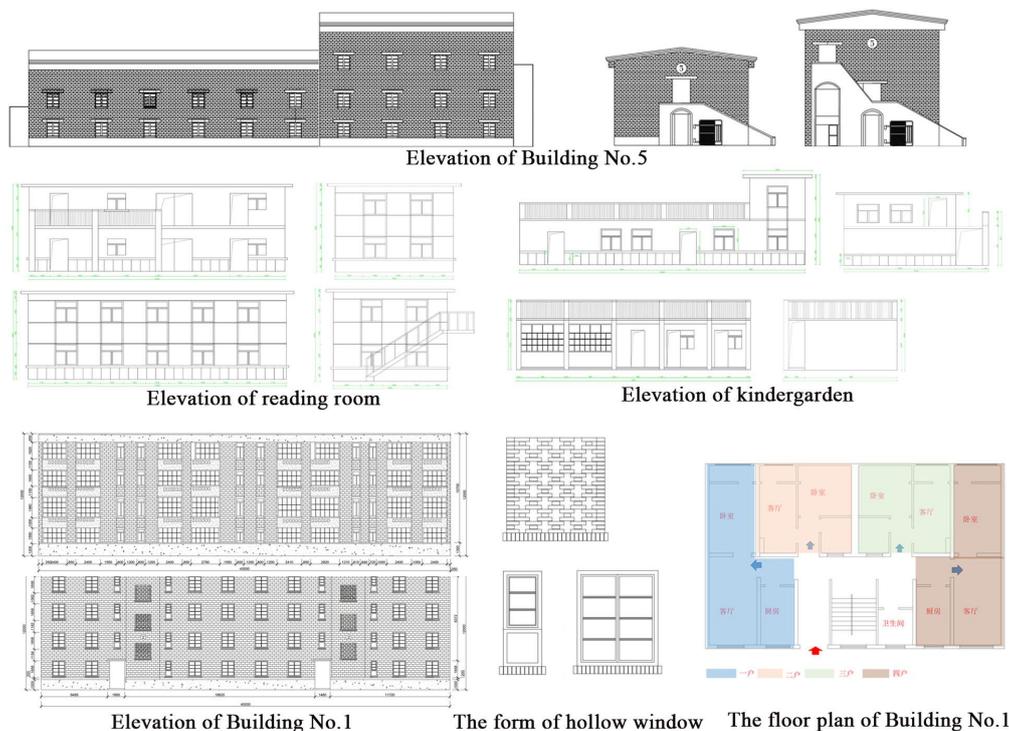


FIGURE 5 Part of architectural surveying drawings, drawn in 2018 by Li Shuyi.

Reloading

Based on the new urban planning, it is necessary to find a way to present industrial memory integrated with the function of the new station to residents and tourists. This approach not only ensures that the historical placed properly in the new planning scheme, but also provides more persuasive possibilities for the preservation of the old industrial area. Therefore, in the renewal plan, we proposed to create an industrial cultural brand that integrates traditional industries such as history tells, product display, design creativity, talent training, etc., so that tourists can visit and experience the pace of industrial development of Jinan in leisure interaction, and at the same time remain the industrial memory of the city to the residents enhancing the sense of cultural belonging. It is a respect for urban culture and the history of China's industrial development by transforming the old industrial heritage into the carrier of culture. This is not only of great social significance, but also in line with the regional development strategy with the theme of "The replacement of old growth drivers with new ones" in the development plan formulated by the government. In this way, Jinandong Railway Station area would contain the value of the building itself as industrial heritage, and more importantly, carry the spirit of the city. This is our proposal of heritage protection and reuses to the government. Although the entire historical area did not escape the fate of being demolished, it cannot be denied that it is a meaningful proposal.

6. Conclusion—a regretful commemoration

This article is dedicated to commemorate the exploration and efforts we have made for the preservation and reuse of the dormitory area of the SPTF. Although the government finally abandoned the entire historical area, as the protectors of industrial heritage, we could not reduce the enthusiasm for actions because of the government's negative treatment. On the contrary, the failure cases give more strength to heritage defenders. It is a great pity to flatten the history and memory during the city expansion, because the carrier of urban development for several decades is far more worth cherishing than a new urban plan drawn up within a few months. Such a pitiful story should not be repeated.

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