Research on the strategy of industrial heritage transformation in the context of emotional awakening

Feng Wang¹, Jie Liu²,* and Xiangyun Wang¹

¹ Shandong Youth University of Political Science, Jinan 31699, China
² Qilu Normal University, Wenbo Zhangqiu 2, China

* Correspondence author; E-mail: ljqlnu1018@163.com.

Received 01 March 2022; Accept 15 March 2022; Published 23 September 2022

Abstract: Industrial heritage is a kind of world cultural heritage that appeared later. It carries the spiritual and material wealth left over by the industrial revolution, continues the memory of the industrial revolution that made outstanding contributions to the development of human civilization in history, is a special legacy in the process of urban modernization, represents the special landscape and historical memory of each city, and is a special kind of historical building. The transformation of industrial heritage should not pursue specific mode and mechanized operation. The process of transformation should not only be the extraction and stacking of industrial elements, but also its deep connotation-emotion. This paper connects the objectiveness of industrial heritage with people's consciousness, stimulates people's emotional recognition of the transformed industrial heritage by tapping the essential strength of the site, analyzes and summarizes the strategies of spiritual shaping of industrial heritage sites with specific examples, and brings more imagination and innovative elements to the transformation of industrial heritage.

Keywords: industrial heritage; emotional place; awakening

1 Emotional experience of the spirit of industrial heritage sites

1.1 Historical emotion

History is the general reflection and record of people's previous life experiences. Life experiences in different stages turn into memory fragments, and the accumulation of these memory fragments constitutes history. Industrial heritage has its unique script-like changing historical scene, which no other form of architecture has. No architecture can imitate or copy...
the unique spirit and charm of industrial heritage, let alone replace its important position in people's minds [1]. Although the buildings in the industrial heritage are gradually dilapidated and lose their prosperity in the past, it has been deeply engraved with the brand of history, and the trustee can send the history. By virtue of the infection of its unique industrial art shape and connotation, everything can hint out the historical events, people's footprints and some custom features in the places where the industrial heritage is experienced, and play a role of historical witness [2].

![Industrial heritage in Chengdu.](image)

**Figure 1.** Industrial heritage in Chengdu.

The rusty landscape of industrial heritage can arouse their nostalgia. They look at industrial heritage from a distinctive aesthetic angle, appreciate those decaying and decadent industrial buildings and structures, taste the incomplete beauty from them and satisfy their inner enjoyment. The industrial heritage is full of mottled walls and raw embroidered components, all of which imply the attribute of time and space to people all the time and everywhere: old. This is a fatal attraction for people with nostalgic feelings because all aspects of industrial heritage enable them to find a connection with their past, which enables them to release their nostalgic feelings(Figure 1).

1.2 Dream factory

Designers often struck by their "industrial Disney" fantasy space, which makes them feel extremely shocked and deeply impressed. This is because of the unique spirit of the industrial heritage itself, which is different from ordinary living places, and the extraordinary scale of industrial buildings and structures makes people "face-to-face" when they are unprepared. When this architectural language form which is different from people's familiar daily life is displayed in front of people, people will have a dreamlike unreal feeling.

1.3 Feel the fun

After the transformation, the space of industrial heritage gives birth to new life, and its functions have also undergone new changes, which has created a dramatic "conflict" between the appearance of old buildings and new functions.
Figure 2. Industrial heritage boilers “dressed in new clothes”.

This kind of "conflict" makes people's psychological expectations contrary or deviated, thus attracting the attention and interests, so it is a positive "conflict". For example, the glass pyramid in front of the Louvre designed by I.M. Pei is interesting and dramatic because of the "conflict" between the new and the old (Figure 2). This kind of "conflict", which is actually a favorable factor, is inevitable in shaping the emotional space of industrial heritage. This kind of place space makes people interesting and is a special industrial experience.

2 Anchoring architecture to place —— the strategy of emotional awakening and transformation of industrial heritage

Paving buildings in places is the root and premise for people to get architectural experience. A comfortable sense of place can not only give people a sense of direction, but also give them a sense of identity and belonging to the place, and then they can feel the spirit of the place. People’s emotional response is the ultimate experience result of place spirit, and a good place should have the characteristics of giving people emotional shock, so that the place can be truly meaningful [3]. At the beginning of its birth, the spaces of industrial buildings are all born for productive activities, and lack of concern for people’s inner feelings, so they need to be reshaped when being transformed and reused. Abandoning the wrong orientation that only pays attention to the needs of manufacturing technology and ignores people’s behavior and psychological requirements, makes people get along harmoniously with the space environment, makes people feel a sense of belonging, identity and intimacy in the transformed industrial heritage space, and creates a “place spirit” that can stimulate people’s emotional identity.

3 Integration of place space

Integrate the ecological space of the place. Ecology includes air, topography, geographical landscape, vegetation, hydrology and other elements, which is an essential component of place spirit. Retaining these ecological space features formed over a long period of time can help people find a sense of identity and belonging, and can also shape a landscape that is close to the original place spirit and closer to people's lives.
However, because it used to be the place of industrial production, it is inevitable that these environmental elements will be polluted and destroyed. Therefore, it should be re-integrated on the basis of reservation and reshaped by modern means, so that it can meet people's ever-developing living needs (Figure 3). A good environment is not only the aesthetic feeling of architectural space, but also the poetic ecological space. For industrial heritage, such a space can not only make people enjoy the relaxed and pleasant environment, but also have an understanding of the evolution process of industrial sites, fill people's attachment to the past emotions and inject delicate emotions into the space environment [4].

**Integrate the texture of the place.** To maintain the spirit of place, industrial heritage must inherit the original place texture accordingly. Different from the transformation of single old industrial buildings, the transformation of industrial heritage is the transformation of the whole factory area, so we should think about the whole from a macro perspective. The inheritance and integration of place texture is an important way to maintain the original sense of place of industrial heritage, and it is a unified limit for the later integration of spatial order.

For example, the memory music park in the eastern suburb of Chengdu was transformed from the former site of Hongguang Electronic Tube Factory (Figure 4). From west to east, the site shows the development process of architectural style from 1950s to the future, and the simple factory buildings built in the later stage of the site destroyed the original texture of the site. The project tries to restore the efficient and tidy texture of the site when building the factory. Keep the excellent old buildings in the site, and dismantle the disorderly and worthless simple factory buildings. Through spatial integration, the original place texture with Soviet characteristics was restored.
Shaping the core space. The site space of industrial heritage often presents a chaotic and messy scene, so it is necessary to re-integrate the spatial order of the original site on the basis of integrating the site texture.

For example, one or more "core spaces" can be shaped in the whole place, and other space elements exist in the form of supporting roles to set off the dominant position of the core space (Figure 5). This kind of core space is helpful to grasp the spatial order of the whole place and play a leading and cohesive role in the whole place. The core space of industrial heritage should choose a space place with historical, functional and certain visibility. In such a place with outstanding formal features and functional features, it is conducive to reshaping the spirit of the place, allowing people to feel the temperament and soul of the industrial age while living, entertaining and communicating normally, and endowing the place with new spirit continuously on the basis of continuing the original connotation of the place, and continuously continuing the vitality of the place spirit.

Figure 5. Shaping the core space.

4 Integration of new and old elements in the place

Industrial heritage is a special kind of historical relics. With the constant changes in society, economy, history, and culture, its sites have accumulated buildings and structures with different functions and different appearances in different periods. These chaotic site elements are mixed together, which is not conducive to showing the characteristics of the site, and also easy to cause confusing visual myths and messy perceptions of the site. Therefore, these new and old site elements should be re-integrated.

The harmonious integration of new elements. The architectural space scale of industrial heritage is generally large, and some adaptive new buildings are often built in the original space for the development of new functions during the renovation. The newly added part is a clear dialogue relationship with the original part, not an "attachment" relationship. Only when the new elements are harmoniously integrated, can the function be reborn on the basis of maintaining the original style of the building. However, for some buildings and structures that have certain industrial historical spirit and need to be preserved to convey the spirit of place, but are seriously damaged, we can take the opposite strategy to the above, such as
covering the damaged buildings and structures with glass or other transparent materials as skins.

**Regeneration of old elements.** After the industrial heritage is abandoned, besides buildings, there are still a large number of production equipment and other structures left in its place, which can't be used by people through spatial integration like buildings. Without the utility of industrial production, life seems to end, but they often have extremely strong industrial characteristics, which are of great value for strengthening the spirit of the place. We should use them in another way to make them reborn.

![Regeneration of old elements in Dong Jiao Ji Yi Guan.](image)

Figure 6. Regeneration of old elements in Dong Jiao Ji Yi Guan.

An example is to change the original small car conversion function of the factory into a special flower bed in Dong Jiao Ji Yi Guan (Figure 6); The original gas tank was transformed into a landscape fountain; Because the scale of the original small storage tank is similar to that of the character "Minions" in the movie, it has been transformed into a "live version" of "Minions", which has become an interesting landscape node in the venue. These industrial facilities are the historical witness of places, which are not available in general construction places, and are special places of industrial heritage.

From the above examples, we can see that the waste that has lost its use function has not only turned waste into treasure, saved resources, but also become an important component of the spirit of place, and added interest to the originally dull industrial heritage space.

5 Reappear the spirit of place

**Entity reappearance.** Industrial machinery and equipment are often more direct and clear than special forms of industrial buildings. Because of their special appearance, people can easily identify the industrial departments they represent, and they can also most accurately express the different spirit of their places, which directly impacts people's inner feelings. For its unnecessary transformation and reconstruction, it is only necessary to truly reproduce its appearance and entity.

**Memory reappearance.** The industrial heritage site is full of historical memories, which are filled with deep emotions and endow the site with distinctive and unique features. Therefore, the reappearance of some "memory fragments" is helpful to shape the spirit of the site and also has important emotional value [5]. For example, different slogans can often show the special sense of the times in different historical periods: industrial slogans bear the industrial memory of China's planned economy period (Figure 7).
The preservation of slogans and paintings in industrial heritage has become an art form today, and it is an effective restoration of historical memory to carry out some slogans whose colors are gradually fading due to the age. For example, Dong Jiao Ji Yi Guan remembers the slogan walls everywhere in the Eastern Suburb, and people can't help recalling the scenes of that year when they stop in front of the door, giving people a sense of identity and belonging. The dialogue between history and modern times bursts with brilliant fireworks.

**Scene reappearance.** The reappearance of real industrial scenes is full respect for the history and spirit of industrial heritage sites. The reappearance of the industrial scene here first refers to the production scene. No form is more direct, accurate and true than its presentation of that period of history in the old days [6]. People who have not participated in industrial production can see it as enlightening and popular science.

For those who have experienced industrial production, it also contains their deep feelings, just as a worker is full of nostalgia for Guangzhou Steel Works, which is about to be relocated, when accepting a visit, he said, "I have great feelings for this place, and I can't help crying when I say that it will be moved. What I have the most affection for is the blast furnace, because I participated in its production, and I hope it can be preserved.

6 **Sublimation of place spirit**

In addition to the strategies of space integration, remodeling of buildings and structures, reappearance of place spirit, etc., which can tap the essential strength of place and inject emotion into place, refining and reconstructing place spirit can also sublimate the emotion of place. The spirit of place exists not only in the place elements such as places and buildings in the object position, but also in the memory and emotion of the subject. These are abstract without physical support. They need artistic refinement, and re-created symbols are used to express this spirit and emotion.

**Figure 7.** Slogans in Dong Jiao Ji Yi Guan.

**Figure 8.** Sublimation of place in Dong Jiao Ji Yi Guan.
For example, the enterprising and enterprising spirit of workers is as shocking as a symbol extending vertically to the sky. Through the symbolic way, people's emotions in the spirit of the place are refined and sublimated, which has gone beyond the limitations of the architectural entities of the place, and has been upgraded to emotional shock and pleasure. For example, a monument at the entrance of Dong Jiao Ji Yi Guan tells us the main theme of "self-reliance and hard work" of this place in that era, and people can't help recalling how many youthful sweat spilled on (Figure 8).

7 Conclusion

Since the rise of industry, human society and economy have developed rapidly, and people's way of life has also changed, which makes people's demand for architectural space more and more diversified, not only focusing on the functional forms of space, but also more on the spiritual connotation of space. For the renovation of existing buildings, we should pay more attention to the cultural, historical, emotional and other values of the old buildings than before. This paper reflects on the lack of emotion in the transformation of industrial heritage, starts with the location of industrial heritage, analyzes it with specific examples, and then deduces the strategies. In order to revitalize the lost industrial areas, revitalize the declining areas and improve the environment, and make the space richer and more vivid, full of strong emotional atmosphere.

Acknowledgement

The work was supported in part by Scientific Research Project of Shandong Youth University of Political Science(No.2017KB0AB01).

PhD Program in Design, Faculty of Decorative Arts, Silpakorn University.

References