

A study on the reuse of industrial heritage in museums

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Abstract

Reuse and renewal of industrial heritage sites has become popular in Taiwan. For Taiwanese officials and the public, whether sites of industrial heritage should be preserved, or if the government should simply tear down the site and build them anew, is still a much-debated question. In this paper, I argue that although industrial heritage have lost their functions, they still have historical and cultural importance. Therefore, I consider the use industrial heritage sites as museums is the most appropriate way to let people know and understand the meaning and value of industrial heritage. Industrial museum can use architectural strategies, spatial choreography and content arrangement to provoke an open reception and interpretation of the past, present and future. Display design and methods in the industrial heritage museum should let visitors experience the space by themselves and help them connect the new concept and old objects. Through experience, visitors will have their own connection with the industrial machines and devices. Despite the changes that have been made, this impressive site of industrial heritage is not just a container for the objects on display; instead, it forms part of the exhibition itself. In short, the spatial arrangement and display design does not compete with the impressiveness of the space but rather helps visitors to move through it.

Keywords: industrial heritage, spatial arrangement, display design, Ruhr Museum

1. Introduction

The debate of how to use and deal with industrial heritage has become popular in museum studies. Many infrastructural projects in Taiwan, such as roads, railways, power plants, and tap water supply systems were built during the Japanese Colonial Period since 1895. However, many industrial and infrastructural building projects

were changed, suspended, or stopped because of changes in economic development.

For instance, the sugar production was once a very important industry in Taiwan. Fifty factories were built before 1945, and sugar was one of the important export products before 1966. However, as a result of the changes in the international economy, sugar factories were closed one after another. After 1991, sugar was opened for import, and this led to a further decline in Taiwan's sugar industry. Only two sugar factories remain in operation now (Fu, 2011). How to deal with the abandoned sugar factories became important issue.

In 1998, the former organization of the Ministry of Culture, the Council for Cultural Affairs (CCA) set the renewal of deserted space as the emphasis of policy, causing Taiwan to implement "Old Building Reuse" projects from historical sites, historical buildings and even public deserted space. In accordance with these policies, many museums were established, including, The Taiwan Coal Mine Museum (2002), The Gold Ecological Park (2005), The Taiwan Salt Museum (2005), and The Taiwan Sugar Museum (2006).

As a result of the increasing demand for economic development and cultural tourism, it has been common for Taiwanese officials and public to debate whether sites of industrial heritage like pre-existing factories and previous equipment should be preserved, or if the government should simply tear down the site and built them anew.

This paper will figure out how policy makers seek ways to deal with abandoned industrial heritage. It also explains how industrial heritage demonstrates the museums' social function.

2. The relationship between industrial heritage and museums

2.1 Definition of industrial heritage

"Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education." (The Nizhny Tagil Charter, ICOMOS, 2003)

The International Committee for the Conservation of Industrial Heritage (TICCIH), is a

world organization representing industrial heritage and is special adviser to The International Council on Monuments and Sites (ICOMOS) on industrial heritage. The Nizhny Tagil Charter was originated by TICCIH. The 2003 TICCIH Congress in Russia asserts that buildings and structures built for industrial activities, the processes and tools used within them and the towns and landscapes in which they are located, along with all their other tangible and intangible manifestations, are of fundamental importance and have intrinsic value.

The Nizhny Tagil Charter (ICOMOS, 2003) showed that industrial heritage has technological and scientific value in the history of manufacturing, engineering, construction, and it may have considerable aesthetic value for the quality of its architecture, design or planning.

In addition, industrial heritage serves as evidence of activities that have had and continue to have profound historical consequences. If we use the German philosopher Martin Heidegger's point of view to understand this phenomenon, we can see that sites of industrial heritage exist in the world because they have connection with the environment, history and human beings. Although they have lost their functions, they still have historical and cultural importance. Preservationist Randall Mason advocates value-centered theories of preservation that "shift the balance, giving priority to the memories, ideas, and other social motivations that drive the urge to physically preserve the built environment. (Crisman, 2007)" This approach acknowledges that culture is a dynamic process.

Therefore, the motives for protecting industrial heritage are based on the universal value of this evidence, rather than on the singularity of unique sites.

2.2 The way we deal with industrial heritage

Abandoned industrial heritages and sites are often large and may well have a negative impact on the neighborhoods in which they are located. In this section, I summarize how policy makers seek ways to deal with abandoned industrial heritage (Boersema, 2014; Fibiger, 2014):

- Demolishment: demolish the existing buildings and redevelop the land;
- Renewal for new functions: renovate the existing buildings while simultaneously making them suitable for new functions;

- Renewal and based on the same industry context: renovate the existing buildings and convert them into museum or display space;

Renovating the existing buildings while simultaneously making them suitable for new functions are especially attractive to the policy makers. They believe that renovation of an abandoned industrial site is a tool to upgrade neighborhoods by attracting higher-educated residents, firms from the creative sector, and tourists. There are many examples of such redeveloped industrial heritage sites throughout the world: the former power plant site, Erie, PA, US; Ruhrgebiet, Essen, Germany; and the Kings Waterfront, Liverpool, UK, to name a few. The idea of renovating old factories became popular in connection with Florida's "creative city" concept (Florida, 2002).

However, the "creative city" concept, of reusing abandoned industrial sites and industrial heritages as showcases, or reinventing them for new functions poses several problems. First, reusing the abandoned industrial sites and industrial heritages as showcases may destroy or damage the industrial heritage's architecture or material. Due to lack of historical survey and without designation and registration of historical sites, many industrial material and machines are difficult to properly conserve (Yang, 2012).

John Ruskin, an art writer of the 19 century, examined questions of memory and historical authenticity in his book <<*The Seven Lamps of Architecture*>> (1849). In it, he argued that it is important to repair and not to restore old buildings and architecture (Niglio, 2013). His argument influenced William Morris and others, thereby encouraging the creation of Britain's Society for the Protection of Ancient Buildings to campaign against the damage caused by architectural restoration in 1877.

Second, reuse of abandoned industrial sites and sites of industrial heritage as a showcase or a tourist attraction may render the buildings empty and devoid of historical context. Due to the profitability consideration and ignore the heritages' historical and cultural significance, the industrial heritages and machines may only be a display object without interpretation and explanation.

Therefore, the New South Wales Office of Environment and Heritage (OEH), a division of the Government of New South Wales, published the <<Adaptive Reuse of Heritage Places Policy>> in 2012 and pointed out: "Heritage is dynamic and heritage places should continue to live and develop over time. The associated stories of a

place should continue after the adaptation of the place. New additions or new constructions in the vicinity of a place of heritage significance should be in harmony with the existing structure but also be clearly identifiable as new additions. Adaptive reuse should allow for interpretation of the heritage values of the place and promote public appreciation. The authenticity of a place should be revealed and the significance of the place should be interpreted" (Policy and Planning Section Policy, 2012).

In conclusion, we need to see industrial heritage from a broader perspective, rather than judging it by economic function or value. In this paper, I argue that reuse of industrial heritage as museum, is the most appropriate way to "cover up" the function and existence of sites of industrial heritage. I will use the Ruhr Museum as a case to explain how industrial heritage demonstrates the museums' social function.

3. Ruhr Museum in the Ruhrgebiet, Essen, Germany

3.1 History of industrial development of the region

Ruhr(Ruhrgebiet) is an urban area in the German federal state of North Rhine-Westphalia(NRW). The Ruhr region includes the cities of Bochum, Dortmund, Duisburg, Essen, Oberhausen and many other towns and cities. With its 5.5 million people in the area of 4,400 square kilometers, the region is also one of Europe's most densely populated urban centers. At the end of the 18th century, this region was still an agricultural area. At the beginning of the industrial revolution (1850-1925), this area became characterized by honest values of hard work and the soaring wealth of "black gold" (Hernandez, 2011). In 1956 the mining industry reached its peak: in that year 124600 tons of coal were produced, providing work for nearly half a million of people.

In 1958, however, the coal-mining crisis started as cheap imports from countries such as the USA and competition from substitutes for coal (crude oil, natural gas) resulted in the closing of many mines and drastic job losses (Information Resources Management Association, 2011). The Ruhr area had to undergo significant structural changes due to the decline of the mining and metal industry.

The Zollverein Coal Mine Industrial Complex (German: Zeche Zollverein) is a large former industrial site in the city of Essen, Germany. The complex spreads over 100 hectares and consists of three parts: area A [Schacht XII], area B [Schacht 1/2/8] and

area C [Coking Plant]. As with most heavy industry sites that have since closed, Zollverein was predicted to face a period of decay.

Surprisingly, the state of NRW bought the coalmine territory from the RAG immediately after it had been closed down in late 1986, and declared Schacht XII a heritage site. This went along with the obligation to preserve the site in its original state and to minimize the effects of weathering. In 1989, the city of Essen and NRW founded the Schacht XII to take care of the site, later replaced by the Zollverein Foundation (German: Stiftung Zollverein) in 1998 (Hernandez, 2011).

The coking plant had been closed down in 1993, and was planned to be sold to China. The negotiations failed and it was subsequently threatened to be demolished. However, another project of the state of NRW set the coal mine on a list of future exhibition sites resulting in first gentle modifications. Following this, the cokery also became an official heritage site in 2000. In 2001, the Zeche Zollverein was designated a UNESCO World Heritage Site and now it is known as “the most beautiful mine in the world” (NRW, 2014). Today, Zollverein provides an incredible viewing point for understanding coal production and processing industry as it existed in the 19th and 20th centuries.

The Ruhr Museum, located in the former coal washing plant of Zollverein, opened in the year of the Capital of Culture RUHR.2010. The space is full of old designs and devices that are important to the integrity of the plant. As a museum, it demands innovative methods and a careful process to the planning of exhibitions. In the following section, I will figure out how Ruhr Museum use spatial arrangement and display design to demonstrate the industrial heritage’s cultural significance and connect with local people.

3.2 Ruhr Museum’s architecture and spatial arrangement and display design

In the concept of “agile museum”, museum architecture and spatial arrangement are part of the exhibition of the museum itself. The Stuttgart-based architect HG Merz integrates the contents of the exhibition into the existing structure of the industrial heritage site. Despite the changes that have been made, the impressive industrial machines and devices are not just containers for the objects on display, but instead form part of the exhibition itself.

Ruhr Museum is spatially defined by the building's vertical height as it divides the

path from 24 meters into 6 meters. In its permanent exhibition on three levels (17m: present; 12m: memory; 6m: history) it relates the entire natural and cultural history of the Ruhr area. Beginning in the 24-meter high space, visitors enter the space and immediately experience the vastness of the building. As visitors are compressed in space through the exhibition, they keep entering more intimate layers of Ruhr's history and memories. This compression through space leads visitors into the history of the Ruhr Area. The careful crafting of the area's history demonstrates the intricacy and richness of its culture.

The industrial museum's display design needs to consider local people as well. The Ruhr Museum's official website shows clearly: *"The Ruhr Museum wants to be the repository of the Ruhr's memories and a remembrance to the new Metropolis Ruhr rather than a traditional industrial museum (German: als Gedächtnis und Schaufenster der Metropole Ruhr) (Ruhr museum, 2010)."*

The majority of inhabitants in the Ruhr region are the working class. The Ruhr Museum collects objects of local history related to locals' daily lives, in order to make their museum experience relevant and enjoyable. Visitors experience the Ruhr area in the Ruhr Museum in a straightforward and accessible presentation. For instance :

- The museum makes use of file folders to display an unconventional history of the Ruhr area. These file folders each contain distinct non-traditional statistics (unlike conventional demographic, economic, environmental statistics), which are decided upon by the museum. For example, the file folders reveal how many hair salons there are in Essen, how many shoe shiners live in this region.
- The Ruhr region is rich in mineral water, so the museum displays different brands of mineral water with their changing labels by through time. This display method shows the Ruhr region's geological richness and evokes a sense of familiarity and comfort in the museum.
- Biologists found that over the past fifty to sixty years, the number of plant and animal species in Ruhr has actually increased. They believed that this is correlated to an increase in migrant workers from different places, who may have brought these species with them. Therefore, the museum displays animal and plant specimens, to demonstrate the richness of the

population and ecological environment in the Ruhr area.

- X-rays of a virus, as well as a jar of contaminated soil from the Ruhr area, show that the development of industry may cause both physical and environmental damage.
- Student ID cards are displayed to indicate educational changes from the industrial era to postindustrial era.

The Ruhr Museum's display design is in no way traditional. Unlike most museums that show large amount of historical data and narrative text, the Ruhr museum show the richness of the area through media technology, sound technology and photographic images. In the display, the museum does not confine itself to "workers" or "labor". Rather, the museum considers itself as a microcosm of the Ruhr region; visitors can experience Ruhr area and those industrial heritages in a broader perspective.

4. Conclusion

Reuse and renewal of industrial heritage sites has become popular in Taiwan. For Taiwanese officials and the public, whether sites of industrial heritage should be preserved, or if the government should simply tear down the site and build them anew, is still a much-debated question. In this paper, I argue that we should see this phenomenon in a different light.

First, how should we see industrial heritage? From Heidegger's point of view, sites of industrial heritage exist in the world because they have connection with the environment, history and human beings. Although they have lost their functions, they still have historical and cultural importance. Therefore, I consider the use industrial heritage sites as museums is the most appropriate way to let people know and understand the meaning and value of industrial heritage.

Second, while the reuse and renewal of industrial heritage sites adds value to the site, preserve the heritage is still the main purpose to the renewal. Therefore, when making changes or restructuring the space in the form of a museum to increase profits or attract more visitors, museums should return to the primary goal of preservation.

How specific architectural strategies and spatial arrangements can provoke an open reception and interpretation of the past, present and future is fundamental. When buildings are excessively restored to an idealized state or landscapes are "themed"

to represent an imagined past, the possibility for interpretation is closed.

Material change and decay are a means to reveal the past and reimagine the future. Appreciation of the material qualities of industrial architecture and openness to material change and decay allow the past to be visible and understandable. For instance, in the Ruhr museum, visitors are directly confronted with the material reality of previous industrial operations, where their surfaces and artefacts are not glorified or retained for the sake of nostalgia, but are conserved for educational purposes, existing alongside sites of daily life.

In this paper, I argue that when museum visitors encounter architectural imperfection or even dirtiness, they are then compelled to question their place in time. This may be achieved through spatial choreography, content arrangement, and, most significantly for industrial heritages and renewal historical buildings, by intentionally remaining open to time and material transformation. The Ruhr museum in this paper retains a significant amount of original industrial spaces and unrestored surfaces. Their rough and seemingly incomplete states evoke the past while also supporting their present use and remaining open for potential transformation in the future.

Display design and methods in the industrial heritage museum should let visitors experience the space by themselves and help them connect the new concept and old objects. Through experience, visitors will have their own connection with the industrial machines and devices. The museum staff is a mediator or helper, rather than the only means of knowing the space. In this way, the museum staff should not see visitors as passive receiver. The most important thing for museum staff is to know what visitors need and encourage visitors to experience and involve themselves in the exhibition, increasing communication with visitors.

Despite the changes that have been made, this impressive site of industrial heritage is not just a container for the objects on display; instead, it forms part of the exhibition itself. In short, the spatial arrangement and display design does not compete with the impressiveness of the space but rather helps visitors to move through it.

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