Adaptive reuse; potentials and compromises between demolition & conservation with some reflections from Pakistan

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Introduction

The paper is based on the EAAE workshop held between 25th–28th September 2019 in Prague which discussed practices, theories and ideas on Demolition/Conservation in the field of cultural heritage. It brought together a wide range of people including architects, artists, engineers, conservators and other officials related to the field of heritage and conservation who observed and discussed practises related to heritage in general and modern heritage of Prague specifically. This paper surveys the sites visited during the workshop, how they were handled and reintegrated in the localities through different approaches. Moreover, the projects are also compared with industrial sites in Pakistan which have lost their original function and are confronted with questions of demolition or conservation. Our study on the potentials of industrial heritage in Pakistan is integrated in a broader Ph.D. research addressing discourses on adaptive reuse for industrial heritage in Pakistan.

Demolition and conservation

Demolition is usually considered the opposite of the practices of construction as most of the activities occurs exactly in reverse order to that of construction. Demolition has evolved into a complex system of different tasks; surveying and disposing hazardous material, dumping waste material and salvaging materials are the significant factors of the final net cost and determining factors in selecting demolition methods (Diven, Shaurette 2010). Demolition is often considered as an environment-unfriendly process (Itard, Klunder 2007) and is selected when the life expectancy of the building is estimated to be less than the suggested alternative, even considering any improvements an adaptive reuse injection can offer (Bullen, Love 2010). Decisions on tabula rasa demolition are often motivated by developers who tend to prefer new constructions over the more expensive and complicated process of adaptive reuse. The reason is that it is not always viable to keep the existing because of poor building condition and meeting building regulations (Plimmer 2008). On the other hand, demolition abrogates certain benefits of building retention such as embodied energy, the value of the building within the surroundings, the local, national or global context (Baker et al. 2017). Every building has a certain character in the locality, the genius loci and spirit of the space (Norberg-Schulz 1980) and this may vanish when a building is demolished. From a building stock point of view, demolition can be seen both as a loss and as an opportunity to create something new, a moment of creative destruction: to intervene in a building or urban space and cut some of its parts (like a surgical intervention) to give life and longevity to the building or space (Thomsen et al. 2011).

Conservation, on the other hand, aims to secure the built heritage for present and future generations. John Ruskin (1819–1900), one of the protagonists of conservation theory maintained «… a historic building, painting or sculpture is a unique creation by an artistic in a specific historic context and it should age by itself which is a part of its beauty» (as expressed in Jokilehto 2002: 8). Ruskin, together with his adherent William Morris, believed that historic buildings should been taken well care of in order to prevent them from degradating. Moreover, they boldly equalled the act of restoration with destruction: «Neither by the public, not by those who have the care of public monuments, is the true meaning of the word restoration understood. It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed.» (Ruskin 1849: 18).

Viollet-le-Duc on the other hand defined restoration as reinstating a building in a condition of completeness which might never have existed at any given time. These theories were formulated during the time when buildings were already centuries old (Prudon 2017a). But most of the building stock which we have right now is constructed in the last hundred years and mostly after 1945 and it is impossible to conserve or preserve everything that we have, as stated by Rem Koolhaas recently that «we are living in an incredibly exciting and slightly absurd moment, namely that preservation is overtaking us» (Rem Koolhaas 2009).

Adaptive reuse and hybridisation

Converting a disused or ineffective building into a new one which can be used for a different purpose is referred to as adaptive reuse (Royal Australian Institute of Architects et al., 2004): the process of adjusting a building to make it fit for a new function. For conservation of cultural heritage, adaptive reuse is considered an important strategy in contemporary conservation theories and practices (Plevoets, Van Cleempoel 2011). The idea of adaptive reuse for buildings is not new: since ancient times buildings have been altered to host new functions, but this was mostly done in pragmatic ways. Other terms used for adaptive reuse are adaptation, remodelling, conversion, refurbishment, retrofitting, reworking (Plevoets et al. 2019) The most important change in the process of adaptive reuse is primarily the change of functions, followed by adaptations to the building itself; addition, demolition, change in orientation and developing relationships between spaces (Brooker, Stone2004). Adaptive reuse is inevitable if the building lasts longer than its function. Adding a contemporary layer to the existing heritage without destroying the building's character, respecting its historic context and heritage value rather than destroying it is a successful adaptation (Mısırlısoy and Günçe 2016).

Hybridisation, one of the themes of the workshop in antinomy to both conservation and demolition can be related to the concept of adaptive reuse. The term “hybridisation” is mostly used in chemistry and biology; in chemistry it is the idea that «atomic orbitals fuse to form newly hybridized orbitals, which in turn influences molecular geometry and bonding properties». (“Hybridization" as referenced in Chem.LibreTexts? 2013) while in biology it means the act or process of mating organism of different varieties or species to create a hybrid. (“Hybridization – Biology Online Dictionary”). Somehow in the process of hybridisation the new outcome loses purity and originality but at the same time it gives space to advancement while to some extent preserving the parent source or species. On other hand the outcome of hybridisation can be stronger than the parent source. Adaptive reuse can be seen in a similar way as hybridization – an abandoned or underused building/ urban area is hybridized in such a way as to create a new arrangement of functions, spaces and materiality and so to strengthen the usage of the parent source. This creates the opportunity for modern day advancement without compromising the fact that we have a responsibility to preserve past and current day architecture for our future generations. Instead of totally conserving a building as a monument which becomes difficult in some cases, or demolishing it to create a tabula rasa for new construction, adaptive reuse or hybridization can be a common ground between the two concepts. Adaptive reuse of heritage buildings has several benefits. Firstly, it has environmental benefits; one of the main important environmental benefits is the retention of its “embodied energy”, the energy involved in all the construction, production and transportation process for erecting a building. Secondly, it has a social benefit: heritage buildings can be appreciated and used through empathically reusing it rather than generating despair by abandonment or drastic reconstruction beyond recognition. If done well adaptive reuse can save and prolong the heritage value of a building. Thirdly, it has an economic benefit: adaptive reusing a building can provide a return in saving the embodied energy at the same time saving the energy used for demolition and dumping of materials. Fourthly, it has a technological benefit: reusing a heritage building meticulously can retain heritage values and at the same time promoting innovation and novelty (Royal Australian Institute of Architects et al. 2004).

The workshop cases & observation

Several sites visit in Prague were made during the workshop; some of these can be considered good examples of adaptive reuse and can be compared to cases in Pakistan which I studied in the context of my Ph.D. research. One of them was of Vnitroblock, an abandoned industrial building, reused by two young entrepreneurs as an art and entertainment multifunctional space. A wide range of functions are introduced into the former industrial space; a gallery space for young designers and a showroom for European fashion brands, signature store and cafe, a dance studio where you can choose different range of movement classes (Prague City Tourism 2020). Integrated into the locality once again, it is now an attractive and intensively used space for different age groups, with a focus on the younger generation. The reuse of the space is done in a very minimalistic way keeping the integrity, originality, totality, and spirit of the space. Most of the interventions are reversible with attention to minor details. Tectonics and materiality of the existing structure mostly retains its original form with exposed bricks, beams and columns and rigid flooring. Warmth and novelty are given to the interior by thoughtful artificial lighting and reused furniture. The wall-hung paintings, bookshelves and indoor plants softens the newly intervened functions. There is a new staircase and a mezzanine platform which is created on the former channels in the steel beams of the industrial building which gives a glimpse of the past how the channels were used. (Figg. 1, 2, 3)

In Pakistan, there are many abandoned industrial buildings like Vnitroblock which have the potential to be reused and integrated into the life of the local community instead of demolishing the site or leaving it to decay. But there are no specific policies and legislation related to modern and industrial heritage to preserve and reuse them (Akbar, Iqbal, Cleempoel 2020). One of the cities in Pakistan with most potential for the reuse of such abandoned industrial sites is Lahore - the cultural capital with a strong artistic community, and many educational institutes and entrepreneurs who have the potential to bring life into such abandoned sites. One of the most important abandoned sites is that of PECO Industry. The industry is in the centre of densely populated Lahore. It was once considered the leading engineering industry of Pakistan and employed 3300 workers, but is now lying abandoned and on the verge of decay (Siddiqui 2016). The area of this site is almost 0.83 km^2. The complex consists of large halls with concrete and brick masonry structures under a pitched roof with steel structure which could accommodate a different range of functions when reused, comparable to what we have seen in Vnitroblock (Iqbal, Cleempoel 2020). (Fig. 4)

Other sites that were visited in Prague included a factory which formerly produced water meters and that has been converted into a design atelier. The integrity of the building exterior is well kept with some intervention in the interior to accommodate the new function. (Fig. 5) This can be compared to a food factory in Swabi Pakistan which has the same kind of brick masonry structure with front and back lawn. (Fig. 6) It has a potential to be reused for new function to be integrated into the locality to preserve its past and benefit the future instead of lying abandoned in the process of decay.

Another site which we visited was Materna Factory on Dělnická road. (Fig. 7) It can be seen as a case of façadism (Plevoets et al. 2019; Richards 2002) as only the façade of the building is retained and a whole new modern construction is built behind and on both sides of it. The originality of the building is compromised in this case, the façade only shows a glimpse and fragment of the past and the spirit and totality of the space has vanished because of the reconstruction. Dox museum in Prague is also a case of reconstruction where a former industrial site is converted into a modern art Museum. The reconstruction of the site is done in a way that the new interventions and materiality have overshadowed the original genius loci of the space. (Fig. 8)

Discussion and conclusion

The redevelopment and regeneration of a city always leads to various options between conservation, demolition, and hybridization. The fate of the existing building

Fig. 1) Interior of Vnitroblock, an industry in Holešovice district converted into an art and entertainment centre by a bottom-up process. Prague, Czech Republic. (photo Naveed Iqbal 2019)

Fig. 2) Interior of Vnitroblock, an industry in Holešovice district converted into an art and entertainment centre by a bottom-up process. Prague, Czech Republic. (photo Naveed Iqbal 2019)

Fig. 3) Interior of Vnitroblock, an industry in Holešovice district converted into an art and entertainment centre by a bottom-up process. Prague, Czech Republic. (photo Naveed Iqbal 2019)

Fig. 4) PECO, an abandoned industry in Lahore, Pakistan, with similar reuse potential like Vnitroblock in Prague, Czech Republic. (Google Earth image edited by Naveed Iqbal)

Fig. 5) Factory of water meters in Holešovice converted into Architecture AP Atelier and gallery. Prague, Czech Republic. (photo Petr Vorlík 2019)

Fig. 6) Abandoned Food factory in Jehangira, Pakistan, with similar reuse potential like Factory of water meters in Prague, Czech Republic. (photo Naveed Iqbal)

Fig. 7) Materna Factory, a façade retention project in Prague, Czech Republic. (photo Petr Vorlík 2021)

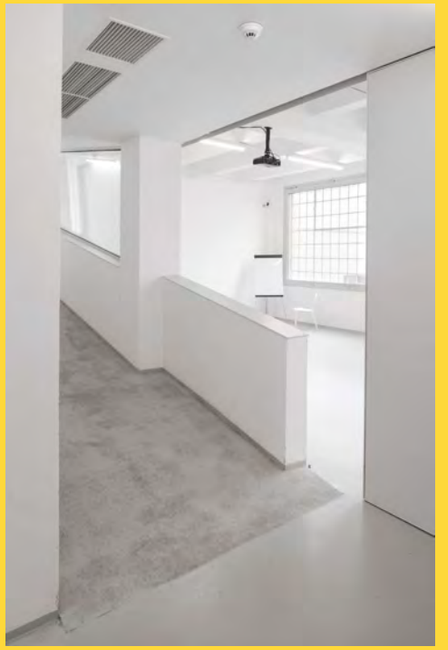

Fig. 8) DOX Centre of Contemporary Art, the industrial heritage adaptive reuse project in Holešovice, Prague, Czech Republic. (photo Viktor Mácha 2013)

depends upon the values attributed to it or the context in which it exists. The values which are related to a building are increasingly complicated, nowadays also dealing with stricter regulations related to hazards, safety, sustainability and environmental impact. Depending on the scale of the demolition it has different impacts including social, cultural, environmental, and economic. Demolition can be a small element involving minor removal in the conservation process of buildings and urban areas, or it can be major or whole element removal in urban regeneration. The buildings are more vulnerable to demolition if they are considered valueless to the people of the past and the present. Sometime age is a criterion for demolition, but this should not be the only criterion, as we also have responsibility to preserve our modern-day heritage for coming generations.

As we strive for environmental sustainability recycling is increasingly considered as an important strategy: aiming to reduce, reuse and recycle waste we find life in everything. This concept can also be applied to historic and modern heritage buildings to hybridize them in a way which has minimal impact on their heritage values and significance. The hybrid can be an antidote to urban monoculture, individual elements can lose their purity but the whole can be stronger than before. In fact, it is a compromise between conservation and demolition to give space for technological improvement. The bottom up practices as we saw in Vnitroblock are welcomed in such processes and could possibly inspire projects in Lahore Pakistan.

Cities are palimpsests with layers after layers of traces and memories and the modern and old architecture coexist. Sometimes the defects we perceive in a locality, a specific space or city today may not be something we need to solve now but may offer opportunity for potential in the future if reused in a sustainable way. In other fields hybridisation is opening up new possibilities for advancement, and this can also be the case in architecture and heritage preservation; Adaptive reuse/ hybridization as an emerging field can contribute to the complex discussion on the demolition-or-conservation process regarding buildings as it offers a common ground to protect the legacy and history of the buildings and offers, at the same time, usability and functionality to those buildings.

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Living with fractures.
A conservation paradox

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Could one be able to choose which past is of more significance within the urban milieu? It is commonly accepted that the city is made up of overlapping layers, each with its historical significance. The older ones emerge here and there, traces of lastingness and substance, while the newer ones are evidences of the modernity and progress of the community.

Large boulevards and other systematization insertions made during the communist redefinition of society, scarred their way through the urban texture. They wall-in scattered microcosms of architecture, in which part of their current identity is the odd relationship they have with their enclosures. Obscured, they come to evolve within themselves, and the scraps of architectural past, disconnected from the wider context, are overlooked, and potentially misplaced.

Context

The eastern part of Europe experienced, during the second part of 20th century, the socialist influence and the communist doctrine that transformed its entire social structure. Soviet-originating Constructivism applied successfully, from the 1950's, the French functionalist principles of rationalizing the city in order to achieve judicious, inclusive urban structures. From the urban point of view, the fresh communist beliefs were to confront the previous orders overlayed in the complex structure and fabric of the traditional cities. These were to soon suffer ideological defeat, an industrial boom, steep urbanization, programmatic national development, the 5 years plans, and the multilateral development of the society, in all the 'Golden Age' of the Communist Renaissance.

In terms of "renaissance", there is a notable cyclical resemblance throughout history between various currents. You can even say that there is an unstable equilibrium that, from time to time, is disturbed by the need for change only to be consolidated again in a different instance by opposing stabilizing forces. The succession of revolution, reform and stabilisation affects all facets of social life and, alongside these, their material expression – the urban environment. Human settlements are often stressed by anthropic crisis, and thus encounter opportunities for change. Past political regimes, economic systems, conflicts of various natures, even subjective or circumstantial instances such as artistic movements and technological convergence, all demonstrate the fragility of the urban environment's balance.

Romania, like several states in the region, entered its socialist period as a predominantly agrarian nation, with the majority or its population living in rural areas. The promise of accelerated emancipation along with the inherent leveling of the individuals' status, got many people on board regarding the ceding of property rights in favor of the state as the sole provider of the means of existence. Thus, the industrialization process that soon followed was widely regarded as a chance of getting the most out of the country's resources and an opportunity for development for both the nation and the individual. Shortly afterwards, the effect of the centralized economy brought the need for urban development, in a manner that would resonate with the state ideology.

Following the adoption of the new constitution in 1952, there was a relatively general enthusiasm accompanying the plans to urbanize and develop the country. Although there was a shortage of certain products, it was accompanied by a tacit acceptance of the fact that sacrifices had to be made in order to boost the transformation of the country. The early 1970's could even be considered prosperous. Large scale projects such as new collective housing districts, big industrial facilities and the electrification of the more remote villages were met with popular enthusiasm.

The taste for "grands ensembles", was present throughout the entire Eastern Block, with various displays. While in most counties they carried the formal name of micro-district, derived from the Russian *mikrorajon*, they were also named for what they were called in Germany (*Großwohnsiedlung*) and Poland (*Wielki zespół mieszkaniowy*), or simply housing estates, such as the Hungarian *lakótelep*, or the Czech *sídliště*. Also, their adoption was particular, fitting the needs of developing industrial nations, and in most cases was justified by the need to accommodate the necessary workforce within the industrial towns.

Porthos' belt

«*D'Artagnan … on recovering his power of vision he found his nose jammed between the shoulders of Porthos; that is, exactly on the belt. Like the majority of the fine things of this world, which are only made for outward show, the belt was of gold in front, and of simple leather behind. In fact, proud as he was, being unable to afford a belt entirely of gold, had procured one of which the half at least was of that metal.*»
(Alexandre Dumas, *The Three Musketeers*)

The act of transforming the city into an instrument of representation, whether as a display of power or to create an image to resonate with the ideological promises of positive change, appears to be ever-present with dictatorial regimes - grand projects to endorse the emerging society with built landmarks. From Haussmann's Paris, 20th century Europe has witnessed power and ideology continually changing the face of cities into an instrument of propaganda. Berlin's *Hall of Glory*, Rome's *Via dei Fori Imperiali*, Moscow's *Palace of the Soviets* and its envisioned grand avenue, Belgrade's *Federal Executive Council*, and last, but definitely not least, Bucharest's *People's House*, rated the second-biggest administrative building in the world at its completion, and its complementing *Victory of Socialism Boulevard*, all similarly tried to stamp on ongoing changes in ideology a proof of righteousness of new paths. However, just like Porthos'