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Restoration of Building Heritage versus Innovation

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Abstract: The continuous developments in science and technology are rapidly influencing many aspects of daily life. The benefits of innovation not only affect the living environment and way of life; they also hugely influence our way of thinking and the general perception of our surroundings. On the other hand, the preservation of cultural heritage is a moral responsibility through which the work and legacy of our ancestors is carried onto younger generations. Heritage manifested through buildings, which can be considered as a vivid trace of the past, carries with it historical and scientific significance and gives evidence of the level of culture and technology of a certain population in each part of the world. Alongside progressive developments in innovation, the following intriguing question arises: How attractive will it actually be for new generations of a 'digitalised future' to preserve and care for "remains of the past"? Furthermore, how reasonable will the restoration of a monument or archaeological site be, compared to the applied technological innovation in the construction of contemporary buildings that offer larger employment and recreational opportunities.This piece of work aims to analyse this dilemma so that it can identify the challenges of a synergy between the two aspects and offer efficient ways where the two can coincide.

Keywords:innovation, restoration, conservation, built heritage, urban artefacts, place identity, adaptive reuse and urban spirit

1 Introduction

At first glance built heritage instantly associates to "something ancient", while innovation to "something modern". This analogy of opposites relates to the metaphysical relation between built heritage as older and innovative building as newer. With concepts that vary greatly from each other, the antagonism between them comes naturally. While through innovation "new discoveries" are attempted, the restoration of existing buildings can at times be perceived as pointless efforts that reflect monotony. However for society, both have a huge significance. Therefore, it is considered that a detailed analysis of the two components is necessary, with the objective of discovering "common ground" between the two and identifying certain characteristics and influences on one another.The differences between the two components are evident, however, having said that, this doesn't necessarily mean that there can't be a potential to cooperate effectively with one another. Practical examples of such cooperation could be a photograph – where the shade and light interact or the visual beauty of sunset – where day and night interact.After providing a separate analysis of both components – built heritage and innovation, all advantages and disadvantages will be identified. This will then enable investigating the cooperation between the two to minimise the disadvantages and maximise the use of the advantages. Finally conclusions will be drawn whether it is possible for the concepts of the two components to complement and have a positive impact on one another; could the restoration of built heritage be perceived by younger generations as ethical and essential, and also regarded as a valuable resource towards sustainable development.

2 Analysis of innovation and its influence in daily life

If for a second we reflect, can we possibly imagine our daily lives without electronic devices? Young children, who are exposed to digital screens that they can easily control with their fingers, are directly influenced by this. This exposure to technology not only affects our daily lives, it also has a positive impact on the innovation advancements. Without doubt the development in technology plays a significant role in society, by influencing individual behaviour, relation between people, and most importantly, the perception of surroundings and beyond.

With emerging innovation from younger generations, it will gradually become more difficult for them to acknowledge and appreciate "the ancient" and its importance, comparing to This can be illustrated from a spatial perspective where older buildings tend to take up more space but for a limited number of people, whereas newer buildings, with the assistance of innovation, tend to take up less space but for a much larger number of people as seen in Figure 2.

Fig 1. Innovation technology results on development of building industry (Source: Construction Site Nat, Image by: DNY59)

Fig 2. Influence of innovation in rational use of land resource (Source: Cheers. Image by unknown)

Fig 3. Design of vertical city, Dubai 2009. (Source: Flickr. Image by Nahudan)

A vivid example of the application of innovation is the urban development of Dubai. In an overall area considerably smaller than Kosovo, the city is inhabited by around 2 million people and has a GDP of over $16 million (around five times higher than in Kosovo).
Aside the construction of fascinating projects of futuristic architectural style, Dubai is able to implement the "vertical city" project of buildings with a height of 2.4km as seen in figure 3.
In a single building alone, apart from housing for around 1 million people, there are plans to offer facilities and an environment to fulfil multidisciplinary everyday requirements. In addition, a giant shopping centre will be built which is capable of serving around 18 million tourists a year. It isn't difficult then to imagine how big of an economic boost catering for all these people would bring Dubai.

Although the buildings are frequented by large numbers of people, there is sufficient access to natural daylight which enables the cultivation of vegetation in high altitudes. With the application of innovation

in technology, Dubai offers the possibility to ski throughout the year through its indoor centres (Figure 4), which is remarkable considering the average temperatures in the city. After all these fascinating ideas and solutions, will it ever be possible for built heritage to continue being attractive to the new "digital age"?

Fig 4. Indoor Ski Center in Dubai. (Source: Homeboy Ski. Image by Pyhajavri)

3 Restoration of built heritage, a regulation or an ethic duty?

Built heritage, as something visible, touchable and immobile, is a relic of our predecessors which enables us to learn about their way of life, social relations, culture, and technological level at given periods of time. As such it is perceived as a witness and survivor of centuries of natural catastrophes and endless wars caused by humanity.

Depicting gloryfing relics which give the impression they are buried deep in the ground, as shown in figure 5, we become curious about their lifes and wonder utopically "what if the stones can speak.." Through their perfect arrangment, although done manualy, one wonders about the history those stones carry with them.

Fig 5. Concrete "footprints" of the past, from the year 2611 BC (Source: Flickr. Image by Champlin)

Through its historic and scientific importance, the preservation of cultural heritage went beyond state borders and became internationalized – firstly with the common strict regulation from the Athens Charter (1931) to continue with the Venice Charter (1964) (Feilden & Jokilehto, 1998: 122). It gained further prominence in 1972 when its rules where standardized on a global scale via the World Heritage Convention, which merges together in a single document the concepts of nature conservation and the preservation of cultural properties. One of the main reasons behind this globalization is the moral right of future generations to inherit from their predecessors, with the idea of passing it on to future generations.

The essence behind the concept of restoration is the preservation of historical values, as it reflects the image of human life in a particular period in time. Built heritage that is preserved efficiently can clearly depict the history, culture and social relations of a place. The bigger the emphasis on authenticity, the bigger is the capability to see into the past.
The scientific importance of built heritage is not only useful in helping us on understanding construction technologies; it also gives us insight into the levels of scientific knowledge possessed by people during the time of the construction of the original building/monument. Through built heritage, we can analyze the evolution of construction technologies concerning construction material and work tools.
In cases where built heritage is protected in a group of buildings or archeological ensemble, the urban importance of its location is heightened. The protection of the urban aspect gives built heritage a bigger historical and scientific significance by offering images closer to the truth in the past. Grouped buildings, with their individual positioning and their relationship with the whole site, can protect the multifunctional use of the location and the site's urban spirit. Aldo Rossi calls these grouped architectural buildings 'urban artifacts' which with their survival contribute to the morphological and cultural evolution of the city. Rossi advances his theory of 'urban artifacts' and expresses his ideal vision for urbanization by stating that a city is defined by the collective memory shared by the people who populate it.
Cities, by reflecting the human achievements integrated in science, culture and technology, have always been considered as masterpieces of the human mind. With the cases of metropolitan cities, the protection of so called 'urban artifacts' have resulted in expanded collective memories which sometimes become of global measures.

Figure 6: Place identities of the cities of Paris and London created by restoration of built heritage. (Source: 123rf. Image by Ashka)

Thanks to restoration of urban artifacts many cities created the place identity, which allows people from all corners of the world to recognize that city, only from the silhouette of the building (Figure 6).

Influence of innovation challenges into built heritage

Architectural trends and innovations can often pose threats against unique values of centuries-old built heritage. Although many places have managed to enact adequate laws to protect built heritage, sustainable conservation, unfortunately remains subject to exaggerated commercialism and economical prosperity. Private investors that benefit from new construction technologies monopolize the economy of a country and subsequently effect the country's developments in many aspects (including the restoration and preservation of built heritage). On the other hand, government funding for cultural investments is continuously becoming smaller compared to the investment capacity held by private corporations in the construction industry. Devising creative financial solutions for the revitalization and rehabilitation of urban heritage areas by leveraging a combination of available resources from the private and public sector is thus an intriguing and complicated task. This happens because of the different beneficial aspirations people from the private sector have and due to certain politics of local or central governments which deal with the restoration or revitalization of built heritage.

Built heritage, not only is often used as a means of gaining economical profit, it is also treated with different political tendencies (sometimes to project certain historical meanings that aren't necessarily related to the original building itself.) Rossi also tries to incorporate the facts of politics and other socio-economic issues, citing Athens and its strong theoretical base for its existence.

Considering the 1884 restorations of the acropolis of Athens which were done in accordance to Leo Von Krenze's ideas (Meksi, 2004: 27), Rossi concludes his idea of this manmade object as an achievement to mankind and its existence. In the restoration of the acropolis of Athens, (Figure 7) one can notice the applied anastylosis (which is the a reconstruction technique of erecting a ruined building), but the social background concerning the centuries of civilization dating between antique times and the innovation of 1884, are not reflected in the restoration.

Fig7. The Parthenon of Athens (Source: Flickr. Image by Swayne)

In this regard, Rossi states that "the architecture of the city is a physical sign in man's biography, indulged beyond the meanings and feelings with which we may recognize it" (Rossi, 1982: 95). With this statement, Rossi arguably points to the political tendencies behind innovative architectural challenges which aimed to emphasize the building's features that were symbolic of the Hellenistic period. However, Rossi also includes that the reconstruction could have been conducted in a manner so to hide the traces that would have indicated Parthenon's existence through several centuries of other periods like Roman, Byzantine or Ottoman; Since 1460, The Parthenon served as a mosque for centuries up until the Venetian Bombardment in 1687 (Tomkinson, 2006:34) . The case of the restoration of the Acropolis in 1884 represents an intervention in which the innovation of the time changes the originality of a heritage that is built, by losing its authenticity and unique values which the building held in itself for centuries. With the intention to protect the authenticity of built heritage, scholars, experts and researchers of the fields of conservation and restoration, assembled in the city of Nara, Japan in November 1994 (Feilden and Jokilehto, 1998: 127). Such a conference was first suggested by ICOMOS during the 16th meeting of the World Heritage Committee. The Japanese government took up the initiative and organized the Conference jointly with UNESCO,ICCROM and ICOMOS.[2] The experts attending the Conference reached a consensus that "authenticity is an essential element in defining, assessing, and monitoring cultural heritage." They recognized that the concept and application of the term "authenticity" actually vary from culture to culture. Therefore when authenticity is being assessed for a particular cultural heritage, its underlying cultural context should be considered. The document on Authenticity created in Nara has been ignored in many places, especially in the case of the recent urban developments in Skopje. Arguably, as a new country, the Republic of Macedonia seems to desperately attempt to overcome current political disputes concerning the county's cultural identity by rushedly building improvised 'innovative heritage' in the style of the so called Macedonia of Philip II (359 BC) and the time of Alexander the great as seen in Figure 9.

Figure 8: The Castle of Skopje (Source: Macedonia Timeless. Image by Unknown)

Figure 9: 'Innovative restoration' or new construction in Skopje (Source: Balkan Insight. Image by Marusic)

Innovations could harm cultural heritage by causing irreversible losses of historical, social, political, scientific and technological values which are usually secured by global standards of heritage protection. Innovation challenges, whether with political tendencies or economical-beneficial interests, are noticeable in the cities of Kosovo as well where urban artifacts which have survived can document the antiquity of these cities.

If we analyze the evolution of the city Prishtina, we can clearly see the innovative challenges which have taken place during different times. In fact, innovations like the ones done in Prishtina, can be called 'total urban transformations' which have intentionally managed to lose every possible architectural feature from the past. Such innovations don't give way to the synthesis of a collective memory since none of the urban artifacts have been treated with the initiative to protect a single monument or component of a nearby building of cultural heritage.

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Figure 10: Image of Prishtina since 1945 (Source: Deviant Art. Image by Avdullahu)

Figure 11. Image of Prishtina since 1968 (Source: Flickr . Image by Munneke)

Every time Prishtina would experience a 'wave' of innovations, the city would unfortunately suffer transformations of its 'core' monuments as seen in the previous figures: 'Sahat Kulla' meaning "Clock Tower" seen in Figure 10, is an urban artifact in Prishtina built after the second world war (From 1945 to 1965). Monument called "Vllaznim Bashkim" meaning "Brotherhood Unity" (seen in Figure 11), is an urban artifact in Prishtina from the "Communist Reconstruction" period (from 1968 to 2008).

Fig.12 The monument called "Newborn" is an innovative urban artifact in Prishtina established after the declaration of Kosovo's independence' in 2008. (Source: Flickr. Image by Nudds)

From these pictures, Fig.10, Fig.11 and Fig.12 we can witness the transformation of the city's Image for almost every two to three decades. This change of image, has, without doubt made it impossible for people to create a collective memory due to the frequent total urban transformations. These transformations have dictated the city's architectural 'core' for certain periods of time with the use of 'innovative urban artifacts' which would shed light to the city's new built monuments/buildings and subsequently draw attention away from, and lose the city's urban spirit.
A similar situation happened in other cities of Kosovo as well where total transformations of the cities' architectural 'cores', which were once thought of as the main associations in the citizens' collective memories, would cause the loss of the cities' urban identity. Innovative buildings would attract more attention than the adjacent buildings of cultural heritage which due to the politics of the time would remain unprotected and neglected to the extent of receiving no maintenance at all and historical values dating back from centuries ago becoming endangered.

5 Innovation effectively integrated for sustaining Built Heritage

Joan Nouvel's claim: " City - A book of stone built with layers of consecutive modernizations" obviously points to the stones of built heritage. The more these stones of urban artifacts, survive throughout times, the bigger their outstanding universal values become. Because of this reason, built heritage must necessarily be considered a resource for development. Moreover, the importance of cultural heritage is emphasized with the Lisbon Treaty which encourages the EU to take action on a global scale to preserve its cultural heritage and promote cultural tourism. In alignment with this, several different versions of Direcorates-Generals (DGs) of the European Comission (EC) have created programmes related to these issues. Among these programmes is the DG Research and Innovation. This directorate, although oriented toward 'the recent/modern', treats built heritage as resource for the development of tourism industries which serve as a driving force for many other fields which must fulfill the requirements for tourism. As long as built heritage is integrated in development plans, its protection is perceived from a beneficiary angle since it gives way to new jobs and causes the overall development plan to be more profitable. Built heritage is to be interpreted in a manner that is as original and authentic as possible not only for economical reasons but also for the sake of correctly informing younger generations. An original and authentic conservation of a city only occurs in the case of conserving every single modernizing layer, states Nouvel. Every "layer" needs to be treated with the

deserved diligence so that it correctly reflects the inherited historical, social, cultural, urban, and scientific values of the building. Since built heritage is conceived as an integral part of the area in which it is located, similar importance has to be given to the restoration and maintenance of the so called 'buffer zone'. At this point, we need to emphasize that if we interpret urban heritage as an evolving interrelationship between history, ecosystems, and culture, this interaction must be seen as a multi-layered integration of natural and cultural heritage. The World Heritage Convention of 1972, recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two.

States that are parties to the Convention agree to identify, protect, conserve, and present World Heritage properties. States recognize that the identification and safeguarding of heritage located in their territory is primarily their responsibility. They agree to do all they can with their own resources to protect their World Heritage properties. They agree, amongst other things, as far as possible to:

- adopt a general policy that aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programs'
- undertake 'appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage'
- refrain from 'any deliberate measures which might damage, directly or indirectly, the cultural and natural heritage' of other Parties to the Convention, and to help other Parties in the identification and protection of their properties.

Should a building be conserved just because of its 'age'? This is a challenge which has to be dealt with carefully in order to not disappoint younger generations. It is obvious that not every building can have the attributes of an urban artifact and be compared to the Eiffel Tower or Tower Bridge, especially not in Kosovo where the population density is higher than any other country in Europe, and where the application of innovative architectural trends barely exists compared to other EU countries.

Fig.13 A survived "urban artifact" of Prishtina (Sources: Onup Magazine, Image by unknown and Wikimapia, image by unknown)

For this reason, the selection of the inherited buildings which are to be restored, conserved and revitalized, is a complex and multidisciplinary process for it requires the collaboration of experts from different fields.
After many debates between private and public institutions, about the old building of "Union" Hotel in Prishtina, the architects and other cultural professionals achieved to "keep" the building alive, from other commercial initiatives, which claimed to build a huge business tower in that piece of land. It was a positive action, because an attractive "urban artifact" , build from Austro-Hungarians in the beginning of 20th century,
win the "innovators", which were focused on economic beneficiary rather in communities urban spirit.
Special importance is to be given to the aspect of land use and analysis must be contended determine how feasible the exploitation plan is and how beneficiary it is for the community. The protection of built heritage has to be justified for all aspects of sustainable development; the building has to be 'open' for

the community's use; it has to be financially beneficial as well as be in complete harmony with the urban development's of the entire area in which it is located.
Exemplary applications of these rules are found in the restoration of Bundestag, the German parliament building. Due to proper restoration and conservation, this building functions as one of the most important institutions not only in Germany, but in Europe too.

Figure 14: A view of Bundestag exterior of 1920 (Source: Pink Big Mac. Image by unknown)

Figure 15: A view of Bundestag interior 2002 (Source: Flickr. Image by Perez)

Second World War and abandoned for decades until it was restored and adapt for reuse. By applying the innovations in the construction industry of the twenty first century, the building was revitalised as it transformed into an important building for Germany. In the existing reinforcement structure, a metal construction with a glass outer layer was integrated. This made natural lighting of the interior spaces possible. Innovation enabled this building to have maximum energy efficiency where the building would function on green energy (with zero emission of CO2). In addition, apart from its political and administrative functions, the building is open to visitors of Berlin which makes the building useful and "closer' to the community. With the restoration and conservation of this urban artefact, the city's identity was retrieved, while citizens of Berlin where given back an important architectural object from their collective memory and the spirit of the city.

The last example shows how adaptive reuse entails in its self restoration and conservation of built heritage by efficiently applying technological and social innovations. This way, the building of cultural heritage facilitates contemporary needs which are set forth by the community and at the same time contributes in achieving what UNESO implies with the claim: 'A nation stays alive when its culture stays alive'.

Fig. 16. UNESCO's statement cemented on a marble plaque at the Afghanistan Museum, Kabul. (Source: Traveller's Teacup, Image by unknown)

6 Conclusion

Preserving and caring for the "remains of the past" seems to be more than just a moral responsibility for future generations. It is in fact, an ethical obligation to make sure that inherited historical values from our ancestors are protected and successfully passed on to future generations.
By analyzing innovative trends, it is understood how impressive achievements of contemporary science and technology are in providing ideal conditions for life. A single unit of "green architecture" which takes up minimal land use can offer suitable conditions and high standards for : a profit-making workplace; quiet and comfortable housing with accessible services; spaces for sports and recreation; and green areas that are even improvised on different floors of the building. On the other hand, by analyzing how reasonable protecting built heritage is, it is concluded that its usefulness lies in its ability to give us insight into historical truths like no other documentation of the past; the stones of an ancient building are the only concrete imprints which can resist time. The older the built heritage, the more it is to be treasured for its historical importance and documentation of scientific accomplishments of the time in which it is built- to an extent, helps us understand how our ancestors lived and how knowledgeable they were. Therefore, with time built heritage grows in capacity to serve monumental tourism and enable a multidisciplinary engagement and prosperity for the entire community.
The two components, cultural heritage and innovative architecture, being in a continuous antagonism with one another, have often negatively affected each other. Alongside emerging innovative trends, awareness of the importance of built heritage has expanded and resulted in emphasized intervention from international conventions to manage the two components in harmony with one another. Moreover, although protection of built heritage was 'overlooked' by international conventions , there were cases where attempts to 'restore' mistakenly caused buildings/monuments to lose their authenticity and subsequently resulted in the loss of their historical significance which means a loss of what is usually a major contribution to the respectful community's collective memory and the urban spirit of the place.
Furthermore, the study also shows cases where the two components complement each other and give us hope that built heritage is to be restored and conserved by new generations and be used as local resources for sustainable development. In order to achieve successful and effective restoration, it is concluded that built heritage should be treated as a complex and multidisciplinary task which requires a perfect intervention of architectural innovation, which enables the protection of outstanding universal values of built heritage, as well as facilitate economical prosperity, social wellbeing, and a healthy environment for the whole country and beyond.

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