



Review

Practices of Built Heritage Post-Disaster Reconstruction for Resilient Cities

Tomasz Jeleński

International Centre of Education, Cracow University of Technology, Skarżyńskiego 1, Kraków 30-866, Poland; tjelenski@pk.edu.pl

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Abstract: The concept of resilience has become increasingly important to our understanding of sustainable planning. Post-disaster urban and architectural reconstruction might be treated as a strategy for resilient cities, helping them to reinvent themselves after possible destruction. The purpose of this study is to analyse several cases of nearly total reconstruction of historical urban complexes. Specifically, it explores how urban heritage conservation and recreation could contribute to the resilience agenda, giving traumatised societies a sense of continuity and localness. It analyses the changes in the conservation doctrine, highlighting the growing acceptance of architectural reconstructions. Drawing on historical examples, mainly derived from the Polish School of Conservation practice, this paper argues that the methods and processes attempted to regain identity for the thoroughly rebuilt structures proved effective in recreating the identity of such cities as Kalisz, Warsaw, Gdańsk, and Wrocław. The article argues that while processes at the governmental level emphasised the strengthening of national identity, the experiences of the reconstructed townscapes eventually involved forms of more diverse municipal identities. The article highlights that the strategy of recreating traditional images of cities after their mutilation in disastrous events might be a key to becoming a more resilient city and the formation of the post-disaster citizenry.

Keywords: heritage; community; post-disaster; planning; Polish School of Conservation practice; reconstruction; resilience; townscape

1. Introduction

The terms of heritage and resilience might at first glance appear unrelated, but a more thorough understanding may lead to the conclusion that built heritage contributes to resilience in many ways, especially in the context of post-impact activities, such as reconstruction and recovery. Human resilience theory seeks to decrease the vulnerability of human populations. In this sense, resilience has always been core to urbanism.

Recent history might be treated as a time of spectacular ruination, a mixture of disastrous wars, planetary despoliation, economic crises, and the deterioration of manufacturing centres. Less violent but equally damaging to the historic urban landscape were decades of downtown redevelopments and suburban sprawl, which brought massive misconstruction to cities around the world. However, the same processes might be perceived from the opposite side as a series of heroic and persistent efforts towards renovation, restoration, adaptive reuse, reconstruction, and the improvement of lost, damaged, or sometimes obliterated values and qualities.

People need their places to be more than functional or instructive. They crave built environments that represent their social aspirations, customs, and community values. Material relics in the cityscape had been long perceived as media for important historical content, but today cities are no longer regarded as collections of valuable items. In post-disaster circumstances, not only the authenticity of the architectural substance, but the restitution of a cultural identity of urban space should be justified

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by the need to unite a broken society. Townscapes that read holistically in the existential perspective from the socio-economic perspective contribute to resilience of urban environments.

2. Results

Since WWI, societies in different parts of the world showed the capacity to recover from the consequences of disasters by reviving some of their most valuable architectural heritage and townscapes. Various conservation practices such as preservation, rehabilitation, restoration, and reconstruction of cultural sites have helped to build resilient cities. An inclusive and participatory approach to restoration and reconstruction particularly resulted in the sustainable regeneration of destroyed cityscape that reinforced social recovery. The acceptance of reconstructions has been growing during the last decades, even among deeply sceptical conservational bodies.

The usual approach to emergencies focuses largely on post-impact activities. However, a more comprehensive risk assessment may include pre-impact disaster risk reduction: prevention, preparedness, and mitigation. In the case of cultural resilience, preparedness can largely be defined as the measures taken in advance to ensure an effective response to the impact of various hazards. The strategy for the reconstruction of historic town centres that had been reduced to rubble—formulated and presented by Jan Zachwatowicz in 1945—set forth the basic assumptions of conservation activities in post-WWII Poland and eventually was accepted by the international community of conservators. Its principles applied both to the historical complexes and their border areas attached great importance to preserving the features of the historical urban form, skyline, and panoramas, especially ones most characteristic of medieval layouts. Later known as the "Polish School of Conservation", the practice was based on the conviction that the primary need of post-disaster reconstruction is to recreate the cultural landscape that was of paramount importance for the existence of a nation.

The resilient environment to a large extent relies on spiritual and emotional contexts of a place. In being attentive to them, we could engage in a dialogical process resulting in more creative resilience practice associated with embedding resiliency into local place-making activities. In the cases of Gdańsk and Wrocław, where customs could not be passed from generation to generation and there was no natural inheritance of tradition, common signs embedded in the townscape became bearers of local tradition, bridging the gap between generations caused by a lack of historical continuity.

3. Materials and Methods

Resilience is a term that has recently gained currency in many disciplines and various scientific contexts. A strong focus already exists on new challenges of urban planning and policy-making, for which the resilience approach gains a growing importance [1]. Urban resilience strategies have tended to be conceived of in terms of security from disasters. Another aim is the facilitation of response and recovery procedures by social institutions or organizations to improve the cities' capacity to recover quickly from disasters [2,3].

This paper focuses on the singular, although important aspect of inclusive conservation of built heritage and spatial culture of residents in disaster-exposed and post-disaster urban areas. It does not suggest an operative post-disaster methodology for the revitalisation of the urban territory that might include environmental clean-up, habitability, recovery of ecosystems, economic reintegration, and sustainability. The main question here is how we envision the future of destroyed cityscapes and townscapes and how that affects their residents.

Since the rise of the heritage conservation doctrine in the nineteenth century, each generation has added new principles and guidelines. The ICOMOS' (International Council on Monuments and Sites) Nara Document on Authenticity [4], which emphasises cultural diversity and the relative nature of values, "encourages heritage practitioners to interpret the Venice Charter through this new lens" [5]. Such an approach is a good starting point for addressing the reconstruction question anew, particularly in the context of resilience.

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This paper analyses primarily the Polish conservation practice in urban planning often called the "Polish School of Conservation", which encompassed the reconstruction of entire historical old towns. The need for a deeper, more complete understanding of success factors for post-disaster reconstruction is growing [6]. This paper aims to examine several cases of reconstruction and regeneration of historic townscapes, specifically the cases of Warsaw, Gdańsk, and Wrocław. The motives have also been discussed that caused societies and governments to make reconstruction and restoration efforts up to the scale of the entire historic complexes, and with the care of historical urban structures, as well as chosen architectural forms and details.

Although architectural monuments can play an important role in maintaining, restoring and creating a social memory, the paper focuses on townscapes, urban environments, and networks, which only recently began to be considered as playing a role in the construction of identities [7]. Even if all the described cities were almost completely resurrected from burnt out ruins, the case studies compare different dynamics of identity building in cities representing various historical backgrounds. In the cases of Wrocław and Gdańsk—cities with a multinational and multicultural past—urban identity reconstruction is bound to be more complicated than in places like Kalisz or Warsaw.

4. Discussion

In *The Resilient City*, Vale and Campanella [8] gathered texts revealing how, for as long as cities have existed and been destroyed—besieged, bombed, burnt, flooded, pillaged, starved, shaken, sacked, torched, and sometimes leveled—the traumatized city-dwellers consistently develop narratives of resilience. Authors explore historic urban disasters from around the globe—the ongoing restoration of urban life—and how disasters have been interpreted and commemorated in built form. Describing cases of Jerusalem, Chicago, San Francisco, Tokyo, Guernica, Warsaw, Berlin, Beirut, Tangshan, and Mexico City, they reveal that the pragmatic process of urban recovery is always fuelled by highly symbolic actions.

On the contrary, examining the case of the post-Great Sichuan Earthquake reconstruction, Guo [9] describes the effects of the process guided by the government and in which urban resilience was not applied as an initial concept. The reconstruction mostly focused on the extremely rapid economic recovery. In many aspects, such as emergency response and relief, economic revival, construction efficiency, and political and social image promotion, it was a notable success, but none of the official documents notices that it also caused a discontinuity in the city's development and socio-spatial incoherence. In the city of Dujiangyan, a generic top-down planning was introduced, while taking little account of its urban history. The absence of cooperation among multiple stakeholders has created urban fragmentation. This raises questions on how cultural resilience should be developed in the reconstruction, what kind of reconstruction, "who should recover which aspect of the city, for whom, in what intention and by what mechanism" [8] (p. 337). If one wishes to maintain the socio-spatial quality of *urbanity*, considering the history of the city over time is a necessity.

Built heritage is one of the things that cannot be outsourced successfully by globalisation [10], but many cases show that it can be successfully preserved, recreated, or even reinvented. The latter provokes strong controversies. There are fine lines between different treatment approaches to architectural conservation. Since Viollet-le-Duc, architectural reconstruction was usually depicted as a phenomenon linked to Romanticism and the desire of nationalist movements to represent the traces of a glorious past. The tensions between the historical and aesthetical values or the material, artistic, contextual, and informational authenticity, or 'staged authenticity' [11] of the architectural and urban heritage have been discussed vastly. Cocola-Gant [12] presents the case of the Gothic Quarter in Barcelona, which was recreated as a medieval space at the beginning of the twentieth century and deeply reinvented between the 1900s and 1960s. In the series of interventions, medieval buildings were restored in the Gothic style, ordinary residential houses were removed and replaced by neo-Gothic buildings, and authentic medieval facades were moved into the area to 'intensify' the Gothic character of the place. This 'medievalisation' transformed a degraded neighbourhood into the

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most attractive part of the city and provided the space with a historic image that it previously did not have. The process was led by local authorities who understood that what the city needed to attract tourism was to exhibit its monuments, irrespective of whether the objects were original, reconstructed, or invented. Such practices provoked the Athens Charter of 1931 and Venice Charter of 1964, which introduced the concept of international heritage, an international framework for the conservation and restoration of historic buildings that opposed reconstruction.

4.1. Post-War Reconstruction

Violent inter-ethnic conflicts frequently result in the destruction of the historic built environment. Architectural heritage is a sphere where emblematic and psychologically potent associations can be exploited directly for purposes of widespread loss of confidence or hope within the enemy population. However, armed conflicts may be treated as a type of disaster differing little in its physical impacts from disasters resulting from natural phenomena. The difference is felt mostly in the aftermath when the strength and effectiveness of coping mechanisms vary greatly [13].

Certain historic sites are strongly associated with patriotism and national identity. When these monuments are destroyed in a war, their rehabilitation strengthens morale during periods of transition. That was the case of reconstructions of Warsaw, Coventry, Middelburg, Dubrovnik, and Kuwait. The power dynamics underlying post-war reconstruction—in conjunction with public perceptions shaped by the media—dictate the terms of project support and funding. Wealthy nations like Britain and Kuwait are bound mostly by the logistics of supply and demand; poorer and more severely wounded ones need to incorporate the expectation of delays and disappointments into their comprehensive plan of reconstruction [13].

Munnoz-Rojas Oscarsson [14] describes the wartime destruction and post-war rebuilding of three prominent sites in Barcelona, Bilbao, and Madrid. By considering different historical, political, administrative, and aesthetic aspects of the three cases, she proposes an interdisciplinary approach to the study of urban destruction and reconstruction. All three of the sites were victims of the same Spanish Civil War; however, while Barcelona's Avinguda de la Catedral demonstrates that wartime destruction can act as a catalyst for urban redevelopment, Bilbao's bridges exemplify the way that reconstruction may be used to mark a change of political regime, and the ruins of Madrid's Cuartel de la Montaña show how regimes tend to design ambitious reconstruction plans, which they are not necessarily able to implement.

With the outbreak of the Great War and its follow-up, WWII, European towns and cities faced a modern type of war, which appeared to be an unprecedented threat to their architecture and townscape. Post-war reconstruction of Polish cities, such as Kalisz, Gdańsk, Warsaw, and Wrocław give spectacular examples of a regeneration not only of complex urban structures, but also a spirit of places for new communities of people disinherited, displaced; migrants and refugees (according to Davies [15], war and post-war resettlements in Poland (1939–1956) affected over 24 million people).

The industrial town of Kalisz was one of the first cities destroyed in the Great War. It was shelled, plundered, and then burned to the ground between 2 August and 22 August. Out of roughly 68,000 citizens in 1914, only 5000 remained in Kalisz a year later. Its historical core lost more than 400 buildings and became the epitome of wartime atrocity in the international media. The ruins of Kalisz, known as the oldest Polish settlement (mentioned by Claudius Ptolemy in *Geography*, around AD 150), very quickly became a ground for reconstruction and modernisation supported by a design competition (it was announced by the local Committee for Reconstruction on 3 December 1915 and settled 3 February 1916 with the support of the Warsaw Circle of Architects). The competition aimed to attract the attention of the wider scene so as to address the problems of future urban structure and architectural heritage. In effect, it was decided to preserve most of the medieval grid structure of the urban core, but, in the building scale, more recent forms of Polish classicism were favoured (Figures 1–3).

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Figure 1. Drawings of the winning Kalisz reconstruction project by Tadeusz Zieliński, Zygmunt Wójcicki, and Maksymilian Bystydzieński; 1915 Competition [16]. Reproduced with permission from Archiwum Państwowe w Kaliszu.



Figure 2. Drawings of the Kalisz reconstruction from Zdzisław Kalinowski's project, which won second prize in the 1915 Competition [16]. Reproduced with permission from Archiwum Państwowe w Kaliszu.

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Figure 3. The reconstructed medieval core of Kalisz with its grid street structure. Photo: Styl Suwałki. Available online: https://turystyka.wp.pl/kalisz-atrakcje-najstarszego-miasta-polski-i-jego-okolic-6043990396179073g (accessed on 1 March 2018), reproduced with permission from the Archiwum Urzędu Miasta Kalisza (Archive of Kalisz Municipal Office).

Kalisz is one of the few cities sometimes still discussed as being rebuilt after WWI but the Great War generally fades into oblivion. The memory of the Second War is still vivid in some societies and it seems that the perspective of time induces deeper reflection on its influence on the cityscape.

WWII left a stigma that subsequent generations failed to erase and which still heavily weighs on the image of many European cities, leaving them as silent witnesses to unprecedented destruction. In the bombing of Warsaw, Rotterdam, and Dresden, one notices deliberate attacks on the most valuable urban areas. Warsaw, unlike any other city, was destroyed several times between 1939 and 1945 and, at the war's end, it was being deliberately annihilated, block by block, as a repression of the Polish resistance to the Nazi German occupation [17]. However, the scale of the state-wide drama was much more severe. According to Pawłowski [18], after WWII, 177 Polish cities were destroyed by more than 50%.

A spectrum of methodologies, including direct and indirect sources (relicts, inventories, measured drawings, structural surveys, and iconographical representations), has been used during the long-lasting process of reconstruction, ranging from the most scrupulous reconstructions of Old Town and royal palaces in Warsaw, to ongoing post-modern 'retroversion' e.g., in Elblag [19].

4.2. Growing Acceptance for Architectural Reconstruction

For several decades, UNESCO's World Heritage Committee (WHC) generally opposed reconstructions. The first exception was made in 1980 for the historic centre of Warsaw, whose massive rebuilding was appreciated by UNESCO as a symbol of "the inner strength and determination of the nation, which brought about the reconstruction of the heritage on a unique scale in the history of the world" [20]. Other exceptions included the listing of the Old Bridge Area of the Old City of Mostar, which was justified on the basis of the restoration of cultural value, an intangible dimension of the

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property, and the Tombs of Buganda Kings at Kasubi, Uganda, which were destroyed by fire in 2010 and gained provisional approval for reconstruction on the condition that the new structure was based on sound documentation, traditional forms and techniques, and continuing use [5].

The current version of the World Heritage Committee's Operational Guidelines for the Implementation of the World Heritage Convention still echoes the Venice Charter when it states: "In relation to authenticity, the reconstruction of archaeological remains or historic buildings or districts is justifiable only in exceptional circumstances. Reconstruction is acceptable only on the basis of complete and detailed documentation and to no extent on conjecture" [5]. However, in light of recent extremists' attacks on heritage places, like the willful destruction in 2012 of the Sufi mausoleums at the Timbuktu World Heritage Site in Mali, the World Heritage Committee's decisions reflect a shifting attitude towards reconstruction, which is now cautiously accepted if it seeks to reflect a pattern of use or cultural practice that sustains cultural value. The justification for this shift is based on previously mentioned exceptions and ideas published in the Nara Document on Authenticity [4] in which the broadened use of intangible attributes makes a stronger case for reconstruction.

Venzone, a village in the Italian province of Udine—rebuilt after an earthquake—is a practical example of the growing acceptance for reconstruction, especially among the general population. It has been voted Italy's most beautiful village in the 2017 *Il Borgodei Borghi* competition. Many Italian cities are rich with priceless world heritage sites. Venzone beat out 19 other shortlisted villages because the panel of judges said it represented "one of the most extraordinary examples of architectural and artistic post-earthquake recovery" [21]. The place had been almost entirely destroyed by the 1976 Friuli earthquake, which killed 47 people. Recovery operations started immediately and—by resolution of a citizens' committee—the historic town centre was rebuilt in its original style. Almost 10,000 stones from the demolished buildings were preserved, stored, and catalogued in the wake of the disaster. The reconstruction was finished in 1990. There is a permanent exhibition in Venzone telling the story of the earthquake and the village's subsequent recovery. Today, it is hardly visible that most of the buildings were built within the last few decades [22].

5. Case Studies

5.1. The Case of Warsaw

Seven decades after WWII, our current perspective gives us an opportunity to better understand post-war rebuilding and its influence on the present-day city image. More general reflection enables the evaluation of the complex processes of both destruction and reconstruction [23].

In Warsaw, throughout the war and German occupation, conservators and architects were protecting historic documentation and saving works, such as a set of relic building measurements, including the Warsaw Old Town, and designed plans for reconstruction even while the buildings were collapsing around them. Professors Jan Zachwatowicz and Stanisław Lorentz acted as representatives of the Polish Underground State tasked with preserving Polish cultural heritage.

The power and vitality of the city were proven after the war when thousands of residents returned to a townscape literally reduced to rubble. Their collective efforts eventually restored the original appearance of the oldest districts through a program of arduous research and reconstruction. In 1946, a writer for *The Warsaw Escarpment* attempted to explain why a return to architectural prototypes seemed so essential: "If the Warsaw community is to be reborn, if its core is to be constituted by former Varsovians, then they have to be given back their old rebuilt Warsaw to some extent, so that they can see in it the same city, though considerably altered, and not a different town on the same spot. One must take into consideration the fact that individual attachment to old forms is a factor of social unity" [13].

It is also likely that Hitler's well-documented intentions to build a new town on ruins of Warsaw (the project presented on Figure 4. was a part of that scheme) made the resurrection of Poland's capital a necessary demonstration of defiance and resilience. Immediately after the war, it was discussed

whether to rebuild Warsaw—over 85% of which was demolished—or leave the city, once with a population of 1.4 million (and almost completely deserted as a result of expulsion at the end of 1944), as a site of remembrance. However, the returning survivors, longing for what had been destroyed and fuelled by defiance, spontaneously turned towards reconstruction.

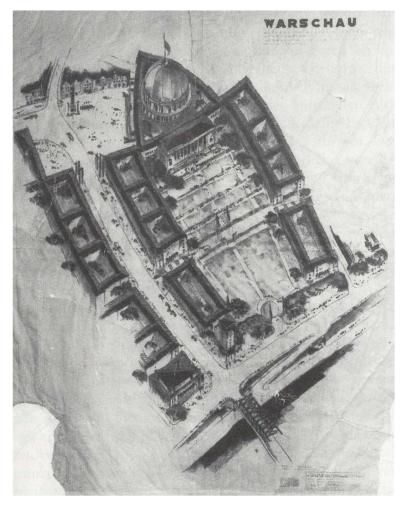


Figure 4. A Nazi German design for the *Warschau Volkshalle* complex at the annihilated Royal Castle site, 1942 (Hans Hubert Leufgen, public domain) after [24] (plate 2.3).

It might seem that the instant rebuilding of Warsaw was the most obvious solution, but the time perspective shows the complexity of that process. The question of the removal of the multi-layered sea of debris was first among the problems, and the next was how to evaluate the substance for further reconstruction. Should the rebuilding be quick—in order to accommodate thousands of homeless—or precise—to meet the conservational criteria? In Warsaw, two powerful ideologies: modernism and socialist realism were impacting the post-war rebuilding process.

Józefacka [24] treats the rebuilding campaign of the late 1940s and early 1950s as an effort to not only combat the devastation caused by the recent war, but also to further undo the perceived damage wrought by the *laissez-faire* development dated to the prolonged era (1795–1918) of partition by neighbouring empires, a preoccupation of the interwar urban planners.

The Bureau of Capital's Rebuilding soon was established. The architects who worked for the Bureau mostly followed the ideas of functionalism and—supported by the Soviet puppet Communist regime averse to bourgeois architecture—decided to renew Warsaw in the modern style, with wide streets and large free areas. Many existing buildings and buildings that could have been rebuilt were further demolished (e.g., Figure 5).

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Figure 5. Demolition of burned out buildings after the war, Warsaw, 1945–1946 (Narodowe Archiwum Cyfrowe, public domain) after [24] (plate 3.21).

The eventual political agreement for the scrupulous rebuilding of the most precious parts of the historic city of Warsaw was primarily the result of the determination of the inhabitants and the support of the whole nation. The reconstruction of the Old Town (Figure 6), the New Town, the Royal Route, and the Royal Baths was the grassroots manifestation of the care and attention, expertly supported by the conservators and art historians who had been preparing the documentation for the reconstructions since the first bombardments of Warsaw in 1939. They also acquired a collection of measured drawings developed mostly in the interwar period by the students of the Faculty of Architecture of Warsaw University of Technology.

In Warsaw's Old Town, the reconstruction included the holistic recreation of the urban plan, townhouses, the city walls, important religious buildings, and the Royal Castle (Figure 7). The final decision was to modernise the inner spaces of rebuilt blocks while restoring the image of the old city streets and squares. The comprehensive reconstruction of volumes and facades was entwined with an improvement of the attractiveness of this part of town for residents in terms of technical aspects. The extant features were combined with reconstructed ones, which "led to the creation of an urban space unique in terms of its material dimension (the form of the oldest part of the city), its functional dimension (as a residential quarter and venue for important historical, social, and spiritual events), and its symbolic dimension (an invincible city)" [20].



Figure 6. Warsaw Old Town (**a**) in 1945 (view from the East), in public domain, available online: https://commons.wikimedia.org/wiki/File:Warsaw_Old_Town_1945.jpg (accessed on 1 March 2018) and (**b**) its reconstruction 1950–1953 (view from the West), in public domain, after [24] (plate 3.32).

It was unique not only in light of the conservational theory, but also, and more importantly, in comparison with the uniform ideological character of socialism and communism. This can be explained by the willingness of the communist government to take advantage of the potential of meanings attached to monuments for their own propaganda objectives. The patriotic rhetoric became the government's tool of legitimization, which concealed the fact of the sovereignty limitation. Before

1989, in the public life of communist Poland, there was little space for forms of social memory other than national.

In 1980, UNESCO included the reconstructed *Historic Centre of Warsaw* on the World Heritage List, appreciating its outstanding universal value and stating that it meets two selection criteria: firstly, "to exhibit an important interchange of human values, over a span of time ... "; and, "to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance." The reconstruction of Warsaw's historic centre was described as "a major contribution to the changes in the doctrines related to urbanisation and conservation of cities in most of the European countries (. . .). Simultaneously, this example illustrates the effectiveness of conservation activities in the second half of the 20th century, which permitted the integral reconstruction of the complex urban ensemble" [20].

The reconstruction project utilised any extant, undamaged structures built until the 18th century, together with the medieval network of streets, squares, the main market square, and the circuit of city walls. Two guiding principles were followed: firstly, to use any reliable archival documents, and secondly, to aim at recreating the city's late 18th-century appearance. The latter was dictated by the availability of detailed iconographic and documentary historical records from that period. Additionally, conservation inventories compiled before 1939 and after 1944 were used, along with the scientific knowledge and expertise of art historians, architects, and conservators.



Figure 7. Royal Castle Square, Warsaw 2009. Photo: Paweł Kowalow (CC BY-SA 2.5), available online: http://warszawa.wikia.com/wiki/Plik:Plac_zamkowy_zamek_krolewski.jpg (accessed on 1 March 2018).

"The cohesive rebuilding process came to an end with the reconstruction of the Royal Castle. Since then, the Historic Centre of Warsaw has fully retained its authenticity as a finished concept of post-war reconstruction" [20]. For political reasons, the Warsaw Royal Castle was restored quite late (1971–1984), and basically from scratch. It is actually founded two meters higher than the original structure but contains numerous original elements that were hidden during the Siege of Warsaw (8 September–1 October 1939) and later, during the German occupation (1939–1945), by a number of people who risked their lives to save and hide as much as possible from the bombed castle before it

was finally blown to bits. The reconstructed castle's interiors consist of lots of original elements among exact replicas and copies.

In 2011, the Archive of the Warsaw Reconstruction Office, housing documentation of both post-war damage and the reconstruction projects, was inscribed in UNESCO's Memory of the World Register.

Further renovations, which occurred across Poland after it regained independence and established democracy in 1989, added some important final touches to the works of the 1940s and 1950s. One of the recent examples is a refurbishment of Krakowskie Przedmieście St in Warsaw, following its partial pedestrianisation (2017) (Figure 8 shows the new image of the street in comparison with its state in 1945).





Figure 8. Krakowskie Przedmieście St, Warsaw, (**a**) in 1945 (photo: Sylwester Braun, public domain) and (**b**) in 2017 (reproduced with permission from the City of Warsaw).

5.2. The Case of Gdańsk

The city of Gdańsk has a complex history. The struggle for 'ownership' of Gdańsk was characterised in particular by a number of turning points in the city's history, which included the period after WWI, when, as a result of a Polish–German controversy, the international community decided to create a neutral Free Town.

In 1945, when Gdańsk was acknowledged as Polish, its Old Town was destroyed by 90%. Some of the damage happened during fights; the most was an effect of a post-war demolition and fire set by Soviet troops. Residents who survived and could not escape had to face the Soviet Army, which meant large-scale rape and looting. After the war, the Gdańsk population had to be almost completely recreated. The new Polish inhabitants were mostly displaced from the territories that became republics of the USSR and ruined areas of central Poland.

The reconstruction of the Main Town in Gdańsk, which already had started in 1945, is regarded as another significant example of the Polish School of Conservation, although not all of its principles were strictly observed. Apart from a detailed reconstruction of the most precious monuments, the idea was to create a cultural landscape that would provide an idea of what the destroyed city had looked like. The concept was to fully preserve the medieval street network and the layout of building compounds of the Right Town. The Old Town and the destroyed areas of the suburb were to be transformed to a considerable degree. The burgher houses were to be rebuilt in their historical forms, which should be understood as rebuilding the façades or street elevations rather than a full reconstruction of every building.

In accordance with newly-realised ideas of socialism, the old districts were reconstructed as working-class housing estates but with an excessive number of public buildings due to an increased presence of historical edifices. It resulted in the construction of a new urban structure; single burgher houses were replaced with long blocks of flats divided into segments corresponding to the divisions of historical plots and covered with a screen of individual façades. Historical public edifices, such as a town hall and churches, were rebuilt or restored in general conformity with principles of conservation. In most cases, their parts (vaults, roofs, tops of towers) had to be reconstructed [25]. Conservation discipline was applied to the major streets and the city panorama visible from the Motława River. The compact urban fabric of a modern working-class district became a natural background behind the monumental gothic edifices and Renaissance façades.

The opportunity was taken to de-Germanize Gdansk during the architectural restoration of the medieval and Renaissance city. It was decided to refer to its golden era of the 16th and 17th centuries and the whole period between 1454 and 1793, when Gdańsk was the largest city and fortress within the borders of the Polish Kingdom. Thus, it was decided to eliminate eclectic buildings of the late 19th and the first half of the 20th centuries. The political attitude toward the architecture of German Neo-Renaissance, derogatively referred to as "Prussianism", resulted in its removal from the panoramas of several cities in the "Regained Territories". However, it should be stressed that those activities were directed toward the relatively new neo-style buildings, which had been created mainly over the previous 50 years, and which were generally lowly rated [26]. The only reason for their survival was the relatively good shape of certain objects, which, due to economic reasons, made it difficult to replace them with new ones.

Demolitions also resulted from the low standard of the 19th-century tenement buildings that had grown within the tight borders of Gdańsk—a city which was at that time overpopulated and enclosed by fortifications—and the propaganda of German identity that was written into them (Gdansk was annexed by the Kingdom of Prussia in 1793 in the Second Partition of Poland. With the unification of Germany under Prussian hegemony, the city became part of the German Empire. At the turn of the 20th century, Kaiser Wilhelm II, together with a close circle of politicians and artists, consciously used architecture as a political tool by creating a broad range of efforts to integrate art and architecture into the Empire's cultural unification processes [27]).

Completely burned 19th-century tenement buildings along the line of the former city fortification were also demolished, which made it possible to recover entire sections of curtain walls. In line with the principles of the Polish School of Conservation, a green belt complex referring to the medieval city fortification system was created, which clearly delineated the Main Town. In similar cases in Poznań and Warsaw, a decision was to fully reconstruct medieval defence systems (although ultimately it was achieved only in Warsaw). In Gdańsk, only fragmentary activities were conducted due to insufficient funding; however, the exposed remains of the city fortifications still dominate the character of the Main Town green belt area [28].

In his lecture delivered on 25 July 1947, Władysław Czerny, an urbanist and vice-mayor of Gdańsk, noted that the historical reconstruction of the Main Town "is not only an artistic postulate but also a deeply justified city-planning reason. The layout of streets, the entirety of the city surrounded by a belt of walls, had its deep justification which (...) has lost nothing of its reason and purpose."(Władysław Czerny as quoted by: Marian Des Logos, DziennikBałtycki, no. 210, 2 August 1947, p. 3, after [28]). The urbanist also noted that modern buildings located next to a historical complex must not compete with it and must not spoil its shape [28].

The scale and the totality of the Gdansk rebuilding have brought irreparable loss of numerous survived walls, vaults or details—the authentic fabric, which by definition should be subject to architectural conservation—but the greatest value of the undertaking was that it has recovered the city for the cultural landscape. It was possible owing to the reconstruction of street elevations in more or less reliable historical forms.

In the 1990s, the democratisation of life exposed and revealed hidden layers of social memory and opened up new possibilities for social activity formerly unrepresented in public life. Proud of the great anti-communist Gdańsk revolts of the 1970s and 1980s, the new generation of citizens threw away their complexes and resentments and looked back on the city's past with courage. The publication of documents, literary works, and pictures of pre-war Gdansk became a trigger for a social debate about the city's identity. Historic cityscape and monuments—those which survived and those who did not—represent social memory. The citizens of Gdansk are eager to get involved in a debate about the identity of their city and their own bonds with it. This debate shows how the perception of historic landscape develops and how the collective memory spontaneously evolves. The changes of attitudes are reflected in the politics of memory and the search for the city's multicultural identity [29].

This search has been carried out at the grassroots level. It revealed the actual differences between the former manner of governing the population and present democratic self-governance of citizens, which occurred in the 1990s, but had its roots in the Solidarity movement of the early 1980s. The bonds and intimacies of social networks and the freedoms and liberties of their citizenries eventually helped to fully consider moral dimensions and orders of location, time, cityscape, and place.

Increasingly visible signs of development and care can be perceived in Gdańsk over the recent decades. One can observe the significant interest of local NGOs and individual citizens in the history of their city, its appearance, recollections, and discoveries. The care for historical spaces often leads to vivid discussions regarding their past and future. Social memory is becoming increasingly open and individualised. The myths of Gdańsk as either Polish or German has been replaced with the myth of a multicultural city (which is not yet the case of Gdańsk, which, since WWII, is still primarily inhabited by Poles). What truly joins all inhabitants of Gdańsk throughout the centuries is rather their sense of liberty [30].

5.3. The Case of Wrocław

Wrocław is another interesting case, especially if compared with both Polish and German cities destroyed during WWII. The rebuilding of German cities such as Berlin, Dresden, and Frankfurt am Main were mainly based on urban reconstruction, whilst, on the building scale, their architecture was in most cases not recreated, but replaced by modern buildings. Some landmarks were reconstructed historically, although in a simplified style.

Wrocław, as a city that for four centuries was under Austrian, Prussian, and German rule, has considerable German architectural heritage. At the end of the war, the city was transformed into a fortress—Festung Breslau. Most of the civilian population escaped before Soviet troops surrounded the city. It was bombed and desperately defended for three months, being the last stronghold of the Nazis. When, as a result of the Potsdam conference, Wrocław was handed back to Poland, 70% of the city and 90% of the Old Town was in ruins.

Similar to Gdańsk, after the war, Wrocław was populated by Polish repatriates forced to leave eastern areas of the former Republic of Poland that had been annexed by the Soviet Union, including cities like Lvov, Vilnius, and Stanisławów. Just in the first year after the war ended, about 166,000 people settled in Wrocław and started rebuilding the city. Unlike those in Warsaw, and similar to Gdańsk, the new Wrocław inhabitants were uprooted. However, people tied into the rebuilding in the hope of moving beyond the horror of war and overcoming the enormous losses the country had suffered. In their search for an identity, they yearned for tradition just as much as they lacked it [31].

The population of immigrants from different backgrounds shared only their prejudice against former occupants of the city. However, the whole intricate geopolitical history of the town has made it a unique melting pot. The town bears witness to the succession of supremacy of several nations. Wrocław as a "true Polish city" was first the product of the Soviet anti-German politics and then the subject of long-lasting propaganda. New citizens were submitted to indoctrination and ideological campaigns. Much of the early propaganda was based on the premise that a huge part of the local heritage is foreign and hostile and thus needs to be eradicated and substituted [32]. The Soviets and the communists aimed to de-Germanise the city, which was generally accepted and eagerly enforced by some of the newly arrived inhabitants suffering the trauma of the war, cruel German occupation, and post-war resettlement.

The process of rebuilding the city was characterized by a mix of de-Germanisation and re-Polonisation, which led to a simultaneous destruction and reconstruction. Only medieval and Renaissance objects were safe, whilst many sculptures, statues, and grandiose eclectic edifices associated with Prussian reign were torn down. The authorities launched a campaign of selective restoration and reconstruction of townhouses in Wrocław's Old Town. The medieval architecture was painstakingly restored, propagating the account of an ancient Polish city, while many testimonies of later eras deteriorated. The process also included the removal of almost all German non-religious statues and many inscriptions—which was an act of retaliation for the ruthless and punctilious de-Polonisation of territories occupied by Germany during WWII.

However, for several following decades, though Wrocław has seen its share of symbolic and ideologically motivated demolitions, restorations, and reconstructions, there seemed to be no coherent policy behind them. If any philosophy dominated, it was the Polish School of Conservation, led by Prof. Zachwatowicz. The reconstruction of Wrocław's historic centre (1953–1962) was one of the largest such projects undertaken in Poland after the war. In effect, alongside medieval monuments associated with the Polish history, surprisingly numerous buildings of German origin were also restored. According to Davies and Moorhouse, the war and expulsions may have influenced the geopolitics, but they could not erase all those hundreds of years of Slavonic-German interaction and overlapping of cultures [33].

When the Iron Curtain collapsed in 1989, it paved the way for city leaders and residents to finally acknowledge Wroclaw's various heritages. The 1990s and 2000s saw Wrocław discovering, accepting, and incorporating its multidimensional, multi-ethnic legacy. The city has found its identity in the recognition that it has many identities. The citizens, as well as the authorities, have reached out to embrace the German cultural contribution to the city. They realized that the debates lead to a healthier society with a more stable characteristic. The residents began to track and restore remnants of German inscriptions, statues, and other traces of a pre-war society [32,34]. The Internet databases and registers have been developed (such as Wratislaviea Amici: [35]), documenting the relics of the former iconosphere of the city and the region.

After decades of persistent renovations resumed in the 1990s, it became vivid how much once mutilated cityscape of Wrocław, as much as Gdańsk, maintained an impression of continuity. Today, Wrocław reveals little of the dramatic rupture of 1945. The central squares and streets in the Old Town, with Medieval, Baroque and Fin-de-Siecle façades of the patrician and bourgeoisie houses, look as if they had survived the war without any damage [31]. With its minutely restored, diverse historical architecture and assertive society, Wrocław might be used as a model for all those cities dealing with unresolved, suppressed conflicts of the past [36]. However, the recent regeneration would not be as successful without the pioneering works of Zachwatowicz and his co-operators.

6. Urban Resilience Plans

6.1. Risk Management for Conservation Areas

Architectural heritage and sense of place are significant driving forces in most societies, cultures, and economies. Setting up improved methodologies for the analysis and management of the risk of the building, architectural, and urban heritage might promote not only better informed, clear, and measurable targets and evidence-based decision-making, but also a deeper and wider understanding of the social and ecological costs associated with the loss of cultural assets [37]. This can lead to ensuring progressive resilience measures are implemented in conservation areas.

Particularly, historical urban centres need a thorough approach to risk management. They mirror the complex network of social relationships developed through the centuries and relate to the intangible heritage that underlies the complexity of the urban life. In addition to the standard economic valuation, new measures would comply with the understanding of value on physical, cultural, landscape, ecological, and societal attributes. This is now possible with the use of a range of valuation tools that originated outside the built environment community but include wellbeing valuation, ecosystem services analysis, and social return on investment. Without such overall sustainability valuation methods, the intrinsic capital of the historical assets would default to a standard market valuation, which ignores physical capital, societal capital, and cultural capital. The ecological and holistic approach applied to the risk assessment of cultural heritage would allow considering historical centres as complex systems, thus requiring an intrinsic cross-cutting and transdisciplinary approach [3].

A significant amount of the theory has yet to be translated into practice in community-planning related to preparedness for urban post-disaster reconstruction. Abe et al. [38] describe an interesting case from Tokyo where an earthquake is assumed to strike in the near future. The post-disaster community training was organised there for inhabitants to simulate a reconstruction process and to consider measures of residential environment resiliency improvement.

The recovery from great natural disasters might be compared to recovery from the most disastrous wars. The historical examples, particularly the 20th century post-war reconstructions, show how important is to treat the traditional urban townscape with respect and even, in the case of heavy damages, to reconstruct not only by replacing the destroyed structures with contemporary urban and architectural forms, but in the cases of the most culturally precious urban townscapes to rebuild and reactivate traditional urban settlements through integrated strategies of architectural reconstruction. The Polish School of Conservation practices might serve as a model for post-disaster architectural reconstruction as a strategy for resilient cities. The cases of historical cores of Warsaw, Gdansk, and Wrocław prove that it is possible to recreate the image of historical structures whilst improving their technical and environmental standards where necessary. The cases confirm that most of society pays more attention to finery than to the theoretical essence of monuments; the issue of the singular buildings' authenticity may not be significant for future generations [25].

The case of Warsaw additionally shows that the strategies of post-disaster reconstruction would be most effective if based on ex-ante plans for the architectural reconstruction of places in danger. The plans should address a wealth of traditional building forms, public spaces, material heritage and cultural legacies. The preparation of such resilience plans may need to involve engineers, planners,

and related built environment practitioners and researchers including architects, conservators, and art historians, working alongside the residents by co-designing reconstruction strategies. Those should cover design, planning and building techniques through analyses of distinct urban patterns, housing typologies, social and spiritual public spaces, as well as cultural practices. The case of Warsaw might be rediscovered in that light as showing what kind of sources might be particularly useful in case of rebuilding destroyed townscapes. The strategies should then be discussed with the municipality and the different stakeholders who might be involved in a reconstruction programme to include the affordability of housing and availability of resources.

6.2. Preparing for a Disaster—The Value of the Sense of Place

Preparing for disasters with an emphasis on physical infrastructural solutions is not sufficient to avoid them and their negative impacts. It is important that communities build social capital in advance of catastrophes. Aldrich [6] discusses a number of recent disasters to illuminate the ways that social capital serves as a critical part of resilience. Specifically, he looks at the response from the perspective of social networks that improve disaster recovery for local residents, communities, and the nation. Social cohesion keeps people from leaving disaster-struck regions, allows for the mobilisation of groups, and provides informal insurance when normal resource providers are not open.

Kłosek-Kozłowska [39] argues that the strategies of urban development and resilience should be rooted in extensive historical knowledge. The cases of Gdańsk and Wrocław confirm that local heritage and traditions inspire people to reinvent the social and cultural importance of shared space. Such a background helps to identify specific values of the built heritage and gain the social acceptance of their protection. Being aware of the specificity of local assets—including townscape and intangibilities—self-organised communities are more likely able to negotiate the conditions under which a rebuilding will occur [40]. The professional historical investigation based on scientific grounds helps to establish a hierarchy of values and valorises space, while social participation—in both spheres of identifying and conserving built heritage—enhances the sustainability of the process negotiated within the community.

Historical urban areas need a thorough approach to risk management that would apply sustainability valuation tools to treat historical centres as complex systems, and understand values of cultural, townscape attributes, along with ecological and societal ones. Since new generation urban resilience plans are being called to include the capacity to recover through risk reduction and post-impact activities, further reflection is needed on relations between heritage conservation and resilience, and further exploration of embedding architectural heritage documentation and conservation methods in a new generation of urban resilience strategies.

7. Conclusions

Resilience means the overall goal of decreasing human vulnerability: an ability to remain in existence, to sustain a period of hardship or difficulty, and the capacity to recover from unavoidable consequences of disasters.

Jan Zachwatowicz and Stanisław Lorenz, the leaders of the Polish conservation services during and after WWII, convinced the authorities of the need to raise several cities from ruins in a way that would give them a historic appearance in order to restore the sense of identity of the places and communities. Faced with the unprecedented loss of the material culture, Zachwatowicz consciously and reluctantly withdrew from the contemporary conservation doctrines, being certain that, in exceptional circumstances, monuments of urbanism and architecture should be treated as prime bearers of national memory.

The above described cases of Warsaw, Gdańsk, and Wrocław confirmed the general assumption of the Polish School of Conservation practice. The three cities, despite the major differences as regards the origins of their architectural heritage, carry the image of successfully resurrected, resilient cities, substantially thanks to their recreated cultural landscapes. After 1945, they all came into

being as the result of an almost complete destruction and population exchange. However, from the socio-cultural perspective, the differences at the beginning of the rebuilding processes were significant: Warsaw was the undoubted token of the traumatised Polish nation, whereas Gdańsk, the traditionally independent and multinational city, and Wrocław, with its townscape rich in symbols of centuries-long Germanic presence and domination, had to undergo the process of establishing their new identity in the drastically changed socio-political circumstances. Despite the differences, in each of the cases, in the continuous process of identity formation, the recreated urban and architectural forms helped new societies accept their new places, and, after 1989—in the next, post-ideological era—acquainting younger and more assertive generations with the complexity of their history.

The material legacy of Gdansk and Wrocław that endured served as a prosthetic memory to the societies who were mostly deprived of the possibility to soak up history from natives. Preserved and recreated remnants of Germanic Danzig and Breslau eventually achieved the role of respected artefacts. Regardless of their origins, they have been accepted as part of owned heritage and pride.

Successful community-driven historical reconstructions of European cities prove that reconstruction of architectural assets—especially when smartly combined with technical improvements of living standards—helps people to reconnect with their past, or, if those places are new to them, to understand places in which they are going to live. A further study of effective reconstruction of entire urban complexes could help to develop a methodology of treatment for the numerous sites affected by military and natural disasters and the measures, which, taken in advance, could ensure an effective post-disaster reconstruction.

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