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Iryna Pohranychna

PhD in Architecture, Associate Professor
Lviv National Polytechnic University
79013, 12 Stepan Bandera Str., Lviv, Ukraine
<https://orcid.org/0000-0002-4164-6110>

Bohdan Cherkes

Doctor of Architecture, Professor
Lviv National Polytechnic University
79013, 12 Stepan Bandera Str., Lviv, Ukraine
<https://orcid.org/0000-0001-6809-956X>

**Destruction and reconstruction of Ukrainian cities
after World War II: Development of methodological approaches
to contemporary reconstruction**

Abstract. The research relevance of the formation of cities during the pre-war and post-war periods of World War II was determined by the influence of the process on the modern appearance of some cities, being one of the main components of their cultural identity. The study aimed to analyse the historical stages of city formation as an integral system of political, ideological and material structures, and to determine the impact of the post-war reconstruction of Soviet cities on the current urban planning situation. The study analysed the post-war reconstruction of Soviet cities in Ukraine as a dynamic and controversial process consisting of several stages. The peculiarities of architectural and urban planning thinking and practical methods were identified, which determined the nature of architecture and the general logic of city formation during the war and post-war years of World War II. Using general scientific research methods such as analysis, synthesis and comparison, the post-war reconstruction of Kyiv, Kharkiv, Zaporizhzhia and Ternopil was analysed; the main architectural and urban planning techniques used in the reconstruction of these cities were identified, and a comparative analysis of these cities with cities in modern Europe was conducted. The systematisation and generalisation of bibliographic materials were used to determine the state of research on this topic, and to summarise and supplement existing information on the principles of rebuilding cities destroyed by war. Through systematic analysis and special research methods, such as graphical comparison, retrospective modelling and architectural composition, the characteristic features of Ukrainian cities that shape their national identity have been identified. The practical significance of the research lies in the use of the results of the analysis of the post-war reconstruction of Ukrainian cities after World War II in the development of plans for cities or city districts for their reconstruction after the end of the Russian-Ukrainian war

Keywords: urban planning; historic cities; planning structure; restoration of historic buildings; authenticity; post-war reconstruction of cities

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*Corresponding author



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INTRODUCTION

For a comprehensive study of the problem of post-war reconstruction of cities, as well as the formation of Soviet architecture, as an example of post-war reconstruction after the destruction of city quarters, historical centres or entire urban formations, studies devoted to the history of pre-war and post-war architectural and territorial development of cities and their reconstruction after World War II were analysed. M. Żychowska *et al.* (2022) studied the correspondence or contrast between the ideology of the ruling power and the formation of style in architecture. The study found that, when a new government wanted to emphasise its isolation from its predecessors, it used art and architecture as ideological propaganda, creating a new style. A striking example of this was the ideology of the so-called “Stalinist empire”, in particular the architecture of Ukraine, Poland, and Romania during the socialist period. The architecture showed no continuity with previous styles and only sought to emphasise its dissimilarity from the “old world”. At the same time, socialist art in the Soviet Union was not homogeneous and changed radically in line with the Communist Party’s policies, from the formation of Bolshevik ideology in the 1920s to Stalinist authoritarianism in the 1940s and early 1950s.

Various paths of spatial change in cities after World War II were examined by Ł. Musiaka *et al.* (2025a). The main objective of the study was to present the results of a comparative study of various forms and consequences of the reconstruction of historic centres of small towns in north-eastern Poland after World War II. The conclusions of this study showed that the negative consequences of spatial transformations (e.g., spatial chaos, lack of a functional and spatial centre, undeveloped neighbourhoods, and limited effectiveness of planning and revitalisation tools) were still felt in the 2020s. The study noted that for the further revival of the studied territories, it was necessary to develop programmes for the restoration of such cities at the national level. V. Paperny (2002) studied the evolution of architecture in the USSR during the Stalinist period, identifying two contradictory trends, Culture One and Culture Two, which alternately prevailed in Soviet culture. The study argued that the departure from the architectural avant-garde of the 1920s was not entirely the result of Stalin’s will. Such architectural traditions were conditioned by the dominant cultural mechanisms of the 1930s and 1940s. A distinctive feature of the work was the combination of academic precision with an interesting narrative about the trajectory of architectural and cultural transformation that marked a turning point in the history of the USSR.

Yu. Ivashko *et al.* (2023) examined the issue of Ukraine’s reconstruction, the specifics of the reconstruction, revaluation and protection of Ukrainian monuments that were destroyed as a result of military actions and the Russian invasion of Ukraine. The second issue covered in the paper was the experience of Polish conservators with cities destroyed during World War II. The third issue was international legislation in the field of heritage protection,

which was analysed for planned measures in the field of reconstruction and revaluation of Ukrainian monuments after the end of the war. The study by O. Kulikov & T. Krotowski (2025) raised the issue of the regeneration of the historic centre of Odesa during post-war reconstruction. The authors analysed the stages of formation of the urban structure of Odesa, the main urban features and landmarks, as well as the determining factors that led to the formation of the historic centre and Odesa as a whole. The zoning of the historic centre and the restrictions arising from the legal status of protected areas were analysed. The negative impact of the war on the destruction of Odesa’s historical sites was examined. The study predicted that the main measures of post-war regeneration of the historic centre of Odesa would be the reconstruction of individual damaged historical sites, since the overall planning structure of the historic centre had been preserved.

Scientists O. Sokhatska & Yu. Chopyk (2023) investigated the economic damage caused to Ukraine as a result of the Russian-Ukrainian war. The study noted that with the start of the Russian full-scale invasion of Ukraine in 2022, infrastructure and property worth almost USD 150 billion were damaged. The restoration of such objects has already begun in part, and this reconstruction has been financed by several funds and grants, including Ukraine’s internal funds. An analysis of the data in this work was necessary for a comprehensive analysis of the problems of Ukraine’s recovery. Based on the results of the literature review, it was possible to note that the issue of post-war reconstruction remained important. Studying the peculiarities of the post-war reconstruction of Soviet cities, their positive and negative features, will help to avoid negative experiences in the future. The study aimed to identify the characteristics of the formation and reconstruction of cities in the 1930s-1950s and to formulate principles for the current reconstruction of Ukrainian cities. The objectives of the study were to analyse post-Soviet cities in Ukraine in terms of their post-war reconstruction and to select cities for detailed study; to analyse urban development plans for cities in Ukraine and other countries; to identify the characteristics of the reconstruction of post-Soviet cities after World War II in Ukraine and to develop methodological approaches to the reconstruction of cities in Ukraine after the Russian-Ukrainian war.

MATERIALS AND METHODS

The comprehensive methodology used to study the destruction of cities during World War II and to determine the characteristics of city reconstruction in the 1940s and 1950s was based on two types of scientific methods: general scientific methods and special scientific methods. Based on general scientific research methods, the state of research on this issue was determined, and existing information on the post-war reconstruction of large cities in Ukraine was summarised and supplemented. The information found on the reconstruction of historic cities after World War II was





systematised to simplify further analysis of sources related to this topic. Within the framework of historical and archival research, attention was paid to the results of scientific research, cartographic and iconographic materials; the main data were taken from the studies by B. Cherkes & O. Lysenko (2013) and V. Shchurek (2022a; 2022b). Sources such as *Zaporizhia after the war: Unique photos* (2020) and *Zaporizhia-1941: Our city in the pages of the world press* (n.d.) were also examined. After analysing bibliographic and iconographic materials and familiarising ourselves with the problems of post-war reconstruction, four cities in Ukraine were selected for detailed study, namely: Kyiv, Kharkiv, Zaporizhia and Ternopil. This choice was determined by their geographical location within modern Ukraine, which revealed the characteristics of reconstruction in Western, Southern, and Eastern Ukraine, as well as whether the size and significance of a city influenced the scale of post-war reconstruction.

Using special research methods, namely the analysis of iconographic materials, the stylistic features and nature of the destruction of ruined neighbourhoods were revealed; using a graphical comparison of historical plans, the state and scale of the destruction of Kyiv and Kharkiv were determined; based on architectural, compositional and planning analysis, the features of the formation of Ukrainian and European cities were identified. Thus, using grapho-analytical comparison, a comparative analysis was performed of the post-war reconstruction of the Ukrainian cities of Kyiv, Kharkiv, Zaporizhzhia, and Ternopil, as well as cities such as Gdańsk, Dresden, and Warsaw. The study found that the reconstruction of Warsaw and Gdańsk was based on the principle of preserving the authentic historical centre, while the reconstruction of Dresden took place in two stages: initially, a city plan with wide avenues and long streets was created, but this approach was deemed flawed, and the city was rebuilt according to a different plan. Using a comparative historical synthesis of the post-war reconstruction of cities in Ukraine and Poland, the main principles for the modern reconstruction of Ukrainian cities were formulated, namely: preservation or restoration of city-forming elements, introduction of the concept of authenticity in the development of projects for the reconstruction of destroyed or damaged buildings, and the formation of comprehensive programmes for the reconstruction of historic cities or parts thereof.

RESULTS AND DISCUSSION

Cities in Ukraine were destroyed many times as a result of war, but their reconstruction after World War II was the most significant in terms of urban development. A special task of the Soviet state and various political and economic structures was to create an ideology that could unite and direct the masses, imposing on them the desires and needs necessary for the Communist Party. In a speech on proletarian architecture delivered on 14 January 1932, O. Lunacharsky stated: "...the task of architecture is to incorporate utilitarian goals, the functional part of the plan,

as harmoniously and fully as possible into a concept that is ideological in nature" (Cherkes & Lysenko, 2013). In the Soviet Union in the 1930s-1950s, examples of ideologised architecture were built, the form of which was determined by an ideological construct that was supposed to serve to affirm certain ideas and stabilise order (Devos *et al.*, 2015). In the periods following the World War I (1914-1918), the National Liberation Revolution of 1917-1921, and after the World War II (1939-1941), marked by crises and instability, the gap between the desired and the actual was particularly acute. In such situations, the ideal was derived from a value system alternative to the existing one. The theme of the ideal city of the future was substantial for Soviet-era architecture. Architects had to transform the existing material conditions of Soviet society, creating architectural images that resonated with the new era. A. Mostakov noted: "The architectural unity of the city is a consequence of the inner harmony of life itself, a harmony that is only possible in a socialist society" (Cherkes & Lysenko, 2013).

The main issues of Soviet architectural theory developed even before the start of architectural and construction practice in the 1920s. Theoretical issues became particularly relevant: the specifics of architecture in general, the role of the architect in a new type of society, and the characteristics of Soviet architecture. The utopian ideal was accepted as a goal that justified any means. With its uncompromising aspirations, utopian consciousness prepared the intellectual groundwork for totalitarianism and its ideology. The hypertrophy of utopian thought, aimed at the realisation of arbitrarily constructed ideals, which was fatal for the historical events of the 20th century, also drew architecture into its dimension. Captivated by the ideals of social utopias, architects began to make claims to the construction of life. They also believed that all new formal approaches to architectural tasks correlated with socialist principles. The "New architecture" was a struggle against eclecticism and, at the same time, a denial of the progressive significance of the classical heritage for contemporary architecture. The rejection of experience and traditions as an essential part of architectural development dominated. The dialectical connection between tradition and innovation was ignored, as was the fact that these are two sides of a single process of moving forward, that any affirmation of the new in practice is inevitably linked to the emergence of a new tradition (Paperny, 2002).

The urban development policy of the Bolsheviks was designed not only to overcome the problems that had destabilised urban society in the previous period, but also to create a new, socialist way of life. The city was to become an instrument for establishing a new system of values and educating a "new man", who permanently abandoned the legacy of the past (Khmelnyskyi, 2010). B. Cherkes & O. Lysenko (2013) noted that by the mid-1920s, the strategy of administrative-territorial division of the USSR was finally based on the requirement to locate administrative centres in places, where there was or was artificially created a maximum concentration of the proletariat. Proletarian



centres, which were united by production and economic ties into single territorial-production systems, together with the adjacent “non-proletarian” zones, determined the areas of mobilisation and political division of the territory. Since in several cases the location of the centres of power did not coincide with the places of the greatest concentration of the proletarian population, the old zoning was remade, and a new one created to link the administrative centres of power with the places of the actual concentration of the proletariat.

K. Shamun (2021) noted that the goal of district planning was not the scientifically sound development of large cities or settlements, but rather the interests of industrial enterprises focused on accelerating production at any cost. The content of regional planning work focused on solving purely practical construction tasks: plans for general zoning of the territory, schemes for the location of industrial enterprises and settlements, energy hubs, railway, motorway and water routes, water supply and sewerage schemes, and engineering preparation of the territory were developed. Issues such as the preservation and identification of valuable natural landscapes, the organisation of recreational areas, the development of tourist routes, and the development of project proposals that emphasised the distinctive architectural traditions of a particular region were largely ignored in regional planning in the 1930s-1950s. The issue of authenticity was not present; all cities in the USSR were planned according to a single scheme to establish the ideology of a “single country”.

Kyiv in the context of post-war reconstruction

The post-war development of Kyiv reflected the continuation of processes that had begun before World War II, characterised by ideological determinism and the active influence of ideology and politics on the formation of architecture. In 1934, the capital of Soviet Ukraine was moved from Kharkiv to Kyiv, and from that moment on, the socialist reconstruction of the city began. The creation of the Government Centre was the main urban planning problem of the mid- and late 1930s. In the process of developing proposals for the location of the Government Square, where all the main buildings for the government bodies of the Ukrainian SSR were to be located, options were proposed in the old part of the city, with the destruction of existing architectural monuments of the 12th-18th centuries. The project by P. Yurchenko was adopted as the basis for future design. It was distinguished by its successful spatial solution, monumentality and pomp, but also provided for the demolition of the St. Michael’s Monastery and St. Basi’s Church. A closed competition was held based on this concept, in which such well-known architects as the Vesnin brothers, I. Fomin, K. Alabyan, V. Zabolotny, F. Oliynyk, A. Tatsiy, P. Alyoshin, I. Langbard, and Ya. Steinberg participated (Cherkes & Lysenko, 2013).

Most projects envisaged Government Square being located perpendicular to the Dnipro River, with the ensemble opening onto the river and a system of steps and ramps

along the slope. The exception was the projects of the Vesnin brothers, who in one version separated the square from the Dnipro with a colonnade, and in another completed the exit to the river with a large arch. Some architects interpreted the square as a propylaea with tower-like structures at the ends (I. Fomin, P. Alyoshin, Ya. Steinberg) and a huge monument to V. Lenin between them. The competition projects confirmed the desire of architects to visualise the main myths of Soviet identity (Fig. 1).



Figure 1. Recording the destroyed buildings on Khreshchatyk Street in Kyiv, 1945

Note: black colour – buildings destroyed in 1941; grey colour – buildings that survived World War II; white colour – buildings partially destroyed in 1941 and demolished in 1945

Source: based on B. Cherkes & O. Lysenko (2013)

The main means of architectural expression were the hierarchy and subordination of the entire architectural composition, its subordination to the main axis, which was always dominated by the monument to the leader, the hypertrophy of the buildings, and the excessiveness of the architectural decor. To destroy the old identity and establish the ideology of Bolshevik power, alongside competitions, the destruction of St. Michael’s Golden-Domed Cathedral was in progress (Hrytsay *et al.*, 1962). During the war, 42% of the housing stock in Kyiv was destroyed, along with several unique buildings, including the 11th-century architectural monument, the Assumption Cathedral in the Kyiv-Pechersk Lavra, and many other cultural monuments. In total, 940 administrative and public buildings, 1,742 communal buildings with a living space of over 1 million square metres, and 3,600 privately owned buildings with a living space of approximately 500,000 square metres were destroyed during the occupation (Fig. 2). On 22 June 1944, the Council of People’s Commissars of the Ukrainian SSR announced a competition for the planning and development of the destroyed Khreshchatyk, the main street of Kyiv. This competition was substantial in the revival of cities destroyed by the war. The task of



designing Khreshchatyk was to accommodate government, representative and public buildings and give Kyiv the formal characteristics of a capital city. In addition to its public functions, the new Khreshchatyk was also to be a centre of

business, trade and cultural activity. The competition was attended by the best architects of the USSR: K. Alabyan, P. Alyoshin, A. Shchusev, D. Chechulin, G. Golts, O. Vlasov, and O. Tatsiy (Fig. 3).



Figure 2. Post-war reconstruction of Kyiv

Note: a – reconstructions on Khreshchatyk Street. Photo: Central State Film and Photo Archive of Ukraine named after H.S. Pshenychny; b – view of the reconstructed Khreshchatyk Street. Photo: Central State Film and Photo Archive of Ukraine named after H.S. Pshenychny

Source: based on M. Zahorodniy (2021)

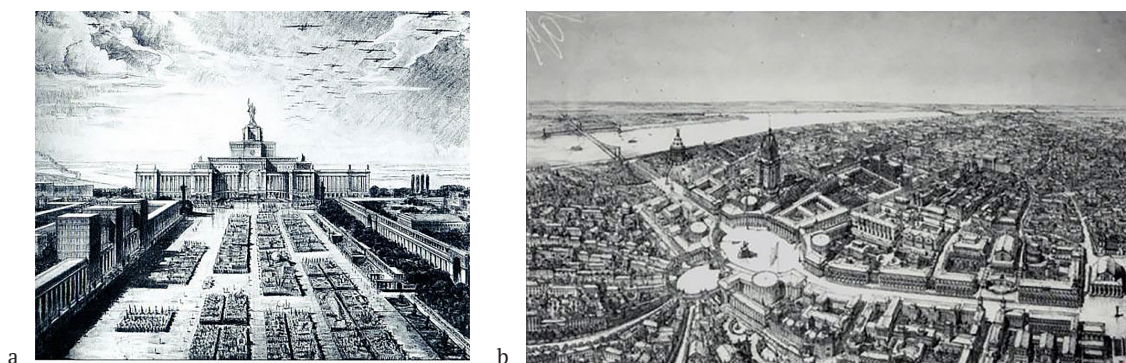


Figure 3. Project proposals for the reconstruction of Kyiv after World War II

Note: a – competitive project for the restoration of Khreshchatyk. D. Chechulin, in collaboration with K. Orlov; b – project for the restoration of Khreshchatyk. Perspective, 1944. Group of architects A. Vlasov

Source: based on T. Asadcheva (2024)

When designing Khreshchatyk, the urban planning issues were emphasised: the convenience of using the street for transport and pedestrians, the expansion of adjacent streets, approaches and driveways, and the organisation of festive squares. The aesthetic aspect was highlighted: the designs used classicist motifs combined with elements of Ukrainian Baroque. Architects promoted the use of local materials, such as ceramics, as an economical way to enhance the aesthetic component of Khreshchatyk’s architecture (Hrytsay *et al.*, 1962). It was proposed to use the motif of arches to reveal the unique relief of the city. This technique was later adopted by the winner of the competition, architect O. Vlasov, a chief architect of Kyiv from 1944 to 1950. O. Vlasov, alongside creating architectural workshops (in 2025, the Main Directorate of Kyivproekt), were central in the development of Kyiv’s architecture. In 1949, the government of the Ukrainian SSR approved the

“Master plan for the development of Khreshchatyk”, according to which its construction began. The architecture of the new Khreshchatyk was to become the architecture of Victory. The competition projects and implementations of the post-war development of Khreshchatyk reflected the mythology of Soviet identity, with buildings characterised by monumentality, magnificent architectural decor, and monuments to leaders dominating the landscape. The urban planning concept for the organisation of Duma Square (in 2025, Independence Square), developed by O. Vlasov’s group in 1949, laid the fundamental principles for its planning.

The 1948 master plan for Kyiv envisaged the creation of the main city thoroughfare, Khreshchatyk. The master plan developed this idea, defining Khreshchatyk and the Dnipro ravine, with its large government buildings, as the city centre. The expert commission considered this interpretation to be the most appropriate: the location of



Khreshchatyk in the overall composition of the city, natural conditions (relief, parks, Dnipro River), and the content of the centre of the capital of the Ukrainian SSR, where Khreshchatyk was interpreted as a modern forum with a large spatial opening of the architectural composition. At the same time, however, the commission noted that the design of the centre did not yet provide a compositional synthesis and connection between Khreshchatyk and other major elements of the centre, such as Government Square and the complex of buildings of the Council of Ministers and the Supreme Council, located on the upper edge of the Dnipro riverbank. The expert commission recommended including these two elements in the composition of the centre of Kyiv, organically linking them with Khreshchatyk. The exceptionally rugged terrain of Kyiv and the wide Dnipro River have always determined the architectural face of the city, the beauty of its panorama, and the uniqueness of the architecture of its prominent buildings, which harmoniously blend with nature. Its distinctive silhouette always ranked Kyiv among the most highly valued and memorable cities, so the task of the city's master plan was to establish the foundations and ensure all the prerequisites for the creation of an architecturally coherent and distinctive ensemble. The project reflected the main façade of the city towards the Dnieper, located critical structures on the high embankment of the Dnieper bank, incorporated the city's silhouette design, and planned a park on Trukhaniv Island. Therefore, the expert commission recommended developing a special scheme for the architectural organisation of the city, spatially separating and connecting the most interesting points in terms of height and landscape. The commission also recommended placing greater emphasis on Kyiv's major architectural monuments, highlighting their surroundings in accordance with their significance and the surrounding environment (Hrytsay *et al.*, 1962).

Kharkiv in the process of post-war reconstruction

The development of Kharkiv's architectural and planning structure was defined by the "General planning project for Kharkiv" (Kharkiv Regional Universal Scientific Library, 2004), authored by the renowned architect and Kharkiv native O. Kasyanov. The master plan was developed for a period of 20 years and defined the main issues of the city's reconstruction and redevelopment. The rapid restoration of the city, which had been destroyed after World War II, required the daily work of Kharkiv's chief architect. Kharkiv became a notable example of urban planning, in which two centres were historically formed: the Old Town or Old Centre (the core of the historically formed city) (Fig. 4) and the New Centre (artificially created by the Soviet authorities). The new appearance of the Soviet city was intended to symbolise "the strength and greatness of the state and people, who won the Second World War". The old city, similar to any historical centre, was shaped by the influence of overlapping laws of a certain period and architectural styles: Baroque, Classicism, Eclecticism, Art Nouveau, and Constructivism. In contrast, the new city was

built from scratch, following the stylistic and compositional system of the interwar period, with the only layer being the post-war Leninist decor (Gubkin, 2025). The new centre was formed in the 1920s and 1930s as the administrative core of the republic's capital (Fig. 5). The new centre saw the construction of such buildings as the Derzhprom (House of State Industry), the House of Projects, the House of Cooperation and the House of the Central Committee of the Communist Party of Ukraine, which together formed the architectural ensemble of Freedom Square (formerly F.E. Dzerzhinsky Square). This large-scale construction project corresponded to the style of constructivism with elements of Art Deco, which dominated the architecture of the 1920s and 1930s. The International Hotel (in 2025, Kharkiv) was located on the rectangular part of the square, which connected its round and rectangular areas (Kharkiv Regional Universal Scientific Library, 2004). During World War II, all these buildings were destroyed. During the reconstruction of Kharkiv after the end of World War II, most of the buildings were rebuilt in a classical style, except for Derzhprom, which retained the features of its original constructivist design.

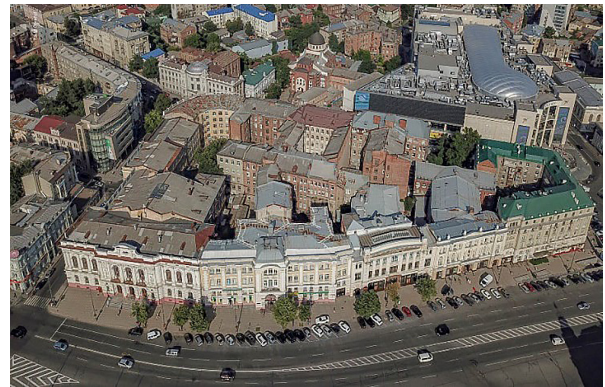


Figure 4. The old centre of Kharkiv

Source: based on A. Chernychko (2025)

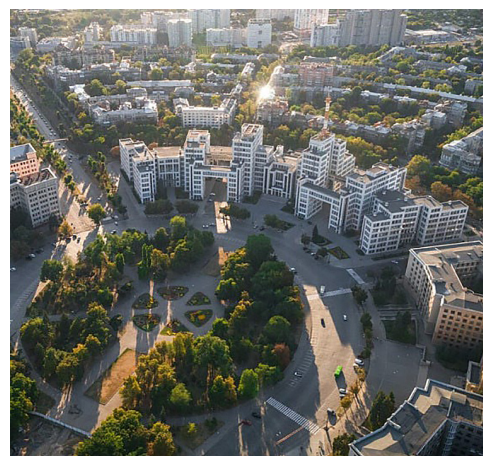


Figure 5. Appearance of the New Centre before the start of the Russian-Ukrainian war

Source: based on B. Lohvynenko *et al.* (2023)





The reconstruction of the Kharkiv House of Projects, designed by architects S. Serafimov and M. Zandberg-Serafimova in 1932, was conducted in the 1950s. The reconstruction was conducted by a group of authors, which initially included V. Kostenko, O. Kasyanova, V. Lipkin and I. Zhilkin, and later joined by I. Yermilov, V. Lifshits and V. Komirny. After the war, only the reinforced concrete frame remained of the constructivist building. During the reconstruction, the central part of the building underwent significant changes, the side wings were superimposed, and ceramic tiles were used to decorate the facade. Initially, it was planned to decorate the building with a statue of J.V. Stalin, with a large spire as an alternative. However, neither of these options was implemented. A distinctive feature of the reconstruction was that the design and construction were conducted simultaneously. The reconstruction was completed during Khrushchev's campaign (late 1950s-early 1960s) against architectural excesses, which explained the less pompous appearance of the building compared to Moscow's "Stalinist skyscrapers" (Kharkiv Regional Universal Scientific Library, 2004).

The reconstruction of the House of Cooperation (built by architect A. Dmitriev in 1930) with the modification of its buildings and the construction of a new central multi-storey block continued until 1954. The authors of the final project, P. Shpara, N. Yevtushenko, and N. Linetska coordinated their plans with the architect of the initial project. The building changed not only its facade and number of floors, but also its purpose: after the reconstruction was completed, it housed the L. Govorov Military Air Defence Academy, and as of 2024, it is the North Building of Kharkiv National University. The building of the Kharkiv Regional Committee of the Communist Party of Ukraine at 64 Sumska Street (in 2025, the building of the regional state administration), designed by V. Kostenko in collaboration with V. Orekhov, was built in 1954 on the site of the demolished building of the Central Committee of the Communist Party of Ukraine (b) by architect Y. Shteinberg (Romanova, 2022). The massive six-storey building with columns and an entablature, designed in a ceremonial style, logically completed the rectangular part of Freedom Square. Its dominance was emphasised by the nearby location of the Giprokoks building (architect E. Lyubomylova) with its complex profile and cut corners. Both structures interacted harmoniously in the urban environment.

The International Hotel (renamed the Kharkiv Hotel in 2025), designed by architect G. Yanovitsky, suffered damage during the war, but was reconstructed by the designer. The composition of the main facade with its voluminous shifts and rounded side wing was preserved, but the decor characteristic of the classical style was added. Returning to the historic centre of Kharkiv, it was worth noting that after the Second World War, the buildings underwent so-called reconstruction. However, the concept of reconstruction did not mean rebuilding houses destroyed during the war, but rather new construction on the site of historic

buildings (Savin & Kirichenko, 2023). Buildings that developed the traditions of Soviet classics began to appear on the sites vacated after demolition. Entire neighbourhoods were built, as well as individual "inserts" between existing buildings (Gubkina, 2025).

One of the most famous projects by architect P. Areshkin was the building with a spire at the junction of Constitution Square and Pavlovskaya Square. In 1954, the main part of the complex was completed with an 11-storey tower crowned with a spire. The neoclassical residential building with integrated shops occupied the entire block. Another aspect of Stalin's reconstruction of Kharkiv was the addition of false decorations to historic buildings constructed between 1939 and 1941. Classical architectural details (cornices, columns, porticos, pediments, balusters) were added to buildings constructed in the constructivist style. Horizontal openings and ribbon glazing were dismantled (Gubkina, 2025), rectangular windows were replaced with arched ones, and light modern railings were replaced with massive balusters. As a result, the buildings were changed beyond recognition (the Central Universal Store, the City Council, the Housing Union Building). This problem had to be considered from several angles: from an aesthetic point of view, such actions made it possible to create a coherent ensemble of the city, to unify all previously constructed buildings; from an economic perspective, to create an image of the rapid development of the Soviet state and the implementation of Stalin's grand plans for reconstruction; and from a political perspective, to conceal the layer of Ukrainian authenticity. Thus, this "reconstruction" appropriated the achievements and contributions of other eras, displacing them from the historical, planning, and landscape urban environment.

Restoration of Zaporizhzhia's industrial potential

One notable example of the reconstruction of a city destroyed during World War II was the reconstruction of Zaporizhzhia. The construction was based on a project developed by the Dniprobud design and planning workshop, and later, according to a master plan executed by Dnipromist of the Ukrainian SSR (architects L. Dmytriievskaya, I. Malozomov), which approved the planning structure developed in the 1930s. It was worth noting the construction of one of the districts of Zaporizhzhia, Voznesenka, conducted based on a project by architects A. Motorin, Yu. Romanenko, M. Savchenko, under the leadership of G. Vegman (Hrytsay *et al.*, 1962), was an example of construction using industrial methods. After the 1940s, multi-storey buildings were constructed in 12 blocks covering an area of 50 hectares in Voznesenka. Concentrated development took place not only along the main streets, but also in a large residential area, which was filled with cultural and educational institutions and green spaces. The residential area had a rectangular grid typical of post-Soviet reconstruction, located at a 45° angle to the meridian, with defined main and secondary streets. The main streets ran parallel to the banks of the Dnieper, and every 500-800 metres, they were



crossed by transverse streets connecting residential and industrial areas.

The architectural and planning solutions for neighbourhoods in Zaporizhzhia were diverse, but followed two basic principles: on the main thoroughfares in front of the squares, the neighbourhoods were built up with densely packed houses around the perimeter. The neighbourhoods away from the squares and the main thoroughfare were much smaller and built up with separately located houses with gaps in the form of spatial groups. The main technique for building up street intersections was to place towers on the corner houses, which were not always justified in terms of composition. In addition, the corners of the neighbourhoods were emphasised by the transition from tall buildings along the main road to lower ones on secondary streets. The large scale of development along the main road led to the construction of 4-5-storey apartment buildings, 80-100 m long, and 50-80 m long block buildings. Blocking was one of the essential features of urban planning in Zaporizhzhia, which made it possible to diversify compositional solutions (Fig. 6).



Figure 6. The first example of the implementation of a model for the comprehensive quarterly development of the capital settlement of Dniprobud

Note: the village of Dniprobud, bounded by Soborny Avenue, B. Khmelnytsky Street, Metalurhiv Avenue, and Dobrolyubova Street

Source: Zaporizhzhia after the war – unique photos (2020)

The left bank of the city was characterised by 4-5-storey residential buildings. On the right bank, the buildings were more village-type, which underwent significant reconstruction in the post-war period. The centre of development on the right bank was the area near the Dniproges dam. On the Dniro side, it was bordered by the Dniproges management building, and on the opposite side by a new administrative building (Fig. 7). The location of new industrial facilities in Zaporizhzhia on the right bank of the Dniro led to the creation of a transformer plant settlement. The neighbourhoods were built up with two-storey residential buildings and dormitories for employees and students of the mining college. The spaces inside the neighbourhoods were used for landscaping and recreational areas.

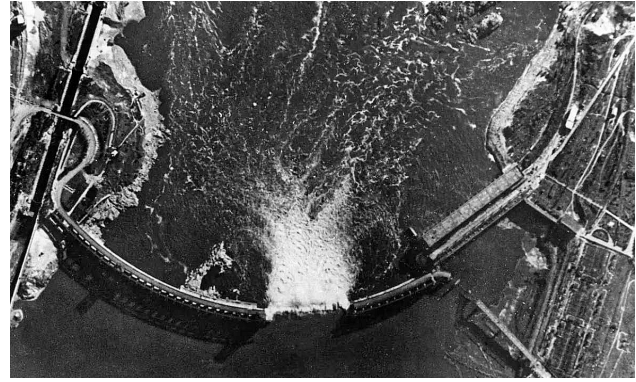


Figure 7. The Dniroges dam after its destruction in 1941
Source: Zaporizhzhia-1941: Our city in the pages of the world press (n.d.)

In general, several shortcomings can be noted in the post-war reconstruction of the city after the 1940s: typical ordinary buildings prevailed; similar neighbourhoods were formed, which did not distinguish Zaporizhzhia from any other Soviet city of the 1950s and 1960s; there was excessive pomposity and decoration of the facades of buildings erected on main streets in accordance with the party symbols of the Soviet empire.

Ternopil: architectural revival after the war

The city of Ternopil became unrecognisable after the German occupation. After the liberation of the city, its reconstruction was conducted based on the Dniro City project, drawn up in 1945 (architects V. Novikov, N. Panchuk) (Hrytsay *et al.*, 1962). In Ternopil, the buildings in the central part of the city were crowded, the neighbourhoods in the centre were extremely fragmented (0.5-0.8 hectares), and the streets were narrow (10-12 metres). The new master plan provided for the reconstruction of the street grid, transport links between individual districts, the enlargement of city blocks, and the formation of a large, pompous theatre square (Fig. 8). All the above urban planning techniques were identical for all post-Soviet cities.



Figure 8. View of the central part of Ternopil. 1970s
Note: photo by Igor Vovk
Source: based on S. Balutskyi (2017)



In addition, a 300-hectare lake was created on the Seret River, and a promenade with public recreation and leisure areas was designed (Fig. 9). The central area of the city, covering an area of 32 hectares, was almost completely rebuilt with multi-storey buildings, including the city theatre, the regional executive committee building, schools, a cinema, a central department store and a library. A boulevard was created along the longitudinal axis of the square, ending with a monument to Bohdan Khmelnytsky (Hrytsay *et al.*, 1962).



Figure 9. View of the city pond. 1970s

Note: photo by Igor Vovk

Source: based on S. Balutskyi (2017)

Overall, the buildings in the central part of Ternopil give the impression of typical Soviet architecture, with features of eclecticism and archaism. Ternopil became a new socialist city, where only architectural monuments remain from the past, sporadically included in the urban ensemble. To determine the peculiarities of the post-war reconstruction of Ukrainian cities, several European cities were analysed, including Warsaw, Gdańsk and Dresden.

Warsaw and Gdańsk: post-war reconstruction of cities

Warsaw suffered the most damage during the bombings in 1943. After the occupation in 1945, a decision was made to rebuild the city. According to the reconstruction plan, all historic buildings were to be restored without exception. To this end, eyewitness accounts, documents and preserved historiographical data were to be used. Even paintings depicting the city dating back to the 18th century were used (Fig. 10).



a



b

Figure 11. The waterfront in Gdańsk

Note: a – post-war destruction; b – present city

Source: based on V. Shchurek (2022b)



a



b

Figure 10. Old Town Market Square, Warsaw

Note: a – after the war, 1945; b – as of 2025

Source: based on V. Shchurek (2022a)

Most of the buildings were supposed to be replicas of the destroyed structures, but not all of the buildings in the historic centre could be restored during the reconstruction process. The reconstructed city was added to the UNESCO World Heritage List in 1980 (World Heritage List, n.d.). In contrast to Warsaw, where a scientific approach was applied, in Gdańsk, the most significant monuments were restored, and the rest of the buildings were made more practical. In other words, the architects did not try to restore the buildings to their pre-war appearance, but decided to build them according to the planning schemes of the 1950s and 1960s, with convenient courtyards and yards, and did so in such a way that the buildings conveyed the spirit of the historical era. After discussions, the architects decided to restore the city to its 18th-century appearance. What can now be seen in Gdańsk in 2025 is a romantic, fantastical perception of the city in the 18th century. It was worth noting that the houses, streets, courtyards, and all the infrastructure were made in a modern style (Fig. 11).



Thus, the reconstruction of Warsaw and Gdańsk demonstrated two different approaches: Warsaw sought to recreate its historical appearance as accurately as possible, while Gdańsk combined the restoration of key monuments with modern, practical planning. The reconstructed cities retained their historical atmosphere, but at the same time were adapted to the needs of modern life.

Dresden: destruction and post-war reconstruction

In February 1945, approximately 4,000 tonnes of explosives were dropped on the city. More than 20,000 residents were

killed, and the city centre was destroyed (Fig. 12, a). Dresden was considered the cultural centre of Germany with its Baroque architecture and picturesque gardens. But after World War II, all historical and cultural monuments were destroyed. Dresden was rebuilt twice: immediately after World War II and in the early 1990s (Fig. 12, b, c). After the first reconstruction, the city finally lost its historical buildings, turning into a model socialist metropolis: rational, but empty. During the second reconstruction of the city in the 1990s and 2000s, the historic city centre was rebuilt from scratch, in the same form it had before the bombing.

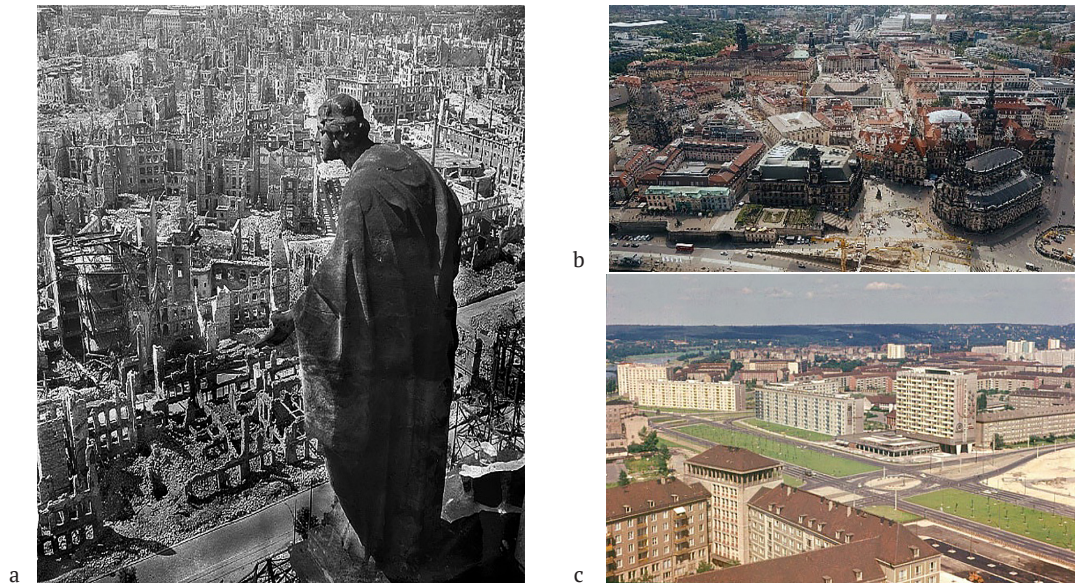


Figure 12. The destruction and reconstruction of Dresden

Note: a – the statue “Allegory of Goodness” in Dresden’s destroyed city centre. View from the town hall; b – view from the town hall tower onto Pirnaischer Square, 1972; c – view of Dresden city centre from a drone. On the left is the Frauenkirche, in the centre is the Palace of Culture

Source: based on K. Kozlova (2022)

The reconstruction of the architectural structure of Polish cities destroyed during World War II became one of the largest and most diverse projects on the European continent (Cohen, 2011). Along with the awesome examples of rebuilding the Old Town complexes in Warsaw and Gdańsk, as well as thousands of architectural monuments that were carefully restored, there were also some irreversible mistakes. However, the total number of rebuilt objects should be taken as an example during the modern reconstruction of Ukrainian cities. Warsaw (Poland) and Dresden (Germany) were diametrically opposite cases. In Warsaw, a decision was made to rebuild the historic centre, while the Dresden authorities called the city *tabula rasa*, a “clean slate”. The city planned to build a modern city with long, straight streets similar to Soviet cities. An analysis of global experience and the development of variability in post-war city reconstruction will help to avoid several mistakes in the modern reconstruction of Ukrainian cities after the end of the Russian-Ukrainian war, ensure the adaptation of the best global examples of reconstruction, and demonstrated

global trends in urban development, including sustainable development, clustering, smart specialisation, and ensuring the openness and resilience of cities (Zakharova, 2023).

Therefore, it was worth comparing the results of this study with existing works to identify similar and different statements and establish the basic requirements for the reconstruction of historic districts or individual objects. In particular, the book by J. Düwel & N. Gutschow (2013) concluded that in all European countries, the destruction of cities was perceived as a factor of liberation from historical layers and an opportunity to create new cities. Thus, the study concluded that the complete clearing of historic neighbourhoods and re-planning according to other spatial schemes was not unique to Soviet cities, but was a common practice in post-war reconstruction in the 20th century. This research result highlighted the need to determine the authenticity of historic buildings that formed city centres, distinguishing between particularly valuable buildings and those that could be replaced during reconstruction. The topic of post-war reconstruction was also



outlined in the study by Ł. Musiaka *et al.* (2025b). The paper presented the results of an analysis of various forms of post-war reconstruction of the largest historical city centres that were annexed to Poland after World War II. The researchers proposed four types of models for the transformation of destroyed buildings depending on the scale of destruction and the type of reconstruction that was applied. These included areas with a predominance of modernist architecture; historic areas; areas with historic buildings and a predominance of authentic, pre-war buildings. The identified models differed from each other in terms of the contemporary significance of the old city, as well as the scale and nature of morphological changes. Ukrainian research included a study by O. Orlova (2024), noting that the post-war reconstruction of Ukraine would be characterised by the search for new ways to develop regulations to accelerate economic development, especially in the most affected regions of Ukraine, due to the significant destruction of industrial and social infrastructure in the context of a shortage of financial resources. In this regard, as of 2024, the question arose regarding the possibility of legal support for the post-war reconstruction of Ukraine, the methods and successful global examples by which this had been achieved in other countries. Although the study did not address the architectural component of post-war reconstruction, all factors that influenced the quality of the restoration of destroyed cities should be considered. Therefore, the topic of post-war reconstruction was addressed substantially, covering the issue from different angles: architectural, urban planning, artistic, economic, legal. The preservation of each country's cultural heritage and the improvement of comfort and safety during the post-war reconstruction process became relevant.

CONCLUSIONS

After analysing the post-war reconstruction of Ukrainian and European cities, it was possible to conclude that during the bombings of World War II, large areas of cities, outstanding architectural monuments, and significant areas of housing stock were destroyed. The first problem to be solved in all cities was the reconstruction of the housing stock, as many people were left homeless. Accordingly, there was no time to develop detailed plans for the preservation of valuable historical buildings. To quickly replenish the housing stock, new neighbourhoods were built with reinforced

concrete panel-type high-rise buildings. A constant feature of Soviet post-war reconstruction projects was the creation of wide avenues and the construction of new residential neighbourhoods (Zaporizhzhia, Ternopil). The capitals of the USSR republics received several Stalinist high-rise buildings, sometimes complemented by a metro line (Kyiv). In the centre of Kharkiv, the redevelopment of destroyed neighbourhoods resulted in the destruction of historic buildings. Thus, in the most substantial and prestigious parts of city centres, ceremonial avenues were built, around which residential buildings grew, with apartments distributed among members of the nomenclature and party elite. Residents were mostly resettled to the suburbs. Thus, not only was one layer of the urban environment replaced, but one social group of the population was replaced by another.

The reconstruction of European cities after World War II was radically different: alongside examples of comprehensive reconstruction of the Old Town in Warsaw and Gdańsk, the case of Dresden's reconstruction in the 1950s was diametrically opposite. The example of the unsuccessful first reconstruction of Dresden, with the establishment of a new city with long, straight streets similar to Soviet cities, and the second reconstruction in the 1990s and 2000s, demonstrated the importance of preserving the authentic structure with thousands of architectural monuments. Therefore, a crucial aspect of the modern reconstruction of the historic urban environment after the war damage in Ukraine should be the maximum preservation of the most valuable elements and ensembles and their visual, compositional, and functional interaction. Detailed plans for post-war reconstruction should be developed for each individual city and form a comprehensive programme for preserving the authenticity of Ukrainian cities. More detailed step-by-step recommendations for the reconstruction of Ukrainian cities after the Russian-Ukrainian war will be considered in future scientific studies.

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Ірина Погранична

Кандидат архітектури, доцент
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
<https://orcid.org/0000-0002-4164-6110>

Богдан Черкес

Доктор архітектури, професор
Національний університет «Львівська політехніка»
79013, вул. Степана Бандери, 12, м. Львів, Україна
<https://orcid.org/0000-0001-6809-956X>

Руйнування та відновлення міст України після Другої Світової війни: формування методичних підходів до актуальної відбудови

Анотація. Актуальність вивчення особливостей формоутворення міст у передвоєнний і післявоєнний період Другої світової війни пов'язана з тим, що результати цього процесу визначили сучасний вигляд деяких міст, будучи однією з головних складових їхньої культурної ідентифікації. Метою даної роботи стало проаналізувати історичні етапи формування міст, як цілісної системи політичних, ідеологічних і матеріальних структур, визначити вплив післявоєнної відбудови радянських міст на сучасну містобудівну ситуацію. У статті було проаналізовано післявоєнну відбудову радянських міст на території України, як динамічного та суперечливого процесу, що складався з кількох етапів. Було визначено особливості архітектурно-містобудівного мислення і способів практичної роботи, що дало змогу зрозуміти характер архітектури та загальну логіку формування міст у воєнні та повоєнні роки періоду Другої світової війни. За допомогою загальнонаукових методів дослідження, таких як: аналіз, синтез та порівняння було проаналізовано післявоєнну відбудову Києва, Харкова, Запоріжжя та Тернополя; визначено основні архітектурно-містобудівні прийоми у відбудові цих міст, а також виконано порівняльний аналіз цих міст з містами сучасної Європи. За допомогою систематизації та узагальнення бібліографічних матеріалів визначено стан дослідження даної теми, узагальнено та доповнено наявні відомості щодо принципів відновлення зруйнованих міст внаслідок війни. За допомогою системного аналізу та спеціальних методів дослідження, таких як графічне порівняння, ретроспективне моделювання та архітектурна композиція, визначено характерні ознаки українських міст, що формують їхню національну ідентичність. Практичне значення дослідження полягає у використанні результатів аналізу повоєнної відбудови міст України після Другої світової війни у розробці планів міст чи міських кварталів для їх відбудови після закінчення російсько-української війни

Ключові слова: містобудування; історичні міста; планувальна структура; реставрація історичної забудови; автентичність; повоєнна відбудова міста