

Secondary Publication



Hiemer, Elisa-Maria; Alvanides, Serafeim; Demeter, Laura; Enss, Carmen M.; u. a.

Mapping Transformation in Central and Eastern Europe 1939-1949

Date of secondary publication: 28.02.2025

Version of Record (Published Version), Poster

Persistent identifier: 10.20378/irb-106818

Primary publication

Hiemer, Elisa-Maria; Alvanides, Serafeim; Demeter, Laura; Enss, Carmen M.; Kisiel, Piotr; Knauer, Birgit; Ludwig, Carol; Stein, Klaus (Ed.) (2024): Mapping Transformation in Central and Eastern Europe 1939-1949, Marburg: Herder Institute for Historical Research in East Central Europe, ISBN: 978-3-87969-493-8.

Legal Notice

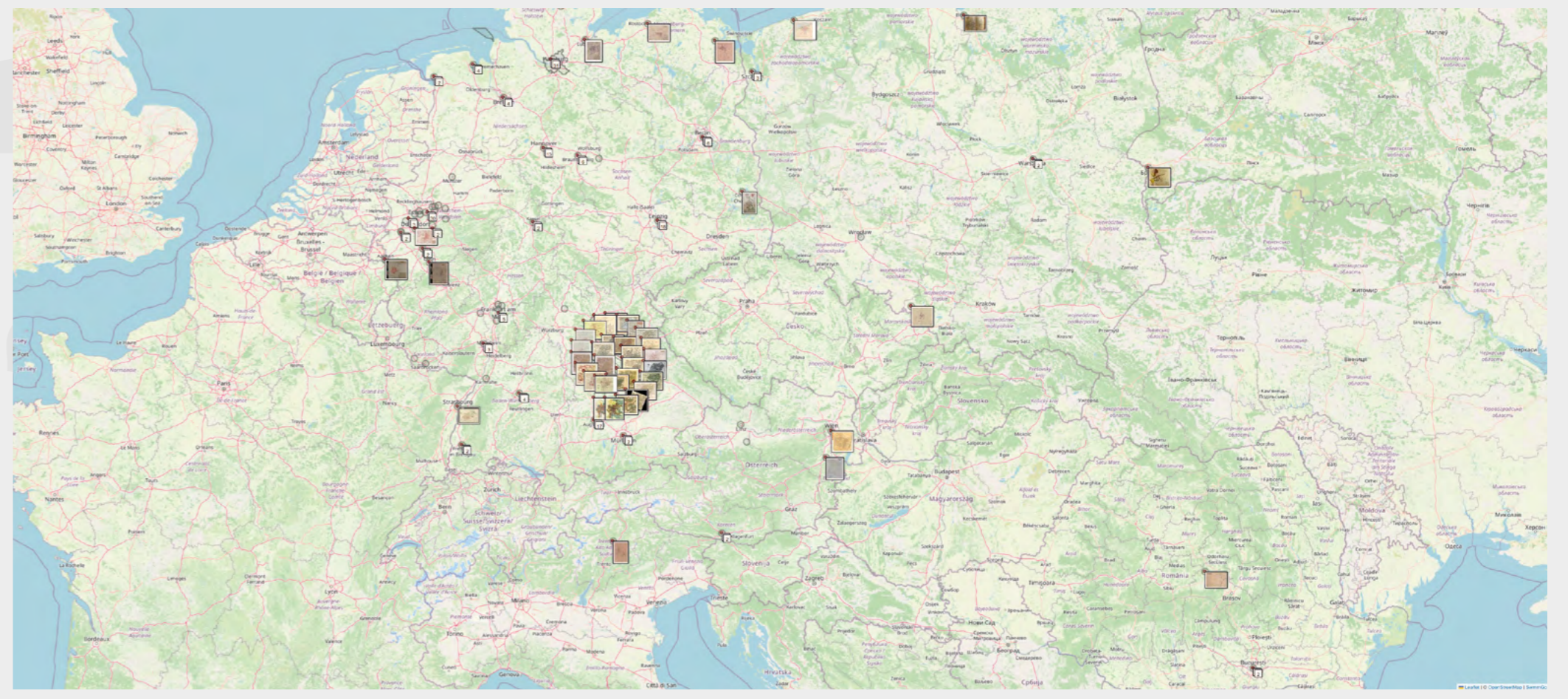
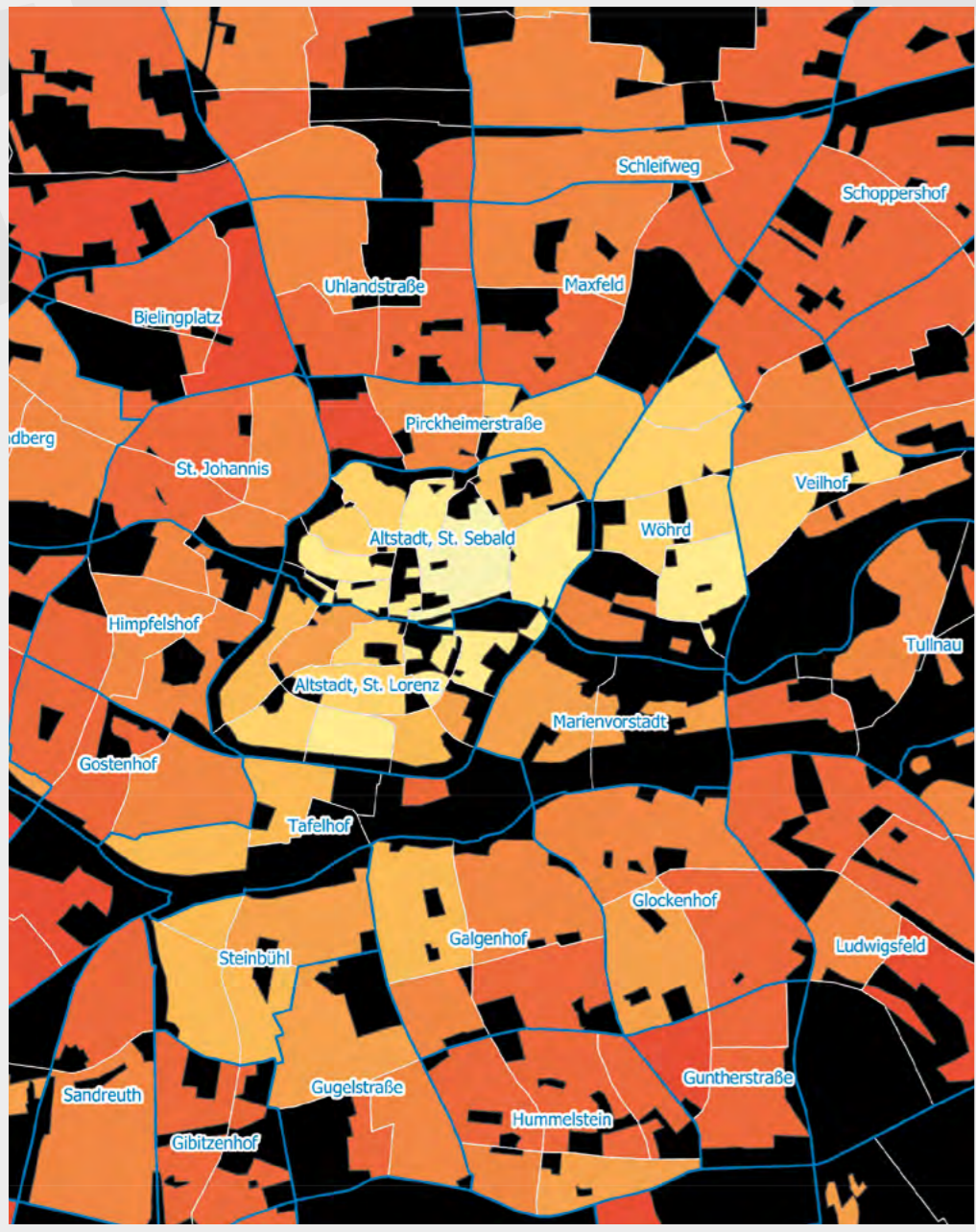
This work is protected by copyright and/or the indication of a licence. You are free to use this work in any way permitted by the copyright and/or the licence that applies to your usage. For other uses, you must obtain permission from the rights-holders.

This document is made available under a Creative Commons license.



The license information is available online:

<https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode>

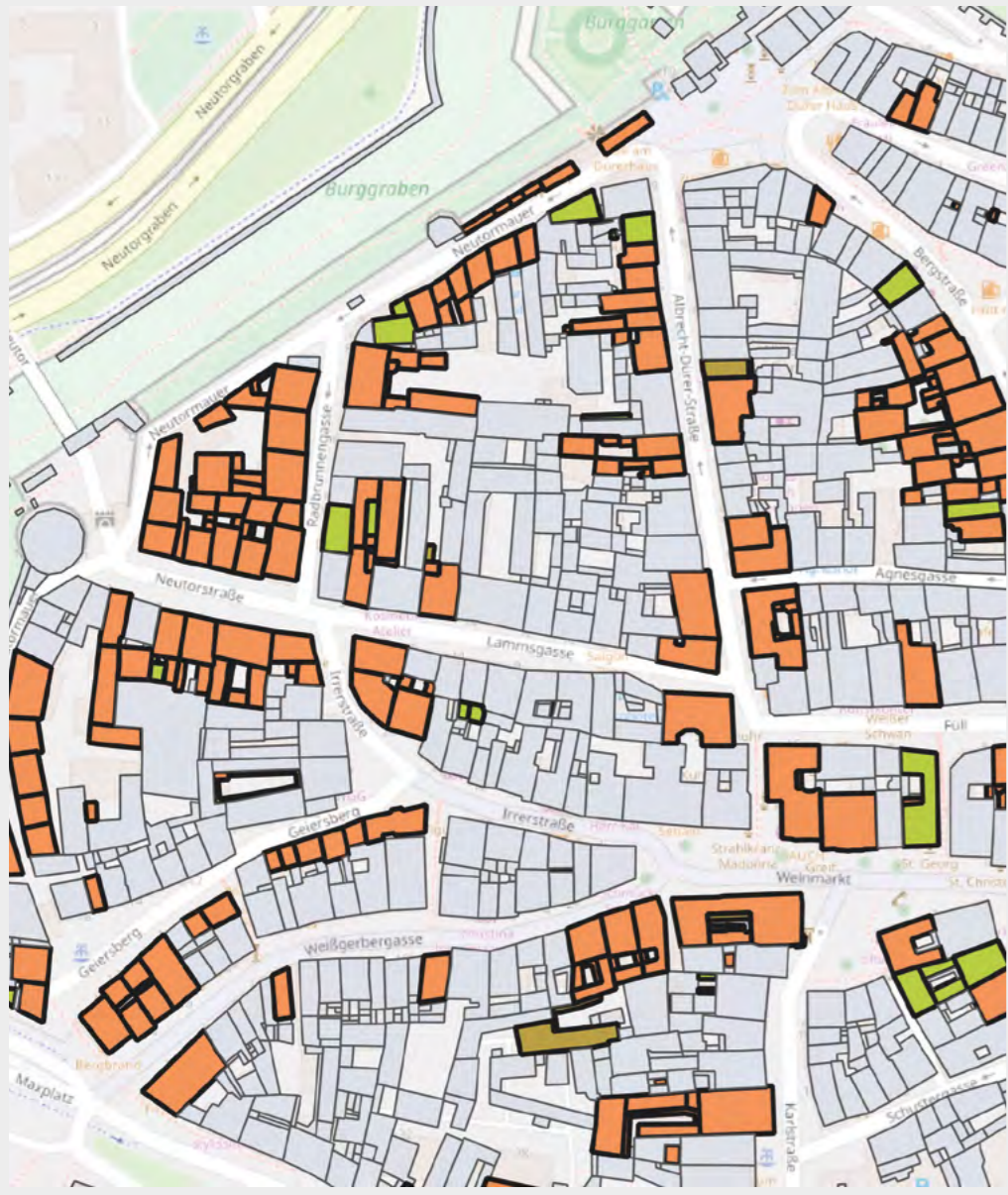


URBAN WAR DAMAGE MAPS – A SOURCE AND RESEARCH OBJECT FOR THE UrbanMetaMapping CONSORTIUM

Carmen M. Enss (Head of Consortium)

City maps are often designed to provide both an overview and orientation. During the Second World War, damage and destruction caused by heavy bombing made orientation increasingly difficult for residents, firefighters and administrators. The damage was therefore documented on city maps, which were then altered or overlaid to reflect further changes. After the war, they also provided existing residents and newcomers with a basis from which to start planning reconstruction. During this post-war period, in which territories were redistributed and borders shifted accordingly, many cities in Eastern Europe suddenly became part of a different country; maps expressed and emphasized territorial claims. New maps were drawn and printed accordingly. Their legends were translated. Reconstruction work shaped and transformed cities, often going far beyond just repairing the initial damage. Reconstruction plans, together with damage maps, provide multi-dimensional documentation of how war and the early post-war years shaped cities and the lives of their inhabitants.

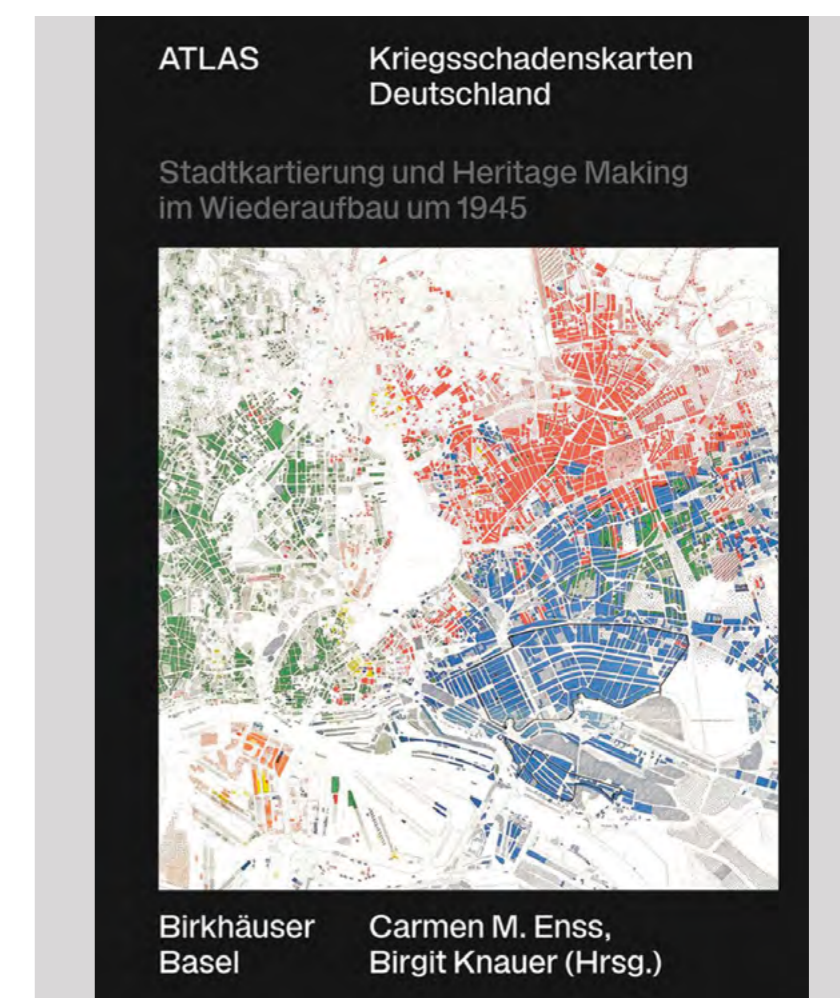
The *Atlas Kriegsschadenskarten Deutschland* [Atlas of War Damage Maps] (Birkhäuser 2023), edited by Carmen M. Enss and Birgit Knauer, is a scholarly edition of city damage maps made for Essen, Freiburg im Breisgau, Hamburg, Hanover, Leipzig and Nuremberg in around 1945. Chapters by Carmen M. Enss, Birgit Knauer and Georg-Felix Sedlmeyer provide an introduction to the production, location, interpretation, agency and use of war damage maps in selected cities in Germany and Austria. The research data and results were shared and discussed within the UrbanMetaMapping consortium before publication. The atlas, together with the underlying research platform *MapMyMaps*, originally developed at the University of Bamberg, provides a basis for ongoing and future comparative research in a European context.



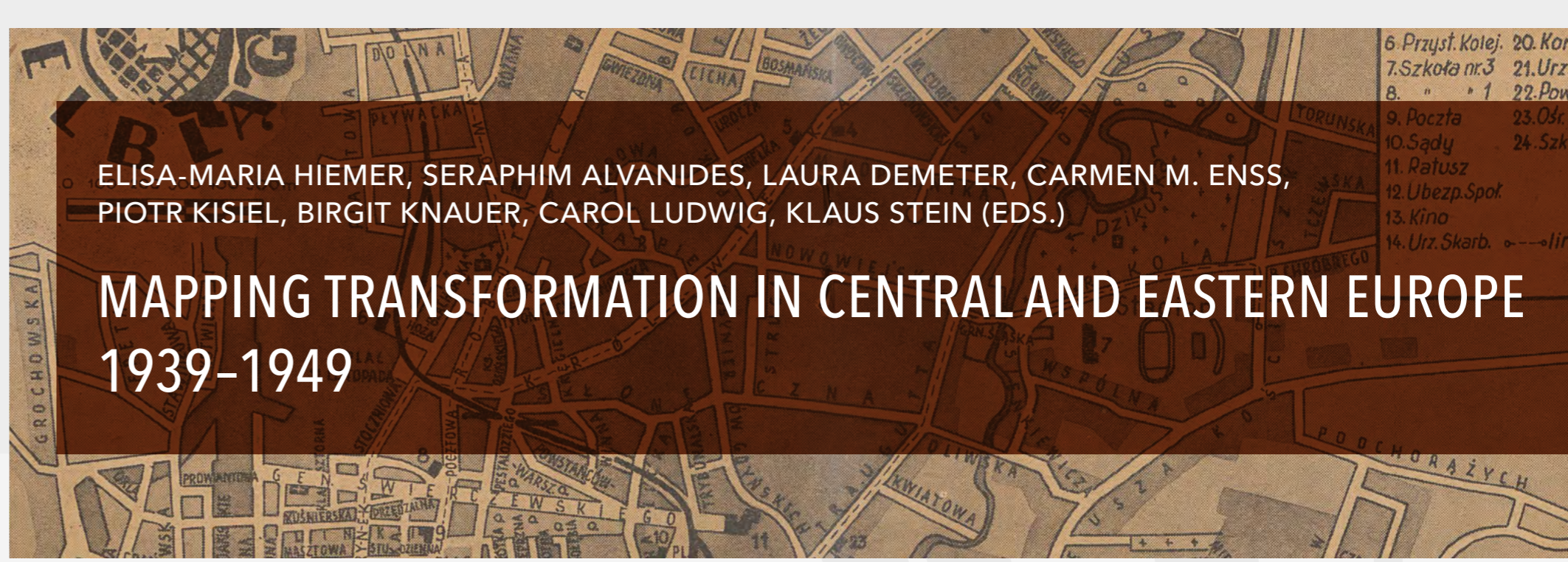
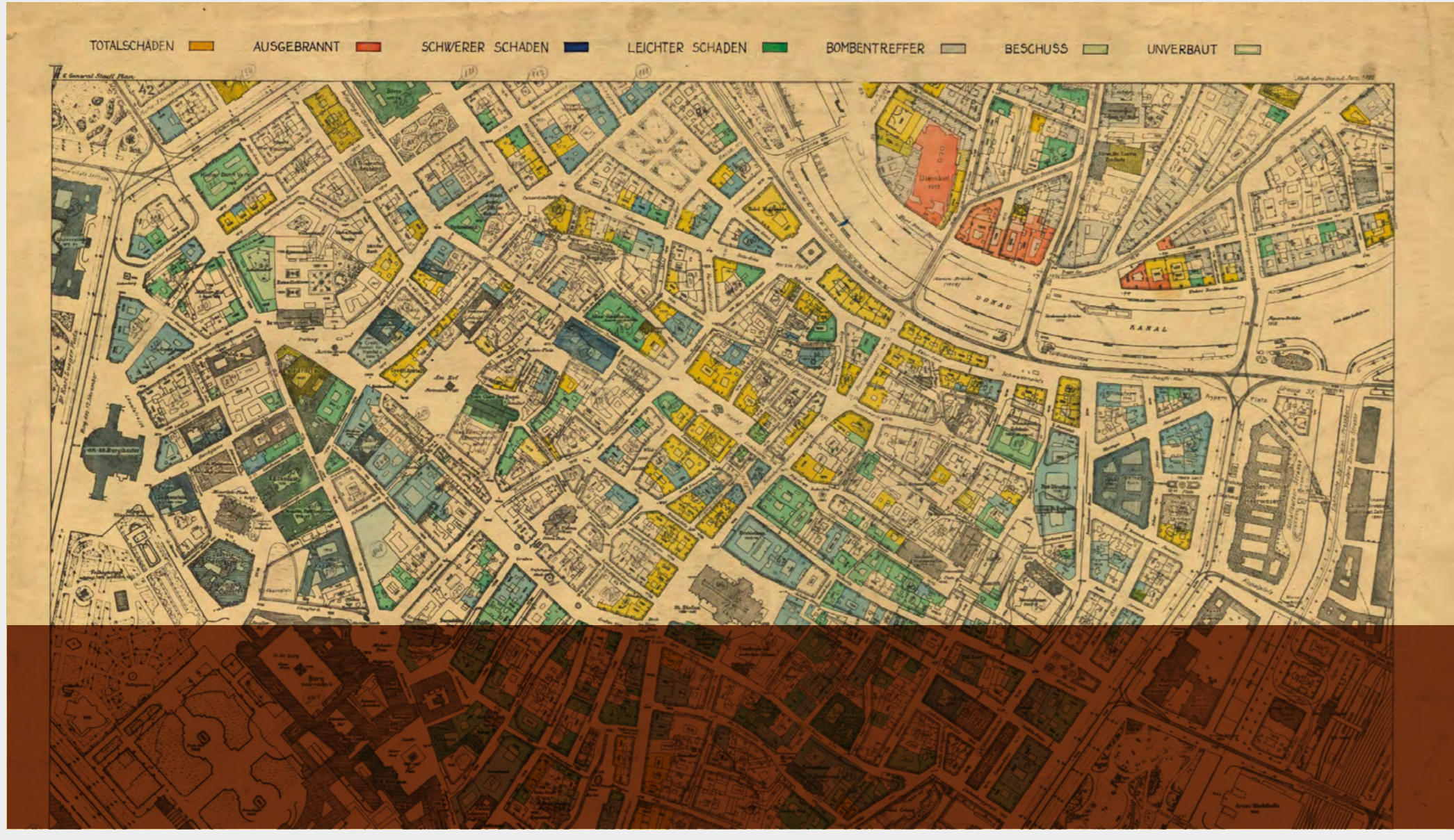
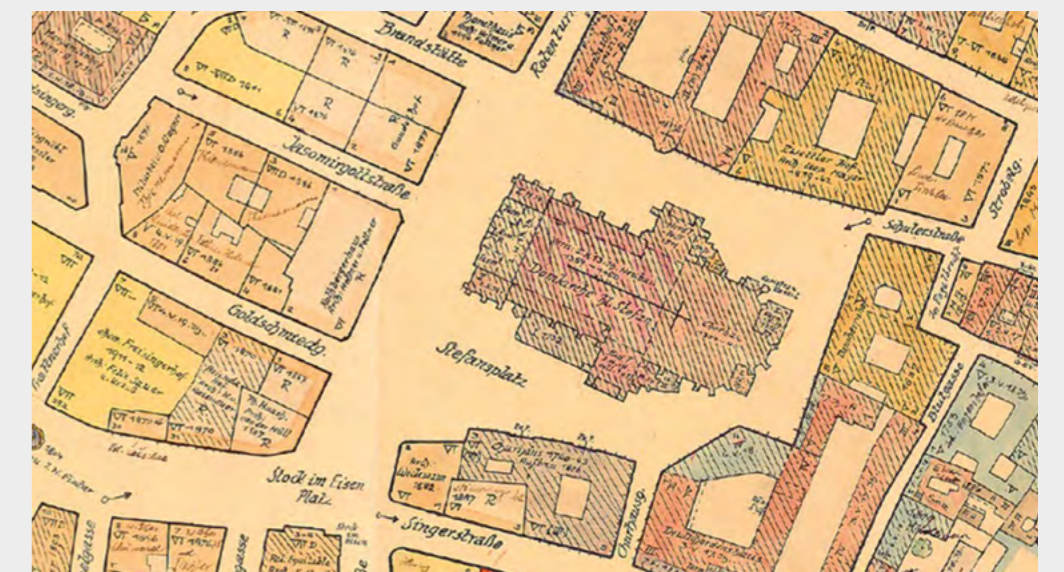
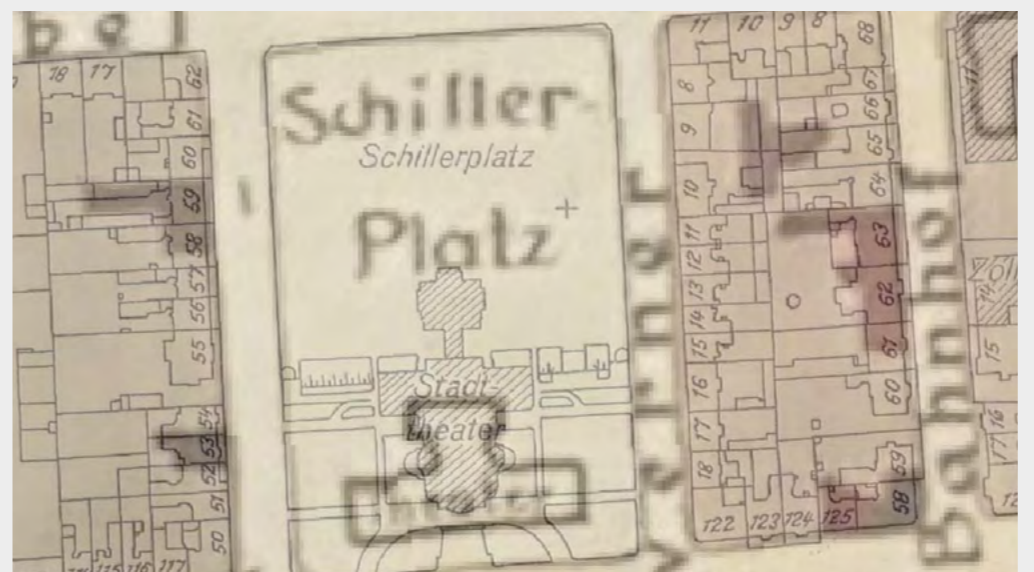
Urban war damage maps, reconstruction plans, maps in travel guides and other thematic maps are the focus of the UrbanMetaMapping research consortium. The historical documents are gathered from archives and library collections in Austria, Belarus, Germany, Poland, Romania and Moldova. As key source material on urban change, they are studied from different disciplinary perspectives: History of Urbanism, Cultural Heritage, History of Cartography, East Central European Studies, Cultural Studies, Social Cartography and Spatial Digital Humanities.

Guiding research questions are:

Why and how were the maps made and what information do they contain? Who commissioned and produced the maps? What information was relevant in the eyes of the surveyor, and what can we learn from the map about their perception of the situation? Does the map express a particular interpretation or narrative, and how does the map reader perceive this narrative? Does the map convey a claim to (destroyed) territory? Is the map part of a reconstruction plan, and if so, how has the damage been reflected in it? What can the map tell us about the historical situation? How did the conditions on the ground change during the war and in the post-war period?



Enss, C. M. and Knauer, B. 2023. *Atlas Kriegsschadenskarten Deutschland: Stadtkartierung und Heritage Making im Wiederaufbau um 1945*. Berlin, Boston: Birkhäuser. <https://doi.org/10.1515/9783035625011>



MAPPING TRANSFORMATION IN CENTRAL AND EASTERN EUROPE 1939-1949

Imprint
Elisa-Maria Hiemer, Seraphim Alvanides, Laura Demeter, Carmen M. Enss, Piotr Kisiel, Birgit Knauer, Carol Ludwig, Klaus Stein (Eds.)
Mapping transformation in Central and Eastern Europe 1939-1949

ISBN 978-3-87969-493-8

HERDER INSTITUTE
for Historical Research on East Central Europe
INSTITUTE OF THE LEIBNIZ ASSOCIATION

LEIBNIZ ASSOCIATION

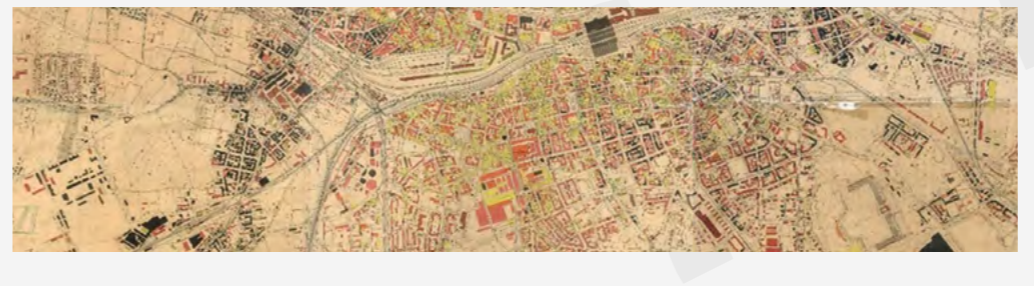
UNIVERSITÄT DES SAARLANDES

IRS Leibniz-Institut für Historische Sozialforschung

TU WIEN

FEDERAL MINISTRY OF EDUCATION AND RESEARCH

UrbanMetaMapping



DISCOVERING East Central Europe

HERDER INSTITUTE
for Historical Research on East Central Europe
INSTITUTE OF THE LEIBNIZ ASSOCIATION

MAPPING TRANSFORMATION IN CENTRAL AND EASTERN EUROPE 1939-1949



War-Damaged Urban Areas in Romania and Bessarabia (1940-1945). A Critical Perspective on War Documentation and Heritage Preservation/Reconstruction Projects

Laura Demeter
University of Bamberg

This project aimed to provide a comprehensive picture of the war-damaged urban environment in Romania during and after World War II (1940-1945). The project focused on four cities in Romania (Bucharest, Braşov, Iaşi and Ploieşti) and one in Bessarabia (Chişinău). The main questions the project addressed were to what degree the Romanian and Moldovan cities were affected by World War II and how the war damage was dealt with in the context of ongoing conflict under the authoritarian regime of Marshal Antonescu (1940-1944). It also examined the way in which international debates on modernization and nationalization of the urban space were reflected in Romanian urban politics of the 1940s. Additionally, it considered 'damage mapping', the transformation of urban space, and the discourse on heritage preservation in the context of war and authoritarian rule.

This interdisciplinary project was informed by historical studies, archival research (qualitative analysis of historical documentation), and case study analysis. The selected case studies reflect the war conduct strategy and destruction caused by the military and aerial attacks of the Allied powers (Soviet Union, Britain, and the USA), and, towards the end of the war, by the German Luftwaffe. Extensive archival research was conducted in national, local, and military archives in Romania and the Republic of Moldova. The collected material spans from maps of war damage issued by various state and military institutions to statistics, contemporary publications, press files, photographic documentation and aerophotogrammetry.

The project sheds a different light on internationally established discourses on reconstruction, modernization, and dealing with damages during World War II, arguing that these need to be discussed in the local context. In Romania, vivid debates took place during the interwar and war periods concerning modernization processes, national style, and systematization as a means of shaping the Romanian national identity of urban settlements. Additionally, the measures taken to deal with the damage caused by the 1940 earthquake created the conditions to address the damage caused by WWII and eventually impacted the wider discourse on the reconstruction and preservation of the urban environment in Romania.



Fig. 3: Overview of cultural institutions damaged by war in Chişinău (1941), copyright National Archives Chişinău, Folder 706/1/515, p.19.

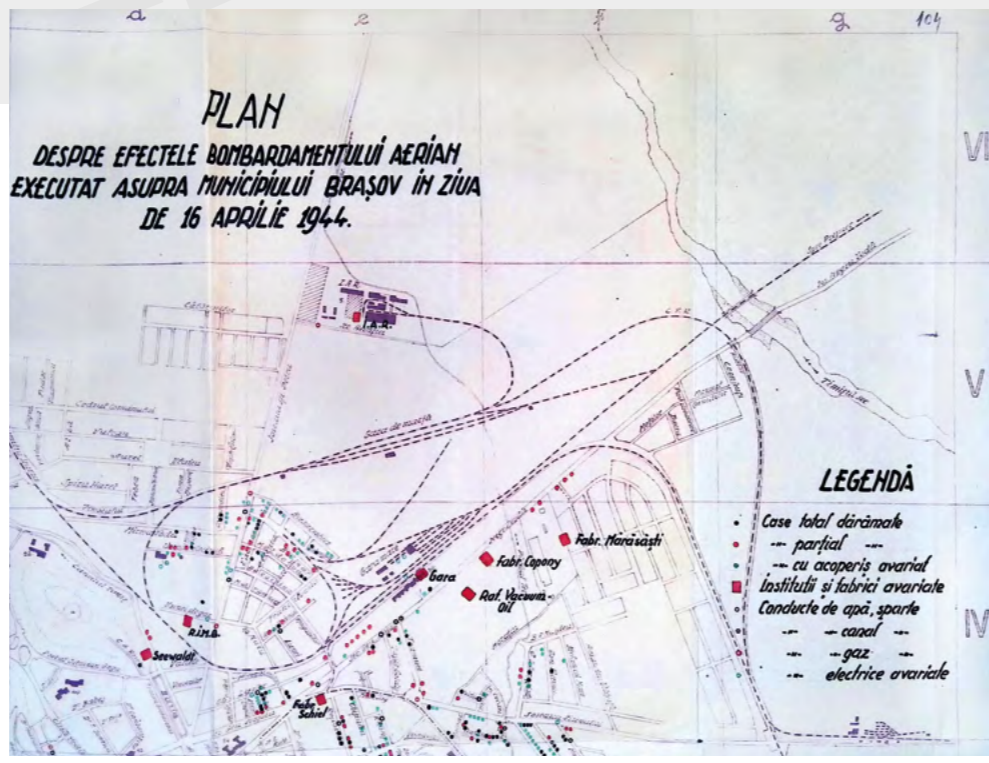


Fig. 1: Aerial bombardment damages in Braşov from 16th of April 1944 (Map section including the legend), copyright National Archives Romania, Bucharest, Fond SAOT, Ds. 2/1945, p. 104.



Fig. 2: War and earthquake damages Chişinău (Map section, 1941), copyright National Archives of the Republic Moldova, Chişinău, Folder 706/1/515, p.19.

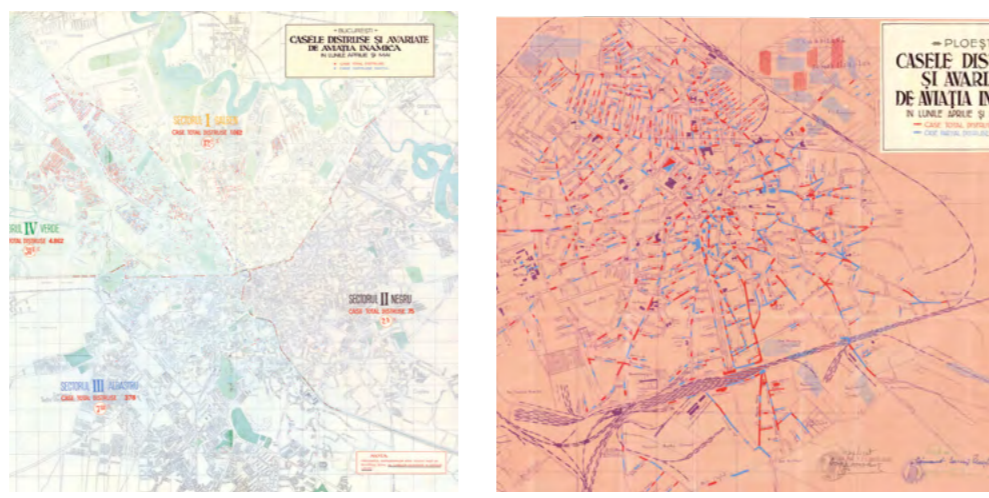


Fig. 4: Bucharest map of damage to residential buildings by aerial bombardments in April and May 1944, copyright National Archives Romania, Bucharest, Fond PCM Cabinet Militar, Ds. 34/1944, p. 56.

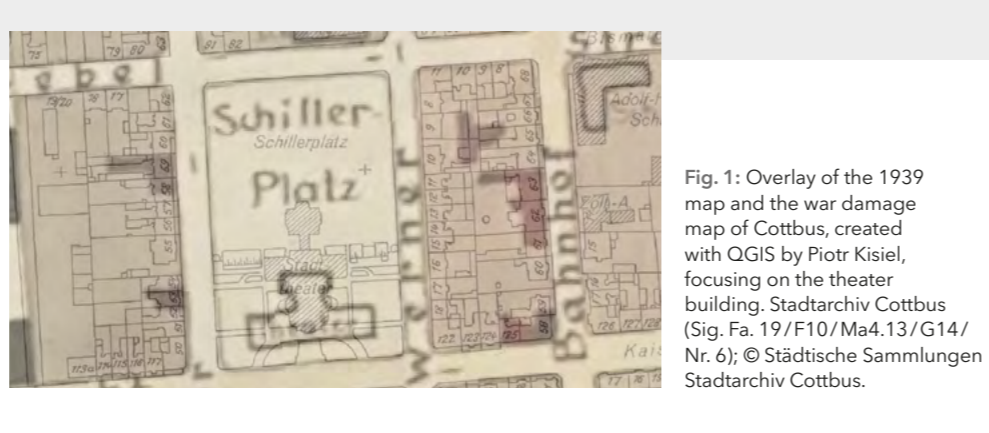


Fig. 5: Ploieşti map of damage to residential buildings by aerial bombardments in April and May 1944, copyright National Archives Romania, Bucharest, Fond PCM Cabinet Militar, Ds. 34/1944, p. 57.

Planning Socialist Cities in East Germany and Poland

Piotr Kisiel
Leibniz Institute for Research on Society and Space (IRS), Erkner

This subproject focuses on Chemnitz (1953-90: Karl-Marx-Stadt), Cottbus, Gorzów Wielkopolski (Landsberg a. d. Warthe), Luban (Lauban), Neubrandenburg, Racibórz (Ratibor), Szczecin (Stettin) and Zerbst in the 1940s and 1950s. Until 1945, all of these cities were located within German borders; in the aftermath of the war, half of them found themselves in Poland. All of them had to face the challenges of post-war reconstruction while simultaneously adapting to the principles of socialist urbanism. The hypotheses to be questioned were whether reconstruction plans drew on the pre-war projects and the extent to which each country followed a similar urban planning strategy.

This comparative project was based on an analysis of planning documentation, administrative files, and contemporary publications on urban planning from East Germany and Poland. A close reading of the gathered data allowed an understanding of the rationale behind reconstruction plans in the two states. Thanks to the application of the QGIS software, it was possible to cross-check the maps with the written documentation and conduct an in-depth analysis of cartographic materials.

Transforming cities in the post-war period was principally driven by concerns about traffic circulation, improvement of living standards, and the political needs of the communist regimes. For the big cities, that meant radical reshaping of their urban morphology, but no such efforts were made in the smaller locations, even if the war damage offered an opportunity to do so. "Polonisation" of the previously German towns did not result in mass destruction of their built heritage. On both sides of the border, one could see examples of both the integration of historical monuments into socialist cityscapes and of their neglect. The project has demonstrated the need to examine "socialist cities" beyond capitals and model towns.

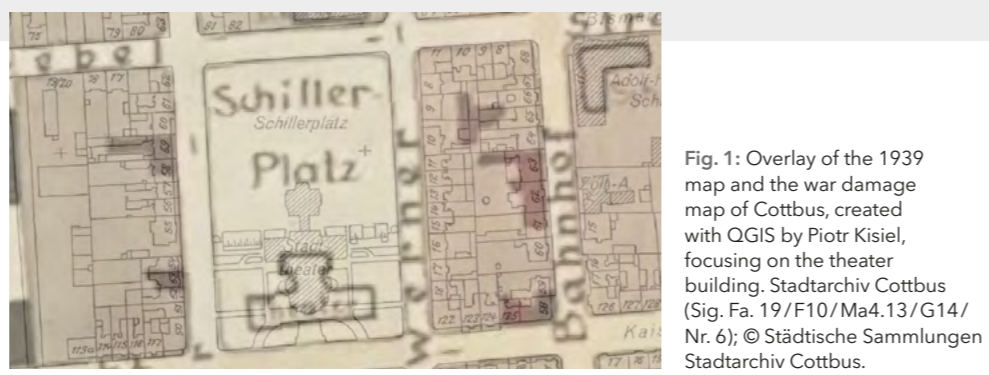


Fig. 1: Overlay of the 1939 map and the war damage map of Cottbus, created with QGIS by Piotr Kisiel, focusing on the theater building, Stadtarchiv Cottbus (Sig. Fa. 19/F10/Ma4.13/G14/Nr. 6). © Städtische Sammlungen Stadtarchiv Cottbus.



Fig. 2: Overlay of the 1949 inventory of damages in the historical center and the 1952 reconstruction plan of Racibórz, created with QGIS by Piotr Kisiel. Archiwum Państwowe w Opolu. Syg. 5/224/0/67/6105 and 45/224/0/67/6109.

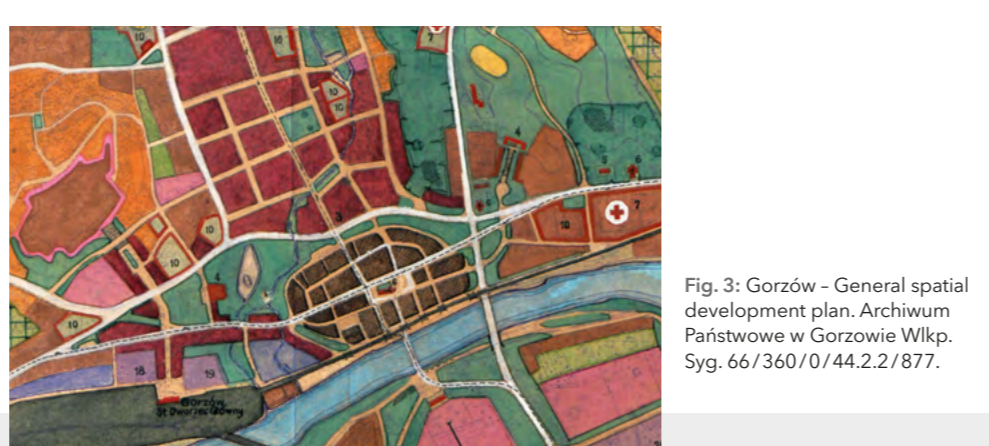


Fig. 3: Gorzów - General spatial development plan. Archiwum Państwowe w Gorzowie Wlkp. Syg. 66/360/0/44.2.2/877.

City Transformations and Postwar Legacies

Carol Ludwig, Saarland University, Saarbrücken
Seraphim Alvanides, Independent Researcher

Few studies have quantitatively explored how bomb destruction affected the long-term physical and social development of cities. To address this research gap, this project employed data science methods and Geographical Information Systems (GIS) to explore specific forms of postwar urban and social transformation in Nuremberg, Cologne, Essen and Duisburg. Research questions included: How can the use of GIS inform new questions and advance understanding of postwar transformation? To what extent has the level of destruction in postwar cities influenced the subsequent land use mix, urban morphology, spatial concentration of heritage and later socioeconomic profile of the cities explored?

City-wide thematic historic maps (bomb damage, land use, heritage) were collected from city archives, scanned and georeferenced in GIS. Urban features depicted in the maps were converted into geospatial data, mapped and analyzed. Additional layers of historical and contemporary socioeconomic and heritage data were used to evaluate changes in the transformation of small areas within the selected cities over time. A quantifiable bomb damage index (BDI) was developed for administrative areas, enabling different types of transformation to be assessed alongside the level of damage, advancing knowledge of the impact of war (from multiple perspectives) on the cities.

Results contribute methodologically and substantively towards a new framework for the analysis of postwar cities, demonstrating how GIS can be utilized for historical research and the study of change in urban environments. We found evidence of strong relationships between social fabric patterning and level of damage in Essen, demonstrating that severe damage/postwar redevelopment

may result in social inequalities/disadvantage decades later. Other cities showed more mixed social profiling, irrespective of bomb damage. Damage transformed the urban fabric of all cities, but a particularly high degree of morphological integration (continuity of block typologies) was observed in Nuremberg, where a more traditionalist approach to reconstruction was implemented, positively influencing the historic character of the rebuilt city. Despite this, ensuing shifts in the concentration of surviving historic fabric dramatically and permanently modified the heritage profile, emphasizing the ongoing value of documenting heritage today.

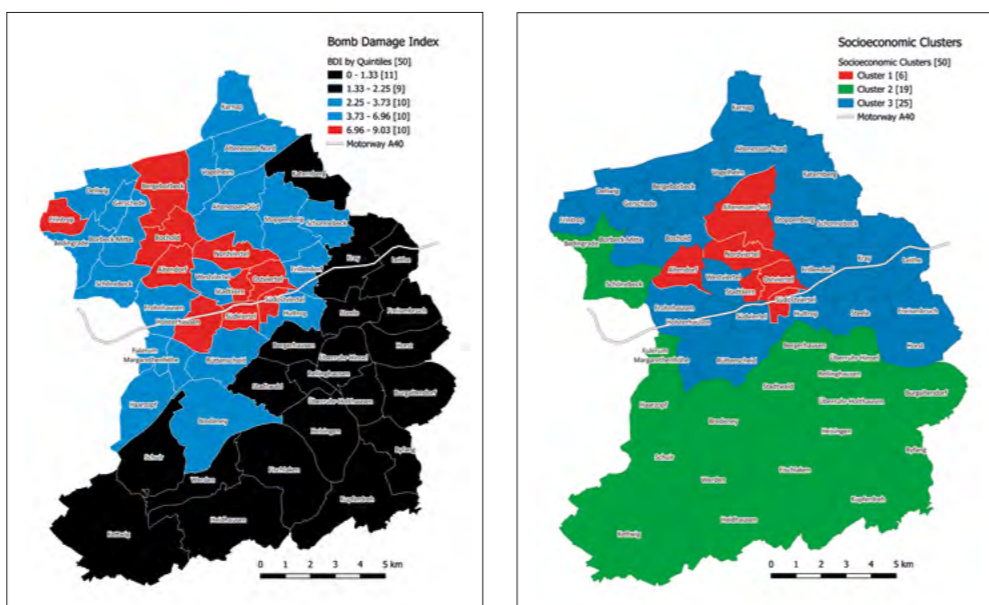


Fig. 3: Essen BDI: Bomb Damage Index (BDI) with highest decile of damage (red), followed by two medium deciles (blue) and lowest two deciles of damage (black). The white line indicates the A40 motorway.
Fig. 4: Essen Clusters: Map of the 3 clusters with the colours representing socioeconomic clusters: 1=red, 2=green, 3=blue. The white line indicates the A40 motorway.

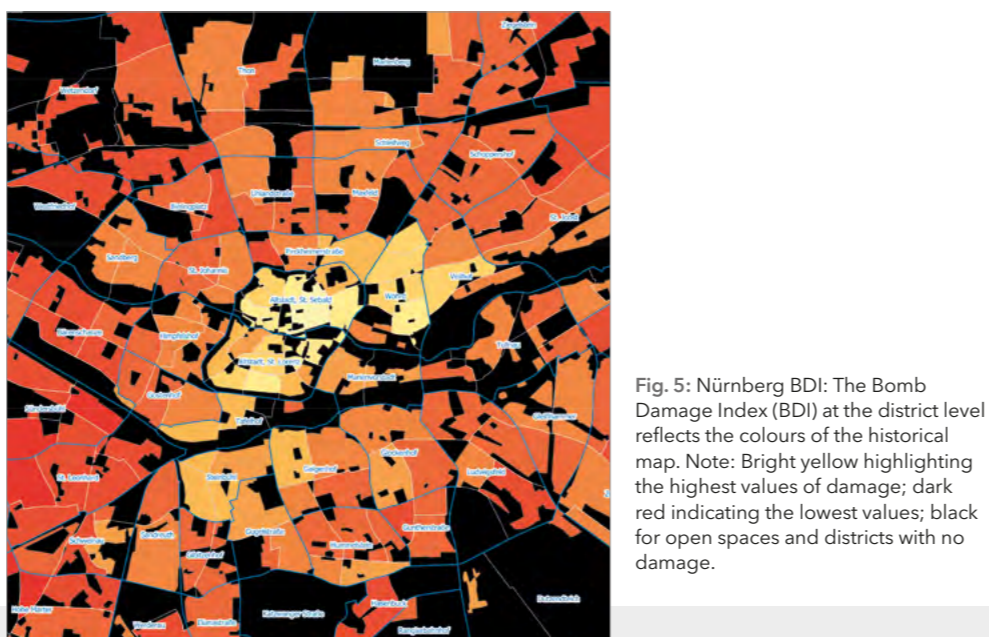


Fig. 5: Nuremberg BDI: The Bomb Damage Index (BDI) as the historical level reflects the colours of the district map. Note: Bright yellow highlighting the highest values of damage; dark red indicating the lowest values; black for open spaces and districts with no damage.

Cartographic vs. Written Discourses

Elisa-Maria Hiemer
Herder Institute for Historical Research on East Central Europe, Marburg

The Polish cities of Kolobrzeg (German Kolberg until 1945), Elbląg (German Elbing until 1945) and Belarusian Brest (Polish Brześć nad Bugiem until 1939, under German occupation 1939-1945) were the focus of this subproject. In addition to suffering massive destruction during World War II, each of these cities was subjected to an almost total population exchange due to the changes in the Central-European geopolitical order and associated border shifts that came after 1945. The project focused on the relationship between the textual and visual narratives of these contested city spaces.



Fig. 1: Drawing of Brest. From the diary *Moje życie: 1886-1979* by Miłkołaj Cwikiewicz. Copyright National Library of Poland, rękopis 12992 t.1.

This project was based on German, Polish, and Belarusian archival material from military and city planning authorities, travel guides, press clippings, a museum exhibition, autobiographical writings and settlers' testimonies, and centralized on the semantic practices and strategies adopted within these diverse visual and textual sources. These were examined through a lens of post-representational cartography and literary theory (such as reader-response theory and narratology). A geocritical reading of testimonies (fig. 1) was achieved by comparing historical and contemporary map layers with personal accounts of forced migration and settlement.

The findings showed that the narratives of the maps frequently contradicted the textual accounts. Whereas the latter tried to align urban history within a single, coherent worldview grounded in a national history narrative, the maps had a more complex character which was, however, often hidden: the apparently neutral principles of the map design (reduction and simplification of complex landscape data) were juxtaposed with an emotional connotation of the space. Through the

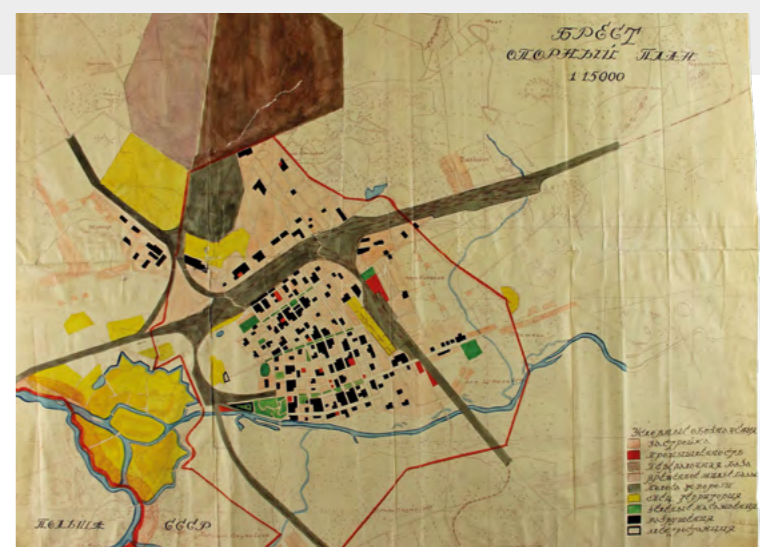


Fig. 2: Map of Brest with the Brest fortresses 1946. (GAB: LA Fonds 1386, Op. 1.13. L. 94). Permission granted by the State Archive of the Brest Region.



Fig. 3: Map of Elbląg's city center. Bonkiewicz-Sittauer M. and J. 1949. Elbląg i okolice. Warszawa: Wydawnictwo biura turystyki i komunikacji. Creator: Lech Ratajski. Permission granted by the National Library of Poland, courtesy of Sławomir Ratajski and Bożena Gadomska.

deliberate choice of cartographic language (scale, coloring, font), a place was charged with emotion and thus provided justification for its status in the national imagery (fig. 2 and 3).

However, some findings support the thesis that national categories limit the comparative analysis, particularly of textual sources. The accounts of female forced Polish and German migrants described very similar experiences, mostly in private or hidden places in cities; areas usually excluded from cartographic analysis. Giving less consideration to the nationality of the narrator not only allows us to reevaluate the effects of incorporation into a different nation, but also reveals the necessity of considering the gender of the narrator.

Reconstruction Of War-Torn Cities in Austria. Transformation and Heritage Associated Subproject

Birgit Knauer
TU Wien/Department of Heritage Conservation and Building within Existing Fabric

The reconstruction of war-torn cities in Austria involved various players and institutions. The four occupying powers had a big impact both on the building industry and on the restoration of historic monuments. Alongside the city administrations, the Federal Monuments Office (FMO) also took a strong position, listing and mapping damage, heritage sites and buildings worth preserving as well as taking part in discussions on how to transform and "improve" the urban structure and the historic cityscape.

This subproject analyzed the reconstruction process in historic Austrian cities after the Second World War from a perspective of heritage conservation, focusing on the discourses and decision-making processes regarding the conservation, reconstruction and alteration of buildings and urban structures. Of particular interest were the monument conservation experts, who played an important role in the discussions about reconstruction measures and cooperated with the four occupying powers to distribute materials for conservation. Nine cities were selected as examples for the study, based on the degree of destruction, their size and their location in the various post-1945 occupation zones: Vienna and Wiener Neustadt, Linz, Salzburg, Steyr, Innsbruck, Villach, Klagenfurt and Graz.

The main hypothesis was that discussions on heritage formed an important aspect of reconstruction planning in all cities, regardless of their size and location. There was also a question concerning whether the discourse on urban conservation which was enshrined into law throughout Europe in the 1960s and 70s already featured in discussion during the years of reconstruction.

The analysis of historical city maps, building age plans (fig. 1), damage maps (fig. 2), reconstruction plans, heritage lists (fig. 3), the archival notes of the FMO from various city and state archives, and newspaper reports from the 1940s and 1950s shed light on the discourses and negotiations that took place concerning valuing cultural heritage after the Second World War. The FMO was integrated into the discourse on reconstruction and participated in planning the transformation of urban structures in historic city centers, as exemplified in both Vienna and smaller cities like Wiener Neustadt. Interventions were proposed that were considered to be "in keeping with the character of the cities." Just like urban planners and architects, the FMO viewed reconstruction as an opportunity to "improve" the old town in certain areas and to reverse or undo the "mistakes of the past." Simultaneously, an interest in the conservation of urban contexts and ensembles ("Old Town islands") emerged, around 30 years before the introduction of statutory townscape protection in Austria. During the discussions on the reconstruction of Vienna in 1945/46 certain protection areas were also designated and mapped.



Fig. 1: Klarer, Adalbert (1948). Building age plan of Vienna's Inner City, cutting. Federal Monuments Office Archive, Vienna.



Fig. 2: Stadtplanungsamt Wien (1945/46). Vienna "bomb hit map", cutting. (For legend with handwritten entries see front page). Vienna City Archive, Sig. 3.2.2. P10/2.120422.

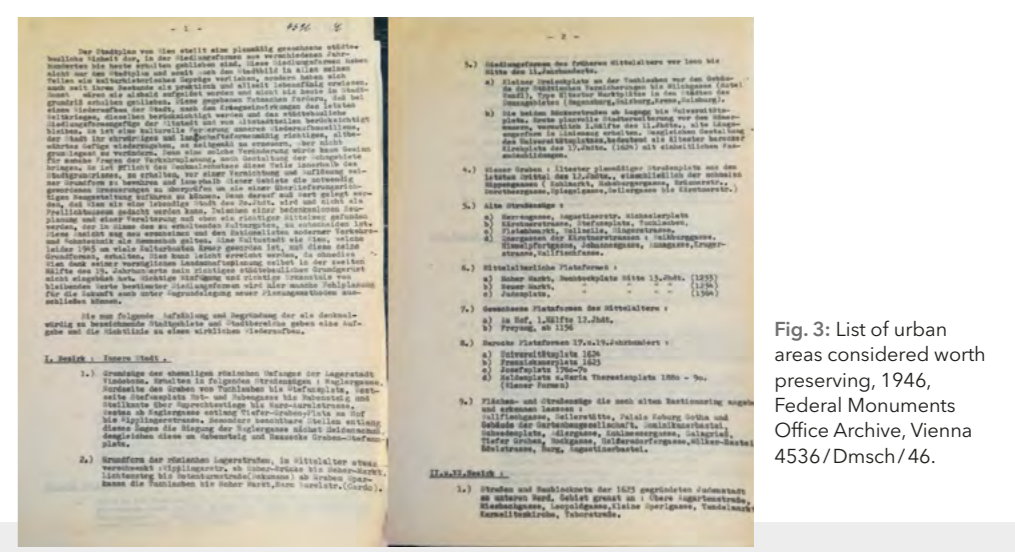


Fig. 3: List of urban areas considered worth preserving, 1946. Federal Monuments Office Archive, Vienna 4536/Dmsch/46.

Digitalized Maps - Digital Maps

Carmen M. Enss, Klaus Stein
University of Bamberg

Historical city maps produced during the Second World War and its aftermath take the form of large sheets of paper. These unwieldy documents are now housed in various archives situated in multiple countries. Contemporary researchers therefore use digitalized copies of these maps, preferably high-resolution scans, for both research and publication.

Collaboration Platform MapMyMaps
MapMyMaps is an online collaboration platform developed for the specific needs of the UrbanMetaMapping project (fig. 1). It allows scans of the maps to be enriched with specific metadata, including defined map categories developed from the research of the Bamberg UMM team: the Sedlmeyer typology (record, showcase, plan) together with Enss' enhancements to Oswald's "social functions", and facilitates their management, distribution and organization for publication. The platform also allows for future comparative research based on the growing collection of historic maps from European cities.

The platform proved to be very helpful for compiling the *Atlas Kriegsschadenskarten Deutschland* (see cover illustration), for which UMM and associated researchers from different universities worked together online to select and assemble around 60 high-resolution maps.

Nürnberg in GIS
In 1942, the Nürnberg administration created a cadastral map covering the area of the walled city with a precision that identified each building. This document served as a base map for the creation of war damage maps showing the destruction caused by air raids, and thematic maps. Marking damage on top of a base map creates a geo-database on paper; comparing these maps allows the city to be studied as a palimpsest: over the course of the bombing and subsequent rebuilding processes, buildings were damaged, destroyed and partially rebuilt.

By georeferencing digitalized maps in geographical information systems (GIS), we can superimpose them. Moreover, the vectorization and subsequent annotation (fig. 2) provide us with a multi-layered geo-database that allows for attainable access and quantitative analysis, such as increase of damage caused by successive air raids, as well as insight into data collection and inconsistencies in the documentation (fig. 3). The intersection between different thematic data, such as the declared historic value of buildings, allow us to reveal, query and visualize unexpected relationships which were not easily accessible from the paper maps.

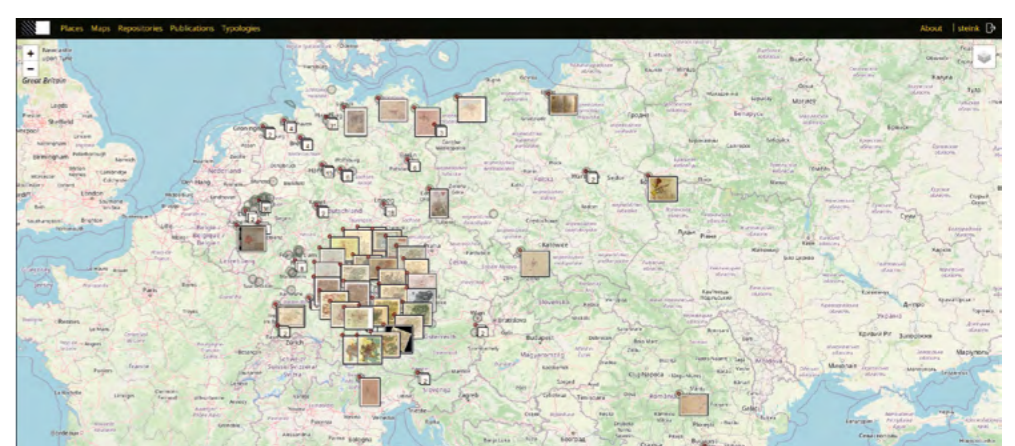


Fig. 1: MapMyMaps screenshot with thumbnails of various maps. The maps for Nürnberg are expanded.

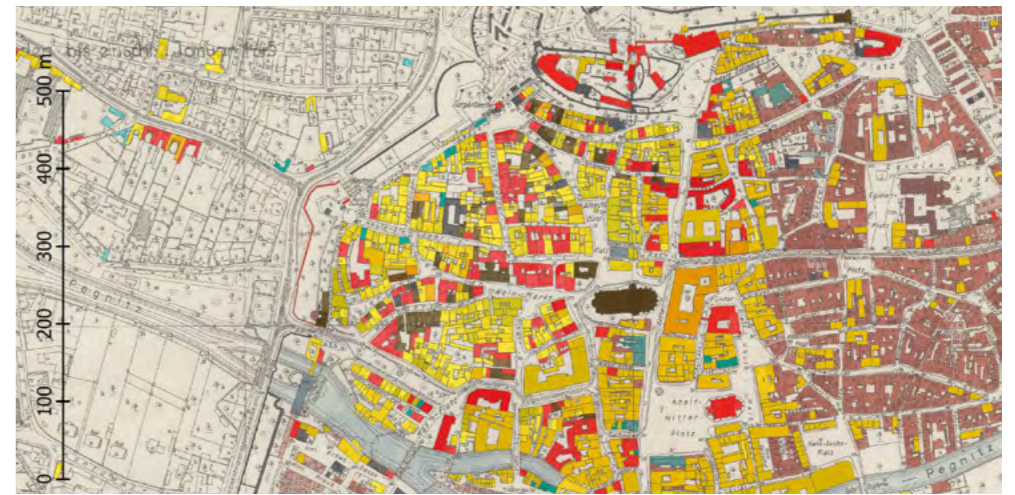


Fig. 2: Attribution and classification of the GIS data from a georeferenced map of Nürnberg on a background map of war damage, dated 3 April 1945, showing the situation at the end of 1944, Nürnberg Stadtarchiv, StadtAN A4/ X, 209.

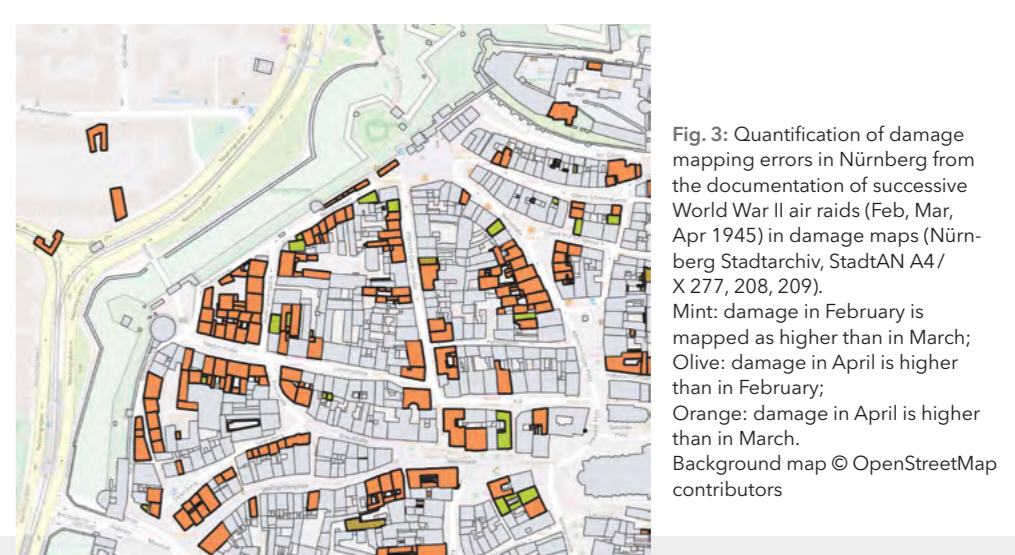


Fig. 3: Quantification of damage mapping errors in Nürnberg from the documentation of successive World War II air raids (Feb, Mar, Apr 1945) in damage maps (Nürnberg Stadtarchiv, StadtAN A4/ X.277, 208, 209). Mint: damage in February is mapped as higher than in March; Olive: damage in April is higher than in February; Orange: damage in April is higher than in March. Background map © OpenStreetMap contributors



Fig. 1: Nürnberg Historic: Damage map of Nürnberg (1950) drawn on a base map from 1945. Source: "Stadtplan nach 1945 mit Kennzeichnung der Zerstörungen des II Weltkrieges" (1950).

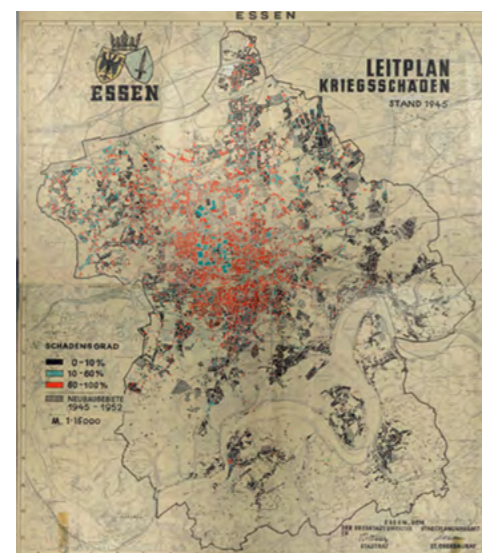


Fig. 2: Essen Historic: Georeferenced damage map of Essen (1952, drawn on 1945 basemap). The map legend shows the three levels of damage: 0-10% (black), 10-60% (blue), 60-100% (red) and newly built 1945-1952 (gray). Source for map: Stadt Essen Bestand 901, Nr. 698.

Elisa-Maria Hiemer is a trained literary scholar and works on the intersection of cultural studies and history. She is specialized in narratives in memory, gender, and urban studies with a focus on Polish-German relationships and inequalities of representation.

Seraphim Alvanides is an urban geographer, with expertise in quantitative methods and Geographical Information Science. He is an independent researcher and co-editor of the journal *Environment & Planning B: Urban Analytics and City Science*.

Laura Demeter holds a PhD in cultural heritage management and development, acquired at the IMT School for Advanced Studies in Lucca, Italy (2017), with a topic on 'transitional heritage' in former-socialist GDR and Romania. Her research focuses on heritage-making processes in the context of war, conflict and regime changes, discourses of value creation, war damage mapping, and heritage protection.

Carmen M. Enss is an architectural historian and urban conservation theorist at the Otto-Friedrich-Universität Bamberg, Centre for Heritage Conservation Studies and Technologies. She initiated the UrbanMetaMapping consortium.

Piotr Kisiel is a historian educated at universities in Poland and Scotland and did his PhD at the European University Institute in Florence. His research interests are at the crossroads of urban history, heritage studies, and nationalism studies.

Birgit Knauer studied art history and romance studies at the University of Vienna. Following her PhD, she worked as a research assistant at the Chair of Heritage Conservation at the University of Bamberg. Currently she is researching and teaching at the Department of Heritage Conservation at TU Wien, focusing especially on discourse and practice of urban planning and conservation in the 20th century.

Carol Ludwig works at Saarland University (Germany) where she teaches in Human Geography and leads the BMBF-funded subproject Sozialkartographie. She is an urban planner and social geographer with professional experience in local and regional municipalities in the UK.

Klaus Stein is a computer science researcher at the Otto-Friedrich-Universität Bamberg. His main research areas are spatial cognition/geo-informatics, social network analysis, and interdisciplinary projects in digital humanities.

For more information see urbanmetamapping.uni-bamberg.de/en