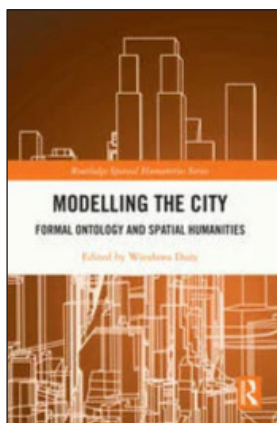


Modelling the City. Formal Ontology and Spatial Humanities,
edited by Wiesława Duży, Routledge, London, 2024, 215 pp.

Cities have been the most complex spatial form of habitation throughout human history. Several disciplines have invested considerable effort in understanding and



explaining this complexity, employing a variety of approaches and methods, as exemplified by the volume reviewed here. Besides history, geography, and historical geography, various branches of theoretical and practical digital humanities feature prominently with brand-new, cutting-edge approaches. However, for readers with a general interest in urban history or spatial humanities but without specific training in data management and cognitive engineering, the entry threshold appears relatively high. Familiarity with the term “formal domain ontology” is taken for granted from the very first paragraph of the Introduction. The reader has to wait until page 176, or instead start reading there, to get a concise summary of what ontologies are useful for: first, “for a structured analysis of the source content [of historical maps]”; second, “used as a controlled dictionary of terms which allows to annotate maps” and third, “in standardizing research using (spatial) databases”.

These advantages indeed make it worth cracking the hard nut, as they facilitate comparative research – a key element of urban history that aims to transcend the level of anecdotal local inquiries.

The studies collected in this concise and visually pleasing volume (or, for most users, the open-access PDF file at <https://library.oapen.org/handle/20.500.12657/93622>) stem from several research traditions. The most instrumental in the creation of the book was the Historical Ontology of Urban Space (HOUSE) project hosted by the Tadeusz Manteufel Institute of History of the Polish Academy of Sciences (IH PAN) between 2020 and 2022, in collaboration with eight further research institutes and universities from Central and Western Europe listed on the project’s homepage (<https://urbanonto.ihpan.edu.pl/about-project/>). Besides the Introduction written by Wiesława Duży, the editor and the PI of the project, Chapters 6, 7, and 8 derive directly from HOUSE. As their website and partly the book’s Introduction explain, the underlying aim was to understand the changes in the spatial structure of cities, particularly Warsaw, from the sixteenth to the early twentieth century. Although not discussed in detail (a missed opportunity for an international readership), the history of Warsaw, rising from a small country town to the capital of the Polish-Lithuanian Commonwealth and then becoming a seat of governance under the partitions of Poland, warrants a detailed investigation of the inevitably changing urban fabric.

The topography of Warsaw is indeed a red thread in the HOUSE-related chapters. To get an overview, the best way may be to start with Chapter 8 by Katarzyna Słomska-Przech and Keith Lilley,

'Exploring urban ontologies through historic town maps', from where the above-quoted definition of ontology is also taken. This chapter highlights the challenging source situation by analysing the Lindley family's 1:2500-scale plan (1897–1901) of Warsaw in comparison with the Ordnance Survey map of Coventry of the same scale and age. The Warsaw map (see also: <https://atlasfontium.pl/lindleys-map-of-warsaw/>) was commissioned by the Russian authorities and executed with a high level of accuracy but without a legend. Reconstructing the legend by identifying a set of typical features offers a particularly illuminating case for the application of the ontology-based method. Further details of the HOUSE methodology for building the formal domain, the Historical Ontology of Urban Spaces, are discussed in Chapter 7 by Słomska-Przech and Duży, with a strong emphasis on potential problems encountered during validation and verification. It also refers to two further systems, the OntoHGIS ontology – a domain ontology collecting information on historical administrative units (developed jointly by the Humanities Research Data Lab at the John Paul II Catholic University of Lublin and IH PAN), as well as the Polish Database of Topographic Objects (BDOT), developed a few years before HOUSE by Główny Urząd Geodezji i Kartografii (GUGiK – the Head Office of Geodesy and Cartography) in cooperation with the Voivodeship Marshals (regional authorities), as the basis of this new ontology that focuses on historic urban spaces. This advanced methodological discussion presupposes user-level knowledge of all three systems, or the continuous consultation of online resources created by them. The third article in this imagined "HOUSE cluster", Chapter 6 on "Uncertain information and spatial objects. Examples from works on the HOUSE project and the European Historic Towns Atlas series" is again more

accessible to a general readership. Its authors, Anna-Lena Schuhmacher, Daniel Stracke, and Michał Słomski, address three types of uncertainties, those of location, dating, and function, which cause problems when creating reconstructed maps of historical urban development. With plenty of examples drawn from their work on the Urban HomeBase, a database of objects featured on historic maps of Warsaw, and the meanwhile published Historic Towns Atlas of Magdeburg, respectively, they argue for "viable solutions to represent and work with uncertainty instead of eliminating and ignoring it". This attitude can be instructive for historical studies, well beyond the projects mentioned. Another merit of the article is the integration of the European Historic Towns Atlas project, a cartographic project which has produced more than 600 atlases of European towns over the past 55 years, into this new methodological framework.¹

Chapter 9 offers a welcome practical application of the ontological method to map out "Changes in spatial development of Lviv from the second half of the eighteenth century to the present day". It is much appreciated that this advanced, clear, and well-argued article has developed from a BA thesis by Marta Demchyna, who, together with her two supervisors, Katarzyna Słomska-Przech and Tomasz Panecki, undertook the analysis of four historical maps of Lviv from 1766, 1844/1855, 1918, and the modern Open Street Map. She dissected these along ontological classes into a database and reassembled the features into a series of consistently designed maps of spatial development, which allow both quantitative and qualitative comparisons. Hopefully, a similar discussion of Warsaw's development with proper historical contextualization will soon follow from the HOUSE team. The good

¹ <https://www.uni-muenster.de/Staedtegeschichte/en/portal/staedteatlanten> (accessed: 13 Nov. 2025).

news for readers interested in these issues is that HOUSe was extended in a new reuse within a Polish-German collaborative follow-up project, “Historical survey maps and the comparative study of the functionality and morphology of urban space. Standardisation – Digital processing – Research” (HiSMaComp, <https://www.uni-muenster.de/Staedtegeschichte/en/Forschung/einzelprojekte-laufend/HiSMaComp.html>).

Chapters 1 and 2 offer a broader theoretical framework for the HOUSe project and, to some extent, to the other studies in the volume at two different ends of the scale. Chapter 1 by Øyvind Eide on “Modelling as a bridge between maps, spatial concepts, and the territory” operates with broad generalisations about how maps as media products model complex realities, discussing four primary modalities of this process: the material, the sensorial, the spatiotemporal, and the semiotic. Other works of the author referenced in several articles of the volume expand on the complex philosophical and conceptual mindset beyond the deceptively simple formulations of the present article. Conversely, Chapter 2 by Francesco Beretta, “An ontology of geographical places and their spatio-temporal, social evolution in the context of an ecosystem of CIDOC CRM extensions for humanities and social sciences (SDHSS)” offers a framework for the experts in an elegant sermon to the already converted. The uninitiated, consulting the <https://cidoc-crm.org/> website for a foothold, will find it surprising to discover that this modelling framework was initially developed as a “theoretical and practical tool for information integration in the field of cultural heritage”, CIDOC being the International Committee for Documentation of the International Council for Museums (ICOM). While appreciating the effort to develop an interoperable system that various disciplines can utilise, this reviewer is somewhat sceptic

whether such a system, even with its extensions, can ever describe the complex social lives of historical communities in space and time.

Chapters 3, 4, and 5, inserted into this framework, take the reader to different shores and showcase different methodologies of using urban space and its representations as historical sources. Chapters 3 and 4 are based on papers presented at the final conference of HOUSe in Münster in September 2022; additionally, Chapters 4 and 5 are embedded in Polish urban history. Humphrey Southall and Paula Aucott in “Identifying key features within the urban landscapes of England and Wales circa 1900” intend to offer “an alternative starting point for categorising urban features” by laboriously processing all written information included on the map sheets of the Second edition of the 1:10650 series of the Ordnance Survey of Great Britain. The identification and quantification of various categories of features, thoroughfares, buildings, and land cover is interpreted by the authors as a form of “implicit ontology”, contrasted with the reference to explicit categories used by HOUSe. The reliance on the historical maps as representations of typical and repetitive elements of urban topography by both approaches, however, works as a common denominator between the two enterprises. Chapter 4, “Narrating Szczecin. Creation of urban authenticity through touristic city trails” by Tabitha Redepenny, is only indirectly related to the main thrust of the volume through the use of various maps in the guidebooks from c. 1900 to the 1980s, analysed by the author. Contrary to the full coverage of generic information displayed on the historical maps, the city trails were intended to show a linear narrative to a set of historically changing audiences, the tourists visiting the town. Finally, Chapter 5, “The change of street names in Poznań and Gdynia in the nineteenth and twentieth centuries” by Grigori Chlesberg, shows the

politicised nature of naming streets, and indeed, entire settlements. His examples, taken from Poland, could be endlessly expanded to other countries and settlements of Central and Eastern Europe. While the changing names certainly create practical problems for historical gazetteers, the author also points to the unstable identity they engender, a concept that the ontological approach can hardly grasp.

As it transpires from the order of this overview, the tripartite division of the book into “Media, sources, data model”; “Investigating urban space” and “Mapping objects in urban space” did not convince this reviewer. While each chapter has its merits, arguments, and conclusions, they speak to different audiences. Fortunately, with the book’s open access, readers can freely choose which chapter to engage with. Whereas the book as a whole does not appear entirely consistent, the chapters still raise several general epistemological questions regarding the level of abstraction applied by the maps and their later

interpreters. Almost all the contributions oscillate between searching for more general categories beyond the particular, which is the basic purpose of ontologies, and seeking the specific manifestations beyond the general classifications, whether “greenery/green spaces” or “buildings with special uses”. An even broader general issue is how far researchers should aim to create a one-size-fits-all ontology of urban spaces and their uses across various geographies and historic periods, or adjust the categories to the needs of the given research project while keeping comparability in mind. Technological advances, also within the field of digital and spatial humanities, combined with the increasingly globalized approaches in urban history, will undoubtedly keep this question on the agenda and acknowledge the contribution of this volume to the debate. ■

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