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Mapping Landscapes in Transformation

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Mapping Landscapes in Transformation

Multidisciplinary Methods for Historical Analysis

Edited by
Thomas Coomans, Bieke Cattoor, and Krista De Jonge

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Mapping Landscapes in Transformation: Multidisciplinary Methods for Historical Analysis
Thomas Coomans, Bieke Cattoor & Krista De Jonge

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POSTFACE

Mapping Historical Landscapes in Transformation: An Overview
John Bintliff

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PREFACE

Mapping Landscapes in Transformation

Multidisciplinary Methods for Historical Analysis

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Bieke Cattoor (Delft University of Technology)

Krista De Jonge (University of Leuven)

Innovation in mapping methods for historical landscape research is flourishing, largely because this type of research is situated at the very fertile intersection of ongoing technological development and sustained critical reflection. On the one hand, the development of digital tools for data capturing, data analysis and data structuring has revolutionised our ability to extract and plot out data of all sorts and to combine, mix and re-mix these data in order to discover spatio-temporal relationships that have previously remained hidden. On the other hand, the humanities' sustained interest in spatiality as well as its growing involvement with the new digital tools make for a continuous critical reflection accompanied by ongoing methodological experiments that stretch, morph and bend these digital tools in order for them to reflect context and source specificity, to include different theoretical perspectives on landscape, to enable narrative formats, etc.

A major challenge for cartographic research into cultural landscape history concerns methods for mapping landscape transformations in all their complexity. How can one define and translate the concept of landscape transformation? How can one combine data from various sources, various types and of varying accuracy when part of these sources is not even explicitly spatial, such as a text? How can one map the palimpsest-like composition of layered urban and rural landscapes? How can one visualise the different speeds of interwoven spatio-temporal processes? How can one deal with missing sources and hypothetical interpretations of transformation processes, at both micro and macro scales? How can one

simultaneously incorporate an array of spatial scales as well as a set of timeframes within one single map, or even a map series ?

This book brings together experts from different disciplines — historians, geographers, architects, urban and landscape designers, and archaeologists — who are active in the fields of historical geography, urban and landscape history and heritage conservation in a wide variety of time-space contexts, from Antiquity and the Middle Ages to the twenty-first century in Europe, America and Asia. Each author deploys mapping methods to construct a very different reading of landscape transformation. Together the contributions make up a widely varying set of mapped space-time dialogues, and have the intention to open up a broad range of multidisciplinary research questions.

This edited volume contains thirteen chapters, grouped into two parts: ‘Projection’ and ‘Focus’.

In the first part, six chapters present reflections and methods that refer to the double sense of ‘Projection’ as a cross-disciplinary approach to visualisation on the one hand and a leap into imagining landscape futures on the other hand:

- ◆ Jill Desimini demonstrates that conventional cartographic techniques are powerful projective tools for investigating and negotiating the time-lapses between past, present and future landscapes. Through a detailed analysis of cartographic methods of incorporating time into topographic maps as well as design plans, she makes a plea for revaluing and updating these conventional techniques as a way of grounding landscape architectural practice in times when data-driven GIS analysis dominates spatial research in the field.
- ◆ Karl Beelen explores the empowerment of local actors caused by increased access to digital urban data and to digital mapping technologies, fostering countermapping practices and feeding into grassroots design. A test case in peri-urban Chennai (India) shows how this empowerment, or ‘the rescaling of the frontier of urban data and urbanisation’ takes shape despite restrictive regimes, but also feeds on the voids purposely created by them.
- ◆ Bieke Cattoor unravels how the practice of re-cartography unites two seemingly contradictory cartographic ontologies at the heart of urbanism: the consideration of the map as a (partial) workable mirror and an engagement with the post-representational quality of the map as a project. Three cases in south-west Flanders (Belgium) illustrate how re-cartography can be a tool for designers and researchers to negotiate time, simultaneously practising the territory and the map as-a-process.

- ◆ Steffen Nijhuis develops a method for GIS-based spatio-temporal analysis that explores designed landscapes as products of time. By systematically mapping different aspects of landscape architectonic composition at several important time stages (their time of conception, development, and mutation), Nijhuis reconceives of designed landscapes as long-term and dynamic compositions. An elaborate case study in Stourhead demonstrates the significance of the method for landscape design research and its relevance to landscape and heritage practice.
- ◆ Cecilia Furlan takes a reverse approach to understanding cultural landscapes as palimpsests. Making wasteland her object of study, she concentrates on those physical and mental entities that temporarily seemed unfit for investment, by this detour gaining knowledge of the drivers of human-induced spatial transformation. A thick mapping of post-industrial Charleroi aggregates spatio-temporal morphologies, oral histories and historical landscape imaginaries to compose a multi-layered story of its industrial (waste)land transformation.
- ◆ Cristina Purcar develops an interactive spatio-temporal landscape catalogue, in which mapping is deployed as a linguistic device that facilitates associative operations between different data sets. Focusing on railway cases from Transylvania (Romania) she interrelates a corpus of historical photographs, maps and plans, cross-fertilising the intertwined histories of landscape photography and railway development, to combinedly analyse the transformation of the Transylvanian railway landscape from a material and iconographic perspective.

The second part, 'Focus', presents seven cases from different time-space contexts, each innovating by adapting existing methodologies to their specific research questions and sources:

- ◆ Piraye Hacıgüzeller, Jeroen Poblome, Devi Taelman, Ralf Vandam and Frank Vermeulen — all archaeologists working on Mediterranean-Antique landscapes — present complex multi-scalar GIS reconstructions of the (past) humanscapes of the Roman city of *Potentia* (Marches, Italy) and the Hellenistic, later Roman, city of *Sagalassos* (Anatolia, Turkey).
- ◆ Arlo McKee and May Yuan analyse the transformation of historical landscapes with remains of proto-historic settlements within a small stream valley in East Texas (USA). Their methodology for micro-mapping is supported by high-resolution data collection techniques (including drone mapping) and multi-scalar data analysis. This research aims at contributing to the preservation of historic native sites.
- ◆ Bram Vannieuwenhuyze studies the urban development of early-modern Bruges, Antwerp and Paris (Belgium and France). He pleads for a methodology

that merges urban topographic analysis based on early-nineteenth-century parcel plans and digital thematic deconstruction of sixteenth-century maps.

- ◆ Reinout Klaarenbeek studies the afterlife of religious houses in Brussels, Antwerp and Bruges (Belgium) after their suppression at the turn of the nineteenth century. Based on accurate surveyors' plans for sales and early cadastres as well as architectural plans for adaptive reuse of the former monasteries and convents as barracks, courts of justice, prisons, factories, schools, etc., he uses tools of historical GIS to map the complex gradual transformation of the urban landscape.
- ◆ Sanne Maekelberg follows the itineraries of Duke Charles of Croÿ in the Southern Low Countries (present Belgium and Northern France) at the turn of the seventeenth century by reference to his correspondence. Her maps illustrate the mobility of the duke and his court in a regional historical environment marked by geopolitical tensions.
- ◆ Ian Gregory, Christopher Donaldson and Joanna Taylor implement GIS technologies in literary-historical research. By applying methods and perspectives from cultural history, literary studies, and geographic information sciences to a large corpus of texts, they investigate how the landscape of the Lake District (England) was represented by nineteenth-century poets and tourists.
- ◆ Chang-Xue Shu builds her study on a systematic empirical mapping based on historical big data covering spatio-temporal dimensions of large scales in China. Her methodological challenge combines geographical visualisation, algorithmic thinking and text mining that use word frequencies to investigate how they might advance our understanding about Chinese architecture in the dimension of the literati's knowledge in the long term (significantly from the sixteenth to the twentieth centuries).

In the Postface, John Bintliff highlights key themes — social interaction and network analysis, space syntax, urbanism and the organisation of landscapes, the structural transformation of cities and regional communications, urban changes and class, deceptions of mapping and townscapes views, phenomenologies of landscapes and of globalisation, neural networks, and heritage — and elaborates on them from his anthropological, archaeological and historical expertise on townscape and landscape research.

Eleven contributions were presented at a workshop held in Leuven on 24 and 25 November 2017. Three of these contributions are adaptations of earlier published texts (Jill Desimini, Bieke Cattoor, Ian Gregory et al.). Two contributions (Chang-Xue Shu, Arlo McKee and May Yuan) are additional to the workshop. This book benefited from funding from the Research Foundation Flanders, in the

context of FWO research project 73605: “Redeveloping the city. Urban transformation and ‘heritagization’ after the secularization of religious houses in Belgian towns at the dawn of the modern age (1773/1796-1860)”¹

For further reading

- Berry D.M. and Fagerjord A. (2017). *Digital Humanities: Knowledge and Critique in a Digital Age*. Cambridge: Polity.
- Bodenhamer D.J., Corrigan J. and Harris T.M. (2010). *The Spatial Humanities. GIS and the Future of Humanities Scholarship*. Bloomington – Indianapolis: Indiana University Press.
- Bodenhamer D.J., Corrigan J. and Harris T.M. (2015). *Deep Maps and Spatial Narratives*. Bloomington – Indianapolis: Indiana University Press.
- Böhme H. Bergemann L., Dönike M., Schirrmeister A., Toepfer G., Walter M. and Weitbrecht J. (eds) (2011). *Transformation. Ein Konzept zur Erforschung kulturellen Wandels*. Paderborn: Wilhelm Fink.
- Burdick A., Drucker J., Lunenfeld P., Presner T. and Schnapp J. (2012). *Digital Humanities*. Cambridge MA: MIT Press, 2012.
- Caquard S. (2013). Cartography I: Mapping Narrative Cartography. *Progress in Human Geography* 37(1), p. 135–144.
- Cattoor B. and Perkins C. (2014). Re-cartographies of Landscape: New Narratives in Architectural Atlases. *The Cartographic Journal* 51(2), p. 166–178.
- Corboz A. (1983). The Land as Palimpsest. *Diogenes* 31(121), p. 12–34.
- Cosgrove D. (ed.) (1999). *Mappings*. London: Reaktion Books
- Desimini J. and Waldheim Ch. (2016). *Cartographic Grounds: Projecting the Landscape Imaginary*. New York: Princeton Architectural Press.
- Ender M., Fürhapter I., Kathan I., Leitner U., and Siller B. (eds) (2017). *Landschaftslektüren. Lesarten des Raums von Tirol bis in die Po-Ebene*. Bielefeld: Transcript.
- Gillings M., Hacıgüzeller P. and Lock G. (2019). *Re-Mapping Archaeology: Critical Perspectives, Alternative Mappings*. New York: Routledge.
- Gold M.K. and Klein L. F. (eds) (2016). *Debates in the Digital Humanities 2016*. Minneapolis MN: University of Minnesota Press.

1. See the contribution of Reinout Klaarenbeek. Promotor of the research project: Prof. Thomas Coomans (University of Leuven); copromotors: Prof. Jan De Maeyer (University of Leuven, KADOC), Prof. Inge Bertels (University of Antwerp) and Prof. Tom Verschaffel (University of Leuven, KULAK).

- Gregory I.N. and Ell P.S. (2007). *Historical GIS. Technologies, Methodologies and Scholarship*. Cambridge: Cambridge University Press.
- Gregory I.N. and Geddes A. (eds) (2014). *Toward Spatial Humanities. Historical GIS and Spatial History* (The Spatial Humanities). Bloomington – Indianapolis: Indiana University Press: Indiana University Press.
- Gregory I.N., DeBats D. and Lafreniere D. (eds.) (2018). *The Routledge Companion to Spatial History*. New York: Routledge.
- Knowles A.K. and Hillier A. (eds) (2008). *Placing History: How Maps, Spatial Data, and GIS are Changing Historical Scholarship*. Redlands: ESRI Press.
- Lammes S., Perkins C., Gekker A., Hind S., Wilmott C. and Evans D. (eds.) (2018). *Time for Mapping: Cartographic Temporalities*. Manchester: Manchester University Press.
- Laxton P. (ed.) (2001). *The New Nature of Maps: Essays in the History of Cartography*. Baltimore: Johns Hopkins University Press.
- Lévy J. (ed.) (2015). *A Cartographic Turn. Mapping and the Spatial Challenge in Social Sciences*. Lausanne: EPFL Press.
- Monmonier M. (ed.) (2015). *The History of Cartography. Vol. 6: Cartography in the Twentieth Century*. Chicago-London: University of Chicago Press.
- Moretti F. (2015). *Graphs, Maps, Trees. Abstract Models for a Literary History*. London: Verso.
- Pickles J. (2004). *A History of Spaces. Cartographic Reason, Mapping and the Geo-Coded World*. London: Routledge.
- Presner T., Shepard D. and Kawano Y. (2014). *HyperCities. Thick Mapping in the Digital Humanities*. Cambridge, MA: Harvard University Press.
- Treib M. (2008). *Representing Landscape Architecture*. London-New York: Taylor and Francis.
- Wilford J. (2001). *The Mapmakers*. New York: Random House.
- Wood D. (2010). *Rethinking the Power of Maps*. New York: The Guilford Press.