Design Space in Cartography: Outlining a design perspective in critical analysis of peace and conflict visualisations

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Abstract:

This paper will present the approach and first findings of a research project on multi-perspective peace and conflict cartography conducted within the research network "Cooperation and Conflict in Eastern Europe" (KonKoop)[1]. The author is part of a visualisation lab connected to this network which explores maps and geovisualisations in the context of how peace and conflict are perceived, articulated and negotiated via spatial representations. This means looking at how maps produce, represent and interpret different positions in conflict and cooperation, but also thinking about how different spatial and temporal perspectives are experienced and mediated. The research takes up the approach of critical cartography and systematic analysis of conflict visualisations to gain an understanding of how they are produced within specific regimes and technologies of visibility, truth and world-making. Analysis insights will provide key inputs for prototyping visualisation methods and tools for articulating the spaces of peace and conflict by experimenting with diverse media and design approaches.

The paper engages with the first findings of the research resulting from the critical analysis of peace and conflict visualisations while outlining and reflecting on the analytical approach, key questions, case studies and methods. The analytical approach learns from the current state of the art on conflict and peace visualisations (Barney, 2017; Black, 2016; Crampton, 2006, etc), as well as broader discussions on understanding and reading maps in this context (Branch, 2013; Leuenberger & Schnell, 2010; Monmonier, 1991; Wood & Fels, 2009) and literature on specific case studies related to peace and conflict in Eastern Europe (e.g. Campbell, 2001; Crampton, 1996). The goal of the analysis is to propose possible understandings of peace and conflict cartography, identify its different typologies, key concepts and features, and explore how its different purposes mobilize visual language and cartographic legacies. First insights reveal the need to engage more in-depth with the issue of representing multiple perspectives of peace and conflict, especially in regards to the complexities of their dynamics, conjunctions and afterlives. Further, there is a need to engage with how maps frame and visualise peace and conflict in relation to broader processes of socio-spatial change, such as sustainable development, e.g. by tracing how the landscape is mobilised in the negotiation of boundaries. Finally, the analysis will aim at gaining insights into how peace and conflict cartography contributes to the production of subjectivities and vision-making on different scales and thus conditions future development processes e.g. through transformation of landscapes.

While critical map analysis is the main method of this research, the main goal of this paper is to explore how it can be supported and expanded from a design perspective, by learning from the author's position and experience as a design researcher. The understanding of design aspects in cartography is still limited: design is mainly discussed in regard to graphic layout and directed towards implying "good" and "universal" design values. The analytical approaches of semiology, iconography and discourse analysis expand the analytical field to engage more critically with the meaning of visual language. However, more insight is needed in understanding the broader context of the design process, as well as in considering how maps and visualisations work as 'design things' (Binder et al., 2011) – meaning, how their production, use and circulation bring together different perspectives on maps and shape how new maps are brought into being.

The paper argues that a design perspective can contribute to an understanding of maps as things that take part in world-making through the production of myths and the construction of "naturalized artificial" (Fry, 2011, p.46). The proposal for such a perspective in this research starts by focusing on the 'design space' (Binder et al. 2011) of maps. In design theory, design space represents an imaginary landscape of a future design constructed by different actors (Binder et al.,

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[1] The research network "Cooperation and Conflict in Eastern Europe: The Consequences of the Reconfiguration of Political, Economic, and Social Spaces since the End of the Cold War" (KonKoop) started work in April 2022 and comprises six institutions from across Germany: the Centre for East European and International Studies (ZOiS), Leibniz Institute for East and Southeast European Studies (IOS) in Regensburg, Leibniz Institute for Regional Geography (IfL) in Leipzig, Friedrich Schiller University Jena (FSU Jena), Eberswalde University for Sustainable Development (HNEE), and the Leibniz Centre for Contemporary History (ZZF) in Potsdam.

2011, p. 107-108). As such, the concept of design space can help in grasping diverse modalities in which maps contribute to staging visions of a world, as well as bringing these visions into being. The paper intends to unpack how this concept can contribute to the critical analysis of visualisations in peace and conflict contexts, particularly in engaging with the issues of cartographic legacies and vision-making. In doing so, the paper will search for connections between the design space approach and the discussion of Wood and Fels (2008) on mental spaces and the 'paramap', to outline analytical directions for delving into the socio-technical systems that enable map design to construct meanings, subjects and futures. The first insights will be tested by looking at concrete examples of cartographic material, such as peace negotiation maps used in the period from 1992 to 1995 in Bosnia and Herzegovina.

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References

Binder T., De Michelis, G., Ehn, P., Jacucci, G., Linde, P. & Wagner, I. (2011). Design Things. MIT Press.

Barney, T. (2017). Cartographies of war and peace. In (eds.) Kent, A. J. & Vujakovic, P. The Routledge Handbook of Mapping and Cartography. Routledge. 173–184.

Black, J. (2016). Maps of War. Conway Bloomsbury.

Branch, J. (2013). The Cartographic State: Maps, Territory, and the Origins of Sovereignty. Cambridge University Press

Campbell, D. (2001). Apartheid Cartography. The Corner House. Accessed on May 4th, 2023 at: http://www.thecornerhouse.org.uk/resource/apartheid-cartography

Crampton, J. (1996). Bordering on Bosnia. GeoJournal, 39(4), 353–361.

Crampton, J. W. (2006). The cartographic calculation of space: Race mapping and the Balkans at the Paris Peace Conference of 1919. Social & Cultural Geography, 7(5), 731–752. https://doi.org/10.1080/14649360600974733

Fry, T. (2010). Design as Politics. Berg.

Leuenberger, C., & Schnell, I. (2020). The politics of maps: Cartographic Constructions of Israel/Palestine. Oxford University Press.

Monmonier, M. (1991). How to Lie with Maps, Third Edition. University of Chicago Press.

Wood, D., & Fels, J. (2009). The Natures of Maps: Cartographic Constructions of the Natural World (J. Pickles, Ed.). University of Chicago Press.