Introduction to the theme issue: “Mental maps: geographical and historical perspectives”

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Maps are symbolic representations of spatial features. As such, they are by definition projections that involve choices of inclusion and modes of depiction. They are therefore subject to framing, coding, and graphic design in their conception and execution. Even the most positivist attempt to map the world as it is – to represent a set of properties systematically, scaling the matrix in which they are embedded in proportion to their ratio in the physical environment – involves a mental conversion. Thus, all maps, from those on classroom walls, to fold-outs of city streets and subways, to GPS on smartphones and aircraft screens, are “mental maps” whose design rests on the decisions of mapmakers.

However, although all maps are artistic conceptions, a fundamental distinction may be drawn between maps proper – that is, those that are fixed cartographic manifestations of spatial relations – and mental maps, whose spatialization of meaning dwells latently in the minds of individuals or groups of people. Visually realized maps can be analyzed to give insight into the underlying mental maps that have shaped them, laying bare mindsets or agendas that may be as socio-culturally significant as the geography they
of agendas that may be as socio-culturally significant as the geography they present. In addition, they may often contain prescriptive images that incidentally shape mental maps in those who view them, thus implanting or concretizing social knowledge. In this issue, Ute Schneider examines the development of German geographer Heinrich Schiflers' mental maps with reference to cartographic illustrations in his books on Africa from the 1930s to the 1970s.

Mental maps can also be decoded to reveal biases of objectified cartographic knowledge such as socio-spatial hierarchies that structure the world, or to explore ways in which collectives and individuals orient themselves in their environment, or to understand how they perceive the world. One way of elucidating mental maps is by examining hand-drawn sketches.

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underlying mental maps that have shaped them, laying bare mindsets or agendas that may be as socio-culturally significant as the geography they present. In addition, they may often contain prescriptive images that incidentally shape mental maps in those who view them, thus implanting or concretizing social knowledge. In this issue, Ute Schneider examines the development of German geographer Heinrich Schiffer's mental maps with reference to cartographic illustrations in his books on Africa from the 1930s to the 1970s.

Mental maps can also be decoded to reveal biases of objectified cartographic knowledge such as socio-spatial hierarchies that structure the world, or to explore ways in which collectives and individuals orient themselves in their environment, or to understand how they perceive the world. One way of elucidating mental maps is by examining hand-drawn sketches by informants of various backgrounds. In one of our articles, Efrat Ben-Ze'ev and Chloé Yvroux use this method to disclose conceptions of Israel and Palestine, particularly the West Bank, held by French and Israeli students. In another, by superimposing large numbers of sketch maps, Clarisse Didelon-Loiseau, Sophie de Ruffray, and Nicolas Lambert identify "soft" and "hard" macroregions on the mental maps of geography students across the world. A deliberately personal approach to mental mapping is represented in this issue by Lars-Erik Edlund, who offers an essayistic account of mental mapping from a liberal arts perspective, taking as a point of departure memories of maps in his own family.

Although many researchers call the subjective map-drawings of their informants mental maps, implying a distinction between fictitious mental maps and their real counterparts, we prefer a more formal distinction between charted maps (endowed with varied claims of objectivity), and latent mental maps (with correlations to the physical world). As we see it, a mental map, rather than being an object, is a theoretical construct not observable in its original repository – the human brain. It is accessible to scrutiny only when reified via behavioral, oral, textual, or graphical acts.
However, the meta-perspective taken by investigations of mental maps complicates the picture. Researchers frequently summarize their findings with regard to mental maps of certain populations through cartographic illustrations. Such images are neither latent in the minds of people, nor are they firsthand, pre-analytic representations of spatial knowledge. They qualify as mental maps because they graphically articulate conceptual notions of space. Thus, researchers are not concerned with the utility of such maps for transversing space, but rather wish to understand the contingent apperception of the world contained in those maps. Janne Holmén charts such mental maps, investigating whether the Baltic and the Mediterranean Seas are seen as links or divisions between the countries that line their shores, according to the mental maps of high school seniors. Similarly, Dario Musolino reconstructs mental maps in order to understand regional preferences of Italian entrepreneurs.

Alongside “cognitive map”, an approximate synonym with more neurological connotations, the concept of mental map is well established in geography, behavioral science, and psychology. Immanuel Kant may have anticipated the idea of mental maps in his writings on geography (Richards 1974 Richards, P., 1974. Kant’s geography and mental maps. Transactions of the Institute of British Geographers, 61, 1–16. doi: 10.2307/621596[Crossref], [Web of Science ®], [Google Scholar]), but it was in the interwar period that psychologist Edward Tolman developed a modern understanding of spatial orientation, and later coined the term cognitive map in his studies of learning in rats (1948 Tolman, E.C., 1948. Cognitive maps in rats and men. Psychological Review, 55 (4), 189–208. doi: 10.1037/h0061626[Crossref], [PubMed], [Web of Science ®], [Google Scholar]). From the 1960s onwards, behavioral geographers came to develop a related interest in the depiction of space in the human mind. Although not actually utilizing the term mental map, Kevin Lynch’s book The Image of the City (1960 Lynch, K., 1960. The image of the city. Cambridge, MA: Technology Press. [Google Scholar]) is regarded as a pioneering work in the field. Another key figure was Peter Gould, who called his isolinear maps of how people perceived different areas


Historians have also taken up the idea of mental maps over the past 25 years, especially in analyzing patterns of dominance and subalternity, the construction and dissolution of historical regions, and the world views of political elites. The German journal Geschichte und Gesellschaft was comparatively early in publishing a special issue on the topic (Conrad 2002 Conrad, Ch., ed., 2002. Mental maps. Geschichte und Gesellschaft, 28 (3), 339–514.[Web of Science ®], [Google Scholar]), and despite the promotion of such competing concepts as environmental images or spatial representation, that of mental maps “has become fairly standard in historical research on collective concepts of geographical and historical macro-regions” (Schenk 2013 Schenk, F. B., 2013. Mental maps: the cognitive mapping of the continent as an object of research of European history. European History Online (EGO). Available from: http://www.ieg-ego.eu/schenkf-2013-en [Accessed 16 April 2017]. [Google Scholar], see, e.g. Mishkova forthcoming).

Disciplines that have found the concept of mental maps useful include geography, psychology, history, linguistics, economics, anthropology, political
science, and computer game design. To date, there has been little communication between those disciplines and methodological schools involved in mental mapping, and an international multi-disciplinary conversation on mental maps with an emphasis on cultural patterns is still in its early stages.\footnote{See, however, the cross-disciplinary discussion in the German anthology \textit{Die Ordnung des Raums: Mentale Landkarten in der Ostseeregion} (The order of space: Mental maps in the Baltic Sea region; Götz et al. 2006 Götz, N., Hackmann, J., and Hecker-Stampehl, J., eds, 2006. \textit{Die Ordnung des Raums: Mentale Landkarten in der Ostseeregion}. Berlin: Wissenschafts-Verlag. [Google Scholar]). View all notes} This special issue of the \textit{Journal of Cultural Geography} addresses this situation by bringing together scholars from the fields of history, geography, economics, anthropology, and linguistics, and by including a variety of quantitative and qualitative research methods. The authors presented here are affiliated with research institutions in Finland, France, Germany, Israel, Italy, and Sweden. They show that mental mapping research is an exciting arena for interdisciplinary and international encounters. We believe their fascinating accounts also demonstrate the potential for the further expansion of the field.


In the current era of disoriented globalization, we believe mental maps will
continue to be crucial tools for insights into the ability of ordinary people to make sense of the world and into the compasses of their political leaders. In addition, mental mapping may contribute to an improved understanding of the effects of multiple spatial frames conveyed by political institutions and various social organizations (Götz 2008 Götz, N., 2008. Western Europeans and others: the making of Europe at the United Nations. Alternatives, 33 (3), 359–381. doi: 10.1177/030437540803300305[Crossref], [Web of Science®], [Google Scholar]), including attempts at place branding (Gertner 2011 Gertner, D., 2011. A (tentative) meta-analysis of the “place marketing” and “place branding” literature. Journal of Brand Management, 19 (2), 112–131. doi: 10.1057/bm.2011.13[Crossref], [Google Scholar]), efforts to create areas of limited statehood (Risse 2011 Risse, T., 2011. Governance without a state? Policies and politics in areas of limited statehood. New York, NY: Columbia University Press. [Google Scholar]), and other forms of manipulating space. Finally, despite the uneasiness about the era we are living in, mental maps show that any juxtaposition of “post-truth” and truth fails to do justice to the ineluctable subjectivity of the human condition.

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Notes

References


Additional information

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