

What a journal for Theoretical Cartography would be about

Hruby Florian
Universidad de Guadalajara
florian.hruby@univie.ac.at
México

With the emergence of digital computing and digital visualization over the last decades, cartography has got available an unprecedented plenty of spatial representation techniques. As another consequence of these technological developments, however, cartography's competence has been never as opaque as it is today: On the one hand, various younger disciplines like, for instance, Visual Analytics, Knowledge Representation, Scientific Visualization or Cognitive Science pursue (at least) some of the research objectives that have been already proclaimed in cartographic textbooks for a long time. On the other hand, current cartographic information environments are shaped by tools as Google Earth, which can not be understood as products of cartography's traditional producer groups anymore. Consequently, we have to differentiate within the geospatial scientific landscape between explicit, traditional cartography and numerous implicit, non-traditional cartographies.

In view of the success of the aforementioned disciplines and applications, cartography has to question its own objectives, its significance and its interdisciplinary positioning. Based on the scientific self-conception of cartography, this question on practical relevance also implies the key issue: what is cartographic theory about? The herewith proposed article will not and cannot intend to answer this matter exhaustively; rather, our purpose shall be to argue for a framework, wherein issues of cartographic theories can be discussed at the speed of digital technologies development. Such framework shall be presented in a two-part way, concerning both form and content.

In regard of the content, we will try to suggest theoretical principles in terms of a least common denominator based on the following assumptions:

- (1) Provided that cartography is about (i.a. visual) representations of spatial reality to humans, cartographic theory discusses this triadic relationship between representation (e.g. map), user and reality.
- (2) Provided that each cartographic representation is a system of (mono-sensory, e.g. visual and/or multi-sensory, e.g. audio-visual) signs, and provided that semiotics is concerned with all kinds of sign systems, semiotics can provide a comprehensive theoretical framework to cartography.
- (3) Provided that (carto-) semiotics provides a solid framework for other scientific fields these disciplines can make substantial contributions in regard of the function and optimization of representations of spatial reality.
- (4) Provided that various disciplines deal with cartographically relevant issues, theoretical cartography has to provide criteria to orientate interdisciplinary investigations and to relate multidisciplinary research as well.

In regard of the form, we will instance meta-carto-semiotics, a new open-access journal for theoretical cartography that aims to give publication space to discuss both the aforementioned basic assumptions and possible consequences with the general focus on how and why current and future technologies should be used in order to represent spatial reality as appropriate as possible.