

# Interdisciplinary Analysis of Prosumer Map-making: Developing a Critical Understanding of Map-use

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## Abstract

With map-use becoming a common-place part of many human activities, in this project we focus on professional and scientific use of maps to assess and distinguish prosumer types of maps and forms of collaborative mapping. The study is broad in scope and considers recent crowd-sourced data collection and applications and SDI developments. The results of this study should help guide the development of online map-making tools to support specific prosumer communities.

*Keywords:* mapping, cartography, prosumers, communication, online-mapping, cartography

## 1. Considering prosumer map-making

Map-making has become a common-place activity [2, 6, 7]. Prosumers, people versed in the usage of information technology and online tools, but with very little or even no formal training in cartography or GIS, regularly use web-based map-making applications to produce maps of various degrees of complexity for audiences ranging from internal workgroups to the global community of a social network. The diversity and complexity points to a need to understand these activities to better guide our development of online map-making tools and support distinct communities [8].

As a starting point, we consider several questions:

- What are the use cases where maps are produced or edited by non-academics?
- How will the maps that are built up collaboratively be understood by prosumers and other consumers?
- Will these players look critically at the content?
- Which forms of maps are preferred by prosumers and why?
- Which forms of semiotics and map language do these maps show?

## 2. Types of prosumer mapping

We ask these questions coming from an understanding of map-making as a communicative activity with strong social and cultural aspects [4] and from a fundamentally critical stance [4,

5, 6]. This means the starting point for the range of prosumer map-making involves a large range of uses and applications in specific contexts. We study this landscape through an interdisciplinary analysis of map-making and types of maps by geographers, cartographers, cognitive scientists, sociologists, and information and communication scientists. We suggest a preliminary classification of maps and forms of collaborative mapping of digital online mapping media. This initial typology reflects concurrent work on GIScience and SDI developments involving the growth of crowd-sourced data [1], with the goal of critically understanding map-use [3].

### 1.1. Foundations

With assistance of cognitive psychologists, the study of prosumer map-making describes various types of “map languages” in the context of specific uses and production. By making a connection between the use of specific tools and approaches to the deployment of a specific cartographic grammar, we aim to have a better understanding of types of maps developed by prosumers that rests on a solid theoretical and empirical foundation.

## 3. Expected results

The project commenced in May 2014. For this poster, we present interim results for discussion and consideration. We are concluding the empirical data collection currently and will also

be able to present some initial outcomes that aim to support prosumers map-making through the identification of good map creation approaches. These approaches should come in the form of helpful guides for the critical use of maps in communication. An important aspect of this is the facilitating a better understanding of linkages among social and scientific modes of map production.

## References

- [1] M.F. Goodchild. Citizens as Voluntary Sensors: Spatial Data Infrastructure in the World of Web 2.0. In: *International Journal of Spatial Data Infrastructures Research*, 2/2007: 24–32.
- [2] M.-J. Kraak, A. Brown. *Web Cartography: Developments and Prospects*. London, 2001
- [3] M. P. Peterson, editor. *Online Maps with APIs and WebServices*. Berlin, Heidelberg (Lecture Notes in Geoinformation and Cartography) 2012.
- [4] E. Sheppard. *Knowledge production through critical GIS: Review and Assessment*. In: *Cartographica*, 40 5-22, 2005.
- [5] F. Harvey, M.-P. Kwan, M. Pavlovskaya. Introduction: Critical GIS. In: *Cartographica*, 40 1-4, 2005
- [6] G. Gartner. Web mapping 2.0. In: M. Dodge, R. Kitchin, C. Perkins, editors. *Rethinking maps. New frontiers in cartographic theory*. London (Routledge studies in human geography, 28), 68–82, 2009.
- [7] G. Gartner. Moderne Kartographie im Spannungsfeld technologischer Entwicklungen und bestehender Implikationen. In: Ch. Reder, editor. *Kartographisches Denken*. Wien (Edition Transfer), 138–145, 2012.
- [8] S. Tzschaschel, H. Wild, S. Lentz, editors. *Visualisierung des Raumes: Karten machen – die Macht der Karten*. Leipzig, 2007.