



# The Politics of Knowledge Production in the Geoweb

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## Introduction

In April, 2011, a discussion emerged on the Public Participatory Geographic Information Systems (PPGIS) listserve, raising pertinent issues around geospatial data production, data ownership, and the role of participation in emergent mapping technologies. The email that sparked the debate was announcing the launch of a new “slum mapping” project using Google Map Maker -- a proprietary geographic database -- and the email solicited participation from listserve members. This project’s goals were contested by community members from OpenStreetMap, a freely-available and editable web mapping platform, invoking the “slum mapping” project’s role in promoting corporate data ownership, disregarding individuals’ contributions, and enacting problematic power relations between mappers and those mapped. Many responded, however, in favor of Google Map Maker’s simple interface and relative openness, which purportedly attract wider participation for



the benefit of under-represented urban areas. This email conversation sparked, in part, many of the motivations behind the current special issue.

As information and social media technologies continue to increasingly incorporate users' geographic location, in a development many geographers call the 'geoweb' (Leszczynski and Wilson 2013; Haklay *et al* 2008; Scharl and Tochtermann 2007), the provocations raised by the above debate resound ever more strongly with current geographic research. Recent work has sought to elucidate and theorize the processes, relations, and shifts involved in the emergence of "crowdsourced geographic knowledge" (Sui, Elwood, Goodchild 2013). Exploring these "knowledge politics" of the geoweb (Burns 2014; Elwood and Leszczynski 2012) has shown that knowledges are produced, represented, owned, and granted legitimacy through a number of social and political processes. The geoweb itself enacts an uneven and diffracted landscape for claims to representation and legitimacy. This becomes particularly important in the wake of large-scale shifts around institutional roles and responsibilities of public and private sector mapping involvement, and in particular the growing presence of profit-based mapping ventures (Leszczynski 2012).

Research on the geoweb has extended principles and insights from critical, participatory, and feminist GIS in ways that resonate with new shifts in the participation and data production processes seen above (Elwood 2008). In particular, uneven access to technologies and the means to leverage them effectively will influence how the technologies develop and the exclusions they imply (Haklay 2013; Gilbert 2010). In this sense, geoweb technologies and the data produced through them both reflect and impact social and political relations, rather than erasing them (Graham and Zook 2013; Chrisman 2005). The geoweb's continued focus on visual representations of data necessitate critical reflection on the role that visibility -- or its lack -- plays in power relations, either between those who see and those seen, or in the potential desire to remain *invisible* (Burns 2014; Young and Gilmore 2014; Stephens 2013). With attention to the relationalities implied in geoweb technology, geoweb research has raised questions about both gender (Leszczynski and Elwood 2014; Stephens 2013) and the role of participation and relations in emergency management and humanitarianism (Burns 2014; Roche *et al* 2011; Goodchild and Glennon 2010).

Geographers are uniquely positioned to address pressing concerns surrounding the politics of knowledge production that arise from the inherent inequalities of geographic technology access and usage. This special issue contributes to these conversations by exploring the politics of knowledge production that emerge around themes of participation. Knowledge politics and participation have both been cornerstones of critical geographic approaches to studying the geoweb. They entail significant implications both for how the technologies and data impact everyday geographies, and for how geographers understand new spatial technologies.

Ethical questions have tracked the evolution of participatory and volunteered cartographic methodologies in geoweb research. In this issue McCall, Martinez, and Verplanke develop a framework to help analyze the thorny ethical questions of the geoweb, focusing on participation and good governance. The authors identify ten characteristics that are present in all VGI initiatives and relate these to five categories of good governance. They then apply this framework to two governance case studies: Mysore, India's electronic grievance reporting system, and Zanzibar's human sensor web for public water service.

The metaphors that we as researchers use to characterize and understand participation in turn shape the lessons and principles we cull from geoweb activity. Comprehending geoweb participation is not merely about description, but is about developing systems of thought around new forms of spatial and social practices. Johnson and colleagues seek to counter the dominant perspective of citizen participation as "sensors" in geospatial technology through an analysis of three geoweb projects that sought to incorporate more authentic and transparent forms of community participation. They find that power differentials, university researchers and citizen participants, and the nature of project funding, helped to promulgate myths surrounding the 'openness' of geoweb that continue to impinge upon the promise online geospatial technology. Dosemagen and Warren analyze the Public Laboratory of Open Technology and Science (PLOTS) Grassroots Mapping project in Lima, Peru. They find that this project jettisons traditionally limited conceptions of public participation in citizen science, and that by being involved in data collection and analysis processes, citizens can develop critical expertise and actively redefine expertise and what constitutes meaningful participation. The epistemology of data in the geoweb is distinct from that in traditional GIScience approaches. McConchie's piece explores the epistemological nature of the geoweb by honing in on the individual, the "hacker" figure. McConchie shows how focusing on "hacker" subjectivities can disentangle binaries persistent in geoweb debates, such as expert/novice and professional/amateur. His notion of "hacker cartography" helps to clarify the in-between subjectivities, so to speak, by connecting across these boundaries. However, he concludes that while many will self identify as "hackers", they may not identify with the label of "hacker cartography", thus necessitating further research into the intersection of epistemology and subjectivity.

## Conclusion

Each of the papers in this special issue touches on the politics of knowledge production in the geoweb. We suggest themes that emerge here, including knowledge politics, participation, and ethics, are fruitful avenues for exploring these politics, and, more broadly, the social and political implications of new geographic technologies. By drawing our attention to the practices, structures, and struggles around *knowledge*, this special issue draws on important prior work of critical, participatory, and feminist GIS, yet extends them into the new geoweb

context. This collection shows how these bodies of research remain important for understanding the new technological landscape, yet it suggests ways in which current thinking needs to shift to make sense of the geoweb. As such, it represents an important intervention into geoweb research and critical technology studies more broadly.

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