Participatory Geoweb: A Research Agenda

Renee Sieber [1]

1 Geography/Environment (joint appointment), McGill University, Renee.Sieber@mcgill.ca

Abstract

This presentation frames a research agenda for the Participatory Geoweb, that is, the involvement of advocacy nonprofits and marginalized communities—civil society—in the geospatial technologies of Web 2.0.

Background and Relevance

The Geoweb—the intersection of geospatial awareness and Web 2.0—has created a paradigm shift in GIScience and Geomatics. Its platform independence, friendly user interface, user-generated content, and (in the case of digital earths such as Google Earth/Maps and MS Virtual Earth) bundled geospatial information create an appealing foundation upon which to launch geographic applications. A significant contribution of the Geoweb is its seeming facility to engage the public, whether this is accomplished through screen scrapings and mashups, or the geolocation of stories and points of interests on digital earths (D. Butler 2006). There is a small but important literature emerging on the participation of the public in this emerging medium (Gibson and Erle 2006; Scharl and Tochtermann 2007; R. Butler 2006; Turner 2006; Tulloch 2007) but it tends towards the mechanical and the evangelical.

This short presentation will frame a critical research agenda for the Participatory Geoweb, that is, the involvement of advocacy nonprofits and marginalized communities—the civil society—in the geospatial technologies of Web 2.0. It builds on prior research in participatory GIS (Craig et al. 2002; Sieber 2006), which has demonstrated the importance of understanding the nature of public, the extent to which participation is actually taking place and the association between participation and empowerment. Because this is a new medium, and (potentially) a new way of thinking about distributed online geospatial information, existing lessons do not necessarily transfer. For example, the Geoweb may represent the "tyranny of the individual", that is, a far more atomistic level of personal engagement than in traditional PGIS activities. In addition to a critical research agenda examining the nature of participation, a research agenda could frame requirements for spatial literacy, challenges in geospatial data handling and access, the place for user generated content, the utility for spatial analysis (and other traditional GIS activities), and the role of culture in mediating application development. At minimum, it would be helpful to simply "map out" the emergent applications of geographically represented information on Web 2.0. Finally, a research agenda must be driven by actual needs of people and remain relevant to the civil society that has become transfixed (at least momentarily) by the Geoweb.

Methods and Data

The methodology consists of a content analysis of existing applications and data (e.g., kml's, scraped sources), review of existing geoweb literature and interviews with key actors (primarily neogeographers). Moreover, certain promoters of the Geoweb—self-termed neogeographers (Turner 2006)—tend to hold GIS (and PGIS) researchers in some disdain, so a research agenda has added need to connect its findings to long-term practice. I am in the process of developing

applications on three digital earths that integrate analysis and representation. The key point will be the extent to which PGIS is relevant to understanding how and why and to what effect civil society becomes engaged in the Geoweb.

Results

As this research is in the formulation stages, I will report on the initial framing of the research agenda.

Conclusions

It is expected that, after an initial hype about the power of online mapping and mashups, the Geoweb will become yet another prosaic tool in the arsenal of Web 2.0 applications that appear online and on mobile devices. Nonetheless it will provide another avenue to jump scale so that individuals and groups can obtain far larger outreach in their advocacy. It is hoped this research can provide a guide and a cautionary note for empowerment on the Geoweb.

References

Butler, Declan. 2006. Virtual Globes: the World Wide Web. *Nature* 439(7078): 776-778.

Butler, Rhett. 2006. Amazon Conservation Team puts Indians on Google Earth to Save the Amazon. Mongabay. http://news.mongabay.com/2006/1114-google_earth-act.html

Craig, W. J., T. M. Harris and D. Weiner. 2002. *Community Participation and Geographic Information Systems*. NY: Taylor and Francis.

Gibson, R. and S. Erle. 2006. *Google Map Hacks*. O'Reilley.

Scharl, A., and K. Tochtermann. 2007. *The Geospatial Web: How Geobrowsers, Social Software and the Web 2.0 are Shaping the Network Society*. Springer.

Sieber, R. E. 2006. *Public Participation Geographic Information Systems: A Literature Review and Framework*. Annals of the American Association of Geographers 96(3): 491–507.

Tulloch. 2007. Many, many maps: Empowerment and online participatory mapping. *First Monday* 12(2). http://www.firstmonday.org/issues/issue12_2/tulloch

Turner, Andrew. 2006. *Introduction to Neogeography*. NY: O'Reilly.