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Spatial Approaches in International Development: Possibilities at the New School

Adriana Abdenur

In 2003, the city government of Rio de Janeiro, Brazil launched *Portal Geo*, an online portal for spatially referenced census data, satellite photos, and geospatial information technology (GIS). Among other features, the portal allows users to visualize and spatially analyze the city's slums, or *favelas*. Considering that for most of the city's history official maps of Rio omitted these areas altogether (in effect, casting a blind eye towards around one-fourth of the city's population), the portal opens up vast possibilities for research and policymaking related to urban growth and inequality in Rio de Janeiro. Its mapping and analysis features can shed light various issues, including trends in urbanization, inequality access to transportation routes, the geographic distribution of infrastructure, the incidence of violent crime, and deforestation in the city's protected areas. More broadly, Rio de Janeiro's Portal Geo shows how GIS and other spatial techniques can help researchers, policymakers, and community activists alike investigate a wide gamut of development-related problems. These are growing possibilities that the GPIA is well-positioned to explore.

Over the past ten years, technologies like GIS and GPS (global positioning systems) have diffused and diversified, and the Internet has helped boost the accessibility of a number of programs, including GoogleEarth and the EPA's EnviroMapper. Despite these advances, development experts (both those in scholarship and practice) have been somewhat slow to incorporate spatial approaches. They are not alone in this lag: in general, there has been a disconnect between the technical, pragmatic dimension of these spatial technologies and the social sciences. There are at least three reasons behind this gap. First, most modern spatial technologies have been developed within highly pragmatic, problem-solving contexts. Second, social scientists have been -- and continue to be -- trained in qualitative and quantitative methods that largely neglect the locational dimension of social phenomena. Finally, and more broadly, education systems have long privileged verbal and mathematical forms of reasoning over spatial thinking, which most curricula and exams oversimplify as "map-reading skills."

One step towards bridging this gap involves acknowledging that, far from mere tools, spatial technologies are part of a broader approach to social problems that can be called the "spatial perspective." This approach need not necessarily involve high-tech solutions, and it can draw on the work of scholars like David Harvey, Edward Soja, Henri Lefebvre, and Scott Lash, all of whom grapple with issues of spatial representation, scale, and the space-time relationship in urban areas. In addition to critically engaging with the spatial dimension of socioeconomic phenomena, this spatial agenda seeks to integrate spatial visualization and analysis methods (including novel technologies like GIS but also "low-tech" methods such as community mapping). A few initiatives have recently been devoted to furthering the integration of spatial approaches within the social sciences, led by geographers yet aimed at a broader audience. This past July, the Center for Spatially Integrated Social Sciences, (CSISS) housed at the University of California, Santa Barbara, held one of a series of workshops devoted to stimulating interdisciplinary discussions and launching concrete efforts related to the application of spatial approaches within the social sciences, both in research and pedagogy. The SPACE workshop gathered some 20 professors and researchers from institutions around the US and abroad to brainstorm how the spatial approach can be integrated into disciplinary curricula within the social sciences.

As a workshop alumna, I have been pondering the role of spatial approaches within GPIA's research agenda and curriculum – an interest shared by many others at the program. Arguably, all development processes have a spatial dimension; the field naturally lends itself not only to adopting spatial innovations but in fact pioneering new approaches and frameworks. Indeed, the use of spatial perspectives in international development is spreading fast, although often in a haphazard manner. Scholars and practitioners increasingly rely on GIS, remote sensing, flow mapping, and spatial statistics to understand phenomena as varied as natural disasters, industrial clusters, urban poverty, urban infrastructure, and migratory flows. Government agencies, NGOs, and international organizations have also launched a variety of such projects. The UNDP recently partnered with RMSI, a global IT company, to develop a disaster risk profile for the Maldives. The World Bank's Spatial Analysis Unit has recently produced materials on topics like the location of economic activity in Indonesia and sustainable development in Pakistan's Indus Basin.

A number of GPIA and affiliated faculty are working on research projects that incorporate spatial perspectives and methods, including locative media using cell phone technologies, GIS mapping, and analyses of the context in which such techniques have arisen. Moreover, the New School various resources that can be tapped into, including the Parsons Institute for Information Mapping (PIIM) and the university's vast array of courses and projects related to spatial (urban and non-urban) design. Some students have taken a few steps in this direction. Sara Rowbottom, a GPIA student concentrating in Cities and Urbanization, has taken GIS-related courses at the New School and at Hunter College. She recently began a thesis that incorporates a critical approach to the role of GIS in conjunction with participatory research on urban infrastructure, drawing on the fieldwork that she and seven others conducted this past summer in Dakar, Senegal. Initiatives like these, by both students and faculty, can help the GPIA define the role that spatial approaches play in its curriculum, as well as GPIA's role within the broader agenda of integrating spatial thinking into the analysis of socioeconomic phenomena.

***Some Useful Resources*:**

- Rio de Janeiro's Portal Geo: http://portalgeo.rio.rj.gov.br/website/BaseGeo/viewer.htm
- CSISS website: http://www.csiss.org/
- Goodchild, Michael F. and Donald G. Janelle (Eds.) (2004) Spatially Integrated Social Science Oxford: Oxford University Press.
- National Research Council (2006) Learning to Think Spatially. The National Academies Press. Available online (and for ordering): http://www.nap.edu/catalog/11019.html.
- GIS Corps: http://giscorps.org/