

Bookreview: Jason Corburn, Street Science: Community Knowledge and Environmental Health Justice (Cambridge, MA: MIT Press, 2005), 217 pp. ISBN 0262532727, \$24.00/£15.95

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Book reviews

Jason Corburn, *Street Science: Community Knowledge and Environmental Health Justice* (Cambridge, MA: MIT Press, 2005), 217 pp. ISBN 0262532727, \$24.00/£15.95. DOI: 10.1177/0963662507080988

The notion of environmental justice, or “environmental inequality” as it is often expressed in the UK, explores the association between environmental exposure and affluence, social class, age profile, gender or ethnicity. In the USA, the idea of environmental justice grew because evidence indicated associations between greater exposure to harmful environmental outcomes and residential locations of black and ethnic minority communities. A recent review of research in the UK highlighted a number of mechanisms through which environmental inequalities manifest in society, from local to global issues (Lucas et al., 2004).

As the need to understand environmental outcomes and their impact on communities grows, so greater emphasis comes to be placed on justice and equity. It becomes necessary to understand communities’ attitudes and their local knowledge of the environment, to identify local action priorities and appropriate ameliorating policies and decisions. In his book Jason Corburn explores practical methods (“street science”) used by diverse low-income ethnic minorities to gather local knowledge to investigate health problems and inform environmental health policy.

The book is divided into seven chapters. The first chapter outlines the nineteenth-century roots and recent history of local knowledge in environmental health policy. It explores the dominant risk framework frequently used to analyze environmental health today, and identifies how this leads to professional autonomy which often inhibits community participation in the decision-making process. This chapter is a useful benchmark for asking why street science and local knowledge is important.

Chapter 2 outlines the author’s definition of local knowledge in the context of the book. He

first notes the various definitions and interpretations according to the policy science, anthropology and development literatures. In this chapter Corburn does not specify one absolute definition of local knowledge, but identifies the diverging characteristics between local and professional knowledge.

Corburn describes local knowledge as the first-hand experiences of residents and communities, stating that it encompasses, “the accounts, stories, tests and practices of residents” (p. 12). The capture of local knowledge for both environment and health-inequalities research is both useful and necessary. Yearley, Forrester and Bailey (2001) made two observations regarding the synthesis of local knowledge and public policy: firstly, they noted that public knowledge was not being fed into the policy system in any useful manner and it is not captured consistently in any particular structure. Secondly, they observed that knowledge was little understood by experts or even policymakers. The narrative case studies in chapters 3–6 show how both of these points can be addressed through appropriate communication. This presents one of the indirect themes of the book, which relates to how effective communication aids both professional and public understanding of local issues.

If local knowledge is captured in an organized, well-structured way it can provide a useful tool for generating local policy-orientated dialogue and decision-making. It also improves engagement between the public and local government, and assists in community empowerment. It is to this end that chapters 3–6 of *Street Science* became interesting. These chapters are the heart of the book and describe practical, real-world scenarios where local knowledge has been effective in challenging existing policy and decisions.

Corburn describes four practical street-science approaches used by local communities in the Greenpoint/Williamsburg neighborhoods of Brooklyn, New York to tackle environmental health policy and planning. The scientific methods employed varied according to the situation. In the

first example, a local community organization, using professional techniques, carried out interviews with neighborhood residents. Results were used to inform government professionals about new types of questions they should be asking of their data, and indicated the need for further toxic analysis. In the second example, local knowledge was used to enhance traditional epidemiological surveys and increase collective self-help, community organization and capacity building (p. 139). In the third example street science was used to support legal claims to convince the Supreme Court of the City Council's negligence.

The final example illustrates the power of mapping to provide simple visual representations of complex problems. The community hazard map, produced by younger community members, brought together different ethnic groups because it visualized the complex issues that face the entire neighborhood.

Corburn identifies four practical ways in which local knowledge can contribute to health research and policymaking, in the form of: epistemology, procedural democracy, effectiveness and distributive justice. As a researcher interested in social-capital relationships of environmental and health inequalities, I think he could add social capital to this list, as it is a useful by-product of street science.

No absolute definition of social capital is available in the literature, but common definitions presented by Putnam (2000) and Bourdieu (1984) are used widely. In 1998 Woolcock stated that social capital was a resource of agents needing to coordinate for mutual benefit. More recently Berkman and Kawachi (2000) suggest that two common features spanning all definitions of social capital are that it is an ecological construct, and that it incorporates a sense of public good. It appears to me that bottom-up research and decision-making by local communities enhances community cohesion, reduces social exclusion and raises both the bridging and the bonding social capital of neighborhoods and communities. It struck me that the participants in the case studies here are harnessing individual skills and human capital to enable each other to work for a common collective goal, and thus are increasing the social capital of the neighborhood.

This book is easy to read, enjoyable and informative, and it provides practical solutions that work effectively in given situations. The narrative is fluid, and has a well-defined, coherent structure.

The four case studies are engaging, and are well framed by supporting chapters outlining not only the need and importance of local knowledge but also its juxtaposition with professional science. This book is refreshingly accessible and is an excellent supportive text for researchers, students, community members and local government professionals who are embarking on, or are currently engaged in, local knowledge gathering or community participation projects.

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Sheldon Krinsky, *Science in the Private Interest: Has the Lure of Profits Corrupted Biomedical Research?* (Lanham, MD: Rowman and Littlefield, 2004), 264 pp. ISBN 0742543714, \$19.95 (paperback).