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Author

Maret, Susan

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Review: Street Science: Community Knowledge and Environmental Health Justice
By Jason Coburn

Reviewed by [Susan Maret](#)
University of Denver, USA

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Jason Coburn. *Street Science: Community Knowledge and Environmental Health Justice*. Cambridge, MA: MIT Press, 2005. ISBN 0-262-03333-X. \$60.00 Cloth. (271p.)

Street science is described by Jason Coburn (p.8) as a practice of knowledge production that embraces a "co-production framework," and is a "process that emphasizes the need to open up both problem framing and subsequent methods of inquiry to local knowledge and community participation." Coburn, Assistant Professor in the School of International and Public Affairs, and the Urban Planning Program in the Graduate School of Architecture, Planning, and Preservation at Columbia University, and former Senior Environmental Planner with the New York City Department of Environmental Protection, wrote much of *Street Science* during a dissertation fellowship (p. ix).

Street science springs in part from local (community) knowledge, which Coburn (p.12) describes as "the scripts, images, narratives, and understandings we use to make sense of the world in which we live." *Street science* is a practice of science, political inquiry, and action, which is situated and evolves in a community (Coburn, p.44). Community case studies such as the population-dense and polluted [Greenpoint-Williamsburg](#) section of Brooklyn, [El Puente](#) efforts to monitor asthma in its community, [Cari Comart and her community's fight](#) to prevent lead poisoning resulting from the fallout of sandblasting the Williamsburg Bridge, and the [Toxic Avengers](#), a group of high school students who organized to raise community awareness of the [Radiac Corporation](#), illustrate the practice of *street science*. These particular case studies support Coburn's (p.71) theory that local knowledge informs environmental health research and environmental policy making in four related ways: 1. by making a cognitive contribution by rectifying the tendency towards reductionism; 2. by fostering of a "hybridizing" of professional discourse with local experience; 3. pointing out low-cost and more effective interventions or remedies; and 4. by raising previously unacknowledged distributive justice concerns that disadvantaged communities far too often face.

In reporting on *street science* practices, which range "from missing hazard information to detailed cultural practices that influence human exposures to

pollution," Coburn shows that citizens act as change agents. This situation is suggestive of Ulrich Beck's complex theory of *reflexive modernization*, which postulates that as people become less constrained by social institutions, they are in a position to *mold* the process of modernization rather than remain passive observers of a system in which they hold no stake (Irwin p. 44). In Beck's world, individuals have the opportunity to become change agents by way of information - information is key to the (re)shaping of the social and political world. This dynamic holds consequence for understanding the fluidity of not only social and political action, but also for self-determination and empowerment; as Coburn (p.201) says, "political power hinges in part on the ability to manipulate knowledge and to challenge evidence presented in support of particular policies." Local knowledge and community based practices, as Coburn writes, are sometimes labeled as romantic or populist; however, these views overlook the structural and global dimensions of problem solving.

Coburn (p.218) believes that *street science* leverages community power imbalances, and can increase agency or decision maker understanding of a community's claims, thereby potentially increasing public trust. While Coburn (p. 202) is careful to note that *street science* is not "inherently superior to nor should replace professional ways of knowing," *street science* allows the "fallibility of local knowledge" to be integrated into the public debate, as well as allowing "new modes of collaborative inquiry from local and professional science to improve environmental health" (p. 202).

Not mentioned in *Street Science* are the theoretical perspectives of Michael Edelstein's classic work *Contaminated Communities: Coping with Residential Toxic Exposure* and Ulrich Beck's seminal idea of *reflexive modernization*, ideas that would have strongly contributed to the theoretical framework of *Street Science*. That said, *Street Science* offers valuable insight into the ways community residents act on hypotheses "often developed over years of living with environmental pollution and disease" to show that environmental-health justice is essential to "democratizing research and intervention decision making" (Coburn. p.201). It is in this light I believe *Street Science* is a contribution to the participatory action research, environmental justice, environmental sociology, environmental politics, and planning literature, and is a solid purchase for academic, special, and public library collections.

References

Beck, Ulrich, Anthony Giddens and Scott Lash. *Reflexive Modernization : Politics, Tradition and Aesthetics in the Modern Social Order*. Stanford, CA : Stanford University Press, 1994.

Irwin, Alan. *Citizen Science: A Study of People, Expertise and Sustainable Development*. New York: Routledge, 1995.

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Susan Maret Ph.D. <smaret@du.edu> is adjunct professor, University of Denver, Dept. of Library and Information Science, 2135 E. Wesley Ave., Denver, CO 80208, <http://www.du.edu/LIS>