KFortun SHOT Data Mgmt Panel

Adventures in Data Management: Challenges and Key Developments in Collaborative Research   Kim Fortun, RPI

My presentation will describe work I've been involved in to develop state-of-the-art data management capabilities in the Platform for Experimental, Collaborative Ethnography (PECE, pronounced "peace"), guided by recommendations of the Research Data Alliance (RDA) and other initiatives promoting open scholarship. PECE is an open source, virtual research environment designed to support collaboration among globally distributed researchers working with many kinds of data over extended periods of time. PECE can also serve as information architecture for individual researchers, for classes, and for research networks. RDA is an international initiative that brings diverse "domain" groups (in different disciplines and topical areas) together with varied technical groups (focused on standards and infrastructure supporting metadata, repository design, "data fabric" that connects repositories, etc.) I co-chair RDA's Interest Group for Digital Practices in History and Ethnography, which has given me the opportunity to learn from others in my own field involved in the development of research data infrastructure, from developments in adjacent fields, and from the many kinds of technical experts involved in RDA. RDA also issues recommendations for shared practices in research data. PECE has implemented RDA's recommendations for data management -- regarding meta-data interoperability, data access control, data format control, data retention and disposition, recording of provenance, and data back-up.

Two primary projects have served as test-beds for PECE thus far: The Asthma Files (TAF), an on-going collaborative ethnographic research project to understand the cultural dimensions of environmental health. Many different projects (including dissertation projects) have run within TAF. Currently TAF is supporting an (partially NSF funded) ethnographic study of air pollution governance in ten cities (in the United States and Asia), with collaborating researchers based in each city. The project has posed many and varied data management challenges, which I will share. The Disaster-STS Network also runs on PECE, demonstrating different challenges (with data management, among other things) that arise in constituting an international research *network* (rather than an international research *project)*. Through these projects, we've developed our thinking about what research data is, about workflow (that often remains unexpressed in talk about "research methods"), and about the many reasons why it is both valuable – and not always possible or right – to share research data.

This work in part extends from years (2005-20010) as an editor of *Cultural Anthropology*, during which development of digital infrastructure was a key challenge, surrounded by debates about the possibility and ethics of open access scholarship. My work on data management also extends from long running anthropological study of the environmental health sciences, from which I've learned how capacity to preserve, discover, integrate and collaboratively analyze research data can animate research fields, supporting foundational knowledge developments.

Kim Fortun is a cultural anthropologist and Professor of Science & Technology Studies (STS) at Rensselaer Polytechnic Institute. Her research and teaching focus on environmental risk and disaster, and on experimental ethnographic methods and research design. Her research has examined how people in different geographic and organizational contexts understand environmental problems, uneven distributions of environmental health risks, developments in the environmental health sciences, and factors that contribute to disaster vulnerability. Fortun's book Advocacy After Bhopal Environmentalism, Disaster, New World Orders was awarded the 2003 Sharon Stephens Prize by the American Ethnological Society. From 2005-2010, Fortun co-edited the Journal of Cultural Anthropology. Currently, Fortun is working on a book titled Late

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Industrialism: Making Environmental Sense, on The Asthma Files, a collaborative project to understand how air pollution and environmental public health are dealt with in different contexts, and on design of the Platform for Experimental and Collaborative Ethnography (PECE), an open source/access digital platform for anthropological and historical research. Fortun also runs the EcoEd Research Group, which turns ethnographic findings about environmental problems into curriculum delivered to young students (kindergarten-grade 12), and is helping organize both the Disaster-STS Research Network, and the Research Data Alliance's Digital Practices in History and Ethnography Interest Group. Fortun coedits a book series for University of Pennsylvania Press titled Critical Studies in Risk and Disaster, designed to connect academic research to public problems and policy, reaching audiences in different regions of the world. Fortun is President-elect of the Society for Social Studies of Science, the international scholarly society representing the field of STS.