

**Triple Session Title:****“Knowledge from the Margins, Innovation and Institutional Change”****Time:** Fri, Nov 4, 2011 - 8:30am – 12:00pm; 01:30pm – 03:00pm      **Place:** Crowne Plaza, Dolder Room**Meeting:**

4S Annual Meeting, co-located with the History of Science Society (HSS) and the Society for the History of Technology (SHOT)

Nov 2-5, 2011 Cleveland, Ohio

**Five Keywords:** Knowledge, Innovation, Democracy, Users, Expertise**Categories:** (I) Public Engagement / Social Movement; (K) Science, Technology, and Public Policy; (L) Theory and Method**Session Abstract (Summary & Rationale):**

Knowledge from the margins is of longstanding interest to the field of Science and Technology Studies. Modern technoscientific knowledge is typically understood to be produced for patent, profit, and/or its liberal virtues. The early focus on innovative knowledge resulted primarily in elite histories of Western (typically male and Caucasian) technologists and scientists going through the frustrations and satisfactions of life in laboratories. However, such studies begged the question, where does this knowledge go, what does it do, and for whom? Later STS scholars often explored this question from the point of view of those in 'the margins' who are: peripheral to modern knowledge production (e.g. civil society organizations, laypersons); 'lacking' modern knowledge production (e.g. non-Western, indigenous); or excluded from modern knowledge production (e.g. female, minority, disabled).

This triple session will demonstrate how a theoretical focus on knowledge from the margins resists typical ways of conceptualizing producers, users and innovation, and radicalizes thinking about institutional change. Part I will topically focus on 'sciences from below' and how they question assumptions about the knowledge production process that are common to Western societies. Part II will demonstrate how perturbing the user/producer boundary resists typical ways of thinking about the design and consumption of information and communications technologies. Part III will discuss how modern ideologies of technocracy and/or neoliberalism shape local knowledge and, conversely, allow for local knowledge to challenge expert regulation. STS and other scholars in women's studies, geography, political sociology of science, and sociology of technology will be interested in this session.

## Triple Session Organization

### Session Part I :

“Knowledge from the Margins, Innovation and Institutional Change: SCIENCES FROM BELOW”.....	3
Time: Fri, Nov 4, 2011 - 8:30am – 10:00am Place: Crowne Plaza, Dolder Room.....	3
Sandra Harding, UCLA, sharding@gseis.ucla.edu	
“Secularism and Indigenous Knowledge: Challenges for Westerners”.....	3
Laura A. Foster, UCLA, fosterlauraa@yahoo.com	
“Epistemic Citizenship and the Patenting of Indigenous Knowledge”.....	3
Xiaofeng “Denver” Tang, Rensselaer, tangx3@rpi.edu	
“Shanzhai: An Incomplete Cultural Innovation”.....	4
Jessica Lyons, Rensselaer, lyonsj2@rpi.edu	
“Science from the Fringe: The Makah in Washington”.....	4
Discussant: Virginia Eubanks, State University of New York at Albany, veubanks@albany.edu.....	4

### Session Part II :

“Knowledge from the Margins, Innovation and Institutional Change: USERS AS PRODUCERS”.....	5
Time: Fri, Nov 4, 2011 - 10:30am – 12:00pm Place: Crowne Plaza, Dolder Room.....	5
Toluwalogo B. Odumosu, Harvard, Tolu_Odumosu@hks.harvard.edu	
“ Re-thinking the margins of knowledge creation: Reconfigured 'producers' and productive 'users' ”.....	5
Kevin R. Fodness, Rensselaer, fodnek@rpi.edu	
“Taking Control of Accessibility: Disabled Information Technologists and Recursive Publics”.....	5
Guillaume Latzko-Toth, Université Laval, guillaume.latzko-toth@com.ulaval.ca	
“Users as co-designers of interactive media”.....	6
Chris W. Anderson, City University of New York (CUNY), Christopher.Anderson@csi.cuny.edu	
“Networks of Communicative Expertise: Marginal Practices and Journalistic Knowledge”.....	6
Discussant: Amit Prasad, University of Missouri at Columbia, prasada@missouri.edu.....	6

### Session Part III :

“Knowledge from the Margins, Innovation and Institutional Change: CHALLENGING REGULATORY FRAMEWORKS”.....	7
Time: Fri, Nov 4, 2011 - 01:30pm – 03:00pm Place: Crowne Plaza, Dolder Room.....	7
Rebecca Lave, Indiana University at Bloomington, rlave@indiana.edu	
“Neoliberalism and Knowledge from the Margins”.....	7
Logan D. A. Williams, Science and Technology Studies, Rensselaer Polytechnic Institute	
“Cosmopolitan appropriation: white cataracts and the innovative user as producer”.....	7
Javiera Barandiarán, UC-Berkeley, jba@berkeley.edu	
“In Search of Democracy and Experts: Environmental Regulation in Chile”.....	8
Discussant: Gwen Ottinger, University of Washington at Bothell, ottinger@u.washington.edu.....	8

**Session Part I :****“Knowledge from the Margins, Innovation and Institutional Change: SCIENCES FROM BELOW”*****Non-Western Knowledges and Innovative Governance*****Time:** Fri, Nov 4, 2011 - 8:30am – 10:00am**Place:** Crowne Plaza, Dolder RoomChair: Logan D. A. Williams, Rensselaer, [willil8@rpi.edu](mailto:willil8@rpi.edu)Chair: Toluwalogo B. Odumosu, Harvard, [Tolu\\_Odumosu@hks.harvard.edu](mailto:Tolu_Odumosu@hks.harvard.edu)***Sandra Harding, UCLA, sharding@gseis.ucla.edu******“Secularism and Indigenous Knowledge: Challenges for Westerners”*****Abstract:**

The overtly religious and spiritual ontologies, epistemologies, and methodologies of many non-Western knowledge systems constitute perhaps the greatest challenge for Westerners to fair and empirically-adequate reevaluations of the strengths and limitations of such knowledge systems. The emergence of a recent literature in social theory on secularism suggests good reasons to reexamine just which kind of secularism multicultural democratic societies (both national and global ones) should want for their sciences. Moreover, we can ask what implications such re-evaluations could have on science policies and practices around the globe. Should indigenous knowledge better travel in the modern West and internationally? In what ways?

***Laura A. Foster, UCLA, fosterlauraa@yahoo.com******“Epistemic Citizenship and the Patenting of Indigenous Knowledge”*****Abstract:**

Hoodia is a succulent plant grown in Southern Africa used by the Indigenous San peoples to suppress appetite and ease breastfeeding. In 1996, South Africa’s Council for Scientific and Industrial Research (“CSIR”) patented Hoodia’s P57 compound and granted licenses to Phytopharm and Unilever to develop it as an anti-obesity product. In response, the South African San Council publicly condemned CSIR and negotiated an access and benefit sharing agreement in 2003 requiring CSIR to give a percentage of profits to San communities. A second benefit sharing agreement was also signed in 2007 between the South African San Council and the South African Hoodia Growers Association (“SAHGA”).

Science studies scholarship provides valuable insights into the struggles over the patenting of Indigenous knowledge. Debate focuses on extending intellectual property rights to traditional knowledge, and the possible advantages/disadvantages of patent ownership for Indigenous peoples. Based on qualitative research, this paper shifts this debate by asking how struggles related to the patenting of Indigenous knowledge transform new meanings of citizenship.

Expanding upon notions of “civic epistemologies” and “biological citizenship,” I examine how struggles over the patenting of Hoodia signal new forms of citizenship arising within post-apartheid South Africa. In particular, I ask how Unilever, CSIR, SAHGA, and the San employ gendered and ethno-racialized discourses of vulnerability in making citizenship claims for protection of their processes and ways of knowing. Through this examination, I develop epistemic citizenship as a conceptual analytic for understanding how characterizations of Indigenous knowledge are used to structure inequitable citizenship claims.

***Xiaofeng “Denver” Tang, Rensselaer, tangx3@rpi.edu***  
***“Shanzhai: An Incomplete Cultural Innovation”***

**Abstract:**

Shanzhai, sometimes translated as “copycat” or “knock-off,” originally described some Chinese underground manufacturers' action of imitating and pirating product design from famous brands. As “Shanzhai Cellphones”--cellphones copying Blackberry, iPhone, etc.--gained a considerable market share in China, the idea of Shanzhai was popularized and feverishly debated by people on the Internet. Many netizens in China acknowledged the creative imitation contained in Shanzhai and joined in a “Shanzhai movement” of cultural innovation. Shanzhai as a cultural movement includes creative and humorous parodies of authoritative or famous figures and activities. The burgeoning of Shanzhai movement vividly demonstrates the vigor of grassroots movement in challenging the mainstream culture dominated by political and business elites, sometimes via creative appropriation of technologies.

This paper examines Shanzhai movement as a pattern of cultural innovation. In this paper I carry out a Wittgensteinian analysis of the language people use to talk about Shanzhai in order to probe how grassroots make sense of this movement and how they use information technology to creatively express their resistance to cultural authority. I conclude by documenting how Shanzhai movement as a cultural innovation was co-opted by business and lost coherence among its participants; I further question how cultural innovation by grassroots might withstand various barriers and gain constant momentum.

***Jessica Lyons, Rensselaer, lyonsj2@rpi.edu***  
***“Science from the Fringe: The Makah in Washington”***

**Abstract:**

Branching off of a previous ethnographic study on the Makah relationship to whaling, this project looks at the many ways in which the North American Makah Nation has become involved in the development of environmental policy. In addition to using the authority of science extensively in their arguments for indigenous whaling and developing a strong relationship with the US Whaling Commission, the Makah are also actively involved in a number of environmental issues regarding resource management. For example, in addition to organizing a number of scientific and cultural exchanges with other indigenous peoples, the Makah are also involved with the Committee for the National Ocean Council, the 2011 Coastal Zone Conference, and are assisting in the organization of a climate change symposia, among other ventures. This project looks at the response to indigenous involvement in policy making, as well as obstacles faced by minority groups. Environmentalist often benefit from capitalizing on the image of “the Ecologically Noble Savage” (Redford, 1990), however, this relationship is a precarious one. As Conklin and Graham (1995) demonstrate in their study of Amazonian Indians, the instability of this “middle ground” (White, 1991) is rooted in contradictions between perceived images of indigenous peoples and the realities of Indian societies. How have the Makah been received in both the public and policy forum, especially when their views may not coincide with standard environmentalist dogma? Likewise, how have the Makah been able to align their local interests with global interests, if at all?

***Discussant: Virginia Eubanks, State University of New York at Albany, veubanks@albany.edu***

**Session Part II :****“Knowledge from the Margins, Innovation and Institutional Change: USERS AS PRODUCERS”*****Users as Designers of ICTs and/or Public Knowledge*****Time: Fri, Nov 4, 2011 - 10:30am – 12:00pm****Place: Crowne Plaza, Dolder Room**Chair: Xiaofeng “Denver” Tang, Rensselaer, [tangx3@rpi.edu](mailto:tangx3@rpi.edu)Organizer: Logan D. A. Williams, Rensselaer, [willil8@rpi.edu](mailto:willil8@rpi.edu)***Toluwalogo B. Odumosu, Harvard, Tolu\_Odumosu@hks.harvard.edu******“ Re-thinking the margins of knowledge creation: Reconfigured 'producers' and productive 'users' ”*****Abstract:**

Margins, borders and boundaries are objects and phenomena with which STS is intimately familiar. Previous work has shown how productive it is to examine borders and the stuff that goes on there, at the margins. STS scholars and researchers have shown that the drawing of boundaries and borders (which are absolutely necessary to create “a margin”) requires epistemological and political hard work, not just to bring the borders and boundaries into being, but also to continuously perform and sustain them, much as the title of the session does – “Knowledge from the margins” – indicating that there are at a minimum two kinds of knowledge, from the margins and from the not-margins.

This paper takes as its starting point, one particular knowledge-margin / border which is maintained and re-inscribed in STS theory and literature, namely, the distinction between “users” and “producers”. It does so by problematizing this margin based on fieldwork conducted on mobile telephone adoption in marginal nonwestern Nigeria. Where should we draw the line between “users” and “producers” in our stories? Who determines which innovations institutions must adapt to? What is the analytical usefulness of the categorical distinction between users and producers? What implications if any, proceed from dismantling the user/producer frame in thinking through mobile technological citizenship in Nigeria?

The paper concludes by arguing for more cautious deployments of the user/producer frame.

***Kevin R. Fodness, Rensselaer, fodnek@rpi.edu******“Taking Control of Accessibility: Disabled Information Technologists and Recursive Publics”*****Abstract:**

This paper/presentation examines the role of information technologists with disabilities in creating and maintaining accessibility software primarily for their own use, or for the use of the communities of disabled people of which they are a part. People with disabilities are marginalized within user groups of technology, and disabled technologists tend to be marginalized within development communities. Therefore, the presentation examines the knowledge and praxis produced by a marginalized community for other members of that marginalized community.

The material for this presentation will come from primary research in the form of interviews and participant observation, as well as secondary research in the form of background material on the history of disabled technologists designing accessibility software.

It expands Chris Kelty's notion of a "recursive public" to include technological development by people with disabilities, for people with disabilities, to overcome accessibility challenges caused by a lack of accessibility elements in existing technology. It connects accessibility concerns and challenges with Zittrain's warnings about the loss of "generative space" by the migration of applications to the cloud, and by the increasing use of data devices which results in a loss of user control over the operating environment.

**Guillaume Latzko-Toth, Université Laval, [guillaume.latzko-toth@com.ulaval.ca](mailto:guillaume.latzko-toth@com.ulaval.ca)  
 “Users as co-designers of interactive media”**

**Abstract:**

Increasingly salient in literature on technological innovation is the idea of a necessary 'redistribution' of agency between the actors of technological innovation. Notably, it appears that the role of users in the construction of communication devices has been underrated, particularly in the case of digital artifacts, which seem to offer more 'plasticity' in response to usage. In some cases, users of interactive media are fully involved in the design process, as was observed in the case of Internet Relay Chat (IRC), where users invented 'services' completing/competing with the initial design, or were institutionally enrolled in governance bodies taking part in technical decisions.

Based upon an in-depth case study of the creation and evolution of the first major IRC networks (EFnet and Undernet), this paper takes on two tasks. First, it tells how the category of the "ordinary user" was socially constructed at an early stage of IRC development when technical roles were still undifferentiated, and it argues that this construction stems from a denial of the power and legitimacy for some actors to act as designers. Then, it describes the ways by which so-defined "users" nonetheless managed to participate in the design of the sociotechnical device, either by appropriating the technical affordances of the IRC protocol flaws and openness (in the case of EFnet) or by being enrolled by IRC operators as allies in network governance (Undernet).

**Chris W. Anderson, City University of New York (CUNY), [Christopher.Anderson@csi.cuny.edu](mailto:Christopher.Anderson@csi.cuny.edu)  
 “Networks of Communicative Expertise: Marginal Practices and Journalistic Knowledge”**

**Abstract (314 words; needs to be 250 words):**

American journalism—as an industry and a set of specific work practices—is currently in the midst of a fundamental transformation, much of it fostered by the growth of digital technologies. Concomitant with these changes, the past decade has seen an explosion in scholarly literature integrating science and technology studies, sociologies of knowledge, and the study of communication in general and journalism in particular. This paper thus contributes to STS literature in the tradition of Pablo Boczkowski, Fred Turner, John Law, Emma Hemmingway, Tarleton Gillespie, Dominic Boyer, and others, looking at the intersection of communication practices, media sociology, and STS.

The proposed paper draws on 3 years of ethnographic research inside the Philadelphia local media “ecosystem,” including more than 6 months at major Philadelphia area news organizations. This research has argued that journalism’s jurisdictional knowledge is created when networked newswork, itself comprised of both social and material artifacts, is overlaid upon a particular form rhetoric about the proper exercise of knowledge. Both these forms of work and discourses of professional “shop-talk” should be documented empirically, if possible. Over the past decade, however, professional journalists have seen a steady erosion of their autonomy vis-as-vis actors from the margins of the communicative field: citizen journalists, bloggers, and others.

This paper, then, responds to the call to study “knowledge from the margins” in two ways. First, it studies how actors at the margins of a particular field affect the knowledge claims and work practices of actors closer to the center of that field. Secondly, it studies a form of socio-technical practice that is itself marginal within the scholarly field of STS itself: journalism and communications. While previous work in STS has examined practices of science, medicine, accounting, economics, the law, and others, this paper aims to continue the application of STS to the domains of media and communication in the spirit of the authors cited above.

**Discussant: Amit Prasad, University of Missouri at Columbia, [prasada@missouri.edu](mailto:prasada@missouri.edu);**

**Session Part III :****“Knowledge from the Margins, Innovation and Institutional Change: CHALLENGING REGULATORY FRAMEWORKS”***Local Knowledge and Expert Regulation***Time: Fri, Nov 4, 2011 - 01:30pm – 03:00pm****Place: Crowne Plaza, Dolder Room**Chair: Kevin R. Fodness, Rensselaer, [fodnek@rpi.edu](mailto:fodnek@rpi.edu)Organizer: Logan D. A. Williams, Rensselaer, [willil8@rpi.edu](mailto:willil8@rpi.edu)***Rebecca Lave, Indiana University at Bloomington, [rlave@indiana.edu](mailto:rlave@indiana.edu)******“Neoliberalism and Knowledge from the Margins”*****Abstract:**

The literature on indigenous ecological knowledge, local knowledge, and amateur science is extensive, and demonstrates a long history of tension between ‘knowledge from the margins’ and formal institutions of science; as long as there has been science in any formal sense, there have been battles over its boundaries. One of the notable features of recent decades, however, is the rise of widely-recognized scientific experts located firmly outside the scientific realm. These experts, despite bearing very little in the way of scientific credentials and a great weight of scorn from the academic community, are accorded tremendous scientific legitimacy by local, national, and international governmental and non-governmental agencies. I will argue in this paper that the rise of neoliberal science management regimes has opened up room for such challenges to academic legitimacy by prioritizing the privatization and commercialization of knowledge. Clearly this creates space for the blatant promotion of science in the service of commercial interests, but I will argue that it may simultaneously create space for science in the service of activist agendas discouraged within academia.

***Logan D. A. Williams, Science and Technology Studies, Rensselaer Polytechnic Institute******“Cosmopolitan appropriation: white cataracts and the innovative user as producer”*****Abstract:**

Cataract surgery is one of the most frequently performed surgeries in the world. Since the 1990s, some ophthalmologists in South Asia have been debating the best surgical practice in the case of white cataracts. This paper provides an empirical case of how public health professionals who are marginalized within the field of ophthalmology are active in appropriating science and technology in a cosmopolitan process. The use of Appiah's 'rooted cosmopolitanism' allows us to better understand the reinvention of surgical practice as a process of technoscientific innovation that is rooted in the local contexts of multiple nations on the periphery of modern science and technology. 'Cosmopolitan appropriation' advances previous theories of appropriation in social studies of science and technology in order to explain: (1) how locations on the 'periphery' can be the impetus for modern technoscientific change; (2) how local contexts are constitutive with global technoscience; (3) how local expert users in the global South can produce high technology in a process of appropriation; (4) how appropriation as historiography helps us better explain an alternative mode of technoscientific change.

***Javiera Barandiarán, UC-Berkeley, jba@berkeley.edu***

***“In Search of Democracy and Experts: Environmental Regulation in Chile”***

**Abstract:**

In industrialized societies, scientists often serve as experts to government and industry on issues ranging from natural resource management to environmental protection. In contrast, in many developing countries, the position of experts is informal, erratic or invisible, even as some common policy tools, like environmental impact assessments (EIAs), require the input and participation of scientific and technical experts. These conditions exist in recently democratic Chile. Though it has known how to harness natural resources for economic growth, environmental conflicts seem to increase and intensify and many criticize a permanent lack of data to evaluate projects through EIAs. Examining a number of large-scale controversies over the use of natural resources, this paper traces the role and position of experts within an emerging environmental regulatory regime in Chile. This paper argues tracing these things says something about Chile, the environment, and expertise.

***Discussant: Gwen Ottinger, University of Washington at Bothell, ottinger@u.washington.edu***