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ENGAGEMENTS

Community-Based Research and Technoscience Activism: A Report on the Living Knowledge 3 Conference

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Since first meeting Henk Mulder of the University of Groningen (Netherlands) Science Shop for Chemistry seven years ago, I have on innumerable occasions cited his lucid description of science shops. In his words, 'A science shop is a not-for-profit organization that mediates or performs research on request by civil society.' In the process, science shops provide knowledge and skills to civil society members as well as students and university researchers; they build equitable partnerships between researchers and civil society organizations; and they inform university leaders and policy-makers of the research and education needs of civil society. For its part, the organization requesting research should be non-commercial, must show that it lacks (all) the resources to do research itself, and needs to demonstrate a capacity to put the research results to productive use.¹

The world's premiere association of science shops is Living Knowledge: The International Science Shop Network, which recently convened its third conference (LK3) from 30 August to 1 September, 2007 in Paris.² Mulder's description of science shop objectives had already appeared on the LK website several months in advance of the gathering. The network's aims were expanded as follows: 'to promote and support public access to and influence on science and technology'.³ With this addition, the stated aims of the science shop network moved beyond promoting the community-based research (CBR)⁵ described above, to engaging the much larger and far more consequential world of research, period.

Expanding the Agenda

The conjoining of CBR on the one hand, and popular participation in the goals and practices of the research system on the other, harbors social and political potentials that belie what might otherwise seem to be an obscure matter. The significance of this connection derives from the *centrality* of R&D in the global economy, the *insularity* of decisions about it, and the *illusions* about the research system's consequences for everyday people that are manufactured by its promoters. Regarding the first point, the research system has become a trump card for the rich countries in global economic competition. From the 1980s onward, policies to direct R&D toward commercial aims were instituted in response to a sustained worldwide profits crisis first evident in the late 1960s. Expenditures have grown rapidly as a consequence, now reaching about \$1 trillion annually. More importantly, a profound commodification of knowledge production and even more concentrated control over it has taken hold within a few decades.⁶

Discrete materializations of these endeavors, such as the ability to genetically modify plant organisms, have engendered considerable controversy and occasional campaigns of opposition. But wider developments during the same period, especially an increased socioeconomic polarization within and between societies, have largely been ascribed by those concerned about them to macro-phenomena such as neoliberal policies and growing corporate power, leaving more proximate sources such as a commercialized research system off the agenda of critical discourse and popular action.

Given the advancing significance of the research system, the complex of corporate, state and university leaders who shape science policy is at pains to encourage public engagements with it that are both episodic in frequency, and ritualized celebrations of progress in substance. In taking research into their own hands, community-based researchers implicitly, and often explicitly, challenge this agenda. Likewise, HIV/AIDS activists, opponents of digital surveillance, seed savers, and movements against advanced weapons systems represent but a few of the many grassroots engagements with specific arenas of science and technology that seek democratization and accountability. As isolated undertakings, however, these efforts yield less than the sum of their respective parts.

Connecting these movements is no simple matter. The wellspring of CBR's authenticity and energy is its grounding in local issues. Moving beyond this base to take on the priorities of a research system that leaves the crumbs (if that) for CBR is usually not a practical option in light of more immediate concerns. In their own way, movements focused on specific technologies are constrained by a different concreteness that requires sustained focus on the industries that deploy these technologies and the policy venues that promote and regulate them. Here too, a remote research system driven by global capital accumulation throws up similar road blocks for, say, anti-weapons activists and free software proponents, but numerous social distances, political differences, and the sheer challenge of keeping pace in one's primary field complicate networking and joint action. The limitations of this understandable concreteness are compounded by a larger dynamic in technology-focused activism that also affects CBR: mobilization usually is a *reaction* to threats and harms already experienced.⁷ These harms make the otherwise remote and revered world of science tangible, urgent, and open to question. However,

this after-the-fact concern with the consequences of the research system is a far cry from meaningful input into its goals and operations. Efforts to guide science and technology toward democratically-decided ends are thus consigned to an endemic condition of too little, too late.

Networking for Action

LK3 was unquestionably a step in the direction of a movement that connects disparate *genres* of knowledge-focused activism, and includes research policy within its scope. Nearly 300 people attended from 37 countries and 5 continents. A pre-conference on the basics of science shops for people interested in organizing them attracted 70 participants, revealing a growing worldwide commitment to building these new and important institutions. The conference organizers called for contributions in five theme areas: university engagement with communities; citizens' science and social movements; research policy from local to global; innovation and citizens; and participatory processes in science and technology. Given the origins of science shops as university-based entities that respond to community requests, a program weighted heavily toward the first theme would not have been a surprising outcome. However, the presentations were fairly evenly distributed among these topics.

University professors and researchers accounted for about two-thirds of the attendees. NGOs (many of them free-standing science shops) were the next largest grouping, about 13 percent of the total. Also represented were government employees (including elected officials), independent consultants, and researchers at independent institutions. I could find only six attendees who were primarily affiliated with a community-based organization of the type that science shops ideally are intended to serve, a void that was noted in a few discussions without gaining significant attention. Youth researchers (pre-university), who often have an inspiring presence at CBR conferences, were absent from this gathering altogether. While this range of profiles would probably compare favorably with many conferences on similar themes, clearly the LK network's aspirations to promote a world of greater knowledge equity face a continuing challenge in bringing multiple voices to the conversation. LK network members are in essence brokers and intermediaries in the negotiation and collaborative construction of a research system that serves sustainability and social justice, but their efforts will likely founder unless a broader range of participants can be brought to the table.

Diverse approaches to knowing were reflected in presentations that ranged from accounts of CBR projects to reflections on the epistemology of trustworthy knowledge; and from standard social science analyses of social movements to an on-the-spot scenario workshop on nanotechnology. In this regard, LK 3 "walked the talk" of the oft-heard claim that diversity in knowledges is to be valued. Finally, the most engaged conversations arguably transpired at breaks and poster sessions (no doubt lubricated by the marvelous French cuisine of all organic and local produce, served with recyclable plates, cups and implements); and Open Space sessions permitted unique and important topics to emerge from the attendees and enabled the formation of relationships among them. The flavor of the many intriguing discussions launched from the floor is suggested

by one that addressed “Promoting Participation: More Participatory Research, or More Participation into Non-Participatory Research?”

Cutting across the conference themes and diverse formats were three principle concerns: critical analysis of the political economy of the research system; strategies for expanding the effectiveness of the LK network; and next steps. Corporate control of the research system received substantial attention in both plenary and breakout sessions. At the opening session, for example, University of California (Berkeley) biologist Ignacio Chapela recounted his community-based research with indigenous farmers in the southern Mexican state of Oaxaca. This research produced (1) evidence that local maize (in the region with the world’s greatest store of biodiversity for this species) had been contaminated by genetically-modified organisms, (2) a publication of the results in the British scientific journal *Nature*⁸, and (3) indignant criticisms from pro-biotech biologists that nearly cost Chapela his faculty appointment. The prelude to this episode came in the 1990s, when Chapela vocally opposed a \$25 million research grant to plant biologists at Berkeley from the Swiss biotech giant Novartis (now Syngenta). The sequel is a recently-concluded deal for \$500 million (\$50 million per year) in research funding to Berkeley from BP for energy research. Both are landmarks in the advancing commercialization of university research, at an institution once recognized as the top public university in the world.

Subsequent presentations – on topics such as corporate shaping of bioscience research agendas and the political economy of participation in nanotechnology policy –resonated with Chapela’s remarks. So did a closing plenary observation by Dominique Pestre (*Ecole des Hautes Études en Sciences Sociales*) that broader participation in mainstream institutions has a legitimate place, but opposition is the main source of improvements in technical safety. In short, understanding and confronting corporate and state power was an important topic at LK3, a significant development in a community of practice that was founded to make local linkages, and retains this grassroots orientation.

A second cross-cutting emphasis was collaboration and networking among science shops. Deliberations in this mode included project descriptions – e.g., the Dig and Learn collaboration of science shops in Bonn, Bucharest and Gödöllő on soil science for primary school learners. Strategic discussions engaged several issues: the differences between local collaborations and translocal campaigns to bring CBR advocacy to national and international policy levels; the importance of supporting and working with Third World scientists; and the need for a growing, densely connected global network to overcome the perpetually marginal and marginalized position of popular movements in the technoscientific arena.

The Living Knowledge network itself was the object of several discussions. For most of the period since its founding in the late 1990s, LK has received European Union funding to support its core activities, but the EU now expects the network to become self-supporting. How will the financial requirements of managing a network be met? (Answer: probably through a sliding scale of membership fees.) How will the focus and energy provided by various EU-sponsored projects, such as Training and Mentoring in Science Shops, be sustained? (Still working on that one, but decentralized nodes deploying diverse strategies will have to step up to fill the void of receding sponsorship from the center.) It is no exaggeration to say that the survival and effectiveness of the network will hinge on the capacity of its members to build new synergies. If the political

economy focus provided a view of the challenges, the discussions on networking took up the matter of how to deal with them.

Finally, next steps were articulated in venues ranging from plenaries to small discussions during breaks and after hours. In addition to the discussion just reviewed on the changes in management of the LK network, the most visible further steps will be a series of upcoming conferences: the Canadian University Research Association Expo in Victoria, British Columbia, Canada, May 2008; LK4 in Belfast, Northern Ireland, in 2009; and a Scientific World Social Forum being organized for Bélem, Brazil, in 2009, details at <http://le-forum.net/wws/info/wsf-fsm-st>.

Conclusion

LK3 identified and analyzed a “third sector” of knowledge production to people active in this arena, deepening our understanding of our place in the political economy of knowledge; continued the valuable nuts and bolts work of building science shops as hopefully stable contributors to this third sector; brought in new players from the global South, from peer-to-peer movements, and from research policy; and sent everyone off not just more enlightened, but armed with specific targets and plans for continued networking and building of a global movement.

Perhaps most impressive was that LK3 was simultaneously more *intellectual* than past LK conferences (with terms like epistemology and names like Gramsci coursing naturally through the discussions), and more *practical* in its sophisticated discussions of strategies and plans for next steps. Action item number one arguably could be the network’s dependence on a predominantly university-based membership, which will be hard pressed to affect policies and practices without a much wider base of participation.

The promises and perils were best captured by Claudia Neubauer of the French *Fondation Sciences Citoyennes* in her closing remarks:

We are living this tension between on the hand a strong optimism and an extraordinary creative power, and on the other hand the impression that what we have achieved up to now is little. So our way towards a new contract between science and society that will lead to a more just and ecologically sustainable world of increased solidarity is still very long. And thus, please, keep acting as you do!

Notes

¹ Henk Mulder, ‘Science Shops’, presented to Society for Social Studies of Science Annual Meeting, 21 September, 2000, Vienna, Austria; and “Science Shops as Science-Society Interfaces: A Basic Introduction”, Plenary Address, Living Knowledge 2 Conference, Seville, Spain, 3 February, 2005. In the five years between the first and second of these talks, the “not-for-profit” criterion had mutated to “independent and participatory.” The non-commercial aims remained as a guideline for client eligibility, but (contradictorily) small and medium enterprises and large firms were added to the list of client organization types, probably in recognition of the fact that some science shops worked with private firms regardless of the prevailing philosophy.

² Previous conferences were held in Leuven in 2001, and Seville in 2004.

³ Available at <http://www.scienceshops.org/new%20web-content/framesets/fs-about.html>

⁵ I use the term CBR in a generic sense to refer to the type of research done by science shops and similar organizations. In the simplest terms, CBR is systematic inquiry that incorporates a substantial level of community participation for the purposes of community improvement and social change.

⁶ National Science Board, *Science and Engineering Indicators, 2006*, Washington, U.S. Government Printing Office, pp. 13-20; on the control of science policy by an insular elite, see Daniel Greenberg, *Science, Money and Politics: Political Triumph and Ethical Erosion*, Chicago: University of Chicago Press, 2001.

⁷ This force is less uniform for CBR. At times it is reactive, as in cases where communities seek to gain knowledge about toxic pollution from substances that were commercialized decades in the past. However, CBR is often mobilized to support future-oriented community visions for things like sustainable agriculture, renewable energy, or planning for more livable cities.

⁸ David Quist and Ignacio H. Chapela, "Transgenic DNA introgressed into traditional maize landraces in Oaxaca, Mexico", *Nature* 414: 541-43, 2001.