

Transcending the Gap:  
Community Participation in US Nanotechnology R&D Policy

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The Loka Institute aims to “kindle a vibrant popular movement for community-driven policies in research, science, and technology that will advance democracy, social justice, and ecological sustainability at every level - from neighborhoods to nations.” This has been pursued via efforts to provide better access to science and technology policy-making at the political center, and (through Loka’s transnational Community Research Network) by creating a venue for building capacity and advancing the art of community-based research (CBR).

The constituencies for these activities have traditionally been quite distinct: technocritics and science policy experts in the first case, grassroots activists and their university allies in the second. Bridging the gap between them is an important challenge. Without a change in priorities at the political center, the resources to provide community access to research, science and technology (including CBR) will continue to be meager, and the many negative consequences of current technoscientific practices will accumulate. Yet the technocritics who advocate for new priorities and transparency in science policy operate from a very narrow and vulnerable political base. They are mostly university intellectuals without a constituency, whose task is made all the more difficult by the cultural status of science as a secular religion (Noble, 1998).

Integrating these two constituencies is one plausible means of building a movement for science policy reform. Such integration could build on the growing network of community-university partnerships already created for CBR. In the past two years, the Loka Institute has expanded its efforts to increase access by grassroots activists to the often obscure world of research and development policy. A significant advance was accomplished in 2003 when federal legislation authorizing \$3.7 billion for nanotechnology research and development also required “public input and outreach to be integrated into the Program by the convening of regular and ongoing public discussions, through mechanisms such as citizens' panels, consensus conferences, and educational events.” The coalition spearheaded by Loka that advocated the public input provisions incorporated both constituencies discussed here. The specification of deliberative processes such as consensus conferences is particularly significant, because popular participation is easily dominated by entrenched interests unless shared learning by everyday citizens is an integral part of the participatory process (Sclove, 1998).

More recently, Loka conducted a workshop of community activists, who developed recommendations to the federal government for implementing these public participation requirements. The principal recommendations were (1) to fund consensus

conferences (this essentially strengthens the language in the bill that calls for such conferences, but provides no funding for them); (2) to assure that all decisions by the federal government are made *after* community input has been secured; (3) to earmark a portion of the nanotechnology funds at each participating federal agency (perhaps approaching 3%) for community action research projects that link nanotechnology developments to community needs; and (4) to assure that *all* social and ethical issues are addressed (otherwise the government will only address the less controversial issues).

What are the prospects that anything will happen? From a political economy perspective, they seem very limited. The knowledge sector of the U.S. and global economies is the engine of growth and profit for global corporations (Galbraith, 1998). The insular and privileged character of the science elite that plans and implements the megaprojects (such as nanotech R&D) at the core of the knowledge sector is well-documented (Greenberg), and resistance to incursions on their control over decisions is to be expected. In the few cases where mainstream research priorities have been significantly affected by grassroots activists—such as AIDS research—effective mobilization appears to have been the product of unique circumstances, i.e., the existence of a relatively homogenous social group whose catastrophic experiences might realistically be mitigated through R&D. Thus, an identifiable group victimized by AIDS—gay males—was motivated to take action for radically different R&D priorities, but this replicates a pattern under which activism in science and technology takes place *after* harm has been experienced.

Can wider participation occur in the early stages of megaprojects, as is envisioned in Loka's advocacy around nanotechnology? This is a question that can only be answered in action. Three developments suggest the possibility that such action can generate beneficial outcomes. First, the fact that the corporate science complex is concerned about public perceptions of nanotechnology (which helped create the space for passage of the participation provisions in the R&D legislation) demonstrates that these dominant institutions have felt the effects of grassroots mobilizations, such as the anti-globalization and anti-GMO movements. Similar mobilizations can be expected as the nanotech project unfolds. *How* this will affect politics and the possibilities for political openings is uncertain, but the situation will be dynamic rather than one of static monopoly. Second, the rapid expansion and institutionalization of community-based research has considerably broadened the populations having direct experience doing research and navigating the research system. The increased capacity at a grassroots level has shortened the distance from the grassroots to the core of the research system. Finally, participatory practices and expectations continue to grow in both popularity and sophistication, ranging from popular budgeting processes in Porto Alegre (Brazil) to citizen panels in Denmark. This cultural shift—albeit slow and uncertain—makes it more difficult for elites to ignore calls for transparency and access or to reject them out of hand. In sum, the challenges are significant, but the prospect for more open science-society relations is a possible dream.

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