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FINAL REPORT

Science and Democracy Network (SDN) Workshop, National Science Foundation Award No. SES-0350796 (\$15,000 awarded February 23, 2004; concluded December 31, 2005)

Activities and Findings:

1. The major research and education activities of the project

The grant supported US participant costs for persons attending consecutive annual meetings of the Science and Democracy Network, held at Harvard University, Cambridge, MA, on July 22-24, 2004 and June 23-26, 2005. The workshops offered opportunities for young researchers to present their work at the intersection of science and technology studies (STS), science policy, and politics; to interact with senior scholars in STS who presented critical feedback; to develop stronger connections within an emerging international network of scholars working on issues of science, technology and democratic governance; and to participate in discussions of how to make their academic work accessible and relevant to audiences outside academic STS.

Each annual meeting (see attached programs) featured presentations on the significance of STS research in wider public debates and offered both junior and senior scholars an opportunity to reflect on the translation of their ideas to transdisciplinary and extra-disciplinary audiences. In this respect, the workshops offered junior STS scholars not only traditional forms of professional training (presenting papers, responding to critical comments, chairing sessions, acting as commentators and panel chairs), but also insights into how to communicate their results to broader scientific and policy communities.

2. The major findings of these activities

The SDN workshops have developed several concepts of interest to researchers in the field of science and democracy, in particular: representation; institutions; and citizenship.

Under the heading of *representation*, papers explored the notion, central to almost any conception of democracy, that individuals and groups have some claim to participate in decisions that affect them and the polity as a whole. However, since not all people can participate in all political decisions, especially technical ones, difficult theoretical and empirical questions continue to arise about the nature of participation and representation in S&T-intensive proceedings. Papers explored alternative forms of public engagement and noted, in general, the need for bottom-up processes supplementing traditionally top-down efforts to draw publics into conversations with experts. Workshop discussions helped to clarify the theoretical justification for such processes and provided for a rich exchange of empirical examples from a wide array of case studies.

Under the heading of *institutions*, papers illustrated many different kinds of institutionalization, institutional frameworks, and institutionalized practices and beliefs. In keeping with STS notions of co-production, papers examined the concurrent processes of knowledge production and appropriation, and of knowledge-related community building. Collectively, the papers complicated any monolithic understandings of the relationship between political institutions and expert knowledge. At the same time, they made the point that social structures and practices evolve in tandem with knowledge-making. Moments of policy reframing offer particularly important insights into processes of co-production.

Under the heading of *citizenship*, a major contribution of SDN papers has been to show that new rights and responsibilities are emerging in connection with decisionmaking affecting science, technology, and the environment. In part, the concept of citizenship itself is being expanded and refined to include epistemic dimensions. Citizens enjoy, among other rights, an increasing array of rights to give and receive information in governmental proceedings. In part, private entities such as corporations have implicitly recognized that S&T innovation can function as an instrument of social control, much like new laws or public policies. Corporations have begun to acknowledge, however incompletely, the need for greater involvement by consumers and users in processes of technological design. Concepts of citizenship are also developing at the level of global governance, as publics engage with organizations that transcend the authority of nation states. The SDN meetings provided opportunities for discussing these phenomena, which point to a decoupling of the idea of citizenship from its traditional moorings in the nation state.

3. Opportunities for training and development provided by the project.

The annual meetings offered room for extended critical discussion of works in progress between junior and senior scholars. Pre-circulated papers ensured that most of the time at the workshops was devoted to discussion. In addition, the meetings provided many opportunities for discussing other aspects of professional development, such as teaching in the area of science and democracy.

4. Outreach activities the project has undertaken

SDN members individually and collectively have participated in a wide range of advisory and consultative activities in the United States, Europe, and Japan. These include running nanotechnology and society programs at US and UK universities, participating in ethics advisory bodies and other expert groups of the European Union, and filing an amicus curiae brief to the World Trade Organization (see David Winickoff, Sheila Jasanoff, Lawrence Busch, Robin Grove-White, and Brian Wynne. 2005. "Adjudicating the GM Food Wars: Science, Risk, and Democracy in World Trade Law." *Yale Journal of International Law* 30: 81-123).

These activities were discussed at both SDN annual meetings and contributed to the training of junior scholars, including graduate students, postdocs, and tenure-track professors.

Contributions:

The unique contributions, major accomplishments, innovations and successes of the project relative to:

1. the principal disciplines of the project

Participants from science and technology studies (STS) received a rare opportunity for intense interaction with others in their field working on issues of contemporary political significance. The international character of the meetings (involving participants from the US, many European countries, Japan, and India) encouraged cross-national network building and collaborative projects. Because of the relatively small size of the meetings (40-45), participants were able to focus on common research and dissemination concerns in a way that is not possible at larger 4S or EASST meetings. This led to a deepening of theoretical perspectives and the further development of a shared conceptual discourse in this growing subfield of STS.

2. other disciplines of science or engineering

Each workshop included invited participants from fields other than STS, such as public policy, law, and journalism (see workshop programs for details). These participants offered valuable perspectives to the SDN members,; in turn, they gained useful insights into their own work from STS scholars.

3. the development of human resources

SDN meetings have been and remain an invaluable occasion for junior scholars—graduate students, postdocs, and pre-tenure faculty—to interact in an intimate and informal setting with more senior scholars. The meetings have provided network members with new job openings and potential for collaborative projects.

4. the physical, institutional, or information resources that form the infrastructure for research and education

A web resource is under development and will take several years to reach its full potential. However, it is already a vital tool for exchanging information before and concerning the meetings, which increasingly provide a salient opportunity for networking and professional development in participants' scholarly lives.

5. other aspects of public welfare beyond science and engineering, such as commercial technology, the economy, cost-efficient environmental protection, or solutions to social problems.

As noted above, SDN members are developing individual and collective expertise in disseminating STS perspectives in a variety of non-academic fora, and thereby have begin to influence decisionmaking in national as well as international settings.