Evaluating the Impact of the First U.S. Citizens' Panel on 'Telecommunications and the Future of Democracy'

David H. Guston
Assistant Professor of Public Policy
Bloustein School of Planning & Public Policy
Rutgers, The State University of New Jersey
33 Livingston Ave., suite 202
New Brunswick, NJ 08901-1980

732-932-2499 x707
732-297-0976 (fax)
guston@rci.rutgers.edu

Abstract. Consensus conferences, also known as citizens' panels -- a collection of lay-citizens akin to a jury but charged with deliberating on policy issues with high technical content -- are a potentially important way to conduct technology assessments, inform policy makers about public views of new technologies, and improve public understanding of and participation in technological decision making. European nations, particularly Denmark, have used consensus conferences for these purposes for a decade. The first Citizens' Panel in the U.S. occurred in April 1997 on the issue of "Telecommunications and the Future of Democracy." This paper evaluates the impact of this Citizens' Panel. The standard criteria to evaluate the impact of analyses focus on the "actual impact" and on the "impact on general thinking." To these standard criteria, this paper introduces the evaluation of two impacts related to learning: impact on the training of knowledgeable personnel; and the interaction with lay-knowledge. These new categories are particularly crucial for evaluating mechanisms for public participation because increasing the contact between experts and lay-citizens and providing lay-citizens with opportunities to hear and be heard are explicit goals of such mechanisms. The impact evaluation is based on a nearly comprehensive set of semi-structured, telephone interviews with the participants in the panel -- the citizens, the experts, the professional staff of organizing and sponsoring institutions, the media, policy makers, and any other identifiable consumers of the panel's work.

Introduction

A continuing problem with the analysis of public policy is the lack of input from citizens who are neither expert in the issue at hand nor representatives of interest groups or immediate stakeholders. As political scientist Charles Lindblom (1990, 164) has concluded about the realm of policy analysis, "[c]itizens do not seem to exist" within it.

As a genus of policy analysis, technology assessment has suffered from the same shortcoming. In the United States, for example, the former Office of Technology Assessment (OTA) gathered panels of technical experts and stakeholders to advise its staff members in the conduct of assessments for congressional patrons (Herdman and Jensen 1997).[1] Although it often scrutinized its own methods and occasionally attempted to solicit wider participation in its assessments, OTA never succeeded in regularly incorporating the participation of the lay public.[2]

The European experience with public participation in technology assessment has, at least over the last decade, been notably different. Although clearly inspired in their creation by the American OTA, the European parliamentary offices of technology assessment evolved different practices and perspectives according to local cultural and institutional influences (Vig and Paschen forthcoming). One such practice, first instituted by the Danish Board of Technology in 1987 and now gaining attention world-wide, is the consensus conference. Defined as "a public enquiry at the centre of which is a group of...citizens who are charged with the assessment of a socially controversial topic of science and technology" (Joss and Durant 1995, 9), the consensus conference functions

---

[1] For more on the specific methods of OTA studies, see Wood (1997). For the institutional history of OTA, its role in Congress and an account of its closure, see Bimber (1996).

[2] OTA conducted several internal reviews of its process, including the Task Force on Technology Assessment Methodology and Management in 1979 and the Policy Analysis Task Force in 1992 (Wood 1997). Sclove (1996) suggests that OTA's failure to incorporate public participation may have had a role in its inability to mobilize a constituency capable of defending it against congressional budget-cutters.

much like a jury but it deliberates on issues of high technical content and moment.[3] Its general aims are to improve decision making about science and technology by expanding access and perspectives beyond the normal elite, to increase the public understanding of science and technology through informed public debate, and to enhance democracy by fostering civic engagement.

On the basis of positive perceptions of the Danish experience with consensus conferences, the practice has expanded to the Netherlands, the United Kingdom, and elsewhere, and now more than 20 consensus conferences on technological issues have been conducted world-wide.[4] In April 1997, 18 months after the closure of OTA, the first consensus conference in the U.S. occurred under the title "Citizens' Panel on Telecommunications and the Future of Democracy."

Despite this rather enthusiastic expansion of the practice of consensus conferences, few formal evaluations of them have been conducted. Neither a broadly accepted method for evaluating consensus conferences, nor even a broadly accepted need for their formal evaluaton, has emerged (Joss 1995). But with consensus conferences still relatively novel events -- and in the U.S., unique -- it is crucial to evaluate their impact, especially so policy makers who are considering adopting the practice can enjoy a more subtle and formal understanding of their virtues and vices, and adjust expectations for their impact accordingly.[5] Using a framework (Guston 1997) that attempts to include the broad aspects of learning so important to consensus conferences, this paper evaluates the variety

[3] A distinction should be made between seeing an analogy between the size and decision-making capacities of juries and consensus conferences, for which participants are selected through various procedures, and the German "citizens' juries," for which participants are chosen in a more random fashion befitting juries (Joss forthcoming).

[4] Joss (1998) counts sixteen in Denmark, three in the Netherlands and one each in Austria, the United Kingdom, New Zealand, and Norway. Sclove (personal communication) reports that Japan, France and Switzerland have recently conducted conferences, and South Korea and Australia plan to.

[5] This rationale is central to "best practice" research, which examines the efforts of organizations to mimic perceived successes in other organizations and which is thus appropriate for the current status of consensus conferences (Mayer, de Vries and Geurts 1995, 110). Great rigor must be brought to best practice research, however, to keep it in the domain of scholarship rather than advocacy (Lynn 1994). This rationale is also central to the concept of the "critical appraisal" of policies and policy analysis. See Majone (1989) and Clark and Majone (1985).

of impacts of the first U.S. citizens' panel. The sections below: 1) review the European experience with consensus conferences; 2) review the process of the U.S. panel; 3) describe the new framework and the methods used to conduct this evaluation; 4) report the findings of the study for a variety of possible impacts or outcomes of the U.S. panel; and 5) conclude and provide recommendations for future citizens' panels. As a pilot or demonstration project, this citizens' panel deserves to be hailed as a success. For future such conferences to have an important impact on policy, politics and people in the U.S., however, many difficult hurdles must be cleared that this conference did not.

The European Experience with Consensus Conferences

Although technology assessment in the U.S. now looks to Europe for such methodological innovations as public participation via consensus conferences (Bimber and Guston 1997), Denmark found its inspiration in an American practice. Consensus development conferences, begun by the U.S. National Institutes of Health (NIH) in 1977 to settle a controversy over breast cancer screening, became the template for the Danish consensus conferences.[6] NIH's consensus development conferences evolved into a way to transfer new biomedical knowledge and technologies to clinical practice, and a number of European nations imported the model to apply to similar questions of biomedical research and practice. But Denmark altered the format to involve lay-citizens rather than experts and expanded its purview beyond biomedical technologies to broad questions of technology in society, creating the participatory and expansive consensus conference (Jørgensen 1995).

The functional elements of the Danish model of the consensus conference are: the panel, comprised of lay-citizens who deliberate like a jury; the steering committee, who

---

[6] Jørgensen (1995) and Guston (forthcoming) each provide a partial but compatible history of the origins of consensus development conferences at NIH, although Jørgensen emphasizes the assessment elements and Guston the diffusion and transfer elements. For information about NIH's consensus development conferences, see <http://odp.od.nih.gov/consensus/>.

structure the process; the experts, who advise the panelists; and the staff members, who support the process (Grundahl 1995).[7] The consensus conferences are conducted under the auspices of the Danish Board of Technology, established by the Danish parliament to conduct technology assessments and support public debate on issues of technology and society.[8] To fulfill this mission, the Board employs a number of mechanisms, of which the consensus conference is just one (Klüver 1995).[9] When the Board uses consensus conferences, it has an important role in selecting the steering committee and generally remains involved in overseeing the conference proceedings.

Most of the other consensus conferences have followed the Danish model, but many occurred without a formal connection with their nation's official capacity for technology assessment. The first Dutch consensus conference was not an initiative of the Dutch parliament, although its results were distributed to the parliament through the Rathenau Institute, the Dutch technology assessment organization with formal links to the parliament (Hamstra 1995). The Platform for Science and Ethics, recently created at the behest of the Dutch parliament through several ministries, managed the second Dutch conference (Mayer et al. 1995). The conference in the U.K. was sponsored by one of the government's research councils through the London Science Museum, and although the Parliamentary Office of Science and Technology was not officially involved, its director served on the steering committee (Joss 1995).

The Consensus Conference in the U.S.

The Citizens' Panel on Telecommunications and Democracy was the first consensus conference after the Danish model held in the U.S. It was the initiative of a

---

[7] A fifth element is the facilitator, whose role to the success of the conference is crucial but whose function is largely transparent.

[8] The Danish Board of Technology maintains a web site with much information about consensus conferences at <www.tekno.dk>.

[9] Grin et al. (1997) also emphasize that consensus conferences are but one form of what they call "interactive technology assessment."

number of organizations, including: the Education for Public Inquiry and International Citizenship (EPIIC) program at Tufts University; the Loka Institute, a nonprofit organization for understanding the social impacts of science and technology and promoting public participation in scientific and technical decision making; the Massachusetts Foundation for the Humanities; *Technology Review* magazine at the Massachusetts Institute of Technology; the University of Massachusetts Extension; the College of Social and Behavioral Science at the University of Massachusetts, Amherst; and the National Science Foundation.[10] The total budget for the panel was about $64,000.[11]

The panel took place 2-4 April 1997 at Tufts University in Medford, a suburb of Boston, during the larger annual meeting of EPIIC, this year on "The Future of Democracy." It also occurred immediately in the wake of one of the worst spring snow storms to ever strike Boston. Cities up and down the Atlantic seaboard were stricken by record snowfalls, and the federal government in Washington, DC closed. But the citizens' panel convened as scheduled.

Prior to the public convening of the panel, the organizers -- a directorate of four members from the principal sponsoring organizations -- conducted a great deal of background work. They chose the topic, telecommunications, from among several other topics because of their perception that the media appetite for telecommunications issues was the greatest. "[T]elecommunications [was also chosen]...because upcoming decisions concerning Internet access and other aspects of telecommunications reform will have profound and lasting impact on all phases of American life" and because "a number of important policies are now on the official docket [as the Federal Communications Commission is] developing recommendations on implementing universal Internet access as

---

[10] The Benton Foundation of Washington, DC provided help in disseminating the Panel's findings.

[11] This sum compares quite favorably with the U.K.'s consensus conference, which cost £ 86,000 or about $150,000, but which involved transporting and housing participants drawn from a national rather than local population.

required by the Telecommunications Reform Act of 1996" (Reed 1997, 2).[12] The

directorate established a twelve-person steering committee, composed of academics,

activists and representatives of sponsoring, expert, and targeted groups, based in part on

their expertise on telecommunications issues; the members are listed in Table 1. The

steering committee met for the first time in January 1997.

INSERT TABLE 1: Members of the Steering Committee

To recruit the participants, the steering committee and project staff considered a

variety of techniques, but settled on hiring a "reputable survey sampling company and

contracted to receive a list of 2,000 random phone numbers from the Greater Boston

Metropolitan area, along with census data on the demographic make-up of this

population" (Reed 1997, 2). In January 1997, student volunteers from EPIIC called

approximately 1,000 of these numbers, identifying 125 potential participants to whom they

mailed materials including a project overview, a questionnaire, and an article by steering

committee member and Loka Institute director Richard Sclove (1996) about the potential

of consensus conferences.[13] However, to meet project goals for diversity in categories of

race, age, educational attainment and computer use, project staff recruited additional

candidates by postering public places and contacting community activists and

organizations. They selected nine panelists through the phone effort and six through this

---

[12] Congress passed the Telecommunications Act of 1996 (P.L. 104-104) to update federal
telecommunications policy, which had been based primarily on the obsolete Communications Act of 1934.
Well-known because of its controversial section, the Communications Decency Act -- which enabled
communities to outlaw obscene and indecent materials on the Internet and which the Supreme Court
ultimately declared unconstitutional -- the Telecommunications Act also deregulated many aspects of the
telecommunications industry, created new responsibilities for the Federal Communications Commission,
and articulated a policy of "universal service" at rates that are "just, reasonable, and affordable."
[13] The Jefferson Center of Minneapolis, Minnesota provided training and other expertise to EPIIC. The
project adopted a method developed by the Jefferson Center to construct a demographic profile from the
census data, upon which to base the selection of participants. This process was an innovation over the
selection process among the European conferences, which relied exclusively on response to advertising.

additional outreach (Reed 1997, 3).[14] Figure 1 portrays the panelists and members of the

project staff, and Table 2 provides some crude demographics of the panelists.[15] Panelists

received $100 per day for their seven total days of service, and they also received food

and transportation.[16]

INSERT FIGURE 1: Participants and Project Staff of the Citizens' Panel

INSERT TABLE 2: Demographic Profile of the Citizens' Panel

Project staff provided the fifteen panelists with background readings and two

weekend preparatory sessions prior to the public panel meeting.[17] Two professional

facilitators managed the preparatory sessions, conducted over weekends in late February

and early March 1997. These sessions were a mix of social, intellectual and procedural

exercises in which panelists got to know one another, received instruction in

telecommunications policy and the use of the Internet, and familiarized themselves with

expectations for panel operations. The panelists selected the sub-topics to be discussed at

the actual meeting: universal access to Internet technology, lifelong education facilitated

by Internet technology, the development of rules concerning content and standards, and

[14] In addition to demographic criteria, project staff applied a "mix and match" approach that attempted to anticipate how different people would interact together, based on address, occupation, age, educational attainment, and the response to a short essay question. Project staff and steering committee members acknowledge that this effort likely yielded a group of participants biased toward civic-mindedness.

[15] Fixdal (1997) describes the representativeness, or lack thereof, of consensus conferences as their "Achilles' heel." Compared to the Dutch consensus conference, the American one lacked more comprehensive demographic information, e.g., religion and finer measures of behavior related to the issue at hand. See Mayer, de Vries and Geurts (1995). County-level data for the Greater Boston Area (from the 1990 census) received by the organizers shows that the age categories represented in the panel by 5 participants each are roughly equal, but that the panel over-represented African-Americans, who constitute only 6.4 percent of the county population (the total non-white population of the county is 12.8 percent).

[16] Some panelists indicated that payment was important and transportation crucial to their participation.

[17] Background reading consisted of an article by Herb Brody (1997), an editor at *Technology Review*, commissioned by the project and reviewed by the steering committee, as well as articles and editorials from newspapers and newsmagazines suggested by members of the steering committee. After meeting with the panelists to discuss his paper, Brody suggested that future commissioned authors do such before they write their papers (Reed 1997).

policy making for the governance of the new technologies (Reed 1997, 8).[18] They also

requested the information and expertise for the steering committee and project staff to

gather. A second meeting of the steering committee in March 1997 reviewed the

questions from the panelists and recommended a list of experts who might respond to

them.[19] After contacting approximately 100 experts, project staff selected sixteen

speakers, identified in Table 3, to present material before the panel. Seven of the experts

represented the corporate sector, four the academic sector, three the government sector

and two the not-for-profit sector.[20] Experts received travel expenses but no honorarium

for their participation.

INSERT TABLE 3

Presentations from these speakers to the panelists, and questions from the panelists

of the speakers, formed the basis of the public aspect of the citizens' panel.[21] In addition

to the public meetings during the day, the panelists had working meals and other executive

sessions to discuss expert testimony, consider additional questions, and fashion their

statement. At a press conference on the morning of the third day, the panelists presented

their four-page consensus statement (Citizens' Panel 1997; Appendix 1 reproduces the

consensus statement).[22] Following the meeting, project staff conducted a debriefing

session with the panelists and the facilitators and solicited comments from panelists and

---

[18] Each of these sub-topics had an associated list of detailed questions for the experts; see EPIIC (1997).
[19] The steering committee met fewer times than those of the European conferences; e.g., the steering committee for the one U.K. conference met for 5 half-day sessions and 2 shorter sessions (Joss 1995).
[20] The substantial overlap between the steering committee and the expert panel -- six of the twelve members of the steering committee were also among the sixteen experts -- should be noted.
[21] The author attended all public sessions of the citzens' panel. A videotape record of the sessions is available from EPIIC. The original plan to have all the experts available for cross-examination did not materialize because of the inability of many experts to remain for the entire conference, largely due to funds insufficient to pay them to remain.
[22] The statement can also be found at <www.amherst.edu/~loka/panel/results.htm>.

experts from a mailed questionnaire.[23] Project staff also engaged in a dissemination effort, described in various ways below.

Methods

       There is no set standard for evaluating consensus conferences. Even if agreement could be reached on a standard set of criteria, there might not be agreement over what the criteria should be applied to -- the inputs, the process or the outputs of the evaluated enterprise. In such circumstances, Majone (1989) suggests specifying the critical roles and modes of evaluation -- that is, defining who does the evaluation and to what aspect of the enterprise is attention directed. Given the potentially uncritical adoption of consensus conferences by countries or organizations attempting to mimic Denmark's success, this evaluation assumes the critical role of a potential sponsor or organizer of a consensus conference. Given that the bulk of the effort at evaluating consensus conferences has been directed at the inputs and process modes, and that best practice research is oriented toward improving outcomes through improving practice, this paper directs its attention to the output mode, in essence attempting to answer a potential sponsor's or organizer's question, "what can I expect to get out of my effort?" As Joss (1995, 91) states, "it is these kind of results which are of interest, especially in countries with little experience of, but a great interest in, the model of the consenus conference." Since there are no standards or benchmarks for outcomes in these areas, however, and since the citizens' panel had no actual client other than the group of sponsors who did not specify any potential benchmarks beforehand, the results will necessarily be qualitative and tentative.[24]

---

[23] To the best of the author's knowledge, only two panelists responded to this questionnaire. The results of the debriefing are found in Reed (1997).

[24] Majone (1989, 177) suggests that evaluation by outcomes should only take place when the measurability of outcomes is high. Although the outcomes as defined here are by no means precise -- especially in comparison to other policy areas -- they are at least evident. Moreover, it will take a sustained effort at evaluating outcomes to develop reliable measures of them, a reflexive point that Majone does not consider. When outcomes are not measurable, Majone suggests evaluation by process or input; the evaluation here attempts to be as sensitive to issues of process and input as possible. Indeed, the approach maintains an implicit model that outcomes are a product of inputs and process (see Clark and

The provisional nature of this kind of evaluation is especially evident in light of such perpectives on social learning as Wynne (1992, 293), who argues that social learning is often "misunderstood to imply that an external trajectory exists by which to define and measure it," as with conventional education. In Wynne's view, learning from analysis is most importantly knowledge that is interactive and reflexive. Even with such caveats, this evaluation may be useful to help benchmark future consensus conferences.

Because such an evaluation does not take the goals of the consensus conference as the only possible and immutable outcomes of the process, it is what Browne and Wildavsky (1984) call a "multi-goal evaluation." Here, the goals are expressed in four categories or criteria of impact. The standard criteria used to evaluate the impact of policy analyses -- of which I take consensus conferences to be a subset[25] -- focus on any "actual impact" of the analysis on authoritative decisions and its "impact on general thinking" by policy elites (Weiss 1977). But because traditional policy analysis often ignores the importance of learning, public debate, and the participation of citizens (Lindblom 1990) -- and it is these aspects that consensus conferences explicitly attempt to address -- this research adds two related foci: impact on the training of knowledgeable personnel, and the interaction of the analysis with lay-knowledge (Guston 1997). These additional foci add the elements of interactive and reflexive learning that Wynne favors.

This framework provides an expanded domain of influence for policy analysis, elaborated in Table 4. In a traditional "linear model" or "magic bullet" approach, the impact of policy analysis occurs directly on decisions or outcomes, that is, an "actual impact" concretely affecting some legislative, regulatory, budgetary or other decision. Actual impact is therefore a strict criterion that remains clearly focused on the substance

Majone 1985; Guston 1997). In any event, a process evaluation was not possible because such an enterprise would have required observation beginning from the original steering committee meeting and including the meetings of the panelists, as occured for example with the consensus conference in the United Kingdom on plant biotechnology (Joss 1995).

[25] Joss (forthcoming) agrees, viewing participatory technology assessment as part of policy analysis and not decision making.

of the analysis. But policy making has dimensions of politics and learning derived from the analysis in addition to this linear influence.   By considering an "impact on general thinking," the traditional perspective begins to include politics by considering changes in agendas, vocabularies, and the framing of problems that may result from the analysis. It also broadens possible impacts beyond the strictly substantive to the procedural: an analysis can have an impact on general thinking about how analyses get done, separate from any substantive issue, particularly if the analysis is procedurally novel or exceptional. This impact, however, is largely restricted to the general thinking of elites, who have access to manipulating vocabularies, agendas and frames.

INSERT TABLE 4: Framework of Categories for Evaluation Impact

The new criteria expand the scope of impacts beyond policy and politics to people. The first, "impact on the training of knowledgeable personnel," broadens the "general thinking" category (albeit marginally in absolute numbers) to include participants as well as non-participants in the analysis. An analysis can be an utter failure at changing policy or the terms of debate, but the analysts and other participants could still have learned something important from the enterprise. This criterion enables the inclusion of not just substantive and procedural learning but reflexive learning -- about the individual participant's own knowledge, experience, organization, etc. -- as well. Finally, the second new criterion of "interaction with lay-knowledge" expands the domain of inquiry to the public diffusion of knowledge beyond participants and elites. It suggests that policy analysis should not be a technocratic enterprise, but that communicating the details of analyses that are intended to have impacts on policy and politics to citizens broadly conceived is an important measure to evaluate. This impact on citizens more broadly has aspects of substantive, procedural and reflexive learning as well.

Other evaluators of consensus conferences have implicitly or explicitly made use of similar categories. In his evaluation of Danish consensus conferences, Joss (1998, 5) describes their impact on "science and technology decision-making and public debate." His survey category about consensus conference reports leading to "parliamentary initiatives eg [sic] law enactments [or] the issuing of guidelines" corresponds to the category of "actual impact," although it is somewhat narrower. His categories of usefulness in party discussions and parliamentary debates are aspects of an impact on general thinking. Joss's "impact on public debate" largely corresponds to "interaction with lay-knowledge." But in his study, Joss takes into account the impact of the consensus conferences on neither the lay-citizens participating in the conferences nor on the professional or expert participants.[26] Mayer et al. (1995) focus on the impact of the second Dutch consensus conference on the lay-citizen participants as well as on the audience. Their approach is a more quantitatively refined one to the sole question of "interaction with lay-knowledge." The framework presented here is thus broad and flexible enough to account for the categories of impact examined by other analysts, and it further specifies aspects of impact that are crucial to consider, particularly in the context of a relatively novel mechanism for technology assessment that includes an essential element of public participation. Table 5 presents a schematic research protocol based on this framework.

INSERT TABLE 5: Schematic Research Protocol

The data for this four-pronged evaluation were gathered by the members of the author's graduate seminar in "The role of experts in the policy process" as part of the

---

[26] This shortcoming likely occurred because the study was a retrospective of thirteen of the Danish conferences, and identifying and surveying the individuals involved would have been a difficult task.

course requirements.[27] The class performed relevant readings and discussed technology assessment, public participation, and the argument for citizens' panels. Under the guidance of the author, they designed instruments with which to conduct a nearly comprehensive set of semi-structured telephone interviews with the panelists, experts, professional staff, steering committee, and others associated with panel. In the fall of 1997, seven to nine months after the panel, the students interviewed 37 subjects, including all but one of the panelists, all but two of the experts, and all but three of the members of the steering committee. One student also conducted an email survey, posting a set of questions on two listservs associated with issues of science, technology and participation and receiving twelve responses.[28] Questions encouraged respondents to consider the variety of possible impacts on policy, politics and people, especially those of which they had first-hand knowledge. Students worked in teams of two, dividing up interviewing chores and collaborating on their preliminary analysis of the results. The author conducted further analysis based on the students' raw data and made follow-up inquiries with some of the subjects.

Findings

Actual Impact

The framework for evaluation defines an "actual impact" of a policy analysis as a change in any authoritative public decision, including changes in legislation, funding, regulations, or other concrete consequences. Evaluations of some other consensus conferences make specific claims to actual impact including, for example, legislation derived from the 1989 Danish consensus conference on human genome research (Joss

---

[27] Upon hearing of the proposed conference, the author contacted one of the organizers, who related that the funds acquired for the conference were inadequate to support an evaluation, despite the initial intentions of the organizers. The author volunteered the class, comprised of the following students: Joanne Cosiol, Sean W. Hadley, Paul D. Heller, Cynthia A. Hoenes, Kenneth S. Lemberg, David S. Mayrowetz, Sara Procacci, Sarah Shin, and Sarah R. Wilson.

[28] The listservs are: FASTnet, the Federation of Activists on Science & Technology Network; and scishops, an ad hoc group interested in promoting community-based research.

1998). The single greatest area of consensus among the respondents was that the Citizens' Panel on Telecommunications and the Future of Democracy had no actual impact. No respondent, not even those governmental members of the steering committee or expert cohort, identified any actual impact.

A principal reason for this lack of actual impact is that having one was not a primary goal of the citizens' panel. The organizers were, in the words of one member of the steering committee, more interested in learning "would it work? What would the participants learn?" As another member of the steering committee said, "I didn't expect any [actual impact]. This was very much an experiment." More importantly, according to the project manager, such an "impact was not the goal of the panelists. They were briefed on upcoming legislative issues and chose not to look at things on the docket."

Despite the fact that organizers conceived of the conference as a demonstration project or "proof-of-concept" exercise, and the panelists themselves rejected the prospect of policy relevence, many respondents felt that an actual impact would have been desirable, and indeed some lamented its absence. One member of the steering committee laid the blame squarely at the feet of politicians: "The people running the panel tried hard to get the word out to politicians, but the politicians weren't really interested. Politicians don't really care what people think." But avoiding the self-fulfilling aspect of this response -- in which promoters of the panel assume that politicians are uninterested and therefore do not produce an analysis that is useful for them -- many respondents pointed to qualities of the panel's output as subsidiary reasons for the lack of impact. Several found the topic of "Telecommunications and the Future of Democracy," despite its sub-division into access, education, content and standards, and governance, too broad. The panel's consensus statement was thus too broad to be useful to decision makers. Respondents, especially those from government, also believed that the topic was not timely, as Congress had dealt with such issues in the Telecommunications Act of 1996, passed just three months prior, and the pending regulatory decisions would be much more detailed in their

specification of already-expressed legislative goals. Respondents further felt that the modest media coverage (discussed below) prevented any actual impact because the media are crucially important in moving elite opinion.

The inappropriate match between the needs of decision makers and the panel's scope, timing and outreach suggest that the citizens' panel was not well tied to decision makers, even if influencing them was not a primary goal. Unlike the Danish consensus conferences and technology assessments performed by the former OTA -- both convened under the aegis of a national legislature -- this panel was the creation of an ad hoc collection of private groups with minimal public sponsorship at the national level. Unlike the Dutch conferences, it was not the work of government ministries and its results were not sanctioned and disseminated by the national technology assessment agency.

The citizens' panel had formal ties with only two people associated with the federal government and one with a local school system. The organizers involved Representative Ed Markey (D-MA) because the conference would take place in his district and because he had been the chairman of a congressional subcommittee with jurisdiction over telecommunications before the Republicans won control of Congress in 1994. A staff member from his office who participated as a member of the steering committee and as an expert found the report of the citizens' panel not timely to congressional needs, as did another member of Markey's staff who was interviewed. The only other representative of the federal government involved in the panel formerly worked for Markey, but at the time of the panel she was director for congressional affairs at the National Telecommunications Information Administration (NTIA).[29] She served on the steering committee and as an expert, but in her job in congressional affairs served as a liaison and analyst and not a decision maker.

---

[29] NTIA, an agency under the Department of Commerce, provides advice to the President on telecommunications policy and is responsible for issues in telecommunications and information technology. See <www.ntia.doc.gov>.

The organizers had originally attempted to involve other higher-level people from the federal government in the panel. They made a strong appeal to involve Vice President Al Gore, but turn-over in Gore's staff limited their access. They invited the administrator of NTIA to participate, but he was unable to do so. The organizers had also sought the participation of Representative Connie Morella (R-MD), chairwoman of the Technology Subcommittee of the House Science Committee. Contacted through one of her staff members with a family connection to the citizens' panel, Morella was unable to participate in the panel because of a scheduling conflict.[30] The staff member, whose portfolio did not include telecommunications, referred the panel's report to the appropriate staff member, who gave it little attention because Morella was not directly involved and because the panel had little to do as such with technology, which is Morella's primary legislative concern.

The thinness of these connections to the federal government substantially decreased any chances of the panel's having an actual impact, regardless of the panel's intentions. As one member of the steering committee said, it would have been more effective to "have NTIA or Markey work with the panel....Congress would be more willing to listen to the results if they were pitched by a [bigger] name and on a larger scale." Even one of the panelists concluded that "we could make more of an impact if we talked to a select group of people who make decisions."[31]

Impact on General Thinking

The impact of an analysis on general thinking involves changes in agendas, vocabularies, and the framing of problems among people who were not participants in the analysis but who can ultimately create an actual impact, that is, among the policy elite.[32]

---

[30] She was also concerned about encroaching on Markey's home turf.

[31] The organizers did attempt to get state government involved, but as the project manager said, "We received polite responses from people working with the state; there's not much going on at the state level with the issues that we addressed."

[32] For the importance of agendas, etc., it policy formation, see Kingdon (1995).

Evaluations of the European consensus conferences suggest that they have had a substantial impact on general thinking including, for example, the influence on party and parliamentary debate that the consensus conferences in Denmark had (Joss 1998).

There are two areas on which the citizens' panel could have had an impact: thinking about the substance of the panel, i.e., telecommunications policy; and thinking about the style of policy making, i.e., the role of citizens' panels themselves. For much the same reasons as for actual impact, the respondents provided little if any evidence for an impact on general thinking about telecommunications policy. Although one respondent close to the panel claimed that it had a "tremendous impact on informing [congressional] staffers [by] raising awareness," none of the three respondents (two were not participants) from congressional staffs acknowledged any substantive learning from the citizens' panel.

Respondents provided modest evidence for an impact on general thinking about the role of citizens, however. One of the congressional contacts, for example, mentioned that subsequent to the panel, discussion occurred about the possibility of incorporating citizens' views into the advance work for another bill. Although such input was never solicited, the response suggests that the panel may have encouraged a few congressional staff members to start thinking about citizen participation as part of their information-gathering routine. Another congressonal contact, not a participant, suggested that the demonstrative aspect of the citizens' panel was not important because congressional aides deal with citizens all the time. Instead, however, it became a useful focus on the way policy issues develop at the district level. Although each of the three congressional respondents received the final report of the citizens' panel, none reported distributing it beyond their immediate office, thus severely limiting the possibility of an impact on general thinking among legislative elite.

In a more positive sign of an impact on general thinking, however, one member of the steering committee reported a number of contacts with the federal government. He provided briefings on the citizens' panel to three government agencies. One briefing, for

the Council on Environmental Quality (an expert body in the White House that provides the President with analysis of environmental issues) led to inquiries about a planning a regional or national citizens' panel on an environmental issue, and led the White House Office of Science and Technology Policy to pursue the topic further. A briefing for the Economic Research Service at the Department of Agriculture led to follow-up from a person from the Office of Management and Budget. Another briefing was presented to the acting director of the Telecommunications and Information Infrastructure Assistance Program of the Department of Commerce. This respondent further reported an inquiry about the citizens' panel from a staff member of the Science Committee of the House of Representatives, with whom he has regular contact. A final federal contact occurred when an alumnus of EPIIC, who at the time worked for the National Security Council, hand-delivered a copy of the consensus statement to the office of Vice President Al Gore.[33]

Two respondents reported encouraging but as yet unfruitful contact with foundations. One reported interest from the Pew Charitable Trust for a possible collaboration on another panel. A second reported that the New England Foundation for the Humanities had decided to conduct a similar panel based on this experience. However, neither proposed panel was on a technological topic, and neither did funding for either panel materialize. These contacts, however, provide evidence that the citizens' panel was on the agenda of the foundations and agencies involved, itself an impact on general thinking.

The Internet survey provided additional evidence for an impact on general thinking.[34] Of the twelve Internet respondents, nine heard about the citizens' panel from Loka Alert 4.3, an email bulletin distributed by the Loka Institute to about 9000 recipients at the time. One of the respondents heard about the panel from unspecified press

---

[33] Several panelists spontaneously offered that the attention of Vice President Gore was an important motivator.

[34] The Internet survey is included here, rather than in "interaction with lay-knowledge," because in the judgment of the author the Internet respondents are more knowledgeable and influential elites than lay-citizens.

coverage, one from a personal contact with one of the organizers, and one was in attendance at the panel.[35] The citizens' panel influenced the thinking of three respondents regarding telecommunications, six respondents regarding the role of citizens in complex and technical issues, and four regarding the role of citizens in policy making generally. The emphasis of those reporting influence on their thinking about the role of citizens was in confirming or demonstrating previously held beliefs about its desirability. Nine of the twelve respondents reported relating information about the citizens' panel informally to colleagues or students, five of them reported discussing the panel more formally in classes or at professional conferences, and two reported having written about it. As befits the medium, this impact extended beyond the national: non-U.S. respondents (as identified by return email address) included one from Canada, one from the U.K., and one from Argentina.[36]

The Internet respondents provided several interesting specifics of impact. The respondent who attended the conference represents an independent technology assessment organization that finds consensus conferences "of considerable interest" for conducting assessments. She was so impressed "by the conduct and deliberations of the panel members and their consensus statement" that she believes her organization "would be even more like to try this technique." Another respondent described his alliance, subsequent to the panel, with the Loka Institute and their now-defunct plan "to bring a National Consensus Conference to the USA over the next two years." A third described an on-going research and writing agenda into which he incorporated details of the citizens' panel.

In contrast to these positive assessments, one respondent, self-described as working in the policy area, reported that "[g]iven policy options presently put forward or

---

[35] Attendance at the public sessions of the panel was minimal; the snow storm was likely an aggrevating factor. There was a sign-up sheet for attendees, but organizers could not retrieve it for the author. Many more people attended the press conference, which was a culminating event for the larger EPIIC conference as well.

[36] Loka reports receiving a continuous low-level stream of inquiries based on Loka Alert 4.3 and another email issued that previewed the panel.

being studied, given current programmed work at my agency, [and] given current government policy orientations and [the] relatively narrow margin of conceivably effective policy suggestions, it would be of little or no (or perhaps even negative) effect to discuss the options opened up by this (to my mind) very interesting and positive experience." This potentially reactionary learning is part of what Wynne (1992, 293) identifies as "the *indeterminacy* of values, identifies and knowledges" of social learning (emphasis in the original). That is, the analysis really cannot control what people will actually learn from it.

In an attempt to further probe the role of the Internet in facilitating the impact of the citizens' panel on general thinking, the author performed various web-based searches, one of which turned up information about a citizens' panel conducted by students in science and technology policy class at McMaster University in Hamilton, Ontario in March 1998.[37] The organizers cited the citizens' panel and a review of it published in *Technology Review* (Hackman 1997) in their preamble and followed the general Danish model, albeit at a reduced scale and time frame. The McMaster panel, composed of a diverse group from within the university, deliberated on the question of mandatory laptop computers for all students. Critical of the proposal, which had been implemented at Acadia University in Nova Scotia, they provided alternatives to attempt to achieve the same goals more effectively.[38]

Evidence from both the interviews and the Internet survey suggest that an impact of the citizens' panel on general thinking on substantive matters is no more apparent than for an actual impact. It does suggest, however, that general thinking about the process of the citizens' panel is percolating onto the agendas of federal agencies, foundations, and potentially influencial people in government and academia, if only in a haphazard way.

---

[37] The url for this web page is <www.dcss.mcmaster.ca/stpp/consensus/laptop/abstract.html>.

[38] University-based consensus conferences may be spreading. An organizing committee of faculty members at North Carolina State University in Raleigh, North Carolina is attempting to plan a consensus conference and is being advised by the Loka Institute. The author distributed a draft of this evaluation to the NC State organizing committee.

Impact on the Training of Knowledgeable Personnel

Consensus conferences involve two types of participants which, after Tables 4 and 5, may be called "elite" and "mass" participants. The elite participants, including experts, members of the steering committee, organizers and other principals, comprise the "knowledgeable personnel" on whose training the consensus conference may have an impact. This impact may be substantive, procedural or reflexive learning. Previous evaluations of consensus conferences have tended to ignore such learning, but the category is important for comprehensiveness because such personnel seem likely to have opportunities to incorporate it into future policy action. The mass participants, namely the citizens who are the decision makers in the consensus conference, are part of "interaction with lay-knowledge," discussed below.

The evidence for substantive learning by the elite participants in the citizens' panel is scant. Only three of the twenty such participants interviewed reported having learned something about telecommunications from the conference. One merely "broadened [her] perspectives on issues. A second "enhanced her knowledge of computers in education and of privacy issues, and a third reported learning specific things about telecommunications policy, including about the 1996 legislation. More interestingly, this respondent reported:

> After listening to the experts, I learned that there is no evidence that
> computers [in the schools] improve learning. If there is no improvement,
> then how can we justify the expense? And the monetary expense is only
> the beginning; teachers must be trained so that computers enhance learning
> rather than baby-sit the kids. Unfortunately, the panel disagreed with me
> and joined the rush to hardwire every school and make all kids computer
> literate. Now I've decided that that would not be a good idea and would
> just waste money.

That this member of the steering committee "learned" something that the panel did not points to the embeddedness of facts ("no evidence that computers improve learning") in a matrix of values (without improvement, we cannot "justify the expense"). But it also points to a question about the depth of learning -- or consensus -- possible. Did this principal fail to understand that the panel might have applied a different value-test than he did? Or did he assume that the panel did not learn the same fact? Or does it point to the possibility of bias in collection of experts presenting this material to the panel, as one participant suggested? Or the possibility of different standards of evidence employed by the panelists and the elite participants? Not a member of the panel, this respondent was thus not privy to the discussions leading the panelists to the conclusion he criticizes.

Although the learning about telecommunications policy was minimal at best among the trained personnel, the learning about the process of citizen participation was more significant. Indeed, this type of procedural and reflexive learning was what many of the elite participants eagerly anticipated: "I was hoping to learn that effective citizen involvement is possible," said one expert and member of the steering committee. Most of them had their expectations fulfilled; eleven of the twenty respondents in this category reported that they had learned something about the process of citizen participation, particularly that "[o]rdinary citizens do have a point of view and can make reasoned judgments" and that "it is practical to have a public review by...lay persons."

Some elite respondents were impressed and even uplifted by the process they witnessed. One elite participant believed that the participants' "thinking was changed radically." Another found the panelists "engaged fully in terms of thinking critically. They'll talk about these issues at the next [Parent-Teacher Association]." A third offered some evidence for the perceived learning:

In the first meeting, they filled out questionnaires about why they were interested in participating. When you compare thee written statements

with the final product, you can see the evolution of reason there. They
were not sold by one line, but gained an amazing sophistication in thinking
and confidence in their ideas. There was also a shift in thinking from
individual concerns to the findings of the group.

Others perceived the participants' experience in more emotional terms. "What I learned
was a miracle," reported one principal. "I saw people who would never have interacted
come together around a common cause. Watching people come together -- a retired
businessman and a young minority kid, for example -- who at first had nothing in common
was amazing. Bonding is perhaps too strong a word, but there was interaction on a very
intense level." A member of the steering committee found the panel's experience
"extraordinary. It was wonderful. It was very intense."

Particularly for the experts, the citizens' panel was a "unique" experience in
observing the public's interest and in having "a general public audience" rather than
"only...technical people." "For general public discussion, it was good because I never
would talk to them otherwise. To be aware of social issues is a good thing." For
academic members of the steering committee, it was "wonderful to get out of the ivory
tower and have wider contact." One expert in particular was happy to be able to parlay
his experience with the citizens' panel into a better ability to deal with a citizens' advisory
board he had previously established for a large telecommunications development project.
Another expert learned from the panelists how to think about her customers more clearly
and target her organization's outreach efforts more efficiently. Others learned more
operationally important lessons about citizens' panels, including how large a task
organizing one really is and how important raising funds is not just for panel operations
but for staff support and for dissemination and evaluation. Although many of the elites
appreciated the contact with the citizens, only three of them found the panel process a

useful experience in networking with other elites. One also lamented the lack of incentives for such participation in the academic reward system.

Many respondents reported finding support for their pre-existing views in the results of the conference. These views were almost uniformly and favorably inclined toward increased citizen participation. One expert and member of the steering committee, for example, "reconfirmed" what he already believed -- "that technology policy is co-opted by business interests." He pointed to the panel's recommendations, which he described as tending more toward "public interest" than industry perspectives, despite the prevalence of industry representatives among the experts, as evidence of the ability of lay persons to articulate an alternative to the "current elitist process." Another, however, reported that the panel "reinforced my view that these panels are nice but reveal no special insight....They didn't come up with anything new." Thus, although there is significant evidence for an impact on the learning of elite participants -- including real excitement over what the panelists were perceived to have learned -- there is some ambiguity over how much these participants learned other than what they may have been predisposed to learn.

Interaction with Lay-Knowledge

With the format of the consensus conference, the interaction of analysis with lay-knowledge is perhaps the most interesting category of impact. The presence of lay-citizens on the panel means, with respect to the application of the framework, that the interaction with lay-knowledge pertains to both participants -- the panel members -- and non-participants alike. Previous evaluations of the impacts of consensus conferences have found that both lay-citizens participating in the conference and non-participants in the audience of the general population have learned from the process (Mayer et al. 1995).

Such evaluations have only focused on whether or not lay-citizens have learned about the technological issue at hand. As with the impacts on general thinking and on

knowledgeable personnel, the impact of the analysis on the interaction with lay-knowledge can be divided into substantive knowledge about telecommunications technology and policy, procedural knowledge about consensus conferences and the role of citizens in public decision making, and reflexive knowledge about themselves and their place in society. For this citizens' panel, the relationship between substantive and procedural learning seemed somewhat more balanced for the lay-citizens than for the other participants and non-participants contacted.

When asked about learning about telecommunications from their participation, nine of the fourteen panelists interviewed reported having learned "a lot," or "some," and only one self-described "geek" reported learning nothing. What stands out among the specific examples of learning that the panelists provided, however, is the way they framed their substantive learning in a policy context. One panelist offered the straight-forward example of learning how to use the Internet. But two other panelists with responses directly related to a technical skill or concept immediately contextualized it. One who learned "how to use a computer" set that skill within a context of further learning about how computers can be used for good and for ill. Another who learned what a "cookie" on a web site is set that new knowledge within the context of questions about privacy. Other examples of the panelists' learning about telecommunications included the problem of the transmission of material on the Internet across political boundaries and the stake and potential impact of the Telecommunications Act of 1996. To further pursue newly acquired knowledge, four of the fourteen got on-line after their participation in the panel and two enrolled in computer classes.

With this new substantive knowledge, all of the panelists reported following the issue of telecommunications since their participation. Said one, "Any time I hear about the topic, I get excited. I look for the topic in newspapers and magazines all the time." Added another, "When I see articles, I stop and read them and now I can understand them, too." Other panelists reported following specific stories such as the challenges to

the implementation of the Telecommunications Act and the federal government's mounting anti-trust case against Microsoft. Twelve of the fourteen panelists interviewed reported having a different or better understanding of the technological issues facing the country. One panelist provided a characteristic response that linked learning about the technology to the process of the panel: "Taking the time to talk to others broadened my mind....[Now] I understand the infrastructure of telecommunications more and how important it is to our world." A second said, "There were lots more issues that I would have thought of on my own."

"Whether the participants actually learned anything about telecommunications was almost irrelevant," declared one principal, "compared to the civic and citizenship aspects of the events." The lay-participants did engage in procedural and reflexive learning. Nine of the fourteen reported having learned something from the citizens' panel about the policy process and the role of citizens within it. Working with the other panelists to come to a consensus decision taught one panelist "how hard it is to achieve a consensus with a diverse group of people." Another got "an idea" from this process "of what legislators have to do." A third learned more about the Telecommunications Act, calling the role of lobbyists in its formulation "a shining example of the system of corporate takeover of America."

Eight of the panelists also learned something about themselves through the citizens' panel, mostly about their role in group dynamics. A typical response was from one panelist who learned "I could work with other people; I am a shy person so it was good to work with others and get the perspectives of others." Another learned that it is "more reassuring to talk to people than assume what they are thinking." A third, who thought it "was neat how we all worked together for a report to be seen by" elected officials, learned how "common people can make significant choices, too."

One of the programmatic goals of consensus conferences and lay-participation in the American context is to enhance civic engagement and help restore faith in public

institutions (Sclove 1996). Attempts to probe this kind of reflexive learning by the lay-participants yielded mixed results. The participants were very enthusiastic about the potential for such panels to rebuild trust and linkages between citizens and government; twelve of the fourteen agreed that they had such potential. However, some respondents conditioned this potential on the ability of citizens' panels to have a policy impact, e.g., "they could [rebuild trust] if the government listened to the panel and acted on what we did." Such responses are something of an irony given that the panelists chose to avoid topics that were on the formal agenda.

This potential was only modestly evident in the reported changes of perspective and behavior of the panelists, seemingly less than expected by the elite participants. One member of the steering committee expressed "no doubt [that the panelists] felt more empowered," and yet only four of the fourteen panelists reported feeling more empowered to influence public policy decisions. Two had joined new groups as a result of their participation in the panel, although three said that they would join more groups if they had the time or money and two more said that they were already too active. Five of the fourteen panelists interviewed said that they felt a greater responsibility to educate others about telecommunications, and ten of the fourteen had advised family members, friends or neighbors about issues from the panel. Five of them had developed new relationships from their panel participation.

The opportunity for the broadest, although not necessarily the deepest, interaction with lay-knowledge comes through the coverage of the event by mass and specialized media, potentially facilitating learning by mass non-participants. Several respondents expressed dismay with the media coverage, for reasons ranging from a lack of funds for more aggressive and coordinated outreach to the difficulties wrought by the snow storm, which prevented a reporter from *The New York Times* from attending the conference and

filled regional headlines for days.[39] But the potential for significant media coverage exists because, in the words of the reporter from *The Boston Globe* who did cover the panel, the prospect of a group of lay citizens pronouncing on a technologically complex issue has something of a "man bites dog quality to it." The counter-intuitive appeal of the citizens' panel was especially strong in Boston, "where there is an incredible concentration of brainpower and you have conferences of experts all the time." But such an appeal might also be limited to Boston, which unlike most cities had a beat reporter like this one who covered ideas and trends in academia.[40]

Table 6 describes the identified media coverage of the citizens' panel. Compared to the U.K. conference, for example, which generated 128 press reports and 25 radio broadcasts (Joss 1995, 95), the attention to the citizens' panel seems minor. The U.K. conference, however, had eighteen months of organization and a full-time media relations person. It was also unable to generate any television coverage of the event itself (rather than the calls for participants), which the citizens' panel managed to do with its press conference, covered on the evening and late-night news on WCVB-TV in Boston.

INSERT TABLE 6: Media Coverage of the Citizens' Panel

The press coverage focused primarily on the novelty and even the chutzpah of bringing together a diverse group of lay citizens to analyze a technically complex issue. The editorial in *Technology Review* praised the citizens for "conduct[ing] themselves with the poise and sophistication of dedicated policy wonks" (Hackman 1997, 5). The coverage recounted the process of organizing the panel and discussed its recommendations, variously characterizing them as "a judicious but far-reaching public

---

[39] Two respondents also mentioned media coverage of the trial of the young British nanny, charged with murdering the infant under her care, as crowding out potential coverage of the citizens' panel.
[40] The reporter had covered previous annual meetings of EPIIC. He was also familiar with a project in civic journalism performed by *The Globe* under a grant from the Pew Charitable Trust on the New Hampshire presidential primary election in 1996.

interest agenda (Tebaldi 1997, 2) and as "list[ing] noticeably to the left, freely employing the buzzwords of diversity and empowerment, and demanding...that telecommunications corporations kick back a portion of their profits to make technology more widely accessible" (Flint 1997, 6). Reading the articles would probably provide an unfamiliar reader with an experience similarly unbalanced between substance and process as the panel itself had been: there is little of informative value about telecommunications technology and policy in these articles, but a great deal of information and even praise for the attempt to get citizens involved in decision making about it. Apart from the dozen or so requests for copies of the panels' report from readers of *MassHumanities*, however, the press coverage generated negligible attention among readers: readers of neither *The Globe* nor the *Technology Review* articles found them inspiring enough to write any letters to the editors.

Table 6 also includes addresses for three web sites carrying material about the citizens' panel. In a preliminary search, the author was unable to identify any other sites that had linked to those for the purpose of bringing attention to the panel.

The limited media impact means that the most significant interactions with lay knowledge took place with participants rather than non-participants. The media attention may well have been reduced by the snow storm, but it was also likely reduced for reasons similar to why the panel failed to have a direct impact or a substantive impact on general thinking -- that the issue as framed and assessed was broad and not remarkably timely, and the process was not well-linked to individuals or institutions with high profiles, although there were some ad hoc and personal connections.

Discussion and Conclusion

The conclusion of an evaluation of a policy analysis is necessarily something of a meta-analysis, attempting to answer what the evaluation has learned about the particular aspect of learning under scrutiny. Learning from such an event as the Citizens' Panel on

Telecommunications and the Future of Democracy is difficult because it is singular, it had many goals, it followed no established ways to teach, and there exist no established ways to learn from it. Thus, the choice of critical perspective and evaluative framework was crucial. The evaluation attempted to discover what a potential sponsor of such an event might get out of it, in terms of an impact on policy, politics and people. The choice of critical role is somewhat arbitrary but sensical, fitting in to both an academic and practical agenda. The choice of a framework that investigated the actual impact, the impact on general thinking, the training of knowledgeable personnel and the interaction with lay-knowledge encompassed well and even broadened the previous types of evaluations and permitted a productive evaluation even in the face of what Majone (1989) calls the problem of "little effect."

The panel had no actual impact on the substance of telecommuications policy; nor did it have an impact on the agenda, vocabularies or problem framing of telecommunications policy. As one respondent opined, "It was definitely not a touchstone for telecommunications policy." Sclove (1996, 29) writes, "[A]lthough consensus conferences were not intended to have a *direct* impact on public policy, they do in some cases" (emphasis in the original). Even though there was broad agreement that this citizens' panel was intended as a proof of the concept, many participants had hoped for an impact and the possibility of one seemed to focus their efforts. Once the concept has been proved, to continue without emphasizing ways of having an impact is a cruel hoax on the participants.[41] Indeed, in a final endorsement of their experience, all fourteen panelists said that they would be very likely to participate in another panel. But some panelists mentioned the importance of the opportunity to have an impact on policy as critical to their participation.

---

[41] Laird (1993) includes "delegated authority" as one of his three criteria for evaluating direct participatory mechanisms.

Finding that the panel had no impact substantive impact on policy or politics does not mean that its efforts went for naught, and the framework used here is important to demonstrate this conclusion. The panel had some ad hoc impacts on procedural aspects of politics -- that is, on the place of citizens' panels themselves on the agendas of policy elites. The participants, both elite and mass, clearly learned a great deal from the citizens' panel, although as one principal suggested, "It would be hard to be involved in the process and learn nothing." Nevertheless, with the experiences related by the participants, the panel demonstrated at least small-scale impacts on procedural and reflexive learning among elite participants and all kinds of learning among the panelists. The panel's report reached onto the World Wide Web, local television news, and the pages of specialized and general press.

The task remains to articulate ways of increasing the chances that future citizens' panels in the U.S. (and elsewhere) may have more significant impacts on policy, politics and people.

Thinking about an actual impact on policy means thinking more about clientele, because policy analysis is a clientelistic enterprise. Although the organizers successfully mapped the format of the Danish consensus conference onto their organizational capacities, they could not map the legitimacy and publicity of their European counterparts onto their effort because they lacked a broadly recognizable national affiliation. There was no legislative sponsorship, no charge from public agencies, minimal representation of federal interests and expertise, and no direct participation of key decision makers. The lack of a national technology assessment organization meant no opportunity for broad-based legitimation and connection to a legislature. All these potential clients need to be integrated into future citizens' panels more closely.

Even with such integration, however, the products of the panel must be useful to these clients. The report from this citizens' panel was not timely and it was too broad. There is at least some irony in the lack of timeliness because that had been a criticism,

from both the Republican budget cutters and the populist critics, of OTA. This citizens' panel also demonstrated from the outset that the citizens could set their own agenda, a potentially empowering option, but also a potentially marginalizing one. The panelists opted to ignore issues on the docket and produced an empassioned but untargeted assessment. Even five of the fourteen panelists were not satisfied with the final report. The report contained "no real solutions," said one panelist. "It was to make people aware but not to change things." Said another panelist, "if you are going to put so much time into a project, you need ore time to write the final report....We were rushing in the end." Future citizens' panels need to concentrate on the mechanics of producing a timely, targeted report that represents the best and unhurried deliberation of the panelists.

Thinking about an impact on the substantive aspects of general thinking follows actual impact. In some respects, the procedural aspects of general thinking follow as well, because, for example, closer connection to a clientele will aid the diffusion of the panel's experience to an elite audience. The steering committee and the experts must be used more creatively toward this goal, for example, by pledging members of the steering committee to taking the results of the citizens' panel to their colleagues in professional fora, to policy makers through walk-arounds of the results, and to media in their localities. But future citizens' panels must implement more specific kinds of dissemination tasks.

Such a greater effort at interaction with non-participants would likely also facilitate an impact on the training of knowledgeable personnel by the panel, as would ways to foster even greater interaction among the participants themselves. With a substantial overlap in the memberships of the steering committee and expert cohort, elite participation in the panel was a modest networking exercise at best. Moreover, experts had enlightening but very minimal opportunity to interact with the lay-participants. Future steering committees should be more active in trying not only raise the profile of the expert participants, but to broaden their membership and create more opportunities for them to interact among themselves and with the steering committee and panelists.

The panelists' interaction with the experts produced a significant amount of substantive learning, although opportunities for less formal interchange, for example, break-out groups, a meal, or general discussion should create even more opportunities. A more focused topic or question is also likely to improve substantive learning among the lay-participants, as less ground will need to be covered in the same time period. Media coverage of a narrower topic (and, when repeated, a less novel procedure) is likely to be more substantive as well. Greater affiliation with higher profile sponsors and elite participants is likely to increase media coverage, as would regular occurences of a citizens' panel under some institutional sponsorship. Regardless of affiliation, additional media outreach beyond a single press conference must be considered to increase the interaction with mass non-participants. Radio coverage seems natural for such a dialogue-based process, and radio is already a hot-bed of political discussion that struggles with issues of disaffection and civic engagement. The production of alternative formats for mass communication and education -- e.g., teaching modules, web sites with audio and video -- should be considered. Participants, both elite and mass, can be encouraged to continue their participation into the dissemination stage by signing letters to the editors of local newspapers (panelists could also conduct their own walk-arounds to local policy makers).

As one of its principals said, this citizens' panel "was successful as a model. It takes time and iterations in a country this big, and with our federal/state system to have any sort of political impact." This first iteration of the citizens' panel demonstrated not merely that one could occur competently in the U.S., but it provided tantalizing evidence that many kinds of impacts can be achieved. For future citizens' panels to succeed in influencing policy, politics and people, however, they will need greater attention to the interaction among participants and the connection to non-participants. They will also need higher profile institutional partners. From the experience of this citizens' panel, it seems likely that such greater effort will be returned.

Bibliography

Bimber, Bruce. 1996. *The politics of expertise: The rise and fall of the congressional Office of Technology Assessment*. Albany: The State University of New York Press.

Bimber, Bruce and David H. Guston. 1997. Introduction: The end of OTA and the future of technology assessment. *Technological Forecasting and Social Change* 54(2/3):125-30.

Brody, Herb. 1997. Wired for democracy? The promises and perils of the new communications technologies. Commissioned background paper, Citizens' Panel on Telecommunications and the Future of Democracy, April 1997, mimeo.

Browne, Angela and Aaron Wildavsky. 1984. What should evaluation mean to implementation. In *Implementation*, 3rd ed., edited by Jeffrey L. Pressman and Aaron Wildavsky, 181-205. Berkeley: University of California Press.

Citizens' Panel on Telecommunications and the Future of Democracy. 1997. Consensus statement. 4 April. Mimeo.

Clark, William C. and Giandomenico Majone. 1985. The critical appraisal of scientific inquiries with policy implications. *Science, technology and human values* 10(3):6-19.

EPIIC. 1997. EPIIC experts questions, Citizens' Panel on Telecommunications and the Future of Democracy, 18 March 1997. Mimeo.

Fixdal, John. 1997. Consensus conferences as extended peer groups. Presented at the conference on Technology and Democracy: Comparative Perspectives, Oslo, Norway 17 - 19 January.

Flint, Anthony. 1997. At Tufts, no wonks need apply." *The Boston Globe* (5 April):B1.

Grin, J., H. van de Graaf and R. Hoppe. 1997. *Technology assessment through interaction: A guide*. Working document W57. The Hague: The Rathenau Institute.

Grundahl, Johs. 1995. The Danish consensus conference model. In *Public participation in science: The role of consensus conferences in Europe*, edited by Simon Joss and

John Durant, 31-40. [London]: The Science Museum with the support of the European Commission Directorate General XII.

Guston, David H. Forthcoming. Stabilizing the boundary between politics and science: The role of the Office of Technology Transfer as a Boundary Organization. *Social studies of science*.

Hackman, Sandra. 1997. First line: And now a word from your neighbors. *Technology Review* 100(August/September):5.

Hamstra, Anneke. 1995. The role of the public in instruments of constructive technology assessment. In *Public participation in science: The role of consensus conferences in Europe*, edited by Simon Joss and John Durant, 53-66. [London]: The Science Museum with the support of the European Commission Directorate General XII.

Herdman, Roger and Jim Jensen. 1997. The OTA story: The agency perspective. *Technological Forecasting and Social Change* 54(2/3):131-44.

Jørgensen, Torgen. 1995. Consensus conferences in the health care sector. In *Public participation in science: The role of consensus conferences in Europe*, edited by Simon Joss and John Durant, 17-29. [London]: The Science Museum with the support of the European Commission Directorate General XII.

Joss, Simon. 1995. Evaluating consensus conferences: necessity or luxury? In *Public participation in science: The role of consensus conferences in Europe*, edited by Simon Joss and John Durant, 89-108. [London]: The Science Museum with the support of the European Commission Directorate General XII.

_____. 1998. Danish consensus conferences as a model of particpatory technology assessment: An impact study of consensus conferences on Danish Parliament and Danish public debate. *Science and public policy* 25(1):2-22.

_____. Forthcoming. Participation in parliamentary technology assessment: From theory to practice. In *Parliaments and technology: The development of technology*

assessment in Europe, edited by Norman J. Vig and Herbert Paschen. Albany: The State University of New York Press.

Joss, Simon and John Durant, eds. 1995. *Public participation in science: The role of consensus conferences in Europe*. [London]: The Science Museum with the support of the European Commission Directorate General XII.

Kingdon, John W. 1995. *Agendas, alternatives, and public policies*, 2nd edition. New York: Harper Collins.

Klüver, Lars. 1995. Consensus conferences at the Danish Board of Technology. In *Public participation in science: The role of consensus conferences in Europe*, edited by Simon Joss and John Durant, 41-49. [London]: The Science Museum with the support of the European Commission Directorate General XII.

Laird, Frank. 1993. Participatory analysis, democracy, and technological decisionmaking. *Science, technology, and human values* 18(3):341-361.

Lindblom, Charles E. 1990. *Inquiry and change: The troubled attempt to understand and shape society*. New Haven: Yale University Press.

Lynn, Laurence E., Jr. 1994. Public management research: the triumph of art over science. *Journal of Policy Analysis and Management* 13(2):231-59.

Majone, Giandomenico. 1989. *Evidence, argument, and persuasion in the policy process*. New Haven: Yale University Press.

Mayer, Igor, Jolanda de Vries and Jac Geurts. 1995. An evaluation of the effects of participation in a consensus conference. In *Public participation in science: The role of consensus conferences in Europe*, edited by Simon Joss and John Durant, 109-24. [London]: The Science Museum with the support of the European Commission Directorate General XII.

Reed, Laura. 1997. Final report, Citizens' Panel on Telecommunications and the Future of Democracy, November 1996-April 1997. Mimeo.

Tebaldi, David. 1997. From the director. *MassHumanitites*, p.2.

Sclove, Richard. 1996. Town meetings for technology. *Technology Review* 99(5):24-31.

Vig, Norman J. and Herbert Paschen, eds. Forthcoming. *Parliaments and technology: The development of technology assessment in Europe*. Albany: The State University of New York Press.

Weiss, Carol H., ed. 1977. *Using social research in public policy making*. Lexington, MA: Lexington Books.

Wood, Fred B. 1997. Lessons in technology assessment: methodology and management at OTA. *Technological Forecasting and Social Change* 54(2/3):145-62.

TABLE 1: Members of the Steering Committee

Paul Aaron, Brandeis University and Benton Foundation

Colin Crowell, Office of Representative Ed Markey

Sharon Gillett, Victory Research and MIT Sloan School of Business

Sandra Hackman, *Technology Review* magazine

Jarice Hanson, University of Massachusetts, Amherst

Charles Kravetz, New England Cable News

Alex Morrow, Lotus Development Corporation

Mariko Nakanishi, EPIIC, Tufts University

Richard Sclove, Loka Institute

Sherman Tiechman, EPIIC, Tufts University

Kristan Van Hook, National Telecommunications and Information Administration, U.S.
        Department of Commerce

Greg Watson, Dudley Street Neighborhood Initiative.

Italics indicates that member of the steering was also an expert who presented material to the panel.

TABLE 2: Demographic Profile of the Citizens' Panel

Gender: 7 male; 8 female

Age: 5 between 14-34; 5 between 35-49; 5 50 or older

Race: 10 White; 4 African-American; 1 Other (some Native American)

Education: 3 high school; 3 some college; 9 college

Geography: 8 urban; 7 suburban

Computer Use: 1 expert; 8 some knowledge; 6 no experience

Employment: arts administrator, auto restoration, City Year Corporation, computer clubhouse manager, consultant, corrections officer (retired), engineer, executive assistant, business manager, industrial engineer (retired), teacher/nurse, unemployed (2), freelance writer/actor

TABLE 3: Experts

Alex Morrow, Fellow, Lotus Development Corporation

Philip Balboni, President, New England Cable News

Kristan Van Hook, Director for Congressional Affairs, National Telecommunications
      Information Administration, U.S. Department of Commerce

Sharon Gillett, Principal, Victory Research and Research Affiliate, MIT Sloan School of
      Business

Laura Ring, Executive Director, Massachusetts Telecommunications Council

Richard Sclove, Executive Director, Loka Institute

Colin Crowell, Legislative Assistant, Office of Representative Ed Markey (D-MA)

Greg Sheldon, Consultant, Telecom City

Carolyn Lukensmeyer, Director, America Speaks

Lee McKnight, Associate Director, Research Program on Communications Policy, MIT
      and Principal Investigator, Internet Telephony Interoperability Consortium

Marcos Bergamo, Division Scientist, Advanced Networking Department and Principal
      Investigator, Gigabit Satellite Network, BBN Systems and Technologies

Isa Zimmerman, Superintendent of Acton/Boxborough Schools

Susan Getgood, Director of Marketing, Microsystems (Cyber Patrol)

Leah Osterman, Director of Educational Programming, Continental Cablevision

Phil Bereano, Professor, Department of Technical Communication, University of
      Washington

Jarice Hanson, Chair, Department of Communication, University of Massachusetts,
      Amherst

Italits indicates an expert who was also a member of the steering committee.

TABLE 4: FRAMEWORK FOR EVALUATING IMPACT OF POLICY ANALYSIS

CATEGORY OF IMPACT	TARGET OF IMPACT	TYPE OF IMPACT
Actual Impact	Policy	Substantive
General Thinking	Politics	Substantive & Procedural
Training of Knowledgeable Personnel	People (Elite)	Substantive & Procedural & Reflexive
Interaction with Lay-knowledge	People (Mass)	Substantive & Procedural & Reflexive

TABLE 5: SCHEMATIC RESEARCH PROTOCOL

ACTUAL IMPACT:

As a consequence of the analysis (consensus conference), has there been any change in relevant:

> legislation?
> funding?
> regulations?
> or any other concrete consequence to any authoritative public decision?

GENERAL THINKING

As a consequence of the analysis (consensus conference), has there been any change in relevant:

> vocabularies
> agendas
> problem statements
> or any other political aspect

regarding

> the substance of the policy issue discussed?
> the process or role of the analysis (consensus conference)?

TRAINING OF KNOWLEDGEABLE PERSONNEL

As a consequence of the analysis (consensus conference), has there been any learning:

> by elite participants

regarding

> the substance of the policy issue discussed?
> the process or role of the analysis (consensus conference)?
> the participants' own knowledge, role, organization, contacts, etc.?

INTERACTION WITH LAY-KNOWLEDGE

As a consequence of the analysis (consensus conference), has there been any learning:

> by mass participants
> and mass non-participants

regarding

>the substance of the policy issue discussed?
>the process or role of the analysis (consensus conference)?
>the citizens' own knowledge, role, civic engagement, etc.?

TABLE 6: Media Coverage

OUTLET	TYPE	DATE	IMPACT
WCVB-TV	5 and 11 pm local news	4 April 97	
Boston Globe editor;	column	5 April 97	~580,000 circulation; no known letters to the " a couple of calls"
*Technology Review**	editorial	Aug/Sep 97	~100,000 circulation no letters to the editor;
*Yes!**	commentary	Fall 97	?
*MassHumanities**	director's column	Fall 97	~8,000 circulation; 12 requests for copy of consensus report

OUTLET	URL
Nettrendz	www.ucaqld.com.au/net/8/democracy.html
EPIIC*	www.epiic.com/EPIIC/news4/html
Benton Foundation*	www.benton.org/citizens/home.html

* Indicates item written by or outlet controlled by participant in the citizens' panel.