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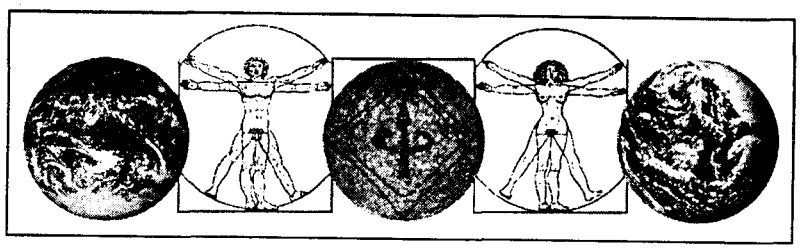

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Adapting the Internet to Citizen Deliberations: Lessons Learned

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Abstract

This paper reviews a research project involving two versions of the Danish consensus conference conducted at North Carolina State University in 2001. One version was conducted in the usual, face-to-face mode, while the other version was conducted entirely on the Internet—the first consensus conference conducted via the Internet. The paper discusses the importance of public deliberations in making public policy about science & technology, the organization and implementation of the Citizens Technology Forum, and some lessons learned from the experience.

Deliberation and Policy

Many commentators decry the paucity of public input in the making of public policy decisions in modern America [4, 8, 10]. When we consider both the complexities and the importance of policies concerning science and technology, the absence of informed and thoughtful public input into decision making is all the more troublesome. Not only does such absence undermine the actual democratic character of many policy decisions, the numerous after-the-fact popular resistances to those policy choices only contributes to ineffective and inefficient government [12, 15, 17, 18].

A number of serious problems beset public policy making about science and technology in the U.S., including exaggerated deference to experts, public ignorance, and apathy. A number of democratic scholars have begun exploring a new democratic model—often called "deliberative democracy" or "discursive democracy"—as a possible corrective to these problems [2, 6, 7, 9, 11]. A fundamental premise of these conceptions is that ordinary, non-expert citizens can, and should, participate in well-run deliberative exercises, for several important purposes. First, effective citizen participation should involve more than periodically casting ballots. Rather, citizenship should involve engaging with both the fundamental issues of the day and with other citizens. Only through deliberative experiences with other citizens can the ordinary individual leaven his or her personal policy preferences with a knowledge of what is important to other citizens. Second, when dealing with highly complex issues, the exchange of information found in deliberations helps each individual expand her understanding. Third, when policy makers pay attention to the results of informed deliberation among citizens, policy choices tend to encounter less organized resistance.

Citizen Knowledge & Competence

The 2001 North Carolina Citizens' Technology Forum grew out of discussions among the investigators during the latter half of 2000 specifically about how to enhance the ability of ordinary citizens to influence policy choice about science and technology.

Danish Consensus Conferences

To address these concerns, we decided to implement a well-known Danish practice, known as a "consensus conference," in North Carolina; we wanted to find out whether that practice could be used successfully in the United States.

The Danish Consensus Conference process involves bringing a group of ordinary, non-expert citizens together to develop a set of recommendations for government decision makers about how to manage a particular public policy issue that involves science and technology [1, 3, 5, 13, 14, 16, 19-22]. The citizen-panelists are provided extensive background information on the issue under scrutiny, develop their own sets of questions, and have access to experts and professional facilitation as they work to create a set of consensual recommendations.

We had three major research concerns:

1. Would a consensus conference enhance the general public's ability to influence technology policy-making?

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2. How would the exercise of striving to reach consensus on a complex issue affect the participants' sense of trust in experts?
3. How would an exercise in reaching a public consensus on a public policy issue involving technology differ from other instances—such as juries—when people attempt to come to a common judgment?

We were also concerned that the success of Consensus Conferences in Denmark might be due to greater cultural homogeneity there, and we wanted to find out if the more diverse American public would find the practice agreeable and useful.

Two Consensus Conferences

We wanted to "push the envelope" a bit with the Danish practice. We decided to organize two conferences—both on the same subject, involving the same experts—one in the traditional face-to-face mode, the other one entirely on the Internet. One group of participants would study, discuss, debate, and deliberate all in the same room together, while the other group would never be in a room together. Face-to-face consensus conferences have been organized at least 35 times in over a dozen countries (including once in the U.S.), but never before on the Internet. We were particularly interested in discovering if this powerful communication tool could—or could not—be adapted to such an intensive project of public deliberation.

Organizing the Project

With funding from the National Science Foundation, and from the Kenan Institute for Engineering, Technology, and Science on the NC State campus, we assembled the elements necessary for the project:

- *A discussion topic.* After considering several possibilities, we decided to examine issues concerning *Genetically Modified Foods.* The development of genetic technologies presents a number of challenges for policy makers and for the general public; the application of those technologies to the general food supply of the nation raises fundamental issues of safety, equity, and public consent. This is precisely the sort of topic a consensus conference is designed to tackle.
- *Oversight Committee.* The Oversight Committee would help us in the preparation of background materials and the selection of panelists. The committee included a geneticist, a chemist, two historians of science, a sociologist, and a rhetorician.
- *A professional facilitator.* Dr. Robert Francesconi, an experienced, professional facilitator, agreed to work with us on both conferences.
- *Citizen panelists.* Panelists were recruited through local newspaper ads. 162 persons responded, and 45 were selected to participate in a face-to-face forum, an Internet forum, and as a control group. Any volunteers significantly involved with biotechnology (through employment, investments, etc.) or involved in the public debates about genetically modified foods (participation in activist groups, etc.) were excluded. We wanted citizens who were interested in the issue, but had not yet made up their minds about it, and were willing to study and listen to multiple viewpoints. The panels were selected to reflect the general population of the Research Triangle area on four traits: age, education, ethnicity, and gender.
- *Internet discussion software.* After exploring many different options, we finally chose *Facilitate.com* because it provided the best array of functions and controls for our purposes.
- *Background materials.* These in-cluded a general summary of the issues surrounding genetically modified foods, government and university research reports, and analyses prepared by various corporations and activist groups. These materials were prepared in print and Internet versions. The Oversight Committee reviewed the background materials, to ensure that they were accurate and unbiased.
- *Recruiting content experts.* We re-cruited a panel of content experts in genetically modified foods, who would be able to address specific panelists' questions. The experts included geneticists, agronomists, biologists, a patent attorney, and a representative of an activist group.
- *Pre- and post-conference question-nacres.* We prepared questionnaires to assess how much our participants learned about genetically modified foods and how their attitudes may have changed through the Citizens' Technology Forum experience.

We then proceeded to stage the two Citizens' Technology Forums.

The Face-to-Face Forum

The face-to-face forum took place on the North Carolina State University over three weekend

two-day weekend in July, a two-day weekend in August, and a three-day weekend in September.

Background sessions. During the first two weekends, the participants got acquainted with each other, with the facilitator, the project staff, and the overall Citizens' Technology Forum process. The participants reviewed the background materials and raised their own issues and concerns about genetically modified foods.

Unlike a standard focus group, in which the organizers establish the issues to be addressed, in the Citizens' Technology Forum it is the participants who control the agenda and their issues that are examined. By the end of the second weekend, the panelists had drawn up a list of five issues they felt were most important, and five specific questions that they wanted to hear experts address.

The final session. The last weekend constituted the actual Citizens' Technology Forum. For the first day and a half, seven experts in genetically modified foods responded to the panelists' specific questions. For the first half of the second day, the panelists convened with all of the experts in an open-ended question-and-answer session, during which the panelists were able to ask follow-up questions and to explore other areas of concern about the topic.

During the remainder of that day, and for the full final day, the panelists deliberated—with the assistance of the facilitator—about their concerns and about the new information they heard from the content experts. Their goal, and the goal of the process, was to develop a set of recommendations for governmental decision-makers about managing genetically modified foods that the entire panel could endorse. These consensual recommendations are contained in the final report prepared by the panelists, which is included here.

The Internet Forum

The Internet forum took place during the same three-month period as the face-to-face forum. All of the activities of this Forum took place over the Internet; the participants never met together face-to-face.

We created a web page where the participants could access the same background materials available to the face-to-face panel. The web page also carried a link to *Facilitate.com*, where the panelists could discuss, debate, and deliberate.

During each of the two sessions we scheduled a number of two-hour synchronous discussion sessions, that is, "live" discussions that involved all participants at the same time. Between the synchronous sessions, the panelists were able to raise and discuss issues asynchronously, much like an ordinary chat room.

Just as in the face-to-face forum, the participants in the Internet Forum became acquainted with each other (virtually), with the facilitator, and with the Forum process. They, too, were encouraged to explore the background materials, and to raise whatever concerns and issues they had about genetically modified foods. They also generated a set of questions for the content experts.

During the final session, the panelists received Internet responses to their questions from the same content experts who had interacted with the face-to-face panel. They also participated in an Internet-based, synchronous question-and-answer session with the experts.

When this was completed, the panelists, under the guidance of the facilitator, engaged in synchronous deliberations, again with the goal of reaching a consensual set of recommendations to governmental decision makers about how to deal with genetically modified foods. The results of their deliberations were written into a final report, available here.

Comparing the Results

The results of both Citizens' Technology Forums exhibit a number of intriguing similarities and differences.

We expected that the two experiences would differ in important ways, especially because the Internet participants would deliberate in a very artificial environment. They would never meet or see each other, would never have the ability to judge another person's comments with the added signals of facial expressions, body language, and so on. Similarly, while the Internet participants would interact with the content experts, exclusively through words appearing on a computer screen, rather than in the more "natural" exchanges between the face-to-face group and the experts. Exploring these differences in the experience of group deliberations was central to our research project.

Concerns and Recommendations. Although both groups worked in isolation from each other, both had very similar lists of concerns about genetically modified foods. These areas of concern reflect the wider public debates about genetically modified foods, and that two separate groups would generate such similar lists should reinforce for the sponsors of genetically modified foods and for governmental decision makers just how important these concerns are to average citizens.

Both groups spoke of the potential economic benefits of genetically modified foods, but both were concerned with the rapid development of genetic engineering, and the unpredictable consequences of its deployment. They both worried that the long-term health effects of genetically modified foods were unknown, and they were dismayed by the apparent lack of mechanisms to track those effects.

Both groups were concerned that genetically modified foods were introduced into the general food supply with little public comment, and they expressed a strong desire to see that consumers are provided with more extensive information about such foods. Both groups endorsed strong programs of public education to overcome the lack of unbiased and reliable information. Both groups argued that citizens should have the option of consuming non-genetically modified foods.

Both the face-to-face and the Internet panels were worried about the potential environmental impacts of genetically modified foods, especially on other forms of agriculture, including organic farming. Both wanted the government to take steps to assure the preservation of non-genetically modified seed stocks.

While both groups agreed that some form of labeling for genetically modified foods is necessary to insure public choice, they disagreed on the feasibility of segregating genetically modified foods within the larger food stream, and differed about the application of the European Union's "precautionary principle" to the bio-technology industry. The precautionary principle halts the regulatory approval of new foods if there is insufficient, inconclusive, or uncertain scientific data concerning potential risks.

Both groups worried that the regulatory structure to oversee this new technology was fragmented and uncoordinated, and both thought that a review of the regulatory structure that is responsible for genetically modified foods was necessary to improve regulatory effectiveness.

Conclusions

All members of the research team were deeply impressed by the commitment and effort exhibited by both the face-to-face and the Internet panelists. It was clear in both group settings that our panelists were actively wrestling with complex issues, assessing difficult moral and political trade-offs, and striving very hard to reach informed and responsible conclusions. In this regard, it seemed that the Internet panel worked as diligently as the face-to-face panel despite the very different deliberative contexts.

Both panels reflected diverse opinions about genetically modified foods, about the role of corporations in its development, and about the proper role of government in managing this powerful technology. Some members were highly suspicious of the corporate developers of genetically modified foods and would have supported significantly stronger restrictions than the others in their group, as a whole, would endorse. Others were more supportive of entrepreneurial development and confident that the combination of market incentives and limited government regulations would assure both public health and economic benefits.

Several people came to the experience with distinctly conflicted feelings about genetically modified foods, hoping that it would be possible to take advantage of the technology's many potential benefits while avoiding its largest dangers. It did not appear that any of the participants left the deliberative exercise with their initial views completely unchanged by the experience.

All of the content experts who interacted with both groups thought that the participants were well informed and fully engaged with the issues. The experts reviewed both final reports and found no technical errors.

It seems clear to the research team that these examples of non-expert citizen deliberations were quite successful. The members of both panels engaged with the issues and the background materials. They raised pointed questions for the content experts and pursued follow-up questions with energy. During their deliberations, they willingly expressed their opinions and listened carefully to the opinions of others. As they worked toward consensus on specific recommendations, they treated each other with respect even when they strongly disagreed. Both groups worked overtime to ensure that the final reports were complete and accurately expressed the group's collective judgment. While everyone found one part or another of the final report to be less than he or she preferred individually, they all endorsed the final collective outcome. Several participants expressed a sense of obligation to work hard on the project because, in their view, they represented ordinary citizens everywhere.

We believe, finally, that policymakers, business and corporate interests, and activist groups involved in controversies about genetically modified foods should pay careful attention to the results of this project. Our two panels studied the issues very carefully, and their opinions and recommendations represent what the average *informed* citizen thinks about genetically modified foods. The concerns these groups expressed cannot be dismissed as uninformed or hysterical; they reflect the careful weighing of

evidence, competing claims, and public values. Neither side in this controversy escaped criticism from our deliberators, who sought sensible solutions to the problems they had identified. Those who ignore their concerns, conclusions, and recommendations do so at their own risk.

The project also demonstrates that ordinary citizens can participate effectively, thoughtfully, and intelligently in debates about very complex issues. While the current Citizens' Technology Forum focused on an issue of genetic engineering, there is no reason that subsequent efforts could not examine any of the wide array of modern technologies—such as computers, energy technologies, environmental protections, etc.—that present difficult and persistent challenges for democratic government.

Future Research

The research team intends to pursue additional research projects on public deliberations about issues involving science and technology. We remain committed to goal of enhancing the opportunities for ordinary, non-expert citizens to help shape social choices about science and technology, and believe that the experiences of this project strongly encourage further work. Eventually, we hope to organize a nationwide set of deliberations on these issues, where we can reliably express an informed, national consensus on specific issues.

For those interested in further information about the 2001 North Carolina Citizens' Technology Forum, the web page used during the project is still available. At this web site, you will find both Final Reports from the two panels, a general description of the consensus conference process, and the background information that both the Face-to-Face and the Internet panels read. The site can be found at:

http://www2.chass.ncsu.edu/forum

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