The Virtual Agora Project: A Research Design for Studying Democratic Deliberation

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Abstract

In 2001, the National Science Foundation provided $2.1 million in funding for the Virtual Agora Project, a three-year exploration of the effects of online and face-to-face democratic deliberation. The project seeks to shed light on deliberation’s effects on individuals, the community, and decision quality as well as how best to use technology to achieve positive outcomes. Of special concern to the project is determining whether deliberation builds better citizens. This paper describes the research design of this project to stimulate future research on deliberation.

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INTRODUCTION

In 2000, my colleagues and I submitted a proposal for a "Virtual Agora Project" (VAProject) to the National Science Foundation's (NSF) Information Technology Research division (which has now been supplanted by the Digital Government and Information Society divisions). In 2001, the NSF agreed to provide $2.1 million in funding to the VAProject, about 40% of the funding we initially requested. The cut in funding has posed challenges to the project, but we have been able to execute a research design reasonably similar to that described in the proposal. The project was funded to run from late 2002 to late 2005, and it is currently ongoing.

The VAProject was designed to achieve two broad goals: the development of open-source freeware for democratic deliberation and to conduct research on democratic deliberation. The development of the software accounts for the preponderance of project costs and time investment. I will focus here, however, on the research aspects of the proposal. The project was meant to extensively explore online and, to a more limited extent, face-to-face democratic deliberation.

This paper seeks to contribute to deliberative democracy research by describing the research goals and general design of the VAProject. It is not meant to provide a complete and up to date bibliography for research in this area or minutiae of actual project execution or statistical methodology, tasks that would take far too much space. In addition, to show that the approach adopted in the VAProject had useful results, the paper will mention some preliminary findings from the research. The paper is divided into three sections: A description of the research objectives as they appeared in the proposal and the form they took in actual research, the research design from the proposal, and some preliminary results.

RESEARCH OBJECTIVES

The research objectives of the VAProject were conditioned on the fact that at the time the proposal was written, in 2000, research results were not available from such studies of deliberation as Vincent Price's Electronic Dialogue Project (2002) or Conover et al.'s (2002) work on everyday deliberation. Very little quantitative and online research had been conducted on deliberation, particularly online

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1 My colleagues on the proposal were Peter Shane (Ohio State University) and Robert Cavalier (Carnegie Mellon University). I wrote the research proposal portion of the submission, which was based on an earlier NSF proposal I had submitted with several other colleagues, including two colleagues whose contributions to the original proposal should be acknowledged: Carter Butts (University of California at Irvine) and Markus Kemmelmeier (University of Nevada at Reno).
deliberation. Thus, the research objectives of the VAProject are rather sweeping—they hoped to define an as yet undefined field of study. The proposal stresses that volumes of existing research in social psychology and elsewhere may not be applicable to understanding the effects of deliberation. Researchers have speculated and continue to speculate (Mendelberg 2002) about the often negative implications of existing social psychological research for deliberation—intensified group conflict, polarized opinions, normative conformity to the group, exaggerated influence for the socially powerful, and intensified effects of emotionally motivated reasoning. This research, however, does not typically involve standard deliberative settings and methods. Many aspects of the context of deliberation could obviate laboratory research findings. For example, some research shows that online communication suffers from poor transmission of social cues, which seems to lead to disinhibition (Kiesler et al. 1984; Kiesler and Sproull 1992)—a lack of civility toward faceless others that can result in conflict. Social norms in particular online settings, however, seem to prevent disinhibition (Baym 1995). Research into social identity theory also suggests that the specific identities evoked by online discussion may undermine disinhibition (Lea and Spears 1991). Given the experiences of deliberative practitioners, it seems plausible that people come to deliberation as citizens, thus invoking a set of norms of cordiality that could prevent disinhibition. In the end, not much was known about deliberation, which vindicates the NSF funding a broad, ambitious examination of actual deliberation.

An additional conditioning factor for research objectives on the VAProject was the NSF's Information Technology Research division's strong interest in the effects of long-term online interaction. I discovered this in reviewer comments to my first version of the VAProject, which focused almost entirely on on-campus experimental research rather than a long-term follow-up. I suspect that technologists among the ITR's reviewers were particularly keen on more naturalistic research on people's use of the Internet in their homes, instead of experiments in controlled settings that people would not normally experience. I agree about the value of such research. But, given the administrative and research difficulties of any longer-term at-home deliberation research, I remain skeptical of the value of such research, unless it is amply funded to reach its research goals. The funded proposal was written to be agreeable to reviewers interested in such long-term engagement. The reader might also wonder why the research was not proposed to the political science division of the NSF. The answer is that the state of the field of political science tends to be more conservative and not favorable to democratic deliberation or experimentation with new forms of democratic engagement—as indicated in several largely negative treatments of deliberation (Elster 1998; Hibbing and Theiss-Morse 2002; Mendelberg 2002).

The proposal contends that information technology (IT) stands at the cusp of a potentially revolutionary application—permitting large numbers of citizens to easily learn about, deliberate, and act on political and social issues. A major
obstacle to this is that very little is known about the best ways to employ such technologies for political discussion as well as the social factors that promote political discussion. The project was posed as a multidisciplinary program of research to address these gaps in knowledge.

Goals, then, included isolating factors that encourage political discussion and identifying rules for best applying IT to political deliberation. The best way to apply IT would be ways that encourage positive outcomes. The proposal identifies two broad clusters of positive outcomes: decision quality effects and "community" effects. Particular uses of IT for political discussion may enhance or inhibit the quality of policy decisions people make based on those discussions. Also, more generally, online and offline deliberation may differ in decision quality. The proposal suggests that quality could be measured by: conformity in decision making, formal rationality of choice, correspondence of decisions with respondent values, identification of a common good, deception and manipulation, confidence in decisions, more effort learning about an issue, and less biased information search regarding the issue.

"Community" effects include a range of possible effects related to the possibility that deliberation enhances citizenship and otherwise affects the well being of the community. Community effects examined include: the representativeness and inclusiveness of deliberation (online and offline), the perceived legitimacy of participant choices, the effects of deliberation on the community-mindedness of participants, degree of conflict, capacity of deliberation to build social networks and social trust, effects on political tolerance, and effects on political efficacy and agency (Muhlberger 2003; Muhlberger 2005). Of interest here is whether these outcomes are affected by online versus face-to-face (f2f) deliberation and by particular uses of IT. Effects could be further divided into those that affect individuals, such as perceptions of political efficacy, and those that cannot be understood except at a social level of analysis, such as social networks.

In addition to the research goals described in the proposal, three related research targets of opportunity suggested themselves during the period in which the software was being built for this project: the stealth democracy thesis, social identity effects, and agency theory. In 2002, Hibbing and Theiss-Morse published their book *Stealth Democracy*, which condemns democratic deliberation in a near absence of data about actual deliberations. Despite its weak basis, the book has been widely read and accepted by many political scientists. The authors seek to show that much of the American public desires "stealth democracy"—a democracy run like a business by experts with little deliberation and little public input. They maintain that many Americans adopt stealth democracy beliefs because they are disinterested in politics and uncomfortable with political conflict and disagreement, which disinterest and discomfort the authors depict as reasonable. They express concern with only one factor they believe is behind stealth democracy beliefs: the 'false consensus' effect—a belief in a broad public
consensus on political issues that results in a very negative view of debate and compromise in government. Hibbing and Theiss-Morse would like to address false consensus beliefs through public education, but not through greater political engagement. They believe the public would react very negatively to increased engagement, which they believe could delegitimize the political system. I hypothesized that stealth democracy would be closely related to authoritarianism and that it might be ameliorated through democratic deliberation, not aggravated. This suggested the goal of further investigating stealth democracy beliefs in the context of a deliberative experiment. It fit well with the original goal of determining the effects of deliberation on the community.

In addition, the recently proposed theory of human agency (Muhlberger 2005) may have potential as a framework for understanding the effects of deliberation, particularly those related to enhanced community-mindedness and citizenship. For example, the theory contends that deliberation enhances citizenship by increasing internalization of an active citizen identity. Such internalization might be detected by direct questions about citizenship as well as reaction times to questions about citizenship. This implied additional ways to study community-mindedness and citizenship. Finally, I also became aware of a research literature in social identity theory in which the effects of online interaction and discussion are examined (Lea and Spears 1991; Postmes, Spears, and Lea 1998). This literature indicates that the chief effect of online discussion is to allow participants to ignore individual identity and let various primed social identities come to the fore. This suggested that reminding people about their citizenship during online discussion could result in different deliberative outcomes than online discussion without such reminders.

**Research Design**

The proposed project consists of two phases—an on-campus experiment (phase 1) and a long-term naturalistic study with experimental components (phase 2). Phase 1 served to show participants that democratic discussion could be successful. Participants were introduced to such discussion in a controlled and intensive environment, specifically an eight-hour on-campus deliberation. Phase 1 took place in July 2004, while Phase 2 is currently ongoing. Eighty percent of the 568 Phase 1 participants were compensated by receiving a Windows PC, with which they would continue discussions in Phase 2, and the rest received $100 and were asked to serve as a control group that would answer three questionnaires in Phase 2. Deliberative Polls™ by James Fishkin and Robert Luskin (Luskin et al. 1996; Luskin et al. 1999; McLean et al. 2000) indicate that participants usually think highly of one-day deliberation experiences. Phase 1 of the VAProject study also served as a controlled experiment that separated the effect of IT-mediated information from the effects of face-to-face discussion. Some effects of deliberation, including attitude change (Luskin et al. 1996; Luskin et al. 1999;
McLean et al. 2000) and increases in political sophistication (Gastil and Dillard 1999), might be due in part to the acquisition of information, not merely discussion. Thus, determining the independent contributions of new information and discussion would clarify the importance of discussion. These contributions can in part be separated by giving detailed policy information to all participants but only letting some deliberate.

Prior to Phase 1, recruits were given a short questionnaire over the phone to establish their initial positions on the four related policy issues to be discussed in Phase 1. The issues are all related to public school consolidation in Pittsburgh, where schools have appreciable overcapacity due to population decline. During Phase 1, all respondents answered a web-based questionnaire and then were given 40 minutes to review IT-based information on the policy issues. Next, they were divided into one of the three experimental groups: face-to-face discussion, online real-time audio discussion, and a control group. The control group was given extra time to read and think about online policy information while other groups discussed the issues for 90 minutes. This design offers substantial separation of information effects from the effects of discussion because very few participants will know facts beyond those in the reading materials. To break up the day and also to look for possible information acquisition effects of discussion, participants were asked to read information about the topic of discussion again in the afternoon and to discuss a second time afterwards. The day ended with a concluding research questionnaire.

The experience in Phase 1 of the VAProject bears some similarity to the Deliberative Poll™ method, which often starts and ends with a questionnaire and involves multiple small group discussions that last about 90 minutes. The method we used differed from a Deliberative Poll™ in a couple respects. First, in Deliberative Polls™, participants are generally sent all the briefing materials to read at home. We did send participants a primer, but left most of the material for them to read during the day, to learn how they go about absorbing information, to insure they actually read some of the material, and to give them a chance to look for specific information after some of the discussion. Deliberative Polls™ also typically offer "plenary sessions" in which all participants meet in an auditorium and a selected individual from each group asks a group-selected question to a panel of experts or community leaders. VAProject participants instead got to read textual materials and reports from experts and community leaders as part of their information sessions. Materials were divided into a core set of documents that summarized the policy issues and "raw materials" that included text from experts and leaders.

To accommodate possible social identity effects of online discussion, the three experimental groups of Phase 1 of the VAProject were further subdivided into groups that received a reminder of their citizenship and groups that did not. Citizenship reminders consisted of a photocopy of an American flag in a participant's room, the word "Citizen" appended to their name on their name tag,
and the word "Citizen" appended to their name during online discussion, if the participant was in that condition. A short video prior to discussion also reminded those in the citizen condition of their citizenship, while the video for those not in the citizen condition did not.

The citizenship-reminder / no-citizenship reminder experiment was crossed with the three deliberation conditions: deliberation face-to-face (f2f), deliberation online, and no deliberation. This resulted in a 3X2 experimental design, as illustrated in Table 1. Participants were each in one of the six crossed conditions, as depicted by the six internal cells of the table. For example, some participants were in groups all of the members of which were given the citizen reminders and who deliberated face-to-face (Citizen, F2F), others were in a group that did not receive a citizen reminders and deliberated online (No Citizen, Online), and still others did not receive the citizen reminders and did not deliberate with others.

Table 1: VAProject Phase 1, 3X2 Experiment

<table>
<thead>
<tr>
<th>Citizen Condition</th>
<th>Deliberation Conditions (Face-to-Face, Online, No Discussion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizen</td>
<td>Citizen, F2F, Citizen, Online, Citizen, No Disc.</td>
</tr>
<tr>
<td>No Citizen</td>
<td>No Citizen, F2F, No Citizen, Online, No Cit., No Disc.</td>
</tr>
</tbody>
</table>

Phase 2, a longer-term naturalistic experiment, complements what can be learned from Phase 1. Phase 2 should help indicate the natural limits of inferences made from the more artificial environment of Phase 1. For instance, it will be revealing to see what happens to satisfaction and engagement in the long run of Phase 2. A captive and well-paid audience in a one or two day deliberation, such as participants in Deliberative Polls™, can be counted on to be enthusiastic about their experience. Much less is known about participation by people in a longer-term setting where there are few immediate rewards. In addition, I believe that many of the benefits theorists describe for deliberation, particularly such benefits as creating better, more community-minded citizens, will only manifest after long-term engagement. Phase 2 was scheduled to be an eight-month follow-up to Phase 1, one in which participants would engage in deliberation from home.

During Phase 2, participants use their eight-month online access to read and share web-based political information and to discuss politics via real-time and asynchronous audio discussion forums. Phase 2 participants will be involved in three deliberative "Web Congresses." The long-term nature of Phase 2 allows participants to develop skill at communicating via a computer medium.
Incentives for participation in Phase 2 include free ISP access for the duration, the computers, occasional small gifts such as video rental coupons, and the opportunity to meet people and to engage meaningfully in the community.

The three Congresses of Phase 2 are designed to empower participants to engage in the entire political process—identifying a key problem, choosing a policy response, and acting to secure actual implementation of the chosen policy. An initial "Issues Congress" helped participants identify a key problem facing the City of Pittsburgh. The researchers suggested four possible issues for consideration: school consolidation, the city tax structure, regional government, and diversity in the city. Participants were allowed to suggest additional issues. The Issues Congress will be followed by a "Policy Congress" that will help participants choose a preferred policy position and an "Action Congress" that will have participants interact with public interest organizations and public officials to decide what actions are entailed in promoting or, depending on their preference, opposing the policy. People are assigned to small discussion groups. These groups are divided into different experimental conditions to test alternative ways of utilizing IT. Each Web Congress is intended to contain a 3X2 experiment. The planned experiments include an attempt to identify the effects of various uses of anonymity, the best mechanism of information exchange between groups, the value of explicit norms and moderation, the value of telepresence features, and the impact of rating systems. Each of these forms of IT utilization will be tested for impacts on the consequences described above for community effects and decision quality effects. Naturally, these consequences will have to be measured, as must be individual and group factors that could covary with the consequences and which therefore need to be statistically controlled. Consequently, the Web Congresses include online questionnaires.

Rigorous experiments on the consequences of various uses of online technology are needed. Deliberative practitioners and usability testing specialists have burgeoning literatures on what works in online communities and discussions. While these approaches no doubt yield helpful insights, they can also result in a great deal of false learning—as did medicine before scientific testing. Systematic testing and theoretical insights on the results could add firmer knowledge to the repertoire of deliberative practitioners.

SELECTED PRELIMINARY RESULTS

Preliminary results are available for Phase 1, though it is necessary to keep in mind that Phase 1 was not meant to be a standalone research project. Phase 1 measures were generally asked only once, not before and after deliberation. Post-measures were intended for Phase 2. This means that results are not yet available for many measures and that, for those measures that occurred in the concluding questionnaire, only between-experimental group results, not within-individual results, are available. In addition, many effects are not expected to be apparent
except after longer-term deliberation. Nevertheless, a number of interesting preliminary results are available.

This project is better able than past, published research to separate the effect of deliberation from that of information because of the presence of an information-only experimental group. While there is evidence of substantial change in mean opinion due to information, there is no evidence of such mean change due to deliberation—the control group does not have significantly different means for the four policy views than do the deliberating groups.

Americans are poorly informed and even small amounts of information can appreciably change policy opinions (Gilens 2001). Thus, it should hardly be a surprise that information can make a substantial difference. While deliberation did not change mean policy views, it substantially shifted individual's views toward the mean of their discussion group. Discussion did not change the mean of opinion, but both online and face-to-face discussion reduced the variance of opinion. Thus, discussion led to coordination of opinions, a coordination that would make collective action more feasible. This is consistent with findings on the structuration of opinions by deliberation (McLean et al. 2000).

In addition, discussion also served the important purpose of motivating the participation that exposed people to the policy information that changed their views. I found that participants who discussed, whether online or offline, had much more favorable views of their experience than those in the information-only control group and were also more motivated to participate in future discussions. It seems plausible that, had we informed participants in advance that they would be in a no-discussion control group, many fewer would have attended.

Phase 1 also reveals that, contrary to the stealth democracy thesis, which claim that stealth democracy beliefs are largely harmless, these beliefs are associated with a syndrome of arguably pernicious attitudes and orientations. These include false consensus beliefs, authoritarian attitudes, a reluctance to take the political perspectives of other social groups or persons, and low need for cognition (Muhlberger 2005). This syndrome of relationships can be understood in terms of Rosenberg's (2002) work on linear reasoning interpreted via agency theory. In gist, Rosenberg describes a mode of reasoning in which people understand causal relationships in simple linear terms—a single mover explains each effect. Such reasoning does not allow for a system of relationships that include feedback loops and multiple causes to an effect. Agency theory contends that people who think in linear terms (in the social domain) are unable to grasp human agency other than by supposing that people are driven by a monolithic will (Muhlberger 2005). Such linear reasoners likewise understand social organization, including the political system, as driven by the monolithic will of some entity, such as a leader or "the public." Linear thinkers in a democratic culture are susceptible to viewing the public as a mythic, unified entity underwriting democracy, perhaps through a strong leader who represents this public. Linear thinking naturally leads to a false belief in a public consensus.
Also, because this assumed public consensus is viewed as the sole prop of the desired democratic social order, disagreement with the assumed consensus is viewed as dangerous and deserving of punishment—key elements of authoritarianism. Contemplating alternative political perspectives and deep thought about social matters may also be viewed as dangerous to the social order. In addition, linear thinkers either do not have or do not wish to employ the conceptual tools for understanding alternative political perspectives or for complex thought. Thus, linear reasoning and agency theory help explain the covariance of the four attitudes and orientations. With such a syndrome behind stealth democracy beliefs, anything that could mitigate these beliefs may well be socially beneficial.

Consistent with predictions, deliberation ameliorates stealth democracy beliefs as well as a variety of factors resulting in stealth democracy beliefs, including perceptions of unproductive conflict in political discussion and belief in the intrinsic irrationality of political discussion. Online discussion greatly reduces vertical collectivism, an authoritarian attitude that is potently related to stealth democracy beliefs. Vertical collectivists are people who believe they should sacrifice their individual needs or interests to the interests of the group, such as the family or associates. Preliminary results also indicate online deliberation reduces stealth democracy beliefs directly.

Another aspect of the stealth democracy thesis is that higher levels of participation will aggravate perceptions of illegitimate political conflict and raise political demands, resulting in delegitimation of the political system. Participants in Phase 1 of the VAP project did ascribe high levels of legitimacy to the majoritarian choices of the deliberative participants. Indeed, most participants felt that policy makers should be substantially influenced by deliberation outcomes, even if the participant personally were to disagree with those outcomes. The strong legitimacy ascribed to deliberation outcomes may indicate a potential for increased demands on the political system—the formation of a public willing to press its demands on the political system through public meetings, the press, or protest. While this may hardly seem problematic to researchers and practitioners who value an engaged public, theorists of elite democracy (Walker 1965) contend that strong pressures on the political system can overwhelm that system with demands, including conflicting demands. Hibbing and Theiss-Morse appear to have something like this in mind. Even if we give credence to such concerns, the VAP results offer some reassurance because discussants' confidence in governmental bodies did not change.

Agency theory draws support from Phase 1 findings that deliberators, both f2f and online in the citizen condition, were more likely to report that being a citizen and being a Pittsburgher are important to who they are. Such identities serve in agency theory as a high-level control over behavior. Changes in these identities may indicate that participants are taking their citizenship more seriously and will be more likely to act on their notions of citizenship in the future.
Importantly, reaction time measures show that participants in the online plus citizenship reminder condition took significantly longer to decide whether various activities associated with active citizenship were in fact responsibilities of citizens. This might indicate that these participants are thinking more carefully about their responsibilities as citizens, a possible first step toward more deeply internalizing those responsibilities.

Online discussion also affects manipulation of other participants. Manipulation was measured by asking participants whether they withheld information or gave invalid arguments to strengthen their position in the discussions. Self-reported manipulation of other participants was significantly higher in the online, no citizenship reminder condition than in either f2f condition. The online condition with a citizenship reminder does not significantly differ from the f2f conditions. This pattern of findings makes sense because online discussion strips identity reminders from communication. Consequently, according to social identity theory, then, online discussion without a reminder of citizenship will stimulate people to be more fiercely individualistic while a reminder of citizenship should invoke people's obligations to the community.

VAProject research has also found some evidence for the value of survey-based measures of deliberative quality of group discussion. A set of questions asked participants how much the learned from the group discussion. This learning-from-discussion scale passes two tests of validity for such a measure. First, individual-level responses on the scale were correlated with the mean response of all other participants in their group (excluding the individual's response). This establishes that the measure has intersubjective validity, a crucial test not passed by other measures of deliberative quality in the current study. Second, the group-level indicator significantly predicts the individual's assessment of various group outcomes such as decision quality and satisfaction.

**CONCLUSION**

The Virtual Agora Project proposal sought to bring a broad research project to bear on the as yet poorly charted domain of deliberation research. The project seeks to address gaps in knowledge about how best to use information technology (IT) for high-quality political discussion and to identify what factors encourage such discussion. The benefits of discussion were to be measured by various deliberative outcomes, including quality of decisions and various effects on individuals and communities. The proposal positioned this VAProject at the intersection of interests pertinent to the Information Technology Research wing of the NSF. This included incorporating a long-term at-home online deliberation component with a series of experiments on the benefits of various uses of technology. This component probably appealed most to the technologists who reviewed proposals. The research design also included an on-campus deliberation with characteristics of a more tightly controlled laboratory experiment. This
component likely appealed to reviewers with a more rigorous social science background.

Most of the expected findings from this research are not yet available. Some preliminary results from Phase 1, however, suggest that the research is yielding insights. Findings on attitude change due to deliberation versus information indicate that short-run deliberation serves to coordinate attitudes socially and motivate engagement. It does not serve the mean attitude change function suggested by prior, less rigorous work. Findings regarding the stealth democracy thesis indicate that stealth democracy is related to a syndrome of socially and politically problematic beliefs and tendencies and that these are ameliorated, not agitated, by deliberation. Also, short-term deliberation does not reduce confidence in government. Deliberation promotes citizenship identity both consciously and unconsciously, as indicated by reaction time measures. Also, consistent with expectations from prior research, self-reported manipulation of other participants appears to be strongest in the online condition without reminders of citizenship. Reminders of citizenship identity make online participation as free of manipulation as face-to-face discussion. Perceptions of having learned much from a group discussion appears to be an objective quality of group discussions that predicts positive outcomes. Finally, a number of other indications in the data, not described above, hint that the online citizenship condition may enhance the community-mindedness of participants.
Bibliography


of the Association for Public Policy Analysis and Management, at Washington, DC.


