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Citizens Deliberating Online: Theory and Some Evidence

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1 Introduction

The capacities of ordinary citizens to engage in successful political give-and-take, and thus to participate in meaningful deliberative democracy, have been debated for some time. Even those espousing great faith in the deliberative citizen, however, have expressed doubts about the suitability of online, text-based exchanges for meaningful and constructive political discussion. Some argue that the impersonal nature of computerized communication renders it poorly suited to developing meaningful relationships, encourages uncivil discourse, facilitates diffusion of unverified information, and ultimately serves to polarize opinions rather than support finding common ground.

This chapter reviews theory and available evidence bearing on the functional utility of online "discussion" for political deliberation, arguing that characteristics of computer-mediated exchanges (viz., reduced social cues, relative anonymity of participants, and a reliance on text-based exchanges lacking non-verbal, facial and vocal cues) may under the right conditions facilitate open exchanges of controversial political ideas. Thus, far from compromising the benefits of face-to-face group meetings, computer-mediated communication may prove especially useful for deliberative work.

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Data from two, year-long panel experiments in online political discussion are considered in light of these propositions.[1] One experiment involved the creation of 60 groups of representative American citizens who engaged in monthly discussions leading up to the 2000 presidential campaign; the second studied 80 groups of citizens meeting several times to debate issues related to health care reform in 2004 and 2005. Both projects gathered extensive survey data from participants, including those in control groups who did not engage in any online deliberation, and recorded the full text of all group discussions for analysis. Main findings largely confirm the value of online deliberation and paint a broadly optimistic portrait of the deliberative citizen online.

2 The Deliberative Citizen

Democratic theory is of at least two minds about the capacities of ordinary people for rational self-governance. Many express suspicions about the ability of typical citizens to comprehend and decide complicated public issues, and thus doubt the value of mass participation in policy making. Lippmann (1922: 32), for example, finding a number of fundamental inadequacies in both the press and the public, argued for a form of elite, technocratic rule relying on political leaders and technical experts to determine policy and then to organize public opinion for the press. By contrast, other theorists place far more faith in the ability of citizens to deliberate public issues and render sensible judgments about policies. In rebutting Lippman, for instance, Dewey (1927) argued that modern democracies were threatened less by incompetent citizens than by communication systems that did not adequately serve them, and that with improvements in the means of public discussion, the ends of true participatory democracy were attainable. People are indeed capable, he proposed, though conditions hadn't permitted them to realize their potential.

The former, dim view of citizen capacities appears to square reasonably well with much survey research over the past several decades, which documents wide swaths of indifference and political ignorance in the American public (Neuman 1986). A significant number of opinions given in response to public opinion surveys – indeed, by some estimates perhaps as many as a third – may be "top of the head" responses, given rather thoughtlessly and

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loosely rooted, if at all, in knowledge of the issues at stake (Graber 1982). As an input to policy making, mass opinion is thus commonly discounted, in favor or more informed and presumably rational elite opinion. This is not to say that public opinion is accorded no value by such accounts. Rather, it is considered a legitimate input to policy making only in a highly circumscribed and indirect fashion, through periodic elections to accept or reject political leaders, and not as a more direct means of deciding policy (Schumpeter 1942; Sartori 1962). Barber (1984) has termed this "weak" democracy. Like others, he argues that a disparaging view of the public underlies the dominant "liberal rationalist" model of democratic government. Citizens are seen as largely ignorant and intolerant, with highly unstable and untrustworthy opinions (Dryzek & Berejikian 1993: 48).

A burgeoning number of political scientists and policy researchers, however, have challenged the liberal rationalist model, arguing that despite claims of being democratic in character, it renders government incapable of adequately reflecting popular interests. They propose instead various forms of "strong" democracy (Barber 1984) that are built upon direct, participatory, and deliberative engagement of ordinary citizens in ongoing policy formation (Macpherson 1977; Barber, 1984; Dryzek 1990; Warren 1992; Mathews 1994). While proposals vary widely in how best to achieve such strong democracy, they rest on a common set of propositions: That political autonomy grows out of collective engagement in political discussion, and that if people were better engaged in discursive politics they would be transformed as citizens. As Warren (1992: 8) puts it, people "would become more public-spirited, more knowledgeable, more attentive to the interests of others, and more probing of their own interests."

2.1 The Call for Citizen Deliberation

Echoing Dewey's (1927) call for improvements in the methods of public communication and debate, participatory democratic theorists submit that the mass media have transformed politics into a kind of spectator sport. Audiences simply consume political views disseminated by elites through the mass media, rather than function as autonomous, deliberating bodies. The *public,* which should rightly be a sovereign, reasoning collective, has been displaced by disconnected *masses* assembled around political spectacle (Mills 1956; Habermas 1962/1989; Ginsberg 1986; Fishkin 1991). Opinion polls and popular referenda only amplify shallow mass opinion formed without any meaningful public debate, producing a mere echo chamber for elite debate.

Participatory theorists argue that these conditions are not inevitable, advancing an agenda to engage the electorate, rebuild lost social capital, and

reform the press. Proposed remedies for treating the ailing body politic are myriad (see Price & Neijens 1997, 1998). However, most emphasize citizen deliberation and identify in it a number of powerful benefits. Discussion theoretically allows citizens to air their disagreements; creates opportunities to reconsider initial, unreflective impulses; and ideally fosters understanding of alternative perspectives and viewpoints (Arendt 1958; Habermas 1962/1989, 1981/1984; Gutmann & Thompson 1996). It is also thought to promote tolerance and understanding between groups with divergent interests, foster mutual respect and trust, lead to a heightened sense of one's role within a political community, and stimulate further civic engagement (Barber 1984; Bohman 1996; Dryzek 2000). The central normative proposition is communitarian in spirit: "When citizens or their representatives disagree morally, they should continue to reason together to reach mutually acceptable decisions" (Guttman & Thompson 1996: 1).

Calls have been increasingly issued on these grounds for engaging ordinary citizens in structured political deliberations (Fishkin 1991, 1995) and for including lay citizens in technical policy deliberations (Fischer 1990, 1993; deLeon 1995). In many such proposals, citizens are selected at random, given incentives to engage in collaborative, face-to-face sessions with their peers, and invited to expert briefings and question-and-answer sessions (Dienel 1978; Renn et al. 1984, 1993; Fishkin 1991, 1995). A large number of other kindred efforts – citizen issue forums, citizen juries, consensus conferences, and the like – have been mounted as well.

2.1 Doubts about the Deliberative Turn

Deliberative theory has garnered many advocates and become popular among reform-minded practitioners, but it has attracted critics as well (Sanders 1997; Hibbing & Theiss-Morse 2002). Bases for criticism are both theoretical an empirical in nature.

First, the argument that group discussion improves the quality of opinion can be questioned in light of much of the research on group decision making. Group discussion has, after all, been known to produce opinion polarization, shifts in new and risky directions, and other undesired outcomes (Brown 2000). It entails social-normative pressures that can lead to reticence on the part of those holding minority opinions, contributing to "political correctness" or "spirals of silence" that distort the communication of true preferences (Noelle-Neuman 1984).

Second, it may well be doubted whether the core attributes of high-quality deliberation – "egalitarian, reciprocal, reasonable, open-minded exchange" (Mendelberg 2002: 153) – are reasonably attainable in practice. While the goal of deliberative theory is to embrace all views and empower

the disenfranchised, Sanders (1997) argues that deliberative encounters likely do just the opposite, discouraging participation by those who lack social or political status (e.g., women or ethnic minorities) or deliberative ability (e.g., the less well educated), thus only further empowering high-status, educated participants. The purportedly egalitarian nature of deliberation cannot be assured merely by invitation; it must be demonstrated in practice by vocal participation, equitably distributed. Also open to question is the degree to which citizen deliberation will be reciprocal, reasonable, and open-minded. People may exchange views, and in some sense argue, without giving reasons for their views; or, if reasons are given, they may simply be ignored rather than given a response.

Third, the vital role accorded disagreement in deliberative theory may be misplaced. People may well find it uncomfortable to disagree, particularly those uncertain of their views, and take political disagreement personally (Mansbridge 1983; Pin 1985; Schudson 1997; Eliasoph 1998). They may avoid confrontation, and hence real debate. Or, if citizens do air disagreements, the result may prove to be increased animosities rather than mutual respect and trust. And even if disagreement does induce greater political tolerance, it might as well induce ambivalence, and thus come at the expense of political action (Mutz, 2002). For reasons such as these, Hibbing and Theiss-Morse (2002) posit that many citizens do not want, and would likely resist rather than embrace, direct involvement in policy making through public discussion.

With the growth of deliberative programs, some of these propositions have been subjected to empirical scrutiny (e.g., Fishkin & Luskin 1999; Price & Cappella 2002). Still, available evidence has been limited and mixed, so the effects of such deliberative exercises, along with clear understanding of the causes of any effects obtained, is presently difficult to determine (Price & Neijens 1997; Delli Carpini, Cook & Jacobs 2003; Ryfe 2005). Several studies, particularly those by Fishkin and colleagues involving "deliberative polls," indicate that citizens learn from their discussions and sometimes arrive at positions that would not have been registered by conventional means such as a public opinion poll. However, most research has tended toward simple input-output models of deliberation effects and has not tested, for example, whether the content and structure of actual citizen discussions follows normative assumptions, or whether exposure to disagreement from political opponents indeed has the beneficial effects postulated.[2]

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[2]Survey-based studies, relying on self-reports of perceived disagreement in political conversations, indicate mixed effects: Perceived disagreement predicts greater awareness of reasons supporting opposing opinions (Price, Nir & Cappella 2002; Mutz 2002); but may also

3 The Online Setting

The Internet and World Wide Web have been greeted by some as cause for optimism about a revitalized public sphere (Poster 1999; Becker & Daryl Slaton 2000; Papacharissi 2004). While growing at a fairly rapid rate, however, political "conversation" online remains a rare phenomenon. According to a Pew Research Center study (2005), about 10 percent of those responding to a national survey reported taking part in online discussions about the 2004 U.S. presidential election. Nevertheless, Internet technologies have considerable appeal to adherents to deliberative theory and practice, in that they permit group interactions among geographically dispersed and diverse participants, potentially bringing far greater reach, reduced cost, and increased representation to exercises in deliberative democracy.

At the same time, some analysts have questioned whether electronic, text-based interactions are well-suited to fruitful political deliberation. Fishkin (2000) argues, for example, that text-based Internet discussions are likely too superficial to sustain sound political deliberation.[3] Putnam (2000: 177) also remains skeptical of the Internet's capacities for generating social capital, in part because "computer-mediated communication networks tend to be sparse and unbounded," encouraging "easy-in, easy out" and "drive-by" relationships rather than the close acquaintance promoted by face-to-face contact. Computer-mediated communication is often framed as an impersonal phenomenon that de-individuates participants, rendering it poorly suited to getting to know others, instead encouraging uncivil discourse and group-based stereotyping (see discussion in Kiesler, Siegel & McGuire 1984; Rice 1993). Sunstein (2001) warns that the Internet, far from encouraging reasonable dialogue over shared issues, merely encourages "enclave" communication among very like-minded citizens, circulating unfounded and often false information, polarizing and intensifying opinions, and contributing to widening gaps between those on opposite sides of public issues. Even if designers of online deliberative programs were able to counter such tendencies, they would still contend with the so-called "digital divide," that is, structural inequities in access to computing equipment, familiarity with its

predict lower, not higher rates of political participation (Mutz, 2002). Laboratory experiments do sometimes directly engage research subjects in discussion, for instance, in business decision making or juries; but analyses have not focused on the tenants of deliberative theory and, moreover, the experimental settings often bear little resemblance to citizen discussion as normally understood.

[3] Fishkin has since experimented with voice technologies, eschewing the usual text-based "chat" formats characteristic of most online group discussions. Iyengar, Luskin and Fishkin (2003) report that voice-only deliberations (akin to conference calls) produce information gains and opinion changes roughly comparable to those found in face-to-face deliberative polls.

use, literacy and typing ability. The prospects for successful political deliberation online, then, remain unclear.

With each of these potential liabilities, though, come potential benefits. The quasi-anonymity and text-based nature of electronic group discussion, for instance, might actually reduce patterns of social dominance. Studies demonstrate that online discussions are generally much more egalitarian than face-to-face encounters, with reduced patterns of individual dominance and increased contributions by low-status participants (Dubrovsky, Kiesler & Sethna 1991; Rice 1993; Walther 1995; Hollingshead 1996). Task-oriented groups generate more unique ideas working in computer-mediated settings than when face-to-face (Gallupe, DeSantis & Dickson 1988; Dennis 1996). Group decision-making experiments generally indicate that online discussions, relative to face-to-face group meetings, generate more open exchanges of ideas (Rains 2005), suggesting considerable utility for deliberative work.

Moreover, recent studies suggest that the computer may not be the "impersonal" medium it is commonly made out to be and that, in fact, people find it useful in forming relationships (Walther 1992). Experimental comparisons show that computer-mediated discussions produce more questions, greater self-disclosure, more intimate and direct questions, and fewer peripheral exchanges than face-to-face encounters (Tidwell & Walther 2002). Other research similarly suggests that people find the lack of physical presence and reduction in social cues to be useful rather than limiting. Bargh, McKenna and Fitzsimmons (2002) find that their experimental participants feel better able to reveal their "true selves" online than in person; while Stromer-Galley (2003) found a number of people reporting that they felt better able to discuss political disagreements over the Internet than face-to-face, because it felt to them more comfortable and less dangerous. Finally, online encounters may assist people in formulating their thoughts, by requiring greater economy of expression and the conversion of inchoate ideas into text, and by permitting statements to be reviewed and edited prior to posting.

Political discussion online surely differs in fundamental ways from that carried out face to face. Its distinctive features, however, may well prove to help rather than hinder the core attributes of sound deliberation. The reduction in social cues, by restricting the projection of social status, may produce less deferential behavior and so undercut status hierarchies. The ability to input "statements" simultaneously may assist the sharing of ideas, while anonymity should reduce inhibitions and anxieties about expressing one's honest views, particularly when they are likely to be unpopular.

4 Two Empirical Forays

While by no means resolving these many issues, data from several field experiments help shed important light on the nature of online deliberation. Unique in their design and scale, these two studies – *Electronic Dialogue* and *Healthcare Dialogue* – provide unusual empirical leverage on debates over the utility of text-based, electronic group interactions for political discussion. Importantly, neither project aimed at replicating "typical" Internet discussion. Instead, they pursued an experimental logic: What *would* occur if we were to bring a representative sample of Americans online to discuss politics, or to debate public policy? The results begin to address fundamental questions concerning the putative value of citizen deliberation and, in particular, of airing opposing points of view.

Our review will out of necessity be brief, intended to provide an overview rather than a thorough presentation of findings. After sketching the outlines of each study, we consider evidence bearing on five basic questions. Who attends such discussions? Who talks? How can we characterize the discussions vis-à-vis normative ideals? How do the discussions influence, if at all, knowledge and opinion? And what of their transformative potential: Can we discern any impact on civic attitudes or subsequent engagement?

4.1 The *Electronic Dialogue* Project

The *Electronic Dialogue* project was a year-long panel study conducted during the 2000 U.S. presidential election. It involved a multi-wave, multi-group panel design, lasting roughly one year. All data gathering was conducted over the World Wide Web. The core of project consisted of sixty groups of citizens who engaged in a series of monthly, real-time electronic discussions about issues facing the country and the unfolding presidential campaign.

4.1.1 Sample

Unlike many Web-based studies, the project did not rely upon a convenience sample of Internet users. Instead, respondents came from a random sample of American citizens age 18 and older drawn from a nationally representative panel of survey respondents maintained by Knowledge Networks, Inc. of Menlo Park, California.[4]

[4] The Knowledge Networks panel includes a large number of households (in the tens of thousands) that have been selected through RDD (random digit dialing) methods and agreed to accept free WebTV equipment and service in exchange for completing periodic surveys on line.

Details of the sampling are presented in Price and Cappella (2002). Briefly, a random sample was drawn from the Knowledge Networks panel for recruitment to the year-long project. Just over half (51 percent) agreed to participate, and the great majority of those consenting (84 percent) subsequently completed the project's two baseline surveys in February and March 2000. Comparisons of the obtained baseline sample (N = 1684) with a separate random-digit dial telephone survey and with U.S. Census data indicated that the *Electronic Dialogue* sample was broadly representative, though it tended to slightly over-represent males, and to under-represent those with less than a high-school education, non-whites, and those with weak interest in politics.

4.1.2 Design

All baseline respondents were randomly assigned to one of three groups. Those in the *discussion* group (N = 915) were invited to attend eight online group deliberations, roughly once a month, beginning in April and continuing through December. Members of the this group, regardless of whether they attended discussions or not, were also asked to complete a series of surveys, one preceding and one following each discussion event. Participants assigned to the *survey-only control* group (N = 139) were also asked to complete all the surveys, although they were never invited to attend any online group meetings. The remaining participants were assigned to a *project pre/post only* condition: They were asked to complete only the baseline surveys and, one year later, the final end-of-project surveys.

Anticipating far less than perfect attendance, sixty groups were formed with roughly 16 invitees per group, in order to produce groups of 5 to 10 participants at each round of discussions. Because of the theoretical interest in the impact of disagreement, three experimental group conditions were created using baseline data: *homogeneously liberal* groups (n = 20); *homogeneously conservative* groups (n = 20); and *heterogeneous* groups with members from across the political spectrum (n = 20). Participants maintained group assignments over the full course of the study.

Discussion groups met live, in real-time, with membership straddling several time zones. Participants logged on to their "discussion rooms" at pre-arranged times, using their Web TV devices, television sets, and infrared keyboards. All discussions were moderated by project assistants working out of the Annenberg School at the University of Pennsylvania, and were carefully coordinated and scripted to maintain consistency across groups. Discussions were not intended to be formally deliberative exercises; instead, group members were simply invited to discuss a number of topics, including which issues ought to be the focus of the campaign; a variety of candidate

policy proposals (e.g., in areas of education, crime and public safety, taxes, and foreign affairs), the candidates' qualifications; campaign advertising; and the role of the media. In all, nine rounds of meetings were held. The full text of all discussions, including time-stamps for each comment posted, was automatically recorded.

All respondents to the initial baseline (those invited to discussions, the survey-only control group, and the project pre/post-only group) were contacted again for end-of-project surveys In January and February 2001. Fifty-five percent completed the first survey, and 56 percent completed the second.

4.2 The *Healthcare Dialogue* Project

The *Healthcare Dialogue* project shared many of the features of the 2000 campaign study, but focused instead on formal policy deliberations about a complex issue: health care reform. It also created online discussions involving health-care policy elites in addition ordinary citizens. Project objectives included: (a) examining online deliberation as a means of maximizing public influence in policy making; (b) studying the interaction of policy elites and ordinary citizens in online discussions; and (c) testing hypotheses related to group composition and the quality of deliberations and outcomes.

4.2.1 Sample

The project again drew upon the Knowledge Networks panel but employed a stratified sampling strategy, such that the final baseline sample (N=2,497) represented both a general population sample of adult citizens, age 18 or older (N=2,183), as well as a purposive sample of health care policy elites with special experience, knowledge, and influence in the domain of health care policy and reform (N=314). The general population sample was further stratified into members of "issue publics" who are highly attentive to and knowledgeable about health care issues (*N*=804) and ordinary citizens (*N*=1379). Comparisons of the obtained baseline general population sample to a random-digit dial telephone sample and to U.S. Census data indicated that the samples were broadly comparable, although project participants were somewhat more likely to be middle aged and to follow politics more frequently.

4.2.2 Design

A subset of the baseline panel (262 health care policy elites; 461 issue-public members; 768 ordinary citizens) was randomly assigned within strata to participate in a series of four moderated online group discussions, including pre- and post-discussion surveys, which were conducted over the course

of the year. Participants were further randomly assigned to participate a group that was homogeneous within strata (that is, elite-only, issue-public-only, or general-citizen only) or mixed across the three strata. Discussion groups were again scripted to ensure consistency across groups, and short briefing materials were made available prior to each online meeting. The full text of all discussions, including time-stamps for each comment, was automatically recorded.

Because baseline surveys indicated broad agreement that the most pressing problems facing the health care system included the rising costs of health insurance, the large number of uninsured Americans, and the rising costs of prescription drugs, these issues were the focus of the online deliberations. Eighty groups (8 homogeneous elite,12 homogeneous issue-public, 20 homogeneous general citizen, and 40 heterogeneous across strata) met twice in the fall of 2004 to discuss insurance-related issues. A total of 614 project participants (123 elites; 206 issue-public members; 285 general citizens) attended at least one of the two discussions. The subset of 614 fall discussion attendees was then reassigned to 50 new groups for another round of two discussions in the spring of 2005, focusing on prescription drugs. In this second round, a random half the participants remained in homogeneous or heterogeneous groups as before, while half were switched (from homogeneous to heterogeneous groups, or vice versa).

Following the four discussion waves – in September and November 2004 and in February and April 2005, with each consisting of a brief pre-discussion survey followed by an hour-long online chat followed by another brief post-discussion survey – an end-of-project survey was conducted in August 2005 (completed by roughly three-quarters of all baseline respondents).

5 The Evidence to Date

Taken together, these two studies provide observations of close to 800 online group discussions involving more than 1,200 different participants, most of whom attended three or four group meetings over several months. With extensive survey data (19 survey waves in the 2000 project and 10 in the 2004-2005 project), full transcripts of the online interactions, and carefully designed experimental comparisons, we are in a good position to evaluate who attends such discussions, the nature of citizens' online behavior, and the influence of the discussions on knowledge, opinions, and attitudes.

5.1 Who Attends?

Rates of participation in the online discussions generally ranged from about 30 to 40 percent of those invited, producing groups averaging around a half-dozen persons each. In both projects, comparisons of attendees to non-attendees found no significant differences in gender, region of the country, or political leanings. However, people who showed up for the electronic discussions were, again in both projects, significantly less likely to be non-white than those who did not (about a 3-4 percent difference), significantly older (by about 3 years on average) and better educated.

Importantly, data from both projects indicate that attendees are significantly higher than non-attendees in interpersonal trust, regular "offline" political discussion, political participation and community engagement. Overall, the experience of both projects strongly supports the view that "social capital" goes hand in hand with deliberative participation (Putnam 2000). Trusting people who are engaged in their communities – even when their activities are not expressly political in nature – were more likely to attend. Those who attended the electronic conversations also scored significantly higher than non-attendees on scales measuring political knowledge and interest in public affairs; and in the *Healthcare Dialogue* project were also significantly more knowledgeable about health-related policy issues and more confident in health care institutions. Multiple regressions consistently show that the most powerful predictor of attendance is "argument repertoire," a count of the reasons a respondent gives in support of his or her opinion on an issue, along with reasons why other people might disagree (which has proved to be a validated and reliable measure of opinion quality; Cappella, Price & Nir 2002).

Two overall conclusions can be drawn from these analyses. First, robust and predictable differences between project attendees and non-attendees emerge, although most such differences are relatively small in magnitude. The best multivariate models, even those employing as many as 30 predictors, account for only small proportions of variance in participation – less than 20 percent in *Electronic Dialogue* and less than 10 percent in *Healthcare Dialogue*. Most of the variability in attendance among invitees, then, appears to be random rather than systematic. Notwithstanding concerns about the difficulty of overcoming the digital divide, both projects managed to assemble samples of discussion participants which, while over-representing engaged and knowledgeable citizens, were as a group highly diverse and broadly representative of the general population.

Second, many of the phenomena thought to stem from engagement in deliberation – trust in other citizens, knowledge, the ability to understand reasons on both sides of issues, civic participation – are also predictors of attendance. Any attempt to gauge the impact of deliberation on attitudes,

knowledge, or subsequent engagement, then, must carefully account for this fact.

5.2 Who Talks?

Bringing a diverse and representative sample of citizens together for discussion is a necessary but by no means sufficient condition for democratic deliberation. We turn, then, to a consideration of what transpired online: How engaged were participants? How egalitarian were the exchanges?

Participants in both projects contributed on average several hundred words per discussion. For example, discounting informal "small talk" at the beginning and end of each discussion and focusing only on the main deliberations, we found that participants in the *Healthcare Dialogue* project averaged just over 300 words per person. Importantly, "talking" in the online groups tends to be distributed very evenly across participants, with variance across group members typically reaching about 80 percent of its maximum value (Undem 2001). Not surprisingly, average words per person decline as groups increase in size.

Multiple regressions predicting individual word counts indicate that older participants – though more likely than younger people to attend discussions – contribute significantly fewer words. In the 2000 campaign study, women contributed significantly more words, but no significant gender differences emerge in the health care deliberations. Typing skills have a discernable though not large effect. The most notable pattern, overall, is the tendency of more politically involved and more knowledgeable participants to enter more words into the discussions: Education, political participation, political knowledge, and especially argument repertoire, have positive effects on the amount of "speaking." Thus, in the *Healthcare Dialogue* deliberations, policy elites contributed significantly more words than even members of the health care issue public, who in turn contribute significantly more words than ordinary citizens who are less interested in and knowledgeable about the issues.

Despite such predictable biases in favor of more knowledgeable participants, these are small relative to what one might expect from the literature on face-to-face groups. Over all, the word-count evidence suggests that the exchanges were quite equitable (Undem 2001). Neither project offered any indication that those holding minority views are reticent in the online group environment. Indeed, those whose issue preferences are furthest from other group members, if anything, tend to contribute *more* rather than fewer words.

5.3 The Nature of Citizen Discussion

Deliberation is more than a mere exchange of words. It should be reciprocal, reasonable, and open-minded. As noted above, people may exchange views without giving reasons, or they may ignore rather than respond to contrary views. However, both qualitative and quantitative analyses of transcripts indicate that the citizen discussions, while not especially sophisticated in policy terms, were nonetheless substantive and responsive. This is true even of the *Electronic Dialogue* discussions, which were framed only as talk about candidates and the issues, not as any sort of sort of formal deliberation (see, e.g., Price, Nir & Cappella 2005; Price & David 2005).

People freely and frankly exchanged opinions. In the 2000 campaign discussions, for example, people expressed on average 15 statements of opinion, pro or con, with reference to the issues discussed. Moreover, they explained their views. Close to 40 percent of all these opinion statements were coupled with one or more arguments to bolster a position (Price & David 2005). Almost all groups, even those that were homogeneously liberal and conservative, produced a reasonable balance of both pro- and con-arguments on most issues. Opinion expression and argumentation both tend to be equitably distributed: Once word counts are controlled, only strength of opinion shows much relationship to the number of arguments made (Price & David 2005). Analysis of transcripts and survey responses in both projects suggest that views expressed were diverse, and perceived as such by group members.

Participants had little or no trouble adapting the text format to their discussion aims, and there are many indications that people felt positively about their online experience (Price & Cappella 2002, 2006). Large majorities in both projects reported the discussion experience was interesting and enjoyable. Liking of the experience was uniform across liberal, conservative, and mixed groups in the 2000 study, while in the health care deliberations, even though policy elites expressed slightly less positive reactions than other citizens, a substantial majority of elites reported liking the experience. *Healthcare Dialogue* groups, which concluded their deliberations by voting on priorities for health care policy, expressed high levels of satisfaction with their final choices (Price & Cappella 2006). The vast majority of attendees said that they think "the potential of this technology for good political discussions" is either "good" or "excellent" (Price & Cappella 2002).

Perhaps most important, adverse reactions to disagreement were not much in evidence. To the contrary, exposure to opposing views appears if anything to be an attraction of the online encounters. Open-ended survey questions invited *Electronic Dialogue* participants to identify what they liked and disliked about the experience. Almost half of all coded "likes" referred to hearing others' views, interacting with people from different

parts of the country, or learning how much they agreed or disagreed with other citizens. By comparison, just over 12 percent singled out the chance to express their views (Undem 2001). Aspects of the discussions that were disliked were fewer in number, and most commonly had to do, not with the substance of personal interactions at all, but instead with technical issues such as logging in or keeping up with scrolled comments on screen.

5.4 Impact on Knowledge and Opinion

Analyzing the impact of deliberation is complicated by the fact that, as noted earlier, the best *predictors* of attendance proved to be precisely those variables usually cast as theoretical outcomes. While this can be interpreted as confirming in part the reciprocal relationship between deliberation and good citizenship, it must certainly be taken into account when attempting to gauge the effect of deliberation on attitudes and knowledge. Toward this end, using dozens of measures available from our extensive baseline surveys, we calculated an estimate of each person's *propensity to attend* and control for this propensity score to remove the effects of potential confounding variables (Rosenbaum & Rubin 1983; D'Agostino 1998). Propensity scoring succeeds in balancing almost all differences between attendees as group and their counterparts who did not attend. Particularly when coupled with separate statistical controls for baseline levels of target outcomes and any variables which may remain imbalanced, it enables fair experimental comparisons to test hypothesized deliberation effects (see Price, Goldthwaite & Cappella 2002; Price, Feldman, Freres, Cappella & Zhang 2006).

Analyses of this sort support several general conclusions bearing on putative increases in opinion quality resulting from deliberation. First, while there are some gains in objective knowledge (e.g., knowing that George W. Bush supported government-funded private school vouchers in the 2000 campaign; Price & Cappella 2002), gains in issue-knowledge are modest at best. On the other hand, deliberation does appear to produce significant gains in "argument repertoires" – the range of arguments people hold both in support of and *against* their favored positions. Online discussion attendance significantly and positively predicted scores on this argument repertoire measure, controlling for argument repertoire assessed on the baseline survey and for propensity to attend the discussions (Cappella, Price & Nir 2002).

Second, aside from any influence it may it may have on the direction of public opinion, deliberation increases levels of opinion holding. Thus, for example, attendance in the *Healthcare Dialogue* discussions significantly predicted fewer "don't know" responses to a range of policy-opinion ques-

tions, again controlling for baseline opinion holding and propensity to attend (Price et al. 2006).

Third, shifts in policy preferences induced by deliberation are usually readily interpretable and appear to reflect the tenor of group argumentation. Although on many topics aggregate levels of support or opposition for the policies discussed remained unchanged, when group-level opinion did shift, the data suggest generally rational movements in keeping with the pattern of group argumentation (Price & Cappella 2002). In discussing federal funding for character education or school vouchers, for instance, *Electronic Dialogue* groups tended to produce more opposing than supportive arguments and thus became on average less enthusiastic about such funding.

Deliberation-induced changes in preferences also seem to reflect movement to more informed and politically sophisticated positions. Price et al. (2006) found that, after controls for propensity to attend, preferences at baseline, and other background characteristics, *Healthcare Dialogue* attendees were less likely than non-attendees to support tax-based reforms and were more supportive than non-attendees of government programming and regulations as a means to cut heath care costs. Importantly, these differences between participants and non-participants parallel those between policy elites and general citizens at baseline. Thus, the impact of deliberation was to move citizens in the direction of elite opinion (even though, since such movements occurred to a greater degree in groups *without* elite members, they were not apparently the mere product of elite persuasion).

5.5 Impact on Citizen Engagement

Finally, what of the transformative potential of online deliberation? Although the estimated effects on civic engagement are small in size, results are consistent across a number of different indicators and across both projects. Online discussion attendees, relative to non-attendees with comparable propensities to participate, score significantly higher in end-of-project social trust, community engagement, and political participation. For example, participants in the *Electronic Dialogue* discussion reported voting in the 2000 presidential election at significantly higher rates than their counterparts who did not attend, even after extensive controls (Price & Cappella 2002; Price, Goldthwaite & Cappella, 2002). While the 2000 project did not find similar increases in personal political efficacy, the later *Healthcare Dialogue* project did, along with increases in self-reported engagement in health-policy related activities such as working for advocacy groups, attending meetings, or donating money to a group pursing health care reform (Feldman & Freres, 2006). Thus, the sorts of social and political capital that contribute to participation in online deliberations (see section 5.1 above) are

themselves *products* of discussion as well, lending support to claims that social capital and deliberative behavior are mutually reinforcing.

Analyses based on coded transcripts find almost no evidence that observed gains in social trust or in electoral and community participation were mitigated by encountering disagreement (Price, Goldthwaite, Cappella & Romantan 2005). Estimated effects of *Electronic Dialogue* participation on post-project community engagement were slightly larger for those who encountered more supportive group members, but there were nonetheless significant, positive effects of discussion even for those who met with substantial disagreement in their groups; and no moderating effect of disagreement was found in connection with either voting or post-project social trust. Thus, although some survey studies using self-reports of perceived disagreement have suggested that face-to-face political opposition can lead to ambivalence and withdrawal (Mutz 2002), here we find little to suggest that online disagreement disengages.

6 Taking Stock

As noted earlier, these research findings of themselves do not resolve the many issues raised by critics of deliberative democracy, or by those adherents of deliberative theory who have questioned the utility of text-based "chat"-type modes of computer-mediated communication for productive deliberation. Lacking reasonable experimental comparisons to face-to-face deliberations, we cannot say which if any of our observations are the unique product of the online environment itself. Thus, although we might suspect that participants' openness and tolerance of disagreement resulted from the diminished social cues and relative anonymity afforded by text-based exchanges, such propositions must remain speculative.

Similarly, in the absence of comparisons to other online deliberation programs, or to typical web-based discussions as they now occur naturally, we cannot say how much our findings stem from the particular manner in which these discussions were designed and undertaken (e.g., under the auspices of University researchers with the sponsorship of respected nonpartisan and governmental agencies). We make no effort to generalize to other online settings.

Still, these experiments in "online democracy" do begin to address systematically questions concerning the putative value of online deliberation. Randomly selected citizens adapted readily and well to the online environment. They produced reasonably coherent political discussions; showed willingness to debate and engage their opponents; responded favorably to their online experiences; developed opinions and grasped arguments for and against those views; and came away a bit more trusting and civically en-

gaged than comparable non-participants. Though broad stroke, the picture emerging from these analyses of citizens deliberating online shows them, if not quite meeting all the lofty ideals of deliberative theory, certainly coming closer than might have been expected.

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