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Is Information Good for Deliberation? Link-Posting in an Online Forum

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Abstract

Does information improve deliberation? Proponents of online deliberation argue that the availability of the Internet can solve two longstanding problems of citizen decisionmaking: that preexisting inequalities tend to be reproduced rather than minimized in deliberative forums and that citizen decisionmaking sacrifices the benefits of expertise. Because all deliberators online can access information during their discussion, deliberation should be more informed and more equal. We put those claims to the test by analyzing URL-link posting in an online deliberative forum composed of 25 deliberating groups. On the positive side of the ledger, we show that participants did take advantage of the informational capacities of the web. URL-link posting not only generated more interaction than did opinions posted without links but it also responded to what we call the scale and uptake problems of public deliberation. On the negative side of the ledger, far from equalizing deliberation, the availability of online information may have given additional advantages to already advantaged groups. This was true even in groups that were actively facilitated. The availability of online information may also have fostered discussions, in some instances, that were more opinionated than informed. Information in the Internet age is newly accessible, we conclude, but is also politicized in unfamiliar ways.

Keywords

public deliberation; online forums; information, inequality

Acknowledgements

Can radically democratic decisions be intelligent ones? Critics since Aristotle have worried that giving power to the people sacrifices the benefits of expertise. Concerns like this have taken on new salience in the context of a contemporary enthusiasm for public deliberation. In the last decade, organized forums for citizen deliberation have proliferated (Delli Carpini, Cook, Jacobs 2004; Rosenberg 2007; Gastil and Levine 2005). Older channels for citizen input such as public hearings and town meetings have been joined by new ones: citizen juries, public issues forums, study circles, citizen assemblies, choice forums, deliberative polls, online dialogues, and visioning workshops, among them.

Champions of public deliberative forums maintain that the experience of making, hearing, and evaluating arguments makes people more politically knowledgeable as well as more reasonable (Fishkin 1997; Gastil and Dillard 1999). In other words, participation produces political competence. But even if it is true, that fact is understandably not enough to allay critics' concerns about the quality of judgments that are arrived at through public deliberation. Social psychological research on group decisionmaking has shown that those with minority opinions are often pressured to agree with the majority opinion, no matter how ill-informed (Turner 1991); that high-status participants tend to be perceived as more accurate in their judgments even when they are not (Hastie et al 1983); and that people tend to credit information they already know rather than information they do not, even when indications are that the latter may be more accurate (Larson, Foster-Fishman and Franz 1998; see Mendelberg's 2002 overview). These findings cast doubt on the capacity of public deliberation to produce informed decisions.

The question, then, is whether public deliberation can be organized in such a way as to counter social dynamics like these. Some scholars have pointed out that participants in an *online* forum can access information from the web as they need it. The result should be discussion that is at once more rational, because it is supported by better evidence, and more equal, since all participants are able to seek out evidence on the web to support their opinions (Barber 1998; O'Hara 2002; Grossman 1995).

However, this argument makes at least three questionable assumptions. One is that participants in online deliberation actually avail themselves of the informational opportunities offered by the Internet. The assumption is that people both seek out information over the web and pay attention to the information that others find, incorporating it into their discussion. The second assumption is that more informed discussion does not come at the expense of other deliberative values, such as equality or civility. The third assumption is that the information that is accessible over the Internet is credible enough to foster more informed rather than misinformed discussion.

In this paper, we bring empirical analysis to bear on those assumptions. As part of a broader effort to understand just what transpires in public deliberation (Ryfe 2005; Stromer-Galley 2005), we analyze one kind of information sharing in an online deliberative forum: the posting of URL links. This is a still relatively uncommon form of information exchange. However, it is both distinctive to the Internet—and thus at the cutting edge of the Internet's capacities in this regard—and lends itself to the kind of empirical analysis that has been difficult with other forms of information-sharing. Our study is exploratory: we are interested in how people use URL links in their online discussions. But we also seek to assess the extent to which their typical uses of URL links enhance or undermine deliberation.

To anticipate, we find support for the first assumption but not for the second and third. Based on a quantitative analysis of the distribution of URL links and responses to links in 25 groups in the forum across demographic characteristics, the presence of a facilitator, and the conversational context, along with a qualitative analysis of exchanges, we show that participants posted links more to inform and interest their fellow deliberators than to persuade them and more to identify deliberative options than to evaluate those options. Yet, in line with the assumption that people actually attend to the information made available to them, they did so in ways that often elicited serious responses from group members. People also used links in ways that we had not anticipated. Their use of links responded to what we call the *scale* and *uptake* problems of public deliberation, namely the fact that small groups are necessarily idiosyncratic in their opinions and the fact that deliberators have no guarantee that the recommendations they arrive at will be acted upon by decisionmakers.

However, contrary to the second assumption, more information *did* come at the expense of another deliberative value, namely, equality. Internet use exaggerated rather than mitigated certain preexisting inequalities. Contrary to the third assumption, that the information available over the Internet is transparent enough in its political orientations as not to bias discussions, we found that political orientations were concealed in Internet sites that presented themselves as politically neutral. These sites then appeared in discussions as sources of objective information. One obvious answer to these problems is careful and critical facilitation, and we suggest ways that facilitators can spur discussion about what counts as credible information.

Information, equality, and partisanship

We begin by summarizing existing empirical research that has assessed the informational benefits of the web for public deliberation. We do so, specifically, with respect to the assumptions we described above, about the likelihood that people will avail themselves of Internet information; about the likely egalitarian character of their use of information; and about the credible, or alternatively, politically transparent character of that information. In the process, we identify a set of hypothetical possibilities that we explore in our empirical study.

With respect to the assumption that people will avail themselves of the informational capacities of the Internet, several researchers have sought to evaluate the informed character of online discussions by coding people's references to external sources in advancing opinions, such as books, articles, reports, websites*,* experts, and sometimes, personal experience and facts. The premise here, following Habermas (1984), is that reasoned arguments are ones that are grounded in empirically verifiable evidence or in shared norms. Researchers have found that, overall, opinions supported by external information are infrequent. However, Davis (1999); Coleman (2004); and Stromer-Galley (2005) found that the topic of the discussion influenced the frequency with which people referred to external information. For example, a discussion of malpractice litigation generated significantly more references to external information in a Yahoo! Politics chat room than did other topics (Stromer-Galley 2005). Graham and Witschge (2003) found that the phase of the discussion was important: participants in UK Online were more likely to offer references to outside sources later in the discussion than at the start.

Presumably, other features of the discussion should influence the level of information sharing. In line with research documenting the role of facilitators in encouraging participants to consider each other's opinions (Dahlberg 2001), facilitators may encourage deliberators to share information as well. Alternatively, the presence of facilitators may discourage information sharing, as participants turn to facilitators with questions rather than seeking out answers themselves. In another dynamic, participants bringing outside information to bear on discussion may inspire others in the group to do so too. So there will be high information-sharing groups and low ones. Finally, people with more cultural capital, and especially, in this case, access to computer skills, may find it easier to generate external information supporting their views.

The last expectation reflects the concern that people do not have equal access to the informational capacities of the Internet. Informed deliberation may come at the expense of equal deliberation. That concern, which runs counter to the assumption that more informed deliberation does not jeopardize other deliberative values, finds support in research documenting the existence of a "digital divide" in computer and Internet use, with women, people of color, and especially lower income, less educated, and older people using the Internet less (Pew 2006). Although that gap is declining, it still affects participation in online discussion (Stromer-Galley 2002). If the digital divide is reproduced in online deliberators' ability to access evidence supporting their opinions, then online deliberation will reinforce rather than mitigate preexisting inequalities.

Finally, with respect to the assumption that the information available over the Internet is, in fact, credible and politically transparent, and produces deliberation that is informed rather than just opinionated, scholars have drawn attention both to the unreliability of web sources (Knight and Burn 2005; Vedder and Wachbroit 2003; Flanagin and Metzger 2007) and to the polarized character of political discourse online. With respect to the latter, examination of the links provided on political organizations' websites shows that links tend to be to partisan organizations (Sunstein 2002; Chin 1997). We do not know whether people in online deliberative forums tend to rely on partisan material, however, nor whether deliberators talk about the accuracy of materials they cite and read. Do deliberators question the credibility and objectivity of cited materials or do they accept them as authoritative?

We address these questions and possibilities by way of a study of URL link-posting in a public online forum. URL links are just one of the forms of external information that have been studied by researchers. We focus on link posting in part for methodological reasons. Scholars have acknowledged the difficulty of gauging what counts as external information in discussion (Stromer-Galley 2005) and indeed have operationalized the concept in quite different ways. URL links are easy to identify. We also expected that participants who took the trouble to follow URL links would indicate in their responses that they had done so. This would allow us to capture better than previous studies have done whether people responded to external information offered to them. The other reason for focusing on link-posting is that it is a form of information-sharing that is unavailable to face to face deliberators. In that sense, it should realize at least one element of the Internet's claim to deliberative innovation.

Data and methods

Listening to the City Online was convened in the summer of 2002 to solicit public input into the rebuilding of the World Trade Center site in the wake of the September 11, 2001, terrorist attack. It was sponsored by a coalition of civic groups and rebuilding authorities and it followed a face-to-face forum of the same name (Polletta and Wood 2005). Listening to the City Online was advertised by way of media coverage of the face-to-face forum and emails sent by civic organizations to their members. The personal information that the 826 participants provided when they registered allowed organizers to assign them to dialogue groups with roughly similar demographic make-ups. Participants were strangers to each other. Groups had, on average, 30 members; however, a significant minority did not participate actively. Of the 826 registrants, 549 posted at least one message. Those who participated in the dialogues tended to be more educated and have higher incomes than residents of the metropolitan region. According to the 2000 census, 69 percent of area residents did not have a B.A. degree compared to only 20 percent of LTC message posters; percent of residents made less than $75,000 a year, compared to only 28 percent of LTC message-posters. Men, whites, and people under 55 were also overrepresented. Compared to participants in the in-person Listening to the City forum that preceded the online dialogues, online dialogue participants were also more likely to be male and under 55.

Over the course of two weeks, twenty-five groups discussed preliminary plans for the site, as well as housing, transportation, and economic development issues, and plans for a memorial to the victims of the attack. The dialogues, which took place on threaded message boards, were asynchronous. Groups followed the same agenda, with topics and questions introduced at regular intervals by the forum organizers. Participants were provided with background materials: descriptions of the building and transportation options and renderings of preliminary plans for the site. Once the forum began, participants were permitted to read the posts in other groups but were restricted to posting within their group. Periodically, they were asked as a group to summarize areas of agreement and difference and were also asked to respond to individual polls. Group summaries and poll results were synthesized by organizers and forwarded to rebuilding authorities (Figallo, Miller, and Weiss 2004). The recommendations arrived at were not binding on officials or on participants. However, this is by no means atypical of public deliberative forums, few of which do more than secure officials' agreement to consider the recommendations that emerge from them (Delli Carpini, Cook, and Jacobs 2004).

Two features of the forum make it especially useful for an analysis of information sharing. One is that the 25 groups followed a similar agenda. This allows for comparison across a number of variables. The other is that 16 of the groups were actively facilitated and 9 were not. All the groups were monitored by the dialogue organizers, who very occasionally posted instructions in unfacilitated groups. What we call facilitated groups, by contrast, had one or two facilitators, who were an active presence: encouraging participants' input; responding to and summarizing participants' responses; helping to solve technical problems; and providing information on the dialogues and the substantive issues that came up in them (Trenel forthcoming). This arrangement allowed us to focus on the impact of facilitation on information sharing.

We relied on the dialogues' search engine and a manual reading of all the groups' threads in order to identify every URL link. There were 525 links in total, 437 of them

sent by participants rather than facilitators. We were interested in two outcome variables. One was whether a participant posted a link in a message. The other was whether and how participants responded explicitly to links. Since people rarely responded to a message in a thread other than the one in which it appeared, we limited our search to responses in the original thread. Clearly, simply thanking a person for posting a link reflects a different kind of engagement with the material than agreeing or disagreeing with the information provided in the link does. Accordingly, we defined as *engaging* a link any one of the following responses: agreeing with the content of the posted link; disagreeing with it; corroborating it; expressing doubt about its generalizability or relevance; or requesting clarification or elaboration.

It was not feasible to code all the messages posted by the 25 groups in order to compare the responses elicited by messages that did contain links with that that did not. Instead, we draw on a prior study by the first author of a subsample of twelve of the 25 groups, in which all the messages that contained an opinion backed up by a reason were coded (1,415 in total), along with the responses to those messages (Polletta and Lee 2006). We tested for differences between message posters in the sample of 12 groups and those in the 25 groups in terms of demographic variables (age, race, income, education, and gender) and frequency of posting messages. These did not reveal any significant differences, leading us to believe that the sample is representative of opinion-posters. This allows us to compare the conditions in which people posted and responded to reasoned opinions and messages containing URL links.

Following the questions outlined above, we identified several independent variables of interest. One was the presence of a facilitator. To discern whether a digital divide was operating, we drew on demographic information provided by everyone who registered for the dialogues. We were able to match age, race, gender, income, and education data to 486 of the 549 people who posted at least one message. Participants did not provide information on their current computer use when they registered. But 250 participants who completed a survey at the end of the dialogue did provide such information. Of the 93 people who posted links, 42 completed the survey. We weighted survey responses using demographic information about all participants in order to generalize to the population of message-posters.[1]

To investigate whether the information online deliberators brought to bear was unacknowledgedly partisan, we coded the content of the webpages to which people posted links. These included newspaper or magazine articles; editorials; governmental agencies; other threads in the forum; advocacy groups; or sites devoted to architecture, design, or planning. For all the design sites and the most frequently-linked sites overall, we assessed how transparent each site was with respect to its sponsorship and purpose. To capture participants' purposes in posting particular links, we coded the discursive context of each link based on the message in which it appeared. *Informational* messages brought information relevant to rebuilding issues to bear on the choice situation but did not advance an opinion; *practical/collaborative* messages drew deliberators' attention to a design idea or answered a question that had been posed by another deliberator;

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[1] Given the relatively small survey sample size, CHAID was not used. Instead, a logistical regression model was used to detect the differences between those who answered the survey and those who did not; we calculated non-response weights based on the significant demographic variables, namely, gender, age, and education (see Lynn 1996).

argumentative messages supported or criticized a position, either that of the poster or that of someone else; and *mobilizing* messages sought to connect deliberators with groups mobilizing outside the forum.

Results

We begin with a broad-brush picture of link-posting and then draw on a more in-depth qualitative examination of a sample of links and the exchanges in which they appeared in order to consider our three questions of interest: Do people avail themselves of the informational capacities of the web? Does the availability of information come at the expense of equality? Does the availability of information encourage more biased rather than informed deliberation?

Of the 9,031 messages that were posted by participants over the course of two weeks, 249 messages sent by participants contained at least one link; that is, 2.8 percent. Of the 549 participants who posted at least one message in the dialogues, approximately 17 percent posted at least one link. Groups varied somewhat in their rate of link-posting, but messages containing links accounted for no more than five percent of any group's total number of messages.

A logistic regression analysis shows that men who posted at least one message were more than twice as likely as women to post at least one link (see table 1). [2] Age, income, and education level were not significant predictors of people's propensity to post at least one link. White participants were half as likely as non-white participants to post at least one link. However, since the category of non-white includes Asians and several other groups, and there were relatively few non-white participants in the dialogues, this finding may not tell us much about the presence or absence of racial disadvantage in link-posting. Overall, participants in the dialogues were a computer savvy group. But link-posters were even more frequent users of online resources. Based on link-posters' weighted survey responses, it seems that 86 percent of the link-posters went online several times a day compared to 75 percent of dialogue participants overall. Roughly 70 percent of link-posters read online news several times a day compared to 42 percent of dialogue participants overall. Both of these are significant differences.

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[2] Clustered robust standard errors were used to account for possible between-group variations. Fixed effects models were also used, yielding similar results and interpretation (models not shown; available upon request).

Table 1. Logistical Regression Model for Participant Posting At Least One Message Containing a Link

	Odds	Coef.
Number of posts		1.133
(Natural Logged)	3.104***	(0.437)
		0.247
Facilitated Group	1.28	(0.286)
		0.823
Male	2.279**	(0.726)
		-0.311
35 or older	0.732	(0.25)
		0.736
BA or higher	2.087	(0.84)
		-0.956
White	0.385*	(0.177)
		0.18
Income $\geq$ \$75,000	1.197	(0.364)
Constant		-5.178***
Pseudo R Square		0.26
N		487

Clustered robust standard errors in parentheses (clustered by 25 groups)
*p < .05 **p < .01 ***p < .001 (two-tailed tests)

Participants in facilitated groups posted more links than did participants in unfacilitated groups but they did not post more messages containing links. Nor were people more likely to post at least one link in a facilitated group than they were in an unfacilitated group (see table one). In other words, there was no clear evidence that facilitators were helping people to post links who normally would not do so.

What do people use links to do? More than 37 percent of the links that appeared in participants' messages were to a design site. These included sites maintained by private firms (architectural or real estate firms), individuals, university departments, and nonprofit organizations. Participants introduced design sites by suggesting that their fellow deliberators take a look at a particular design plan or by registering their own liking for an idea described on a site. The second most commonly linked site was a magazine or newspaper article. These accounted for 19 percent of participants' links. Most of these articles were about developments in the rebuilding process, for example, news that the City might take control of the World Trade Center site. More than 15 percent of the links were to an advocacy group's website. Advocacy groups included organizations dedicated to ensuring that the twin towers were rebuilt, organizations of victims' family members, environmental groups, organizations protesting violence against Arab-Americans, and generalist political organizations such as moveon.org. A significantly smaller proportion of links were to, in descending order of frequency, a public agency website (9 percent); a newspaper or magazine editorial (8 percent); and

other threads in the forum (1.6 percent). Another 9 percent of the links did not fall into any of these categories; they included mainly personal websites.

The discursive context of the links suggests that participants' intent was often to provide information relevant to the choice situation more than to press a particular point of view. Informational links accounted for 33 percent of those posted. They were often introduced with little more in the way of commentary than, "thought this might of interest…" Strikingly, however, even more of the links were presented in a discursive context that we call practical/collaborative. By that, we mean that the link was posted in order to draw deliberators' attention to a design idea or in order to answer a question that had been posed by another deliberator. More than 43 percent of the links fell into that category. Compare that number to the proportion of links that appeared in an argumentative discursive context: sixteen percent. People posted links, it seems, to float possibilities and elicit other people's opinion more than provide evidence in support of their own opinions. Finally, just over six percent of the links were mobilizing, that is, aimed at persuading readers to participate in collective action outside the forum.

Did link posting enhance the give and take that is essential to good deliberation? Consider how participants responded to links. A total of 133 links were responded to by participants in some way; that is, 30 percent of all 437 links posted. Two messages posted by different people contained the same long list of 54 links. They elicited a few responses of appreciation for the whole list rather than for any particular link. If we omit the links contained in these two messages, then just over 40 percent of the remaining 329 links were responded to in at least one subsequent message. Just under 15 percent of the 329 links were responded to in two or more messages; and 4 percent in four or more messages. By comparison, of the 1,415 reasoned opinions advanced in twelve groups, 37 percent were responded to in some fashion (Polletta and Lee 2006). Roughly 13 percent of the opinions elicited two or more responses, and 2 percent were responded in four or more messages. So even though responding to the content of a link required more time and energy than simply responding to an argument made directly by the poster, people were willing to do so as often. If deliberation depends minimally on give and take, link posting fostered deliberation.

When and how did people respond to links? The presence of a facilitator did not make participants more responsive. While 48 percent of the links in unfacilitated groups were responded to, only 38 percent of the links in facilitated groups were responded to. Also surprising, the apparent communicative purpose of posting the link did not affect the likelihood that it was responded to. There were no significant differences among contexts that we characterized as informational, practical/collaborative, argumentative, and mobilizing in eliciting one response or in eliciting multiple responses. The same was true of the kind of site to which participants linked. A message containing a link to an editorial, for example, was no more likely to elicit a response than was a message with a link to an engineering site.

The most common explicit response to a message containing a link was one of appreciation. "Cool site, thank you," one participant wrote about a website on skyscrapers. "Keep the thoughts flowing Mootth…..."[3] another wrote about a link about American foreign policy. If we characterize agreeing, disagreeing, corroborating, expressing doubts about a link's generalizability or relevance, or requesting elaboration

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[3] To protect the anonymity of posters, all names have been changed.

as engaging the link's content (rather than, say, merely expressing appreciation in a rote way), then 31 percent of the links were engaged. By comparison, only 23 percent of reasoned opinions were engaged (Author 2006).

Deliberation

With respect to our first question of interest—Do people avail themselves of the informational capacities of the Internet?—we find that, in this case, they did. However, they did so in a distinctive way. One can imagine a form of deliberation in which participants draw on external information in order to support their own arguments, to rebut other arguments, and to jointly adjudicate among the decision options available to them. So far, we have described a pattern of information sharing that is at odds with this image and is closer to the mix of deliberation and dialogue that observers have seen in successful deliberative forms (McCoy and Scully 2002; Pioneers of Change 2006). Rather than mobilizing evidence to support their opinions, people monitored the news to contribute to an accurate picture of the choice situation. And rather than searching for information to evaluate the options already on the table, they sought out design sites to generate design and planning ideas, that is, to expand the array of options on the table. They sought information to brainstorm options more than to argue for or against them.

Our qualitative analysis of links and the messages and exchanges in which they appeared confirms that image. People often posted information that might be relevant without making a recommendation. For example, one participant provided a link to an editorial that supported rebuilding the towers to their original height, and then wrote, "This puts into another perspective of rebuilding. What's your opinion?" Even when participants made an argument, they sometimes provided links to suggest there were more options than either side recognized. For example, in a discussion of whether there should be moderate and low-income housing at the site, a member of one group mentioned approvingly the federal Mitchell-Lama housing program. Another group member, who had earlier noted the success of a program to provide low cost housing for artists, now posted two links to information on Mitchell-Lama but also pointed out some of the shortcomings of the program. Then he wrote, "you know, has anyone given any thought to housing off-site?" The exchange resembled neither the point counterpoint of debate nor a process of systematically assessing claims but rather involved floating possibilities, fleshing them out, and lining them up alongside alternatives.

Posters' fellow deliberators responded to this style of information sharing. They followed the links, digested the information, and, more often than they engaged reasoned opinions, responded by engaging the ideas presented in the link. For example, a link to an article about the possibility that the Port Authority would give the City ownership of ground zero in exchange for ownership of New York's Kennedy and LaGuardia airports elicited eleven responses in the thread in which it was posted. Group members variously posted additional news stories, commented on the pros and cons of the plan, described a similar project to point out likely costs, described yet another project to dispute that assessment, and proposed alternative ownership arrangements. Members responded to each other's assertions, asked questions ("I was under the impression that a connexion was also being made to LaGuar[d]ia [Airport], to be completed in 2006. Was this project cancelled?"), and acknowledged corrections ("Ah, k. Thanks for the clarification"). "I'm learning from this discussion," the facilitator commented. In another group, a participant

complained about the preliminary plans that had been drawn up for ground zero and posted a link to an architectural firm that had prepared its own alternative plans. His message elicited eleven responses, in which group members variously expressed their liking for the plans, offered modifications, commented on the modifications, and debated the commercial requirements for the area. There was no sign of convergence on a position but the discussion was free, informed, and interesting.

It is possible that this forum's concern with design issues led to a distinctive form of information sharing. In a discussion of, say, welfare policy, deliberators would not be describing options that could easily be represented through a visual image. Nor would the discussion be about aesthetic preferences, which are difficult to adjudicate by reference to authoritative information. Perhaps the link we just described to the alternative site plans spurred such an energetic response because people could weigh in with their personal likes and dislikes without any claim to expertise. On the other hand, many of the issues around which deliberative forms have been organized have had significant design components, for example, discussions of suburban growth and zoning; historic preservation; wildlife preservation and park design. Moreover, the kind of information exchange we have described may not be limited to design issues. One could imagine that in a discussion of welfare, people might search the web for descriptions of the welfare policies of other countries. In a discussion of health care, they might look for accounts of interesting programs. In these discussions, as in the World Trade Center forum, people might trawl the Internet more for practical ideas than for authoritative information.

Of course, brainstorming does not, on its own, produce practical recommendations. Experts on dialogue processes argue that deliberative forums should have at least two phases: one characterized by "divergence," in which opinions, perspectives, and options proliferate; and a second phase characterized by "convergence," in which participants come to conclusions, shared insights, and next steps (Pioneers of Change 2006; see also McCoy and Scully 2002). The first phase is important not only for giving participants a better sense of the range of problems and possible solutions but also for generating the creativity that leads to innovative answers and the sociability that gives people a stake in making the process work. But it the second phase is equally important and is in some ways more difficult, more likely to provoke feelings of frustration and antagonism among participants. For that reason, participants may be reluctant to shift from brainstorming options to evaluating them. This is one problem with the style of information sharing we observed in the online dialogues. At some point, information must be accessed to evaluate options rather than to identify them; however, this did not occur in the dialogues. A second problem with using the web as a source of practical ideas is that those ideas are treated as equally practical. As we will discuss in a moment, a brainstorming approach may mistakenly assume the credibility of web-based information.

First, however, we want to draw attention to two more ways in which deliberators' use of the web may have improved deliberation. Both involved extending the reach of deliberation, in the first case, by expanding participation in the forum, and in the second, by extending its effects. We noted that 1.6 percent of the links were to other threads in the forum. In reading through the group discussions, however, we were struck by how often posters either summarized or cut and pasted portions of other groups' discussions (recall that participants were able to read other groups' discussion but not to post to them themselves). Forum participants were clearly paying attention to what was

going on in other groups and they took from them novel proposals, provocative claims, general conclusions, and good questions. This is interesting, we believe, because it responds to the representation problem in deliberation. How do you create deliberative groups that are not so idiosyncratic in make-up as to generate recommendations that are clearly unrepresentative of the larger population? And how do you ensure that people with minority opinions in their groups are not stifled? In Listening to the City Online, people seemed eager to know what other groups were thinking and to capitalize on their insights. Being able to bring the conversation from one group to bear on that of another gave participants a sense of being part of a larger deliberating body. It also gave those who were in the minority on a position the sense that there were others who held their views. For example, in one group, a writer expressed her frustration that no one was listening to her opinion that the towers should be rebuilt. Another member responded, "Jennie Have you read the other boards? you are not alone. groups 6 and 7 seem to have a strong sentiment toward rebuilding the towers too." In another group, a member countered opposition to including residential space on the site—opposition not from people in his own group but in other groups whose discussions he had been reading. He posted a link to a new development that did include housing and had been highly praised by architectural critics. In instances like this, deliberators were able to capitalize on the diversity of opinion characteristic of large groups without sacrificing the intimacy of the small group.

A second use of links responded to what we call the uptake problem in deliberation. We noted that fifteen percent of the links were to activist groups involved in the public debate about ground zero. Interestingly, it was not only partisans of a particular agenda who shared such information. Many participants did so in a civic rather than partisan spirit, including in their lists of websites, for example, groups that were in favor of rebuilding the towers, even though they personally were not, or listing groups concerned about regional development, even though they were focused on rebuilding the towers. This use of links is intriguing since in this forum, like most, participants were offered little in the way of assurance that their recommendations would have any influence with decisionmakers. Link-posting to organized groups was a way for participants to help others remain involved in the debate after the forum was over as well as to gain the influence that comes with organized pressure rather than formal deliberation.

Inequality

We have talked so far about the deliberative value of the information that was shared through Internet links. However, people did not routinely engage in that kind of information sharing and when it occurred, it was stratified. Men were more than twice as likely as women to post at least one link. People with Internet experience were more likely to post links than those without such experience. To our second question--Does the availability of information come at the expense of equality?—we must answer "yes."

Were there conditions in which these disparities were mitigated? In line with research showing that women participate more extensively in women-dominated online groups (Herring 2003; Savicki et al. 1997), we compared link-posting by men and women in male and female-dominated groups; that is, in groups with significantly more messages posted by men or women. This showed that participation in a woman-

dominated group did not reduce the gap between men's and women's link posting. In line with research suggesting the benefits of active facilitation for women's participation in online forums (Trenel forthcoming), we also investigated whether groups that were actively facilitated were less unequal in link-posting. Our qualitative analysis showed that facilitators actively encouraged people to post and respond to links. They thanked people who posted links, urged other group members to follow links, summarized and commented on links, and occasionally reposted links that they thought were especially valuable. This may account for the greater number of links relative to messages that were posted in facilitated groups. People posted more links when a facilitator was present. But people did not post more messages containing links when a facilitator was present and more people did not post: participants in facilitated groups were no more likely to post at least one link than were people in unfacilitated groups. The presence of a facilitator did not minimize inequalities in link-posting. Indeed, when it comes to responding to links, there is evidence to suggest that facilitators may have had the opposite effect. Again, while 48 percent of the links posted in unfacilitated groups were responded to, only 38 percent of the links posted in facilitated groups were. One possible explanation is that the presence of facilitators may have led people to ignore informational links, perhaps in the belief that if the link was important, the facilitator would take the initiative to communicate the information contained in it. Alternatively, participants in facilitated groups may have followed a posted link but, after the facilitator responded to the link, decided that to also respond would be redundant. Either way, facilitators' responsiveness may have come at the expense of participants' responsiveness.

Partisanship

Where some students of the Internet have been impressed by the potential for more informed discussion, others have cautioned that the partisanship and unreliability of information online may provoke instead discussion that is more polarized. This is the basis for our third orienting question: what is the quality of the information that people bring to bear in online deliberation? Scholars have measured information quality in a variety of ways (Vedder and Wachbroit 2003; Flanagin and Metzger 2007). We focus here on the transparency of the site to which participants linked, transparency both with respect to the site's sponsorship and its purpose (referred to as "pedigree criteria" by Vedder and Wachbroit [2003] and "site credibility" by Flanagin and Metzger [2007]).

We studied all design sites that were linked to as well as the news and personal websites that were among the most frequently linked to sites. Most were transparent as to their sponsorship but some were not. We focus on three of the most linked-to sites. Gramercynews.com appeared ten times in the dialogue. The URL suggested that the site was a news outlet but in fact it was the personal website of a forum participant who was an ardent proponent of rebuilding the towers. The site consisted of photographs of the original towers, doctored photographs of ground zero with the original towers superimposed on it, a design proposal, and appeals to rebuild the towers. The poster did not spur much reaction in his own group, perhaps because group members were frustrated by his zeal. However, the URL was also cut and pasted to threads in other groups, where participants had had no contact with the website's creator. In one group, a facilitator posted links to "supplementary information to support these dialogues." The list included major media outlets, for example, CNN, the *Washington Post*, and the *New York Sun*.

Gramercy.news.com was included in the list. Someone in another group posted the link and urged his fellow group members to email it to everyone they knew. People viewing the site might well imagine the plans on it had been vetted for feasibility since they were published in what looked like a news outlet.

Links to "Techcentralstation.com" appeared eight times. TCS Daily called itself an "online journal" and looked like a news site, with headlines, bylined stories, a ticker tape of breaking news, and a section of book reviews. It described itself as providing news, commentary, and analysis on technology, commerce, and society. Not disclosed was the fact that the site was sponsored and maintained by the DCI group, a top Republican lobbying firm (Confessore 2003; see also Miller 2005). The piece to which participants in the Listening to the City forum linked, by conservative philosopher Frederick Turner, argued that the memorial to the disaster should be a garden on top of a building, which would honor both spiritual values and economic ones (Turner 2002). The article was clearly an opinion piece but readers may well have assumed that it was selected by the editorial board of a news journal rather than by the employees of a public relations firm. This is important because research has shown that information originating from a perceived news website is more likely to be considered credible than that originating from a commercial or personal site (Flanagin and Metzger 2007).

A link to the architecture firm Franck Lohsen McCrery appeared 26 times in the forum, more than any other design site. The firm had been invited to propose a master plan for the site early on, shortly after the disaster, by the Manhattan Institute, a conservative think tank, and it reproduced those plans on its website. What was not made clear in the text accompanying the plans was that, at a time when many observers were questioning the need to replace the commercial space lost in the disaster since occupancy rates downtown had declined, the FLM plans proposed buildings that would create up to fifty percent *more* commercial space than the original towers had provided (Magnet and Frank Lohsen McCrery 2001). This would not have been surprising to those familiar with the Manhattan Institute or its magazine *City Journal*, which published the FLM plans and later compared them favorably to the "anti-development, anti-business" "sentimentality" that had engulfed rebuilding authorities (Malanga 2002). Those who linked to the firm's website in the online dialogue would not have known that the plans were developed in tune with the commitments of the Manhattan Institute.

Since, as we suggested earlier, participants posted links more to introduce options than to evaluate them, and often described those options as matters of personal preference, one could argue that the political bias of a design site was unimportant. If the point was to brainstorm, and in particular, to brainstorm aesthetic ideas, then what did it matter if a website concealed a political point of view? We argue that it did matter. Design plans imply that such plans are feasible. And they imply that they are plans only for the design of the space rather than also plans about the appropriate use, ownership, and control of the space. The latter are rightly contentious issues.

Interestingly, participants in the forum were self-conscious about the potential bias of some kinds of information. They often introduced editorials as being editorials, or as offering "one point of view," and they frequently complained about the partisan character of New York City newspapers. However, we found few instances of participants questioning the credibility of an online information source. Undoubtedly, participants evaluated the credibility of the sites to which they linked on their own. And

we do not know whether the sites we have described led people to press for possibilities that were unrealistic or to agree to parameters in redesign that were unnecessarily constricting. However, if there is value for a group in discussing the merits and shortcomings of the options available (rather than each member reflecting on them on their own), then surely that value extends to discussion of the evidence for assessing options.

Conclusion

This study examined URL link posting as a form of information exchange in a single deliberative forum. Link-posting is just one, and by no means the most common, form of information exchange. However, it does have the benefit of lending itself to close empirical analysis. In addition, since it permits a kind of information-sharing that is unavailable to people deliberating without access to the web, it is one of the ways that the Internet can lay claim to genuine innovation in deliberation. Of course, a normative theorist of deliberation might not recognize a forum in which participants were not charged with deciding anything as real deliberation. However, few of the contemporary forums that have been characterized as "real- world deliberation" (Page and Shapiro 1999) actually make binding decisions. The fact that Listening to the City brought diverse citizens together to talk about issues of public concern qualifies it as deliberative under many contemporary definitions (e.g. Gastil and Keith 2005). We conclude, then, by moving from our findings to their theoretical and practical implications and to questions for further research.

Participants in this forum did bring external information from the web to bear on their discussions. They did so in ways that that might not be expected on a forensic model of debate, with information mobilized by participants to advocate for and adjudicate among pre-established options, but are in tune with recent pictures of how people actually deliberate. Participants posted links less to corroborate their opinions with authoritative evidence than to keep their fellow participants abreast of developments in the rebuilding process and to offer design ideas for practical comment. In other words, they used information to clarify the choice situation and to expand it more than to adjudicate among options already on the table.

This kind of brainstorming may have been effective not only in generating innovative solutions but in strengthening the social ties among group members that keep them invested in the forum. On the other hand, in the light of recent research suggesting that making arguments rather than simply sharing opinions is likely to influence online deliberators' post discussion opinions (Price, Nir, and Cappella 2006), we need further research on the deliberative benefits of the brainstorming we observed. In addition, it is possible that the unique circumstances of this particular deliberative forum—in the wake of a disaster that was widely experienced as a collective trauma—made participants uncommonly solidary to begin with. Further research might investigate which way the casual arrow points: does the internet-aided brainstorming that we observed *foster* solidarity or does it *depend on* solidarity?

Forum participants used information available online to do two additional things of deliberative value. They responded to the *scale problem* in deliberation by citing and reproducing discussions taking place in other groups. This gave those with minority opinions a sense that there were others who shared their views outside the group. And it

allowed all participants a sense that they could gain access to a wide range of ideas and opinions while operating mainly within a more intimate group. Participants also used the Internet to respond to the *uptake problem* in deliberation. Worried that their recommendations would be ignored by decisionmakers, they urged each other to take action outside the forum by joining advocacy groups, writing letters to the editor, and signing petitions, and they provided the links to do those things. In these ways, online deliberators took advantage of the informational capacities of the web and did so in ways that made deliberation more effective.

However, our findings were less sanguine with respect to the two other assumptions made by champions of online deliberation, namely, that more informed discussion does not come at the expense of other deliberative values, especially, equality, and that participants do not mistake opinions that are available over the Internet for facts. With respect to equality, men and those with more Internet experience were significantly more likely to post links. Insofar as adducing evidence helps to advance one's views, women and people without much Internet experience were disadvantaged. With respect to the quality of Internet information, the fact that participants presented information drawn from the web as creative possibilities does not lessen the importance of the authority of that information. Since design plans are based on assumptions about how much space is available, what it is to be used for, who will control it, and what environmental, engineering, and economic standards it will adhere to, not knowing the politics of a website makes it difficult to know how feasible a particular plan is. Visitors to the site may assume that a professional-looking design plan meets agreed-upon design criteria or that a site that looks like a newspaper publishes opinions that have been reviewed by an editorial board. Indeed, research has shown that people tend to treat websites as credible if their layout is aesthetically pleasing and seems professional (Wathen and Burkell 2002). In this forum, some of the most commonly linked-to sites were ambiguous about either their sponsorship or their agenda.

Is there any solution to these problems? We believe that facilitators can play a valuable role in helping participants to jointly evaluate the credibility of information sources. Facilitators might themselves ask link posters about the credibility of a site, modeling for others how to initiate such a discussion. They might give participants tips on how to assess the credibility of a site or establish a special thread in which participants could discuss credibility issues more generally.

Another role for facilitators is a more basic one: encouraging and helping participants to post and respond to links. Facilitators' technical help and social encouragement may mitigate inequalities in participants' ability to use the Internet effectively. The challenge, however, is for facilitators to provide that help in a way that leads participants to become more engaged rather than more dependent on facilitators to do the work of information sharing. We suspect that here, as is true in other instances of deliberation, the appropriate question is less whether facilitation is good for deliberation than what kind of facilitation is good for which tasks of deliberation.

Our findings thus invite further investigation into how facilitators can help to produce informed deliberation. Future research might also explore the effects of link-posting on other forms of information-sharing. Does easy access to various websites undercut the credibility of other kinds of evidence offered by deliberators, for example, summaries of articles they have read and can cite but cannot reproduce or facts for which

they do not have a source? Alternatively, by creating a glut of information, does the proliferation of websites make accounts of personal experience seem more authentic and therefore authoritative?

For now, we conclude by siding both with the champions and skeptics of online democratic deliberation. The availability of the web makes for deliberation that is not only more informed but also that is more fully connected to other forms of political action and that combines the virtues of intimacy with those of representativeness. However along with these advantages come dangers. Those who are experienced in using the web have an advantage in accessing information from it. The novelty of the web also accounts for the fact that it is difficult to assess the credibility of online information sources. Information in the Internet age is newly accessible but is also politicized in unfamiliar ways.

References

Barber, B. R. (1988). *The Conquest of Politics*. Princeton, NJ: Princeton Univ. Press.

Chin, A. (1997). Making the world wide web safe for democracy: A medium specific first amendment analysis *Hastings Communication and Entertainment Law Journal* 309: 311-37. Retrieved May 5, 2005 from http://www.unclaw.com/chin/scholarship/www.htm

Coleman, S. (2004). Connecting parliament to the public via the Internet: Two case studies of online consultation. *Information, Communication, and Society*, 7 (1), 1-22.

Confessore, N. (2003, December). Meet the press: How James Glassman reinvented journalism—as lobbying. *Washington Monthly*. Retrieved January 5, 2004 from www.washingtonmonthly.com/features/2003/0312.confessore.html

Dahlberg, L. (2001). The Internet and democratic discourse: Exploring the prospects of online deliberative forums extending the public sphere. *Information, Communication & Society,* 4 (19), 615–33.

Davis, R. (1999). *The Web of Politics: The Internet's Impact on the American Political System*. New York: Oxford Univ. Press.

Delli Carpini, M. X., Cook, F. L., & Jacobs, L. R. (2004). Public deliberation, discursive participation, and citizen engagement: A review of the empirical literature. *Annual Review of Political Science,* 7, 315-44.

Figallo, C., Miller, J., & Weiss, M. (2004). Listening to the city: Public participation group facilitation in redeveloping the world trade center site. *Group Facilitation: A Research and Applications Journal*.

Fishkin, J. S. (1997). *The Voice of the People: Public Opinion and Democracy.* New Haven: Yale University Press.

Flanagin, A.J., & M. J. Metzger (2007). The role of site features, user attributes, and information verification behaviors on the perceived credibility of web-based information. *New Media Society*, 9, 319-42.

Gastil, J., & Dillard, J.P. (1999). Increasing political sophistication through public deliberation. *Political Communication,* 16, 3-23.

Gastil, J., & Keith, W.M. (2005). A nation that (sometimes) likes to talk: A brief history of public deliberation in the United States. In J. Gastil and P. Levine (Eds.) *The Deliberative Democracy Handbook: Strategies for Effective Civic Engagement in the Twenty-First Century* (pp. 3-19). San Francisco: Jossey-Bass.

_____ and P. Levine, Eds. (2005). *The Deliberative Democracy Handbook: Strategies for Effective Civic Engagement in the Twenty-First Century* (pp. 3-19). San Francisco: Jossey-Bass.

Graham, T., & Witschge, T. (2003). In search of online deliberation: Towards a new method for examining the quality of online. *Communications,* 28(2), 173-204.

Grossman, L. K. (1995). *The Electronic Republic.* New York: Viking.

Hastie, R., Penrod, S. D., & Pennington, N. (1983). *Inside the Jury.* Cambridge: MA: Harvard University Press.

Herring, S. C. (2003). Gender and power in on-line communication (pp. 202-228). In J. Holmes and M. Meyerhoff (Eds.) *The Handbook of Language and Gender.* Malden, MA: Blackwell.

Knight, S. and Burn, J. (2005). Developing a framework for assessing information quality on the World Wide Web. *Informing Science Journal,* 8, 159-172.

Larson, J. R., Foster-Fishman, P. G., & Franz, T. M. (1998). Leadership style and the discussion of shared and unshared information in decision-making groups. *Personality and Social Psychology Bulletin,* 24, 482-95.

Lindblom, C. (1980). *The Policy Making Process, 2nd edition.* Englewood Cliffs, NJ: Prentice Hall.

Lynn, P. (1996). Weighting for non-responses. In R. Banks et al (Eds.), *Survey and Statistical Computing* (pp. 205-214). Association for Survey Computing. Retrieved 6/1/07 at www.iser.essex.ac.uk/home/plynn/downloads/Lynn%201996%20Weighting.pdf

Magnet, M. & McCrery, F. L. (2001). What should rise from the ashes? *City Journal*, Autumn. 30-39.

Malanga, S. (2002). The downtown redevelopment flop. *City Journal*, Autumn.

McCoy, M.L., & P.L. Scully. (2002). Deliberative dialogue to expand civic engagement: What kind of talk does democracy need?" *National Civic Review,* 92,117–35.

Mendelberg, T. (2002). The deliberative citizen: Theory and evidence. *Political Decisionmaking, Deliberation and Participation,* 6, 151-193.

Miller, L. (2004). Powers behind the throne. *PR Watch* 11(4). Retrieved May, 5 2005 from http://www.prwatch.org/node/3292

O'Hara, K. (2002). The Internet: A tool for democratic pluralism? *Science as Culture,* 11(2), 287-298.

Page, B.I. & Shapiro, R.Y. (1999). The rational public and beyond. In S.L. Elkin and K.E. Soltan (Eds.), *Citizen Competence and Democratic Institutions* (pp. 93-115). University Park: Pennsylvania State University Press.

Pew Internet and American Life Project. (2006). "Who's online." Retrieved December 10, 2006 from at http://www.pewInternet.org/trends/User_Demo_4.26.06.htm

Pioneers of Change Associates. (2006). Mapping dialogue. Johannesburg, South Africa: Pioneers of change. Retrieved December 10, 2006 http://www.pioneersofchange.net

Polletta, F. & Lee, J. (2006). Is telling stories good for democracy? Rhetoric in public deliberation after 9/11." *American Sociological Review* 71 (5): 699-723.

Polletta, F. & Wood, L. (2005). Public deliberation after 9/11. In N. Foner (Ed.), *Wounded City: The Social Effects of the World Trade Center Attack on New York City* (pp. 321- 350). New York: Russell Sage.

Price, V., Nir, L., & Cappella, J. N. (2006). Normative and informational influences in online political discussions. *Communication Theory,* 16, 47-74.

Rosenberg, S. Ed. (2007). *Can the People Govern? Deliberation, Participation, and Democracy*. New York: Palgrave.

Ryfe, D. M. (2005). Does deliberative democracy work? *Annual Review of Political Science,* 8, 49–71.

Savicki, V., Lingenfelter, D. & Kelley, M. (1997). Gender language style and group composition in Internet discussion groups. *Journal of Computer-Mediated Communication* 2(3).

Stromer-Galley, J. (2002). New voices in the public sphere: A comparative analysis of interpersonal and online political talk. *The Public,* 9, 1-19.

_____. (2003). Diversity and political conversations on the Internet: Users' perspectives. *Journal of Computer-Mediated Communication*, 8(3). Retrieved May, 5th 2006 from http://jcmc.indiana.edu/vol8/issue3/stromergalley.html.

_____ (2005). Decoding deliberation online. Paper presented at the Second Conference on Online Deliberation, May 2005, Palo Alto**,** California.

Sunstein, C. (2002). *Republic.com*. Princeton, NJ: Princeton University Press.

Trénel, M. (Forthcoming). Facilitation and inclusive deliberation. In T. Davies and B.S. Noveck, (Eds.), *Online Deliberation: Design, Research, and Practice*. Chicago: University of Chicago Press.

Turner, F. (2002). "Honor in the sky." *TCS Daily*, 1 August.

Turner, J. C. (1991). *Social Influence.* Pacific Grove CA: Brooks/Cole Publishing Company.

Vedder, A, and Wachbroit, R. (2003). Reliability of information on the Internet: Some distinctions. *Ethics and Information Technology,* 5, 211-5.

Wathen, C. N. and Burkell, J. (2002). Believe it or not: Factors influencing credibility on the web. *Journal of the American Society for Information Science and Technology*, 53(2), 134–144.

Weblab. (2006). Small group dialogue. Retrieved November 5, 2006 from www.weblab.org/home.html