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The Promise and Problems of
Online Deliberation

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Preface

Contemporary forms of communication using the Internet have already dramatically shifted the ways we share information and ideas with each other across time and space. People can publish widely and can access volumes of information in ways they never could before via the Worldwide Web. What do these changes mean for public discourse? The Kettering Foundation has an interest in the potential and the pitfalls of the Internet as a space for democratic practice. We wonder whether deliberation is occurring at all, and what it might look like. This paper provides an extensive look at the opportunities and the cautions of the Internet as a deliberative space in a way that we hope will inform others experimenting with these media.

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Introduction

The Promise and Problems of Online Deliberation

The rapid growth of the Internet over the past 20 years has brought with it a vast amount of communication about public issues of concern to citizens. Moreover, there are a wide variety of tools people can use to interact with each other online and discuss public issues. It is easier than ever for citizens to get information about a public issue, share that information with others, and state opinions about the issue through blogs, social networking sites, newspaper websites, or other public forums. The easy access to information and interactive and collaborative properties of the Internet create exciting opportunities for democracy.[1] The Internet could be a mechanism for people to engage in conversations about public issues that matter to their communities or around the globe.

Yet, despite this great potential, relatively few spaces online encourage citizens to talk in ways that help them realize their disagreements are based on differing experiences, recognize trade-offs, and make choices based on those realizations. In some ways the relative scarcity of online deliberative space is not surprising. After all, in the traditional realms of politics and public life, such deliberative spaces are also rare compared to other types of public contexts. The relative newness of the Internet, though, and the restrictions that digital media present on how people interact, means that our trusted methods of civic engagement may need to be adapted to the online environment in order to tap the potential for high-quality deliberative decision making online.

As digital technology and the Internet continue to create more and new spaces and media for conversation, deliberative practitioners and scholars are examining and testing some of the potential for deliberative discussion online. A number of public and community organizations have implemented innovative

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[1] Z. Papacharissi, "The Virtual Sphere: The Internet as a Public Sphere," *New Media & Society,* 4 (2002):9-27. Z. Papacharissi, "Democracy Online: Civility, Politeness, and the Democratic Potential of Online Political Discussion," *New Media & Society,* 6(2004): 259-283.

projects to build deliberative spaces online. Online town halls, deliberative forums, serious games, and other digital tools used by these organizations may hold some promise for engaging citizens in the kind of deliberative discussion that the Kettering Foundation promotes. These tools are developing at a rapid pace. Moreover, there are some other online communities that have emerged around specific issues or problems that might have the potential to encourage deliberative discussion.

Research Question and Goals

To gain a better understanding of the promise and potential problems of different online practices, this report responds to the question: *To what extent can digital media truly offer potential opportunities for deliberative decision making, particularly the practice of deliberation itself, i.e., recognizing trade-offs and making choices*?

To address this question, this report assesses features of online deliberation by reviewing online deliberative tools, examples of other potentially deliberative sites, and relevant academic research. First, it reviews some general considerations that are important to keep in mind when moving deliberative discussion online. These issues are general concerns that we should keep in mind regardless of the specific tool used.

The bulk of the paper describes several different design choices that are commonly used in online forums hosted by deliberative organizations including discussion boards, real-time chat, web conferencing, social media, and virtual environments. This section illustrates some of the different forum design choices and assesses deliberative affordances of these choices. Although there is some innovative work being done by several deliberative organizations, it may well be the case that deliberation is happening in other spaces online and looking carefully at those places could offer us a better understanding of how to foster deliberative interaction in an online environment. For this reason, this review also includes examples from other online spaces where deliberation might be happening. The

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report concludes by assessing what implications these choices hold for designing and hosting deliberative decision making as Kettering understands it.

Deliberative Discussion Online: Some General Considerations

There are some substantial, possibly crucial, differences between online interaction and face-to-face meetings that shape the kind of communication that people engage in during forums. Online, information is plentiful, freely available, and easily accessible. Which information people choose to pay attention to makes a difference in how people talk and listen to each other in online settings. In addition, issues of identity, time, and space can be very fluid in online settings. Different digital formats (blogs, social media, online discussion boards, games, and so on) treat these issues of identity, time, and space very differently, and these differences matter for the quality of deliberation.

Before deciding on a particular tool, it is important to think critically about the roles of information, identity, space, and time in new media tools. How different tools manage these issues can hold implications for forum design, the role of the moderator, and the quality of discussion.

Information: Naming and Framing in an Online Environment

Online, information about public issues is omnipresent and easily accessible. Newspapers, government agencies, civic institutions, political organizations, interest groups, bloggers, and others all post information that could be relevant to a public issue. Many of these websites also have mechanisms for readers to comment on issues or participate in discussion with each other. According to research done by the Pew Internet and American Life project,[2] 77 percent of American adults use the Internet. Of that group, 78 percent check the news; 67 percent visit local, state, or federal government websites; and 50 percent look online for news or information specifically about politics. These relatively high percentages show that American

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[2] Pew Internet and American Life project (accessed December 2010) http://pewinternet.org/Trend-Data/~/media/Infographics/Trend%20Data/November%202010/Online_Activities_-_all_Dec2010_update.xls.

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adults have some interest in getting information about political issues through online sources. A smaller, but still substantial, group of people also contribute to discourse online. Also,32 percent post comments on online news groups, blogs, or photo sites, and 30 percent share something online that they created themselves. In addition, 61 percent use an online social-networking site.

One important way that information is named and framed online is through newspaper sites and political blogs. Major newspapers, such as the *Huffington Post* and the *New York Times*, and local papers, such as the *Columbus Dispatch*, post news stories and editorials online and invite comments from readers. Often these stories receive comments that are accusatory, partisan, and adversarial rather than deliberative.[3] At times, however, the comments can be thoughtful, provide additional information and experiences, and encourage diverse points of view.[4] The quality of the comments may depend on the issue being discussed, whether and how the original author responds to comments, and the extent to which a moderator removes abusive comments. Independent blogs face the same dynamic. In an ideal sense, blogs can encourage deliberative discussion because readers can help shape the story as it unfolds. However, the reality of discussion on many political blogs is far from deliberative.

This information abundance[5] online is a mixed blessing for democracy. Although information is everywhere, many political conversations online happen in what Lyn Carson calls "information islands,"[6] or echo chambers, where people interact with similar others and seek confirmation of their own views. Echo chambers are evident in many blogs, advocacy organizations, news sites with ideological or partisan positions, and political discussion boards. In these spaces citizens can easily choose to join with others who share their political views. These

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[3] This is exacerbated when comments are made anonymously, as discussed in the next section.

[4] For example, some recent stories about the rates for electric power in the *Columbus Dispatch* included personal stories, additional information, and thoughtful responses from commenters.

[5] C. Bellamy, (*Conversant Community-Engagement and Decision Making Online* (Communities and Action: Prato CIRN Conference Proceedings, 2007).

[6] Bellamy , p. 3.

echo chambers exacerbate the already-polarized public discourse and discourage people from engaging in thoughtful conversations about trade-offs. In this way they are an obvious detractor from deliberative discussion.

What is perhaps less obvious is that even apparently apolitical sources, such as popular social-networking sites and search engines, have the potential to solely provide citizens with information that confirms, rather than challenges, their views. For example, a central feature of Twitter is that members choose topics and people they wish to "follow." Similarly, Facebook enables users to choose what information is displayed on their walls and to "unfriend" people or "hide" posts by friends they do not wish to hear from. Although social-networking sites have the potential to present citizens with a wide range of opinions and perspectives on a topic,[7] these features make it easy for users to create a self-made echo chamber in their social networks if they wish.

In addition, search engines, such as Google, use algorithms that base search results on the online activity of the particular user. A particularly troubling result of this technological design is that people with different political opinions may get very different results to the same search term. If citizens are at all active online, they are likely to get search results that are consistent with their other online activity. This means that even something as innocuous and pervasive as a Google search is likely to provide Internet users with specifically targeted news items and websites that support their beliefs and opinions rather than challenge them.[8]

Information is never neutral, whether shared online or via a more traditional media. But, the filtering processes (both technological and human) that occur online create a situation where issues are often named and framed in very limited ways. Although naming and framing is not the primary focus of this report, the information challenge online is an important background to our discussion. If we wish to create an online space that promotes high-quality consideration of trade-

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[7]Magdalena E. Wojcieszak and Diana C. Mutz, "Online Groups and Political Deliberation: Does the Internet Facilitate Exposure to Political Disagreement?" *Journal of Communication* (forthcoming).

[8] E. Pariser, "Beware Online 'Filter Bubbles.'" (video lecture on *TED: Ideas worth spreading*, 2011) http://www.ted.com/talks/eli_pariser_beware_online_filter_bubbles.html.

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offs, it is essential to remember the omnipresence of information and the power of echo chambers in the naming and framing of issues.

Another consideration created by the presence of information online is that it is easy for participants in an online forum to post links to news stories and other websites that provide information for the discussion. Sociologist Francesca Polletta found that link posting was very common in the America*Speaks* Listening to the City online dialogues in 2002.[9] She found that participants used external sources to support their arguments, point out other options, and even demonstrate visual images that helped the group visualize the possibilities being discussed.

This easy access to information in the midst of a conversation is quite different from how information is used in face-to-face conversations. When online, people have the opportunity to read news stories, watch videos posted by other group members, or visit websites during the time that the deliberative discussion is occurring. In some ways this can be a benefit to choice making as additional information can help participants understand trade-offs more fully. If this new information is presented during the discussion, as people are working through a particular option, they might be moved to read it because the information helps them work through a problem they are in the midst of thinking about.

Another consequence of this easy access to information is the possibility that group members can easily multitask online, even during a deliberative discussion. Participants may be moved to search for information on a topic or look for a news story they read earlier, rather than staying fully engaged in the conversation happening in the forum. They could also easily begin electronic multitasking[10] by checking e-mail, surfing the web, posting things on Facebook, or "tweeting" about the forum while they are simultaneously participating in the discussion. For many

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[9] F. Polletta, P.C.B. Chen, C. Anderson, "Is Information Good for Deliberation?" (link-posting in an online forum) *Journal of Public Deliberation*, 5 (2009): article 2. http://services.bepress.com/jpd/vol5/iss1/art2/.

[10] K. K. Stephens, and J. Davis, "The Social Influences on Electronic Multitasking in Organizational Meetings," *Management Communication Quarterly,* 23(2009): 63-83.

members of the millennial generation, electronic multitasking is a typical and comfortable behavior.[11]

This multitasking could be distracting and potentially detract from the depth and richness of the conversation happening in the forum. Alternately, it could help bring in new information to the discussion or spread the word about the topic to get others interested or mobilized. We discuss some of these possibilities below when we describe the role of social-networking sites. In any case, forum designers and moderators ought to reflect on how they wish to deal with the omnipresence of information and its influence on how issues are named, framed, and discussed.

Anonymity and Identity Online

Another feature of online tools that influences the quality of conversation is the extent to which people are easily identifiable. In the early days of the Internet, anonymity was the norm. There was a great deal of concern that people were able to create fake identities, provide misleading information, and attempt to deceive others, and concerns about anonymity are still very prevalent.[12] Anonymity isespecially easy when the main way people interact is through text, which lacks the visual cues that are available in face-to-face interaction. This norm of anonymity was playfully displayed by the iconic *New Yorker* cartoon created by Peter Steiner in 1993, in which a dog, sitting at a computer, turns to another dog on the floor and says "on the Internet, nobody knows you're a dog."[13]

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[11] J. Frand, "The Information Age Mindset: Changes in Students and Implication for Higher Education." *EDUCAUSE Review,* 35 (5) (2000): 15-24.

D. Oblinger, "Boomers, Gen-Xers, & Millenials: Understanding the "New Students," *EDUCAUSE Review,* 38 (4) (2003): 37-47.

[12] C.R. Scott, "Benefits and Drawbacks of Anonymous Online Communication: Legal Challenges and Communicative Recommendations," in *Free Speech Yearbook*, *vol. 41* ed. S. Drucker (Washington, DC: National Communication Association, 2004), 127-141.

Several chapters in Davies & Gangadharan's *Online Deliberation* (2009) also express concerns about anonymity.

[13] Steiner's cartoon was published in the July 5, 1993, issue of the *New Yorker* (Vol. 69, p. 61). According to an article in the *New York Times*, this image is the most reproduced cartoon from the *New Yorker* (G.

This potential clearly still exists online, as evidenced in many online communities and games where most users create account identities or avatars that are not reflective of their real-world life. However, the growing trend in online interaction now is one of personalization. This means that in more and more settings people's interactions online are connected to their real-world identities through their Google, Facebook, or Twitter profiles; professional identities; or online retail accounts. People create digital footprints by their actions online,[14] and a quick Google search can often provide a great deal of information about individuals' personal and professional lives.

Thus, it is becoming more difficult to be completely anonymous online, and it takes a certain amount of Internet savvy to manage one's online identity. This trend is humorously depicted by more recent cartoons, based on the *New Yorker* image. In one, created by cartoonist and blogger Rob Cottingham, the dog asks his companion, "How the hell does Facebook know I am a dog?"[15] In a follow-up, also created by Cottingham, the dog states, "On Facebook, 273 people know I'm a dog. The rest can only see my limited profile."

This larger issue of identity and anonymity on the Internet has been reflected in the design of some deliberative forums. Some tools, such as Civic Evolution and e-thePeople, require participants to use their real name and/or create a personal profile in order to participate. Other forums occur through social-networking sites, which clearly connect participants into their larger community of friends, family, neighbors, and colleagues.

This identifiability creates some accountability—what participants say is tied to their real-world identity in a permanent way. If participants in an online forum

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Fleishman, "Cartoon Captures Spirit of the Internet," *New York Times*, December 14, 2000, http://www.nytimes.com/2000/12/14/technology/cartoon-captures-spirit-of-the-internet.html?src=pm).

[14] H. T. Welser, M. A. Smith, E. Gleave, and D. Fisher, "Distilling Digital Traces: Computational Social Science Approaches to Studying the Internet," in *Handbook of Online Research Methods*, eds. N. Fielding, R. L. Lee, and G. Grant (London, UK: Sage, 2008), 116-140.

[15] Cartoons posted on *Noise to Signal: A Cartoon about Social Media, Business, and How We Live and Work in a Digital World* (accessed December 5, 2011) http://www.robcottingham.ca/cartoon/greatest-hits-facebook-and-social-networking/.

use their real names, others could link their comments to their Facebook page, twitter feed, and professional presence online. This connection to one's real-world identity could motivate participants to follow the conventions of civil conversation and take the tasks of deliberation seriously. However, it could potentially hinder the quality of discussion by making people less likely to state controversial opinions or take risks in the discussion, as described below.

In other online discussions participants can be relatively anonymous. These sites typically ask people to create some kind of identity to participate, but people can choose any label to identify themselves. Comments on news stories, YouTube videos, political discussion groups, online communities, games, and some deliberative forums allow participants to remain relatively anonymous in this way. Although active participants may end up creating a profile that presents a relatively consistent persona, many people choose to simply participate without providing much, if any, personally identifying information. Even when people in a forum are able to be completely anonymous, participants often form impressions of each other based on their screen names, what they write in the forum, and other nonverbal cues related to spelling, word choice, and so on.[16]

Anonymity is often cited as a major concern in online discussion because it creates a space where there are no external constraints on people's contributions. Because people are not accountable in any real-world sense for the things that they say in an anonymous forum, it is easy for participants to say hurtful, rude, or attacking things to other members of the group.[17] The lack of civil discourse, or "flaming," is quite common on some online sites and is evident in comments on

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[16] D. Jacobson, *Impression Formation in Cyberspace: Online Expectations and Offline Experiences in Text-Based Virtual Communities*. (Brandeis University, 2006). See also:

N. Ellison, R. Heino, and J. Gibbs, "Managing Impressions Online: Self-Presentation Processes in the Online Dating Environment," *Journal of Computer-Mediated Communication,* 11(2006): 415–441.

[17] M. Lea, R. Spears, and D. De Groot, "Knowing Me, Knowing You: Anonymity Effects on Social Identity Processes within Groups," *Personality and Social Psychology Bulletin*, 27*(5)* (2001): 526–537*.*

Scott.

J. R. Suler, and W. L. Phillips,"The Bad Boys of Cyberspace: Deviant Behavior in a Multimedia Chat Community*, CyberPsychology & Behavior*, 1*,* (1998): 275–294*.*

YouTube videos, many news stories, blog posts, and some politically themed online discussion boards. Such conversations often involve consecutive opinion statements with no real evidence of consideration of other views. Sometimes the echoing of adversarial partisan politics can lead to name-calling and demonization of opposing views, which clearly does not further deliberative discussion.

Anonymity also makes it easy for participants to not take the tasks seriously, especially on sites that embody the kind of youthful, playful Internet culture.[18] Anonymous participants can easily spend time swapping inside jokes ("Internet memes") rather than seriously discussing the issues, or stating extreme positions on an issue just to get a rise out of others with opposing views ("trolling").[19] Given these frequent and relatively pervasive characteristics of many online discussions, one may be left wondering, as Alice Diebel asked, "Is anyone listening online, or is everyone just typing?"[20]

On the other hand, there can be some clear benefits of anonymity in an online forum. Anonymity allows people a degree of safety to say things they would not feel comfortable saying among their peers or possibly even to strangers in a face-to-face setting.[21] Although this is the same issue that can cause people to flame each other, it also has the potential for positive influence. First, it could allow for socially undesirable but very real opinions to come out in the discussion. As Lucas Cioffi noted,[22] anonymity allows the "racist in the room" to speak his piece, which then could put the uncomfortable topic of racism on the table for discussion by others in a very real way.

The safety afforded by anonymity could also facilitate deliberation by helping people feel more comfortable to articulate questions or concerns about their own

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[18] D. Porter, ed., *Internet culture* (New York: Routledge, 1997).
[19] C. Hardaker, "Trolling in Asynchronous Computer-Mediated Communication: From User Discussions to Academic Definitions," *Journal of Politeness Research,* 6 (2010): 215-242.

[20] Personal communication, Kettering Foundation's Online Deliberation workshop, May 2011.

[21] J. B. Walther, "Computer-Mediated Communication: Impersonal, Interpersonal, and Hyperpersonal Interaction," *Communication Research*, 23(1996): 1-43.

[22] Personal communication, Kettering Foundation's Online Deliberation workshop, May 2011.

positions. The kind of critical reflection on one's own experiences and opinions is essential for deliberation because it helps people begin to see the trade-offs of the positions they hold. If participants know that everything they say can be traced back to them and seen by their friends and fellow members of other online groups, they may think it is too risky to question the party line. As Nancy Kranich[23] noted, many participants in NIF forums are essentially anonymous in the sense that they do not know each other prior to the discussion and they are unlikely to have any interactions after the forum. Jurors often have this kind of anonymity as well.[24] Having some distance from one's outside obligations and connections can be freeing, which helps people take risks in their thinking about trade-offs for positions they may otherwise feel pressure to agree with. In this way anonymity can help further deliberative discussion.

Finally, anonymity can also have positive affects on the social dynamics of a deliberative discussion. Communication scholar Joe Walther observed that in certain settings, such as online support groups, anonymity can help people build closer relationships than they would face-to-face. He called this dynamic "hyperpersonal" communication.[25] With a lack of visual cues in online discussion, people tend to key in on things they think they share in common with others and make assumptions that others are like them. So, they are more likely to share

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[23] Personal communication, Kettering Foundation's Online Deliberation workshop, May 2011.

[24] J. Gastil, S. Burkhalter, and L. W. Black, "Do Juries Deliberate? A Study of Deliberation, Individual Difference, and Group Satisfaction at a Municipal Courthouse," *Small Group Research,* 38 (2007): 337-359.

[25] Walther makes this argument in several articles. He coined the term *hyperpersonal* in the 1996 article cited above. For more recent explorations of the topic, see:

J. B. Walther, and M. R. Parks, "Cues Filtered Out, Cues Filtered In: Computer- Mediated Communication and Relationships," in *Handbook of Interpersonal Communication*, 3rd edition, eds. M. L. Knapp and J. A. Daley (Thousand Oaks, CA: Sage, 2002), 529-563.

J. B. Walther, "Social Information Processing Theory," in *Engaging Theories in Interpersonal Communication: Multiple Perspectives* (Thousand Oaks, CA: Sage, 2008), 391-404.

J. B. Walther, "Computer-Mediated Communication and Virtual Groups: Applications to Interethnic Conflict," *Journal of Applied Communication Research,* 37(2009): 225-238.

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personal information and build close relationships.[26] Although deliberative discussion does not require that all participants develop close personal relationships with one another, a certain level of trust is necessary for the kind of respectful, egalitarian conversation that allows people to weigh trade-offs. In this way anonymity could help facilitate the discussion.

Clearly anonymity is an important consideration in forum design. Although it has potential benefits, to be successful, anonymity ought to be moderated by clear norms for deliberative discussion. Facilitators may be essential in this regard, and we discuss the role of facilitators below in our description of online forums.

Flexible Approach to Space and Time

Finally, understandings of space and time are quite different online than they are in face-to-face discussions. For example, in an online forum, physical location is less of a concern: Citizens can talk to their neighbors and people from across the world with nearly equal ease. This means that people from many different locations around the world could potentially be engaging in an online forum together. This kind of geographic dispersion can provide a diverse range of perspectives and experiences to the group, which can aid in the discussion of trade-offs.

Conversations online can also involve a large number of participants. While it can be logistically difficult to physically bring together large groups, online forums can be organized to accommodate hundreds or thousands of people. Organizations, such as America*Speaks*, take advantage of this potential for mass collaboration by running forums that involve many simultaneous small-group discussions.

However, mass participation does not always mean better deliberation. Recruiting and involving a wide range of people is essential. Although Internet access is becoming more widespread, it is far from universal. And access in and of itself would not be enough: there are still important digital divides related to age, socioeconomic class, ability, education, and technological knowledge. Additionally,

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[26] See also M. Lea and R. Spears, "Love at First Byte? Building Personal Relationships over Computer Networks," in *Under-studied Relationships: Off the Beaten Track*, eds. J. T. Wood and S. Duck (Thousand Oaks, CA: Sage Publications, 1995), 197-233.

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as Carolyn Lukensmeyer noted,[27] sampling is always an important issue for America*Speaks* forums because having a demographically representative population is what makes the organization legitimate in the eyes of policymakers. This can be problematic when most of the people who would express interest in online deliberations are white, middle-class men. For example, when America*Speaks* hosted the Listening to the City online dialogues in 2002, over 15,000 people wanted to participate. However, to keep a diverse and proportional sample they could only accept slightly over 800 participants. Even if having demographically proportional samples is not essential to the goals of a particular forum, this example points to the possible difficulties of getting the right people in the virtual room to begin with.

Another pressing design issue is that online tools vary in whether people talk together in real time or asynchronously. There are fundamental differences between technologies that offer real-time and asynchronous interaction, and these differences can matter for the quality of the discussion.[28]

Asynchronous features, such as discussion boards and blogs, allow people to post content to a website where others can view it. Readers then have the ability to comment at their leisure without the constraint of having to be online at the same time as others.[29] Asynchronous discussions are very common in online forums, as discussed below, and have some advantages for deliberative discussion. Because time pressure is removed, participants can take as much time as they need to think through the issue and articulate their ideas clearly without being interrupted by

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[27] C. Lukensmeyer, "What are the frontiers of innovation in online engagement?" (panel discussion, *Frontiers of Democracy: Innovations in Civic Practice, Theory, and Education* conference, held at Tufts University, Boston, MA, July 22, 2011).

[28] D. Janssen, and R. Kies, "Online Forums and Deliberative Democracy: Hypotheses, Variables and Methodologies," (paper presented at the conference on "Empirical Approaches to Deliberative Politics," European University Institute, Florence, May 22-23, 2004).

[29] A. F. Rutkowski, C. Saunders, D. Vogel, and M. van Genuchten, "'Is It Already 4 a.m. in Your Time Zone?'" Focus Immersion and Temporal Dissociation in Virtual Teams," *Small Group Research,* 38 (2007): 98-129.

C. S. Saunders, C. van Slyke, and D. R. Vogel, "My Time or Yours? Managing Time Visions in Global Virtual Teams," *Academy of Management Executive*, 18(1)(2004): 19-31.

others.[30] They can edit their comments to help ensure that their contribution to the conversation reflects what they mean to say. Conversations are slowed down and group members can read and respond to comments at their convenience. A relaxed sense of time can also help participants feel less anxious about participating.[31] This can make online forums more accessible to people who might not otherwise participate because of work or family obligations, and can help encourage more reflective participation.

A disadvantage of asynchronous discussions is that individual posts can tend to be long, which might be overwhelming to other participants. Many participants may simply read, rather than add comments. It is quite common in online communities to have some members who simply "lurk," that is observe the discussion but never post. Although lurkers are members of the community, and research indicates that they are influenced by the conversations they view online, they are not actively engaged in the discussion.[32]

Additionally, the conversations themselves may be open for several weeks and there is a substantial risk that participants will eventually drop out of the discussion. Maintaining interest in the topic and keeping the conversation going can be difficult in asynchronous discussions. Some forums, such as the Minnesota E-Democracy's Issue Forums, have had success using periodic e-newsletters that summarize, highlight aspects of the discussion, note when new topics will be introduced, and encourage people to come participate.[33] This process has

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[30] L. W. Black, Listening to the City: Difference, Identity, and Storytelling in Online Deliberative Groups," *Journal of Public Deliberation,* 5 (2009): article 4, http://services.bepress.com/jpd/vol5/iss1/art4 .

[31] M. Baralt, and L. Gurzynski-Weiss, *Comparing learners' state anxiety during task-based interaction in computer-mediated and face-to-face communication* (Language Teaching Research, 2011).

[32] B. Nonnecke and J.Preece, "Lurker Demographics: Counting the Silent" (paper presented at CHI 2000, Amsterdam, April 2000).
See also: C. M. Ridings and D. Gefen, "Virtual Community Attraction: Why People Hang Out Online," *Journal of Computer-Mediated Communication*, 10: 00 (2004).

[33] T. Becker and T. Ohlin, "The Improbable Dream: Measuring the Power of Internet Deliberations in Setting Public Agendas and Influencing Public Planning and Policies," *Journal of Public Deliberation,* 2(1) (2006).

successfully maintained high levels of engagement with the discussion that presumably would not have continued without such outreach.

In contrast, synchronous features, such as chat, video-conferencing, webinars, and games, allow people to interact in real time. Some advantages of synchronous interaction online are that it creates some time boundaries around the conversation and mirrors some of the group dynamics of face-to-face interaction that facilitators are used to in deliberative forums. Questions can be clarified right away, which helps limit misunderstanding among group members, and groups can engage in exercises such as go-arounds that are often part of face-to-face forums

Some possible disadvantages of synchronous online interaction include the potential for disjointed conversation, increased potential for technological difficulties, and limits to who would be able to participate due to the limited time frame. The extent of these disadvantages varies depending on the particular features of the tools. These features are discussed in more detail below.

Online Tools for Deliberative Discussion

Online interaction can take a variety of forms, and many of these forms have been used to further some aspects of deliberative discussion. Depending on the technological features available in a given tool, people communicate through text, video, voice, or images. In online discussions people can ask questions, post comments, respond to others, and sometimes can rank or tag other people's comments to indicate support or agreement. They can use visualization or theming tools to get a sense of the conversation so far. They can work together to craft documents. They can use their social networks to post links to other sources of information, photos they have taken, or documents they have created.

Some of the major innovations in online deliberation have come from organizations such as America*Speaks*, Civic Evolution, Online Town Halls, E-thePeople, Deliberative Polling, and Intellitics. Tools have been reviewed and

L. Dahlberg, "The Internet and Democratic Discourse: Exploring the Prospects of Online Deliberative Forums Extending the Public Sphere," *Information, Communication & Society,* 4(4) (2001): 615-633.

summarized by Matt Leighninger's recent report *Engaging and Being Engaged by the Public Online* and through the websites ParticipateDB and Participedia. In the sections that follow we provide examples from these organizations to describe how specific features can help or hinder deliberative discussion.

People also do a great number of things online that are not obvious examples of democratic life, but may be of interest to those who promote online deliberation. When people buy and sell things online, they often write reviews of products, and rank other people's reviews. Millions of people play immersive online games, many of which involve working in small groups to solve problems. Thousands of users join online communities focused on a common interest where they create content, discuss topics they care about, and make decisions through online discussion. Although these more recreational uses of online interaction are not focused on democratic life, if we think outside the proverbial box, we can see that some aspects of these collective online activities may hold some technological features that can help promote deliberation.

The characteristics of these different features can affect how willing people are to share personal stories, talk openly about their values, and engage in a rigorous back-and-forth discussion of trade-offs. Given these differences, perhaps different combinations of features and formats are particularly suited to different parts of the deliberative decision-making process.

The features themselves do not completely determine the quality of the conversation, of course. Just as face-to-face small-group discussions can range from shouting matches to deeply reflective dialogues, online discussions using the same technological features can vary depending on the participants' motivations and commitments, the guidelines and facilitation of the discussion, and overall goals of the forum. Nonetheless, the online interaction features we review here do have particular strengths and limitations built in. So, it is useful to understand the features' inherent characteristics and how they can be used successfully in deliberative practice.

The following sections provide an in-depth discussion of the interactive features inherent in these tools. Although many contemporary web tools use some combination of the features, it is useful to consider each feature on its own to help examine how well it promotes high-quality deliberative discussion. For each feature we provide a description of the technology, examples of its use, and an examination of its strengths, limitations, and applicability for deliberative discussion and choice making. These discussions draw on observations of online tools developed by deliberative practitioners, our investigation of other potentially deliberative spaces online and academic research on online deliberation and computer-mediated communication.

Discussion Forums

Text-based discussion boards can be seen as the mainstay of current online deliberative tools. Asynchronous discussion forums are commonly used in deliberative tools and have also received some attention from deliberative scholars. In its most basic form, a discussion board allows participants to type in responses to questions or comments posted by moderators or other group members. The central challenge occurs when one begins to consider how to organize a forum in a way that best allows participants to weigh trade-offs of various options. There are a few methods for structuring the forum that prove useful in this regard.

Threaded vs. Unthreaded Discussion. One design consideration is whether participants' comments should be organized by time, topic, or some combination of the two. This question is highlighted in the feature of threaded vs. unthreaded conversations. Early online forums, like the Listening to the City online dialogues held in 2002, were "unthreaded" in the sense that they listed participants' contributions according to the time that they were made. This results in a page where the topic of discussion is at the top and comments are presented in chronological order. Sites can vary on whether the oldest or most recent comments are listed at the top of the page.

Unthreaded discussions can be difficult to follow because conversations are organized by timing rather than topic, and in an asynchronous discussion replies to a particular idea could be separated by several other comments about other topics.[34] A benefit of unthreaded conversation, though, is that it puts all the contributions at the same level of importance. This means that participants can easily keep up with the current conversation without missing replies that may otherwise be hidden if they were associated with particular comments. Some contemporary tools, such as Zilino, use unthreaded discussion format followed by a time for participants to summarize their conversation.[35] The summary period allows participants to provide their own understanding of the conversation, which can provide the coherence that is potentially missing from simply using unthreaded conversation on its own.

Many contemporary forums used threadeddiscussion boards in which replies are directly associated with the comment to which they are responding. Threaded conversations are the norm for many political discussion sites and online communities, and they mirror the standard reply feature used in blogs, news stories, and sites like YouTube or Flickr. One benefit of threaded conversations is that they can be more topically coherent than unthreaded conversations because the comments in each thread are all (presumably) about the same idea. This makes it easier to understand the overall sentiment of the group on particular topics and means that the overall "big picture" of the discussion can be more evident to participants than it is in unthreaded discussions. Threaded conversations can also be used in mapping, as discussed below.

However, using threaded conversations in a forum can mean that the discussion loses a little bit of the temporal coherence because several threads can be going at once. In addition, it may be the case that using a threaded discussion creates a structure to the conversation too early in the process. Replies cannot easily

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[34] Black (2009).

[35] T. Bonneman, "Small-group dialogue on Zilino," Zilino Blog: Water Cooler for the Zilino Community, posted on April 24, 2010 (accessed December 5, 2011) http://blog.zilino.com/2010/04/24/small-group-dialogue-on-zilino/.

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be decoupled from the original comments, which means that innovative or insightful replies could potentially be overlooked while irrelevant replies to popular ideas could get more attention than is warranted simply because they are associated with a popular comment. Additionally, it could be the case that seeing the number of replies associated with a particular comment influences participants' perceptions of the trade-offs associated with a particular position.

Clearly one consideration is whether to use threaded discussion, unthreaded, or some combination of the two in an online forum. There are additional ways to structure the discussion, including how and when topics are presented to the group.

Organizing Topics for Discussion. One straightforward way to structure the conversation is to organize the topics and questions in a way that promotes deliberative discussion. This method of structuring the conversation to move from naming and framing through deliberation to decision making is well thought out and successful in face-to-face forums and should not be overlooked as an important consideration in online discussions as well. What becomes more complex is deciding how and when to move from one topic to another.

Regardless of whether they use a threaded or unthreaded format, forums typically have specific times for participants to address particular topics. For example, in online discussions held by Countywide Community Forums, of King County, Washington,[36] participants are presented with a limited timeframe within which they can comment on a particular topic. After that time is done, the forum moves on to the next topic and participants are encouraged to post comments on the new topic. A similar strategy was used in the Listening to the City online dialogues, in which new topics were introduced every few days during the two-week discussion period. Although participants could comment on any topic, they were encouraged to respond to current topics in order to help the group address all of the various aspects of the larger issue being discussed. Similarly, Zilino provides

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[36] Information about the Countywide Community Forums can be found at http://communityforums.org/what-is-a-forum/.

clear start and end times for the table discussions. As noted earlier, the Minnesota model of summarizing discussions and publicizing them through newsletters is useful for keeping conversations on track.[37] Similar methods have been used by Web Lab[38] in some early deliberative forums, and in the NIF Virginia Tech student forum experiment.[39]

This structure provides the benefits of asynchronous posting by allowing ample time for people to read and post comments, but also keeps everyone involved in discussing the same general ideas so that participants don't spend time posting to a thread that no one is actively reading anymore. For any asynchronous discussion forum, designers and facilitators need to decide how much time is needed for a particular topic and how the topics and questions fit together to promote deliberative discussion. Although the timing of the discussion forum is different from face-to-face meetings, much of what we know about structuring and facilitating deliberative discussion on face-to-face forums translates well to online discussion.

The Role of Facilitators. Another important question for online forums is what role facilitators should play. Facilitators are, of course, a central feature of NIF discussions and other forums. Much of what facilitators do in face-to-face meetings—helping the group set guidelines, asking questions to promote analysis of trade-offs, encouraging equal participation opportunities, summarizing and clarifying, and otherwise guiding the conversation—still apply to online discussions. It is worth noting, though, that different online forums have made different choices about the necessity and role of facilitators.

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[37] See Becker and Ohlin and Dahlberg.

[38] D. Adams, and A. Goldbard, *Transforming Dialogue: Web Lab's Explorations at the Frontiers of Online Community* (Web Lab, 2000).

[39] L. S. Dudley, R. S. Morse, and J. P. Armstrong, "Comparing Content of Two NIF Forum Formats: Face to-Face Group versus Online," *International Journal of Public Participation* (2008).

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One choice is to have facilitators for each group that is engaged in an online forum. This is a standard design choice used by Zilino, America*Speaks*' online tools, online deliberative polling, online town halls, and many other forums. In these forums the facilitator provides topics, guides conversation, and helps summarize the discussion in much the same way that facilitators do in face-to-face meetings. This seems to be successful in promoting deliberative discussion, but may require facilitators to have additional technological skills specific to the tool.

Another choice is to have relatively little facilitation and allow the group to guide itself. Moderators could be used to judge the appropriateness of comments and remove posts or even block participants who attempt to sabotage the conversation. Unlike facilitators who actively guide conversations, moderators operate in the background and do not typically engage in conversation with participants. This hands-off approach has been used by a few forums with widely different results, and the success seems to depend somewhat on the other design features of the tool.

For example, e-thePeople provides unfacilitated discussion on a wide variety of public issues. Anyone can post a topic for discussion, which occurs via threaded conversation. Our look at current conversations on the e-thePeople site shows conversations that are divisive, antagonistic, and not highly deliberative. In this case, it seems that unfacilitated, relatively unstructured conversation does not encourage participants to engage in true deliberation.

However, the unfacilitated conversations that happen in forums designed by Civic Evolution provide a counter example.[40] This tool, used in the recent Australian Citizens' Parliament and other events, combines discussion forum with other features (such as a wiki, ranking, and some aspects of social media) to help groups of people collaborate to create policy recommendations. The tool provides guidelines for interaction and provides a specific step-by-step process for the conversation, but does not include facilitators. Participants are asked to follow guidelines and given mechanisms to report problems to a moderator. Participants

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[40] More information about Civic Evolution is available at their website: http://civicevolution.com/.

also were not completely anonymous as they had personal profiles associated with the tool.

According to Civic Evolution's founder, Brian Sullivan, they have not encountered problems with bad behavior in the self-monitored process. He said that in the beginning of the Australian Citizens' Parliament:

> I kept worrying about how to stop bad behavior. I realized that every solution I could come up with inhibited participation. The real problem wasn't people gaming the system; it was getting people to participate in the first place…. You have to trust the people and focus on how to help them participate rather than worrying about how you might police them[41]

In this case the structure provided by the tool itself promotes critical analysis of ideas and consideration of alternative views. Although the goal of the tool is to help people create policy recommendations, rather than weigh the trade-offs of various policy options, the technology itself seems promising for promoting deliberative discussion.

Rating, Tagging, and Buttons. Another way to structure discussions happening in asynchronous forums is allowing participants to rate comments made by others. Ratings can help ensure that relevant comments and posts are brought to the top of the page; as community members read, they rate posts based on any number of factors that come together to move the most important points of the deliberative conversation to the forefront as they come in, thus keeping the conversation rolling.

Rating is a key feature of several online communities, such as reddit or digg,[42] where users post news stories or links to share with others. In these sites,

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[41] Sullivan, personal communication, December 30, 2009.
Also quoted in: M. Calka, and L. W. Black, "Doing Community-Based Partnership Research in Online Communities," in *Case Studies in Community-Based Participatory Research*, eds. L. Harter, J. Hamel-Lambert, and J. Millesen (Dubuque, IA: Kendall-Hunt, 2011).

[42] Reddit.com and Digg.com are both online communities that have content populated by users who post news stories, photos, and other links of interest. Members of the communities use a system of ranking where they can "upvote" or "downvote" posts in addition to writing comments.

For general information on online communities see:
H. Rheingold, *The Virtual Community: Homesteading on the Electronic Frontier* (London, UK: MIT Press, 2000).

posts with the most upvotes are moved to the top of the page. Online retailers such as Amazon.com also use rating to allow customers to indicate how helpful a particular product review is. Although these communities and online retailers are not places we would typically think of as deliberative, they have some implications for civic engagement work. Many discussions on reddit, for example, center on political questions and involve interactions from people with different backgrounds and perspectives. Because of the norms of this community, respectful and thoughtful posts tend to be "upvoted" and thus displayed near the top of the page (which means that they then get more attention from readers and other participants). Similarly, the reviews on Amazon.com provide information about the strengths and weaknesses of particular products in order to help potential customers decide whether to buy the product.

Clearly this is not the same kind of task as weighing trade-offs of complex policy options. However, the technology that allows the most helpful reviews to be posted higher on the page can provide an example of possible features to promote good decision making online. Several public forums have used this feature to allow participants to rank comments made by others by clicking on a number of stars (up to five) or giving a post a thumbs up. For example, the National Dialogue on Health IT and Privacy, which was created in part by America*Speaks* and an organization called Delib,[43] used this kind of ranking system to move highly rated comments to the top of the page.

In addition to rating comments, there are other ways that forums could enable participants to easily support or characterize posts made by others. For example, participants in the National Dialogue on Health IT and Privacy could tag their comments, or comments of others, with key words that indicate the topic of the post. Participants could search comments according to tags. Additionally, forums

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J. Preece, *Online Communities: Designing Usability, Supporting Sociability* (Chichester, UK: John Wiley & Sons, 2000).

[43] Information on the National Dialogue on Health and IT can be found at: http://asonline.org/online-health-it-and-privacy-discussion/ and http://www.youtube.com/watch?v=XWscKH_y0gs. Delib's organizational website is available at: http://www.delib.co.uk/.

could use buttons that are just as easy to use as liking or showing support, but had other types of meaning. For instance, one could envision buttons that participants could use to thank others for their comment, demonstrate empathy, show that the comment provided a new and interesting idea, or even note that they are intrigued but not sure what they think yet. All of these kinds of immediate responses, which participants may not deem worthy of a full reply, could help members of the group understand various positions on the policy options and potentially begin to articulate trade-offs.

When ratings are used to organize the comments on the page, with the most highly rated comments at the top, this is referred to as ranking. Ranking seems to be best used to identify the top ideas that could be discussed in more depth, rather than focusing on weighing trade-offs. However, it could be useful as a kind of polling mechanism that allows participants to indicate support for a particularly insightful comment. In this way ranking can facilitate deliberative discussion by both identifying promising ideas and helping others demonstrate support for ideas that help summarize or clarify key aspects of the discussion. However, depending on how and when ranking is used, it could also discourage deliberative discussion by narrowing the field of possibilities too soon or even shutting down promising but unpopular ideas. By highlighting popular ideas, ranking could disrupt deliberative discussion by creating a kind of social pressure or sense of false consensus. Also, if ideas are posted to a forum rather quickly, some good ideas may be missed and unintentionally shipped to the bottom of the page simply because of when they were posted.

Ranking can also be subject to manipulation by special interest groups. Participants with strong opinions could easily work together to push particular ideas to the top and limit or hide comments that disagree with their position. This dynamic was evident in the White House's open dialogue project that aimed to get citizen input on the most important ideas for transparent government. [44] In this

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[44] D. E. Morelli, and L. W. Black, "The Promise and Problems of Online Deliberation and Its Link to Policy Making" (presented in the Political Communication Division of the National Communication Association annual convention, Chicago, IL, 2009).

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conversation some of the most highly ranked topics (to legalize marijuana and to force the president to produce his birth certificate) were clearly products of special interest manipulation of the ranking system.

To use ranking effectively, designers ought to consider limiting its use to only specific times. Ranking is very good for helping groups sort through a wide variety of ideas. Some of the problems here can be avoided through strong moderation of posts and by timing the ranking so that it occurs after the period of idea generation is complete. Introducing ranking later into a forum could allow participants to talk more freely about their ideas first and then use ranking to sort through comments and weigh in on the tradeoffs associated with particular positions.

Conversation Mapping. Mapping is a very specialized kind of forum, which is utilized by the organization OnlineTownhalls.[45] Mapping allows group members to create a kind of visual image of the conversation so that everyone involved can have a shared understanding of the big picture. In these forums, valid concerns are shown branching out in a kind of tree, where the branches are first constructed as the framework of issue being discussed, which is expanded throughout the discussion with participants' comments and responses. This process uses rating to move the important comments up closer to the parent branch of the tree.

Mapping provides a well-organized, easily traceable system of conversation on relevant subjects. However, it can sometimes be confusing to read the tree. It is difficult, for example, to easily trace a thread along one of the branches, as they all must be presented in single-file format. Additionally, given the nature of the map system, all posts are compressed and headed with a title written by the poster, which may or may not be totally indicative of the content of the post. The post

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For more on the Open Government Dialogue, see Tim Bonneman's blog posts related to the open government dialogue, such as "Open Government Dialogue: 26 Tips for Improving Phase 2," http://www.intellitics.com/blog/2009/06/10/open-government-dialogue-26-tips-for-improving-phase-2/.

S. P. Konieczka, "Practicing a Participatory Presidency? An Analysis of the Obama Administration's Open Government Dialogue," *International Journal of Public Participation,* 4 (1) (2010): 43-66.

[45] For more information see OnlineTownhall's website: http://onlinetownhalls.wordpress.com/start/.

cannot be read unless the cursor is hovering over the "bubble" of the post on the tree, where the text of the post is presented in a pop-out. In this way, it is very difficult to read a conversation as it progresses, as users can't easily cross-reference or compare posts, because they cannot read more than one at once.

As a whole, the mapping structure is highly organized, and can work very well to provide an overall view of the conversation. It's not clear how well this system works to help group members articulate trade-offs associated with different positions. There seems to be potential, but participants may need orientation and training to understand and make the most of the tool.

Theming Tools. The last feature of discussion forums discussed here is what I'm calling "theming tools." Finding themes in a conversation is an important task of facilitators and forum organizers, and this task is perhaps even more important in online discussions that can be temporally and topically disjointed. Forum designers are able to manually find themes by reading through discussions and sharing them with participants. However, there are also a few automated tools that can help with the task of theming by scanning all of the text of an online discussion and providing a visual image.

One possible theming tool is a word cloud, which provides a visual image of the most common words in the conversation. In these clouds, the size of the word is determined by how often it appears in the discussion. Word clouds could analyze all the text of a conversation. Alternately, these clouds could focus on the key words or tags provided by participants. For example, the National Dialogue on Health IT and Privacy displayed tag clouds on the side of the discussion posts, which provided a visual image of the topics that were receiving the most attention from the group. These images, which can easily be incorporated into blogs or online discussion forums, provide a snapshot of the topics being discussed, which may be useful for facilitators or participants to get a sense of the conversation. However, word clouds do not provide context or really describe the sentiment of particular terms.

Another theming tool is sentiment analysis, which scans all the discussion contributions and provides a graphical image of how positive or negative the sentiment is associated with a particular word of interest. Facilitators or participants could use this analysis to gauge how positive or negative the group feels about a particular topic during the conversation. Although such an image does not articulate the trade-offs associated with any particular option, it can help groups understand how the group seems to feel about that option, which could then open up new avenues for discussion.

Discussion Forum Summary. In sum, discussion boards can provide a great deal of potential for deliberative discussion because the asynchronous nature allows participants to carefully consider what they want to say, participants can easily interact directly with each other by replying to one another's posts, and the conversational threads can be easily viewed and followed. Facilitators can help guide the conversation through helping create guidelines, posing questions, balancing speaking turns, summarizing, and clarifying just as they would in face-to-face forums. Discussion boards can employ other features to help structure the deliberation, such as mapping the conversation, allowing participants to rank or tag comments, limiting topic discussion to certain time periods, or integrating other features, such as periodic polls. Although discussion boards are "lean" media in the sense that they are limited primarily to text,[46] they hold a great deal of promise for promoting deliberative discussion.

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[46] Media richness theory classifies technologies as varying on how much information they allow participants to exchange in their interaction. The richest media for interaction is face-to-face, which allows verbal, nonverbal, and contextual information to be exchanged. Text-based computer-mediated interactions (like chat or discussion boards) are considered "lean" because they lack the ability to provide nonverbal and contextual information.

For more on media richness see: R. L. Daft and R. H. Lengel, "Organizational InformationRequirements, Media Richness and Structural Design," *Management Science,* 32 (1986): 554-571.

Text-Based Chat

Another common text-based way of interacting online is chat. Unlike discussion boards, chat is synchronous, meaning that conversations happen in real time. This means that all group members must be available to participate at the same time, which can potentially present scheduling challenges.

In chat, contributions tend to be shorter than they are in asynchronous discussion, and each comment is presented in chronological order (not threaded). These aspects can make conversations appear to be disjointed as responses are not visually located near the comments they are topically linked to. This can lead to underdeveloped arguments, personal attacks, and misunderstandings.[47] Comments on chat logs can also come and go quickly and without active facilitation the topics raised on chat could easily be lost. However, as a real-time technology, chat can allow for more immediate interaction and discussion than asynchronous discussion boards. If actively facilitated, chat could help groups deliberate well.

Chat is a feature that tends to be integrated into a platform that also incorporates other features. Chat could easily be integrated as an add-on to more asynchronous discussion forums. Chat can also be used in immersive virtual environments. For example, in Second Life, group members can communicate through voice or through text-based chat. In a recent Second Life forum on the economy,[48] chat seemed to be an effective way for group members to add comments to the conversation without vocally interrupting other speakers. Chat allowed people to participate even if they had technological trouble with the voice feature on their computer. In addition to making longer contributions, participants used chat to make brief notes of agreement or encouragement, pose more information for the group, or make requests for clarification. The facilitator drew attention to comments made in the chat log, in case others had missed them, and made sure that they were

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[47] H. Weger and M. Aakhus, "Arguing in Internet Chat Rooms: Argumentative Adaptations to Chat Room Design and Some Consequences for Public Deliberation at a Distance," *Argumentation and Advocacy*, 40 (2003): 23-38.

[48] I participated in the NIF forum held in Second Life, hosted by Beth Offenbacker and Bill Corbett on July 27, 2011.

incorporated into the larger discussion. In this way the chat function supplemented the main discussion.

Other forums use chat as the primary means of participant interaction. Researcher Vincent Price argues that "under the right circumstances" features like text-based chat can promote high-quality deliberative discussion. Price and his colleagues conducted two separate year-long research projects that used chat as the primary way for group members to discuss contemporary political issues.[49] The Electronic Dialogue Project in 2000 focused on issues related to the presidential election. The Healthcare Dialogue Project in 2005 focused on formal policy deliberations around health care. In both forums, groups of randomly selected, demographically representative participants engaged in monthly, real-time, text-based discussions.

Their research shows some evidence of high-quality deliberative discussion. Price reports that conversations were "substantive and responsive" and participants "freely and frankly exchanged opinions."[50] In the Electronic Dialogue Project about half of the statements made by participants were categorized as arguments for or against a proposed solution[51] and over 40 percent of those opinion statements were coupled with one or more arguments to bolster the position.[52] Both projects demonstrated a diversity of opinions and showed predominantly positive responses to disagreement. As Price summarizes, almost all groups "produced a reasonable

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[49] V. Price, "Citizens Deliberating Online: Theory and Some Evidence," in *Online Deliberation: Design, Research, and Practice* eds. T. Davies and S. P. Gangadharan (Chicago: University of Chicago Press, 2009), 37-58. (Available online: http://online-deliberation.net/).
See also:

J. N. Cappella, V. Price, and L. Nir, "Argument Repertoire as a Reliable and Valid Measure of Opinion Quality: Electronic Dialogue during Campaign 2000," *Political Communication,* 19 (2002): 73-93.

V. Price, L. Nir, and J. N. Cappella, "Normative and Informational Influences in Online Political Discussions," *Communication Theory,* 16 (2006):47-74.

[50] Price (2009), p. 50.

[51] Cappella, Price, and Nir (2002).

[52] Price (2009).

balance of both pro and con arguments on most issues. Opinion expression and argumentation both tended to be equitably distributed…. Analysis of transcripts and survey responses in both projects suggest that views expressed were diverse, and perceived as such by group members."[53]

Finally, analysis of the surveys after the events provides evidence that participants had better understanding of political issues, could articulate a wide range of arguments on the topic, and developed more sophisticated opinions of relevant political policies. This research shows some promising results for text-based synchronous discussion features and their ability to promote high-quality deliberative discussion.

Web Conferencing (voice only or video enabled)

Voice and video conferencing are newer applications with a great deal of potential for deliberative discussion. Like text-based chat, web conferencing allows for real-time interaction. Yet, these features bring in some of the nonverbal cues from face-to-face conversations. Free web services like Skype and Google+ Hangout allow Internet users to talk to each other using voice or video. Although two-way video calls are quite common, the use of multiway video calling is newer and still creates some technological challenges. Video conferencing could potentially create a space for deliberative discussion that is similar to face-to-face meetings, but its newness makes it hard to judge.

Online Town Halls held by the Congressional Management Foundation used a combination of web conferencing and text-based chat to help citizens communicate with their congressional representatives. In these sessions the Congress member used voice-over technology that could be heard by constituents via their computers. Constituents used text-based chat to pose questions, which were then read aloud for the congressional member to address.[54] Later, citizens had an opportunity to chat

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[53] Price (2009), p. 50.

[54] D. Lazer, M. Neblo, K. Esterling, and K. Goldshmidt, *Online Town Hall Meetings: Exploring Democracy in the 21st Century* (Washington DC: Congressional Management Foundation, 2009).
See also:

together, without the congressional member present, to summarize and debrief their experience. Researchers found the Online Town Halls to have highly successful outcomes and respectful, fact-based, and thoughtful discussion processes.

The Virtual Agora Project,[55] held in 2005, also provides some insight into the quality of the deliberative discussion using such tools. This event used software that allowed participants to speak with each other using voice chat. Researchers found that participants in these synchronous conversations engaged in fairly high-quality deliberative discussion. For example, Jennifer Stromer-Galley's content analysis shows that 55 percent of the statements made by participants fell into the category of "reasoned opinion." This category includes making opinion statements, such as "I'm for K-8, because I think it solves the problems we face," and expressions of agreement or disagreement with other participants.[56]

Turn taking can be a little tricky to manage in voice-only web-conferencing tools. Without visual cues to indicate who will be speaking next, participants may have difficulty gaining the floor for discussion. This could potentially detract from the group's ability to engage in a reflective weighing of trade-offs. Facilitators can help manage turn taking, of course, but technological features can also help manage this challenge. In the Congressional Management Foundation's Online Town Halls, questions were answered in the order that they were received (other than redundant or inappropriate questions). The software used in the Virtual Agora project had a mechanism for people to "get in line" to speak and also limited each contribution to no more than three minutes. Participants were given a few opportunities to "jump ahead" in line with urgent or timely contributions. These

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K. Goldschmidt and L. Ochreiter, *Communicating with Congress: How the Internet Has Changed Citizen Engagement* (Congressional Management Foundation, 2008).

T. Hysom, *Communicating with Congress: Recommendations for Improving the Democratic Dialogue* (Congressional Management Foundation, 2008).

[55] P. Muhlbergerand L. M. Weber, "Lessons from the Virtual Agora Project: The Effects of Agency, Identity, Information, and Deliberation on Political Knowledge, *Journal of Public Deliberation*, 2 (2006): Article 13.

[56] J. Stromer-Galley, "Measuring Deliberation's Content: A Coding Scheme," *Journal of Public Deliberation*, 3 (2007): Article 12. Retrieved fromhttp://services.bepress.com/jpd/vol3/iss1/art12.

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features helped create equal speaking opportunities for all group members and could potentially help increase the quality of the discussion.

Other organizations host deliberative events that combine web conferencing combined with more conventional types of meetings. For example, America*Speaks*' "virtual summits" use web conferencing to model the 21st Century Town Meeting.[57] Participants view a webcast presentation on the topic, and then engage in small-group conference calls using the phone. Each "virtual table" conference call involves 15 to30 people and is led by a trained facilitator. Ideas from all the groups are shared with the theme team who summarizes and thematizes the results of the discussions and reports them back in the form of a webcast. Participants use online voting tools to express their preferences.

Another variation of web conferencing used by America*Speaks* is their Networked House Parties. In these forums, participants gather together to engage in face-to-face dialogues in homes across the country. They begin by watching a webcast, talk together face-to-face, and then submit their votes via text messaging. According to America*Speaks*, this blended format offers a more compelling deliberative experience than the virtual summits because it allows participants the richness of face-to-face meetings. But, the use of webcasts and text-message polling allows the event to scale easily, which is one of America*Speaks*' priorities.

Although scalability may be less of a concern for Kettering, it is interesting to note that the blended format of the networked house parties uses face-to-face meetings for the deliberative discussion and the online tools for the naming and framing of issues. This choice may point to a limitation of web conferencing as a means to help participants weigh trade-offs in deliberative discussion. At the recent Frontiers of Democracy conference, Carolyn Lukensmeyer seemed optimistic about online tools, but noted that there was a need for further development and innovation related to scalable mass collaboration and deliberation.[58] In other words,

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[57] For more information on the Virtual Summits and Networked House Parties, see: http://asonline.org/tools/#vs.

[58] Lukensmeyer (2011).

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there have been some successes so far, but more innovation may still be needed to truly engage large numbers of people in online deliberative discussions.

Social Media

Social media sites, such as Facebook and Twitter, are very popular and can provide means for publicizing events, gathering information or ideas from a large group of people, and sharing the results of a deliberative forum with a wider social network. A benefit of using existing social network sites for deliberative discussion is that it would bring deliberation to where people are already spending their time. This makes recruiting easier and can capitalize on the interests of groups of people already using social media to talk about public issues. Yet, although Facebook and Twitter have both been used in town-hall-style events, the technologies themselves do not seem to lend themselves to high-quality deliberative discussion.

For example, the recent Twitter Town Hall with President Obama[59] provided an opportunity for people from around the country to send in questions. The most frequently re-tweeted comments (used as a kind of ranking process) were selected for responses from the president. This process was good for gathering insights from a wide group of people and sharing answers via streaming web video, but the rapid pace of questions that were posed did not allow members of the public to really deliberate with each other.

Similarly, the Congressional Foundation's Online Town Halls allow members of Congress to communicate with their constituents through Facebook as well as other tools. In these forums, citizens can pose questions to their Congress member, and the questions and answers are then shared on the Congress member's Facebook page.[60] Another example of a forum occurring via Facebook is the Talk Vancouver project, which embedded an application into the Facebook site to allow Facebook

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[59] Obama's Twitter Town Hall is available at: http://askobama.twitter.com/.

[60] Personal communication, comment made by Brad Fitch at Kettering Foundation's Online Deliberation Workshop, May 2011.

users to help shape the city's transportation plan.[61] These initiatives were successful in helping citizens express concerns and opinions to public officials, thus giving policymakers a clearer understanding of what their constituents think. However, in neither case did groups of citizens use the social media to engage in rich, nuanced discussion with one another where they articulated key values, considered different possibilities, and weighed trade-offs associated with the possibilities.

Facebook differs from Twitter in the way that messages are displayed and the ways that people can interact. The wall on a Facebook page is very much like a minimally threaded discussion that is organized chronologically (the advantages and disadvantages of this format are similar to what is discussed above). Although people can directly reply to others' comments and can indicate support by liking a comment, these features alone are not enough to promote deliberative discussion.

Wikis/Collaborative Writing

Another way that groups can work together in online forums is to collaboratively create a document through using a wiki or tool like Google docs. These tools allow multiple people to add and edit content to a document that already exists. All group members can see the document, and many can be editing simultaneously. Wikis also allow people to discuss the changes they are proposing on a separate "talk" or discussion page, which could allow group members to engage in deliberative discussion. Each content page on the wiki has a corresponding discussion page, which operates like a threaded discussion board.

Wikis have received some attention from civic engagement practitioners.[62] For example, Civic Evolution incorporates a wiki feature to help participants collaboratively create a policy recommendation based on the conversations they had on the discussion boards. Wikis have also been used by businesses, local

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[61] For more information see http://apps.facebook.com/VanTransportFuture/.

[62] R. Carlitz and R. Gunn, "e-Rulemaking: A New Avenue for Public Engagement," *Journal of Public Deliberation,* 1(1) (2005).

governments, and other communities to share information and keep community members updated about the status of new projects.[63]

The most well-known wiki-based project is the online encyclopedia, Wikipedia.[64] Some recent research on Wikipedia's policymaking discussions show that participants used the discussion page to engage in a relatively high level of problem analysis, weighing pros and cons, and working together in ways that were respectful and considerate.[65] The success of such conversations, however, depends on the overall culture and norms of the community. Wikipedia has an extensive set of policies governing participants' behavior in the community, and infractions are typically sanctioned quite rapidly. The wiki technology itself does not encourage or prohibit deliberative discussion and it seems likely that the culture of collaboration in Wikipedia is what allows it to be successful.

Budgeting Tools

One type of online tool that has had success in helping people weigh trade-offs is a budgeting simulator, which allows people to work with data, make choices, and see the results of their choices.[66] In online budget simulation, community members can choose from multiple budget options to construct their own version of a larger budget, which is presented along with other simulations. The resulting displays can be commented on and discussed by users in a traditional comment

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[63] B. S. Novek, *Wiki Government: How Technology Can Make Government Better, Democracy Stronger, and Citizens More Powerful* (Washington DC: Brooking Institution Press, 2009).

[64] A number of other projects have used wiki technology to create encyclopedialike databases, including Participedia, which provides information on public participation approaches, cases, and tools.

[65] L. W. Black, H. T. Welser, D. Cosley, and J. R. DeGroot, "Self-Governance through Group Discussion in Wikipedia: Measuring Deliberation in Online Groups," *Small Group Research* (forthcoming). Preprints available online at: http://sgr.sagepub.com/content/early/2011/05/08/1046496411406137.abstract.
See also:
N. J. Klemp and A. T. Forcehimes, "From Town-Halls to Wikis: Exploring Wikipedia's Implications for Deliberative Democracy," *Journal of Public Deliberation* 6 (2) (2010).

[66] For example, see the Budget Allocator (http://corporate.bangthetable.com/budget-allocator/) and Budget Simulator (http://www.budgetsimulator.com/info/) tools.

format. This allows for discussion and a simulation that displays actual results and processes, and statistics to supplement them, without leaving discussion to imaginary results and potential ends.

Some benefits of budgeting tools are that they allow for discussion on tangible possibilities by providing detailed accounts of how particular budget choices would play out in a community. Participants can see immediate results of their decisions and can also see results of other group members' choices that might be different from their own. This allows participants to immediately observe some of the trade-offs of their choices.

The challenges to using this kind of tool stem from the specificity. These tools are significantly more complex than text-based forums, which may mean that participants need instruction in order to avoid technological difficulty. Additionally, unlike wikis, chat, or discussion boards, these tools are designed solely for budgetary considerations, not necessarily for larger social questions. It may be the case that such tools could be an integral part of a deliberative discussion if combined with discussion forums or chat.

Serious Games/Virtual Worlds

Another burgeoning format for civic-engagement opportunities comes from games or virtual worlds. Online gaming is incredibly popular with teens, and in 2010, 36 percent of adult Internet users stated that they play collaborative games online.[67] Although many of these games are recreational, some more serious games take advantage of the immersive virtual experience of gaming to help people address social problems.[68] Additionally, some public participation practitioners

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[67] Pew Internet and American Life project.

[68] S. Bittle, C. Haller, and A. Kadlec, *Promising Practices in Online Engagement* (Public Agenda, Center for Advances in Public Engagement, 2009). Available online at: http://www.publicagenda.org/pages/promising-practices-in-online-engagement. See also work by researchers Carrie Heeter, Brian Winn, and Len Fleck at the University of Michigan: http://tism.msu.edu/deliberative-games.

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have used the virtual world of Second Life to hold deliberative forums on public issues.[69]

One benefit of using serious games or immersive virtual worlds for deliberative forums is that the avatar-based interactions allow for a richer kind of interaction than text-based discussion. Participants can sit together in a virtual room and feel a sense of co-presence that is typically more difficult to achieve with discussion boards or chat. Avatars can also gesture, move around, and display other nonverbal behaviors. Despite the potential for anonymity in these forums, researchers who studied nonverbal communication on Second Life found that social interactions there "are governed by the same social norms as social interaction in the physical world."[70]

Moreover, virtual worlds like Second Life can allow participants or forum convenors to create specific kinds of virtual spaces for their interaction. For example, the group MinGov 2.0 uses Second Life to create a virtual town for their meetings.[71] Craig Paterson noted that this process allows the group to create city-planning designs that they could then walk through and get a sense for in a more concrete way than is possible in other kinds of online interactions.[72]

Potential downsides of virtual worlds and games are that they are more complex and require more advanced computing power than text-based features or even online budgeting tools. This complexity can lead to a higher chance for technological difficulties, and users may require more orientation and training just to get around in the space.[73] Forums that use Second Life include orientations and

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[69] For example, Beth Offenbacker and Craig Paterson both host NIF or other forums in Second Life.

[70] N. Yee, J. N. Baileson, M. Urbanek, F. Chang, and D. Merget, "The Unbearable Likeness of Being Digital: The Persistence of Nonverbal Social Norms in Online Virtual Environments" *Cyberpsychology & Behavior*, 10 (2007): 115-121.

[71] For more information see their website at http://www.munigov.org/.

[72] Personal communication, Kettering Foundation's Online Deliberation workshop, May 2011.

[73] For example, in the July 2011 NIF forum on the economy held in Second Life, several participants had difficulty getting their avatars to sit in chairs in the virtual conference room (some were standing on the table or sitting on the floor) or moving around in the space. Although this didn't greatly inhibit the quality

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assistance both before and throughout the discussion. The need for more advanced computing power could also narrow the group of participants, which makes getting a diverse sample of citizens difficult to achieve.

Use of Mobile Devices

Finally, designers for online forums ought to consider what devices people will be using to participate in the event. Mobile computing is pervasive and many people use smart phones or other mobile devices to access the Internet. Forums can incorporate features, such as texting, to allow participants to send in comments, even if they are away from their computers, or to respond to polls using programs like Polling Everywhere. Although texting and polling are not features that in and of themselves promote deliberative discussion, they can provide opportunities to get immediate input from participants. Such features could be incorporated into tools as an addition to discussion boards or web-conferencing systems.

Conclusion: Reflecting on Deliberative Design

Reviewing these varied online features shows that there is a great deal of potential for online deliberation. The Internet provides new and exciting ways to name and frame information, engage people in conversation, visualize options and trade-offs, and make choices to act together. Yet, there does not seem to be a magic bullet for engaging everyday citizens in deliberative discussion. Each feature reviewed here has its benefits and drawbacks and could play a different role in the democratic process. The table in Appendix A summarizes some of the key attributes of each feature and describes its usability, how it is best used in the engagement process, and it's major drawbacks in terms of promoting high-quality deliberative discussion.

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of conversation, it was a bit distracting for participants, despite the expert facilitation. More troubling was the fact that several participants had difficulty accessing briefing materials or getting their microphones to work, which inhibited their ability to fully participate. These problems were addressed very quickly and professionally during the forum, but they nonetheless point to the high potential for technological difficulties when using virtual environments.

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The real question becomes not which feature to use, but how to best combine these different features to help participants articulate values and describe and weigh trade-offs for different options. Many contemporary tools combine features such as asynchronous discussion boards along with wikis, chat, or web conferencing. A blended approach that uses careful design to match features with the goals of the forum may be the most productive choice. Additionally, we should remember that online and face-to-face modes of interaction are not mutually exclusive.[74] Online tools can be used as a supplement for face-to-face meetings in a wide variety of formats. Careful design should consider not only what technological features to use but also whether and how to involve face-to-face meetings.

Finally, it is important to note that technology can only do so much. True deliberative discussion in the way that Kettering understands it must be grounded in a particular set of norms and expectations for participants and processes. That is, in order to truly deliberate, people have to be well informed and feel that they are in a group where they will be safe, respected, and listened to. Facilitators and forum convenors know a great deal about how to create that climate in face-to-face settings. What we need to learn is how to translate those expectations appropriately for an online setting. The forums reviewed here show the importance of clear guidelines, skilled facilitation, and the possibility to remove or sanction abusive comments. Additionally, regardless of the feature, designers need to consider how they want to deal with recruitment, retention, and participants' level of anonymity. The tools and features reviewed here give several examples of possibilities that deserve careful consideration.

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[74] This point was one of the major themes coming out of the online working group at the recent Frontiers of Democracy conference.

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Appendix A

Technological Features That Could Be Part of an Online Forum

Feature	Usability	Best Used For	Biggest Drawbacks
Blogs	Easy; Only requires reading and comments.	Issue Naming/Framing; Readers can help shape the story as it unfolds.	Not designed for deliberative discussion. Has potential for flaming or echo chambers.
Social media (Facebook, Twitter, etc.)	Easy; Many people already using them.	Issue Naming/Framing, Recruiting, Mobilizing action after discussion; Most successful in used with other tools.	Connection into social networks can inhibit honest weighing of trade-offs. Somewhat limited audience. New users may need time to acclimate to the technology.
Texting/SMS	Easy; Requires cell phones with texting capability.	Polling and asking quick questions (could be part of weighing trade-offs)	Does not put people in conversation with each other. Not designed for discussion, but can be used with other tools.
Chat (text only)	Easy; Comments are quick and brief.	Weighing trade-offs; real-time conversation	Possibility of disjointed conversations. Text-based, leaves out nonverbals.
Discussion board	Varies; Basic model is easy to use, additions make it more complex.	Weighing trade-offs (See specific uses for different discussion board designs.)	Asynchronous conversation can be hard to follow. Discussions can last a long time, which increases chances of attrition. Text-based, leaves out nonverbals.
- *threaded*	*Easy; comments and replies are grouped*	*Conversation among participants about different ideas*	*Irrelevant replies stuck with original comments; new ideas could get buried.*
- *ranking*	*Easy; buttons to support or tag comments*	*Identifying themes and most-supported ideas*	*Can limit ideas by putting popular ones at the top too early in the process.*
- *mapping*	*Complex; may require training*	*Identifying threads of conversation*	*Can be difficult to read different threads of the discussion.*
Budgeting Tools	Moderately complex	Weighing trade-offs; Visualizing results of choices	Specificity of the tool could limit its use, could require that participants have a lot of background information for successful budgeting choices.
Web Conference (voice/video)	Moderately complex; Possibility of technical issues.	Weighing trade-offs; real time conversation (more nonverbal cues available than chat).	Turn taking can be complicated. Real-time technology may limit people's availability.
Wikis	Moderately Complex; Requires some training.	Reframing and action; collaborative writing	Deliberative discussion is not the main goal of this tool. Possibility of technological difficulties, somewhat limited audience due to complexity.
Virtual Worlds			

About the Kettering Foundation

The Kettering Foundation is an independent, nonpartisan research organization rooted in the American tradition of cooperative research. Everything Kettering researches relates to one central question: what does it take for democracy to work as it should? Chartered as an operating corporation, Kettering does not make grants. The foundation's small staff and extensive network of associates collaborate with community organizations, government agencies, researchers scholars, and citizens, all of whom share their experiences with us.

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