

# *Journal of Public Deliberation*

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*Volume 6, Issue 2*

2010

*Article 4*

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## From Town-Halls to Wikis: Exploring Wikipedia's Implications for Deliberative Democracy

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# From Town-Halls to Wikis: Exploring Wikipedia's Implications for Deliberative Democracy\*

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## Abstract

This essay examines the implications Wikipedia holds for theories of deliberative democracy. It argues that while similar in some respects, the mode of interaction within Wikipedia represents a distinctive form of “collaborative editing” that departs from many of the qualities traditionally associated with face-to-face deliberation. This online mode of interaction overcomes many of the problems that distort face-to-face deliberations. By mitigating problems that arise in deliberative practice, such as “group polarization” and “hidden profiles,” the wiki model often realizes the epistemic and procedural aspirations of deliberative democracy. These virtues of the Wikipedia model should not, however, lead to the simple conclusion that it ought to replace traditional face-to-face deliberation. Instead, this essay argues that the collaborative editing process found within Wikipedia ought to be viewed as a promising supplement to traditional deliberation. These two modes of communication ought to be viewed in Madisonian terms – as distinctive forms of interaction that check and balance the vices of one another. When combined, the wiki model promotes the virtues of inclusion and accuracy at large scales, while the face-to-face model excels in conditions of localism and promotes the virtues of solidarity and social capital.

**KEYWORDS:** Deliberative Democracy, Group Processes, Information Technology, Wikipedia

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\*We would like to acknowledge the two anonymous reviewers who offered a number of helpful insights and comments. We would also like to thank Caleb Clanton, Jane Mansbridge, and the editor of the Journal of Public Deliberation, Ted Becker, for their helpful comments.

In *The Politics*, Aristotle makes a provocative claim about the nature of collective intelligence. He likens the combination of minds to a pot-luck dinner: “The many, of whom none is individually an excellent man, nevertheless can when joined together be better – not as individuals but all together – than those [who are best], just as dinners contributed [by many] can be better than those equipped from a single expenditure” (Aristotle 1984, 1281b1). When their virtues are combined, argues Aristotle, the many can surpass the intelligence of even the most gifted few.

Throughout the last forty years, democratic theorists have pointed to deliberation as a democratic tool for realizing Aristotle’s vision. Like Aristotle’s pot-luck, deliberation is ideally inclusive. It ensures the legitimacy of political decision-making by welcoming all citizens to voice their perspectives. Also like Aristotle’s vision, deliberation enhances collective understanding. By enabling all citizens to contribute, it combines the unique perspectives and understandings of individuals to reach more informed collective decisions.

In theory, the Internet’s power to unite individuals throughout the world would seem to produce the optimal conditions for realizing Aristotle’s ideal of collective intelligence. Online communities allow a seemingly limitless number of individuals to interact and to combine their perspectives. Yet on many accounts, the Internet often appears to diminish rather than enhance the possibility of achieving this ideal. Cass Sunstein (2001), for instance, praises some aspects of interaction within the Internet but worries that it “is serving, for many, as a breeding ground for extremism, precisely because like-minded people are deliberating with one another, and often without hearing contrary views” (71).

Since its creation in 2001, Wikipedia, the free Internet Encyclopedia, has managed to overcome many of these worries. It is driven by the egalitarian idea that anyone with access to the Internet ought to be able to create, edit, and revise the site's content. Unlike newspapers, magazines, and TV broadcasts, in which content is created and edited by a handful of professionals, Wikipedia thrives on a more decentralized model. Within the virtual space of Wikipedia, information is assembled and edited by thousands of people across the world – people who need not have any formal training or degrees and who have never even met. Wikipedia also appears to produce positive epistemic outcomes. It harnesses the vast power of the many to create an accurate and expansive open-source encyclopedia.

In this essay, we examine the implications Wikipedia holds for deliberative democracy. We argue that the mode of interaction within Wikipedia overcomes many of the problems that distort face-to-face deliberations and, at least partially, realizes the epistemic and procedural aspirations of deliberative democracy. This does not, however, mean that the Wikipedia model ought to be viewed as a replacement for traditional face-to-face deliberation. Instead, we argue that the mode of interaction within Wikipedia may supplement face-to-face deliberation. When combined, these two forms of interaction check one another: the Wikipedia model promotes inclusion and accuracy when used at a large scale, while the face-to-face model promotes solidarity and social capital and excels in conditions of localism.

The essay divides into five primary parts. The first outlines the evolution of Wikipedia. The second outlines two of the primary aspirations of deliberative democracy: the procedural aspiration toward inclusion and the epistemic aspiration

toward accuracy. The third section examines the differences between ideal forms of face-to-face deliberation and the form of *collaborative editing* found in Wikipedia. The fourth section juxtaposes the collaborative editing process of Wikipedia against the actual practice, as opposed to the theoretical ideal, of deliberation. We argue that in turning from theory to practice two primary problems with deliberation emerge: the problems of group polarization and hidden profiles. We will then argue that the vast size and relative anonymity of Wikipedia enable this mode of interaction to at least partially overcome these problems. In the final section, we outline the limitations of the Wikipedia model and argue for a synthesis of such online and traditional face-to-face deliberations. We conclude by sketching out a few concrete ways in which Wikipedia might supplement face-to-face deliberation.

## **I. The Wikipedia Experiment**

In early 2001, Jim Wales and Larry Sanger, founders of Wikipedia, had a wild idea: why not create an Internet encyclopedia that is written, edited, and revised by ordinary users? Since then, the growth of this user-created encyclopedia has been astronomical: within one month, Wikipedia had more than 600 articles; within a year, it had 20,000 (Schiff 2006); and now Wikipedia has nearly 2.9 million articles in its English Language Edition alone, and has a total of more than 13 million articles in 260 languages (Wikipedia 2009a).

The technology driving this experiment is a simple software tool called a “wiki,” which enables multiple users to write and edit content. The word “wiki” comes from the word “wikiwiki,” which is Hawaiian for “fast” or “speedy” (Sunstein 2006, 149). The

pioneer of the wiki concept was Ward Cunningham, who developed the first wiki to enable large numbers of users to edit and add new content. Cunningham was perhaps the first to see the democratic possibilities of this new technology: “Wiki is inherently democratic,” he declared, “every user has exactly the same capabilities as any other user” (Sunstein 2006, 148).

Using this tool, Wikipedia has created a platform on which “people of all ages and cultural and social backgrounds can write Wikipedia articles. Most of the articles can be edited by anyone with access to the Internet, simply by clicking the edit this page link” (Wikipedia 2009a). For self-described “Wikipedians,” this process of collaborative content creation is understood through the metaphor of a “socially Darwinian evolutionary process” (Wikipedia 2006a). Like the process of evolution, there are two primary mechanisms driving Wikipedia’s rapid expansion: variation and selective retention. With upwards of nine million registered contributors, variations in content arise almost continuously (Wikipedia 2009a). Yet as in the evolutionary model, not all of these variations are retained. New additions and modifications are only retained if deemed useful by fellow users. The use of “revision control” expedites the process of correcting mistakes and vandalism by enabling users to “revert” an article to past versions, and track the edits of other users (Wikipedia 2009b). This means that outrageous and inaccurate variations on content are quickly replaced until new and more accurate ones arise.

The open-source structure of Wikipedia also means that it costs next to nothing to maintain. Despite its millions of entries, the site is run by the Wikimedia Foundation, a nonprofit organization consisting of less than twenty employees, and operating on an

annual budget of only \$3,500,000 (Wikipedia 2008). The reason for such low overhead costs: the producers and editors of content are the users themselves and, as a result, they need not be hired, paid, or managed.

## II. Deliberative Democracy

While Wikipedia has transformed the world of encyclopedias, this essay seeks to understand the form of interaction within it as a potential supplement to traditional forms of democratic deliberation.<sup>1</sup> To do this, we will examine whether the mode of interaction within Wikipedia realizes two of the traditional ideals of deliberation: (1) the procedural aspiration toward inclusion and (2) the epistemic aspiration toward accuracy or truth-tracking. Of course, there are many other ideals and aspirations that emerge in the literature on deliberation. Yet we argue that the ends of inclusion and accuracy play a prominent role both in traditional and more recent theories of deliberation.

Traditional accounts of deliberative democracy argue that when citizens disagree about moral and political issues, as they inevitably will, such disagreements ought to be dealt with through the exchange of reasons. Gutmann and Thompson (2004) call this the “*reason-giving* requirement.” It is the idea that “in a democracy, leaders should...give reasons for their decisions, and respond to the reasons that citizens give in return” (3). As we will see, such “reason-giving requirements” are justified on the grounds that they promote procedural fairness and truth-tracking in political decision making.<sup>2</sup>

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<sup>1</sup> We recognize Wikipedia’s claim that, “[it] is not a democracy” (Wikipedia 2009f). Yet we are not examining whether it is a democracy *per se*, but rather if it can facilitate deliberative practices within a democracy.

<sup>2</sup> For a closer examination of the distinctions between justifications based on fairness and truth-tracking see Estlund 2008, 127.

The proceduralist justification argues that decisions are legitimate if they are the result of a fair procedure where all parties can participate in contestation and debate. Put differently, legitimacy arises when deliberations take into account the views of all citizens, not just those of the numerical majority (Rawls 1996, 213; cf. Cohen 1997, 72; Estlund 1997, 177). As Bernard Manin explains,

Because it [the decision] comes at the close of a deliberative process in which everyone was able to take part, choose among several solutions, and remain free to approve or refuse the conclusions developed from the argument, the result carries legitimacy. The decision results from a process in which the minority point of view was also taken into consideration (Manin 1987, 359).

On such proceduralist justifications, deliberation confers legitimacy by ensuring that even the losers in the political process have their views “taken into consideration.” In short, the proceduralist position holds that political legitimacy hinges on fairness and inclusion – on granting all citizens the capacity to voice their views.

The epistemic position, on the other hand, holds that political legitimacy arises from the propensity of deliberations to produce accurate decisions. Cheryl Misak captures the essence of this view by declaring, “Deliberative democracy in political philosophy is the right view, because deliberative democracy in epistemology is the right view” (Misak 2004, 15). Deliberation is necessary on this view because in the absence of robust debate and critical scrutiny, citizens and lawmakers cannot know whether their decisions are indeed based on accurate beliefs (Misak 2008, 95-96 cf. Talisse 2007, 389). Thus the epistemic view presumes that when making political decisions, deliberation is the best (if not the only) way to ensure that the decision is “truth-tracking” (Nino 1996, 107 cf. Estlund 2008, 8; Talisse 2004, 27). So on the epistemic view, the exchange of reasons, arguments, and evidence that occurs in deliberation confers legitimacy on the political process not primarily because it is fair or inclusive but because it tends to



produce accurate decisions. We should note that the proceduralist position and the epistemic position are by no means incompatible. Many theorists who value inclusion also value accuracy. Likewise, many who hold the epistemic position also value the proceduralist emphasis on inclusion.

A detailed discussion of these two ideals is beyond the scope of this essay. Our goal in outlining these two positions has been to show that both ideals offer justifications for deliberation as a tool for establishing legitimate political authority. We leave open the question of which of these two accounts offers the most compelling justification for deliberation. Instead, we use these two justificatory accounts as an analytic baseline for examining Wikipedia's potential as a supplement to deliberation.<sup>3</sup> We use the proceduralist position to examine whether Wikipedia embodies a procedurally fair process of information exchange. We use the epistemic position to examine whether Wikipedia enhances collective understanding.

### III. Is Wikipedia Deliberative?

Before juxtaposing Wikipedia against these two deliberative ideals, we begin by asking: are members of Wikipedia engaged in deliberation or some other form of interaction? At the outset, the form of interaction within Wikipedia appears to depart from traditional deliberation. The information exchanges within Wikipedia result in a collaboratively authored encyclopedia. Ideal deliberation, by contrast, aims primarily at facilitating democratic decision-making and legitimating the use of coercive state power.

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<sup>3</sup> We should emphasize that this distinction is a *generalization* and should not be taken as anything beyond an analytic tool. For we fully recognize that most contemporary deliberative democrats, such as Habermas (1990; 1996) and Estlund (2008), offer hybrid version of deliberative democracy that equally emphasize both the procedural and epistemic value of deliberation.

In spite of these general differences, many existing accounts argue that Wikipedia is, at least in part, an exercise in deliberation. Sunstein, for example, claims that though wikis are primarily “mechanisms for aggregating information” (Sunstein 2006, 148), Wikipedia “is in part a deliberative forum, with reason-giving by those who disagree and with deliberative ‘places’ to accompany disagreement” (152).

We agree with Sunstein’s characterization of Wikipedia as a partially deliberative environment. However, we argue that the primary form of interaction is not deliberation but rather what we call *collaborative editing*. To be sure, this process shares two key qualities of the deliberative ideal. First, it is guided by a similar orientation toward the common interest. Second, it appeals to the norm of consensus as its ideal decision rule. Yet Wikipedia departs from two other primary features of ideal deliberation. First, it represents a shift from face-to-face to more anonymous forms of online interaction. Second, it substitutes an egalitarian form of collaborative editing for the deliberative practice of reason-giving as its primary mechanism of information exchange.

### *Distinguishing Deliberation From Collaborative Editing*

	<b>Ideal Deliberation</b>	<b>Wikipedia</b>
<b>Aspiration</b>	Common Interest	Common Interest
<b>Decision Rule</b>	Consensus	Consensus
<b>Level of Intimacy</b>	Face-to-Face	Relative Anonymity
<b>Interactive Mechanism</b>	Reason Giving	Collaborative Editing *

**Figure 1:** Adapted from Jane Mansbridge’s (1983) account of unitary and adversary democracy, this figure illuminates the primary features of ideal deliberation and Wikipedia’s collaborative editing. We borrow three of her criterion (assumption, decision rule, and level of intimacy) and add one of our own (interactive mechanism).

These four categories serve as an analytic baseline for distinguishing ideal deliberation from the process of collaborative editing found in Wikipedia. \*Collaborative editing is the primary form of interaction in Wikipedia, but, as Sunstein (2006, 152) notes, forums of deliberative reason-giving also exist.

Consider first the similarities between ideal deliberation and Wikipedia's collaborative editing. Like most deliberative ideals (Cohen 2002; Habermas 1997; Mansbridge 1983; Pettit 2000; Gutmann & Thompson 1996), contributors to Wikipedia aspire toward the common interest. This aspiration is perhaps most evident in the foundational principle guiding the editing process: "neutral point of view" (NPOV). This principle encourages participants to avoid biased or self-serving contributions and to instead present information from a neutral point of view. According to this principle: "where there have been conflicting views, these should be presented fairly" (Wikipedia, 2006).<sup>4</sup> Implicit within this call for neutrality is an aspiration toward creating content that serves the common interests of all readers. Entries on controversial political issues, for instance, should not privilege the interests of Democrats or Republicans. Rather, they should present information neutrally, in ways that represent all relevant perspectives.

In comparing ideals of deliberation with Wikipedia, perhaps the most striking similarity arises from their shared emphasis on consensus. Like the deliberative ideals of Cohen (2002) and Habermas (1979), decisions concerning the rules, policies, and content of Wikipedia arise out of a process of "reasonable-consensus building." In determining policies and mediating disputes, the Wikipedia community aspires toward solutions that appeal to all users. Once a consensus is reached, these moments of unanimous agreement are then translated into basic guidelines and principles. "If we find that a particular

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<sup>4</sup> Two other guidelines supplement the NPOV rule. The first is "verifiability," which requires that other users be able to check the sources used to create new content. The second is "no original research," which mandates that entries cannot contain unpublished arguments, ideas, data, or theories. In addition to these principles, Wikipedia encourages users to adhere to the norms of good faith and civility and to refrain from personal attacks on other editors (Wikipedia 2006a).

consensus happens often,” Wikipedia explains, “we write it down as a guideline, to save people from having to discuss the same principles over and over” (Wikipedia 2006b).

This commitment to consensus arises out of a concern for the potentially tyrannical effects of majoritarian decision rules. As their rules page explains, “At times, a group of editors may be able to, through persistence, numbers, and organization, overwhelm well-meaning editors and generate what appears to be support for a version of the article that is actually inaccurate, libelous, or not neutral, e.g. giving undue weight to a specific point of view. This is not a consensus” (Wikipedia 2006b). The worry here is that articles based upon the perspective of the numerical majority, as opposed to the perspective of the whole or of a supermajority, will not result in unbiased or neutral material.<sup>5</sup>

Although Wikipedia shares this emphasis on the common interest and consensus, it departs from two key aspects of the deliberative tradition. First, the online interactions in Wikipedia represent a shift from face-to-face to partially anonymous interaction. In Mansbridge’s deliberative account of “unitary democracy” and in many other ideal accounts of deliberation, face-to-face relations play a vital role. Such relations cultivate civic friendship and shared understanding. As Mansbridge puts it, “The face-to-face interaction of friends helps to create and to maintain their common interests...They come to respect and to know one another by piecing together, over time, informal cues derived from their intimate contact” (Mansbridge 1983, 10). While Mansbridge is explicit in her

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<sup>5</sup> It should be noted, however, that Wikipedia’s rejection of pure majoritarianism is only partial. While consensus is the ideal, Wikipedia users admit that unanimity may not always be possible. In certain circumstances, they allow for super-majoritarian procedures. When consensus proves impossible, for instance, decisions must be made on the basis of a super-majority, consisting of anywhere from 60% to 80% of participants (Wikipedia 2006).

emphasis on face-to-face relations, most other deliberative theories rest on an implicit presumption of face-to-face contact. Public political forums, informal conversations, and town hall meetings – all of these traditional deliberative settings enable citizens to face one another when exchanging reasons and information.

Wikipedia departs from such traditional deliberative settings. Its users go by names like “Scray,” “Ferrylodge,” “AxelBoldt,” “Almondwine,” or “MamaGeek.” Although users may become familiar with the online personas of others, they are likely never to meet face-to-face, to see one another, or to ever know the real names of fellow users. As a result, this online space creates an interactive world based not on face-to-face intimacy but on *relative* anonymity. The anonymity of Wikipedia users is relative for two reasons. First, editors’ anonymity is not impenetrable, as one Wikipedia page cautions “your mask can fall off” (Wikipedia 2009g). For example, the “WikiScanner”—a tool used to trace anonymous edits to organizations or individuals IP addresses—was used to identify the, now famous edits made by Brian Chase (whose story we will return to later) (Wikipedia 2009h). However, even tracing an IP address is becoming increasingly difficult. Programs now enable “cloud browsing,” allowing individuals to connect to a remote computer and browse with an altered IP address. Also, browser plugins like “FoxyProxy” or “TOR” mask IP addresses making it impossible to track users. Thus, it is possible to be almost completely anonymous on Wikipedia but it is largely contingent upon the precautions taken by the user.

Second, while most frequent users establish a consistent pseudonym, which enables other users to identify their contributions, important elements of their identity in real space (race, attractiveness, age, and public speaking ability) remain hidden.

Wikipedia encourages editing with a pseudonym, because “logging in under a pseudonym lets you build trust and respect through a history of good edits. It is also easier to communicate and collaborate with an editor if we know who you are (at least, who you are on Wikipedia)” (Wikipedia 2010a). Yet, even when using a consistent pseudonym, a degree of anonymity still exists. After all, the user has far more control over how his or her identity appears in the online space of Wikipedia than in real space. As Smith and Kollock (1999) observe, in such virtual communities, inhabitants are “diffuse, free from the body’s unifying anchor. One can have, some claim, as many electronic personae as one has time and energy to create” (29). By enabling users to construct their own identity, the traditional markers of status that distort deliberation in real space (see section four) become largely irrelevant. Even if an individual were to attempt to gain status through revealing his or her race, gender, or educational credentials, such attempts are likely to be viewed by other users with suspicion. The fact that each user *could* invent a misleading or exaggerated online identity means that such markers of status in real-space lose much of their power.

While the normal markers of status in real-space are largely irrelevant, those with a track record of positive contributions to the encyclopedia can establish status and prestige within the Wikipedia community. For example, the process of becoming a Wikipedia administrator requires making enough “good” edits (typically a few thousand) to gain 70-85 percent approval when the user makes a Request for Adminship (Dee 2007). These hierarchies within Wikipedia create inequalities in status. Yet unlike the diminishing effects of status in real space, we have found no evidence to suggest that such status differences undermine the inclusiveness or epistemic accuracy of the

collaborative editing process. In fact, it seems as though this online status system enhances the accuracy of contributions. The status of Wikipedians, after all, is determined not by arbitrary factors like age, race, or gender but by the accuracy of the editor's contributions. So while status inequalities exist, these differences would appear to enhance the epistemic accuracy of the editing process.

The second key difference between traditional deliberation and Wikipedia arises from the mechanism of interaction. While deliberation occurs through reason-giving, interaction within Wikipedia occurs through collaborative editing. As we have seen, for Gutmann and Thompson (2004) the "reason-giving requirement," which stipulates "the need to justify decisions made by citizens and their representatives" (3), is fundamental to deliberative democracy.

In contrast to reason-giving, interactions within Wikipedia are based on a process of collaborative editing. Online editors work collaboratively to add relevant information, eliminate bias, and fine-tune spelling and grammar. This is not a conversational exchange where parties offer arguments and reasons about a future decision. Rather, each party takes this decision making process into his or her own hands, changing the content of Wikipedia's entries with minimal consultation or deliberation. This points to a crucial distinction. In ideal deliberation, collective outcomes arise through a prior process of reason-giving that, at least ideally, results in a decision made through consensus. In Wikipedia, collective outcomes arise from a kind of "editorial equilibrium" – a process where individuals implement revisions at their own discretion but where only those changes that enhance the accuracy or readability of the entry will survive the scrutiny of fellow editors.

While collaborative editing plays a primary role in Wikipedia, it should be noted that more deliberative forms of reason-giving also exist. In creating entries, editors use a separate page (the “Talk Page”) as well as I.R.C. channels to discuss possible changes in content. Consider, for instance, the longstanding debate among editors on the “abortion” page concerning whether to display images of aborted fetuses. On one side, editors argue that pictures ought to be displayed. In one such user’s words, “Why aren’t there any pictures of the aborted babies here? It really seems that Wikipedia is whitewashing this issue. In the very least we should acknowledge what abortion is and what it does to an unborn child” (Wikipedia 2006c). Critics reply that displaying such photos violates Wikipedia’s foundational principle of No Point of View and is inconsistent with the structure of many of Wikipedia’s other entries. As one user insisted: “[P]utting a picture in is unneeded. If you are saying that there should be a picture to give a better understanding of the topic then surely the mastectomy page should have a picture of a removed breast or the area where the breast used to be to increase the understanding of the procedure and what it entails” (Wikipedia 2006c). Such reason-giving often yields creative solutions. In response to this exchange, another user offered a possible compromise: “I’m not sure if this has ever been suggested, but we *could* put a link at the end in the external link section to some pictures” (Wikipedia 2006c).

That Wikipedia users also appeal to reason-giving does not mean that this is a fully deliberative process. As we have seen the primary form of interaction lies not on the “Talk” pages or I.R.C. channels but in the process of content creation itself. This editorial process is less an exchange of reasons and more an attempt to achieve an



editorial equilibrium through the unstructured and often chaotic edits and revisions of a wide array of users.

#### **IV. Juxtaposing Practical Deliberation and Collaborative Editing**

The previous section sought to outline the structural differences between the Wikipedia model and ideal forms of face-to-face deliberation. While important, this essay seeks to extend this comparison beyond the realm of ideal theory to the actual practice of collaborative editing and deliberation. In evaluating the potential uses of the Wikipedia model as a supplement to deliberation, it is not enough to compare this model to theoretical ideals of deliberation. We must also compare it against deliberative practice. When, after all, we turn from deliberation in theory to deliberation in practice, a number of problems emerge that stand in the way of realizing the procedural and epistemic aspirations of deliberative democracy. As a result of status inequalities, group polarization, and other empirical problems, the actual practice of deliberation often diminishes rather than enhances these values (Mendelberg 2002).

In what follows, we outline two of the primary shortcomings of face-to-face deliberation: the problem of group polarization and hidden profiles. We also examine the ways in which the collaborative editing process of Wikipedia overcomes these empirical shortcomings. Again, our aim is not to call for an end to face-to-face deliberation but to explore the potential of alternative spaces such as Wikipedia to supplement and improve existing practices of deliberation.

##### *1. The Problem of Group Polarization*

This first problem arises in the deliberations of homogenous groups, where members share the same values, beliefs, or preferences. In such contexts, deliberation tends to erode the procedural and epistemic quality of collective understanding. Consider what occurred when sixty citizens in Colorado were broken up into ten deliberative groups (Sunstein 2006). In this experiment, participants were divided into “red state groups,” consisting of conservatives from Colorado Springs, and “blue state groups,” consisting of liberals from Boulder. Members of these groups were asked to state their opinions on questions about same-sex marriage, affirmative action, and global warming before and after fifteen minutes of deliberation within their groups.

What were the effects of deliberation? As Sunstein (2006) explains, “In almost every group, members ended up with more extreme positions after they spoke with one another. Discussion made civil unions more popular among liberals; discussion made civil unions less popular among conservatives” (Sunstein 2006, 45-46). This study along with countless others shows that deliberation within like-minded groups tends to have polarizing effects (Brown 2000; Sunstein 2000; Sunstein 2001; Sunstein 2002).

These findings indicate that the homogenous deliberations undermine both the procedural and epistemic aspirations of deliberative democracy. On the one hand, conditions of group polarization undermine the procedural aspiration toward an inclusive public dialogue. Rather than cultivating the values of fairness, tolerance, and equality, such homogenous groups often become “breeding grounds for unjustified extremism, even fanaticism” (Sunstein 2002, 178). This results in two interrelated procedural worries. First, group polarization diminishes inclusion by cultivating attitudes of extremism and intolerance – attitudes that promote monolithic group identities and the

exclusion of those with diverse perspectives. Second, such conditions cultivate a fragmented public deliberative forum. Rather than creating an inclusive conversation between citizens from all backgrounds, deliberation tends to occur within insulated enclave spaces that erode the diversity and openness of the broader public political forum.

In addition to causing procedural problems, group polarization also threatens the epistemic aspirations of deliberative democracy. Along with pushing groups toward more extreme positions, such deliberations also tend to ossify, rather than correct, epistemic errors and biases. Overly homogeneous deliberations tend to move group members toward ever more extreme positions in the direction of their pre-deliberative beliefs and preferences (Sunstein 2002, 178). This means that in cases where like-minded individuals hold false beliefs prior to deliberation, the polarizing effects of homogeneous group deliberation will push them further toward problematic informational outcomes (Sunstein 2006, 96).

While the real-world deliberations of activists, community members, and religious groups often descend into group polarization, the vast size of the collaborative community within Wikipedia enables it to evade this worry. Unlike most face-to-face deliberations, which become unwieldy when groups grow beyond ten or twenty people, Wikipedia faces no limitations on the size of its interactive body. On popular entries, hundreds or even thousands of people regularly participate in the creation of new content.

This vast size of the editorial community has two primary effects. First, Wikipedia's size creates a more inclusive conversation than smaller homogenous groups of like-minded citizens. It cultivates interactions that welcome all individuals and

mitigate the kinds of extremism and social fragmentation that emerge from homogenous deliberation. One way to explain these moderating effects of Wikipedia's more inclusive conversation is through Madison's reflections on size in the *Federalist Papers*. As he reminds us, collective decision-making within small groups and communities often generates dangerous results. In *Federalist 10*, for instance, he declares:

The smaller the society, the fewer the distinct parties and interests, the more frequently will a majority be found of the same party; and the smaller the number of individuals composing a majority, and the smaller the compass within which they are placed, the more easily will they concert and execute their plans of oppression (Madison 1987, 127).

Madison thus argues that in creating government institutions, small homogenous groups ought to be avoided. Instead, he argues that we ought to "extend the sphere" of the republic. As the size of the republic increases, after all, the number of parties and interests also increases, which in turn makes it far more difficult for a single faction to attain majority power and invade the rights of other citizens (Madison 1987, 127-128).

Wikipedia stands as a testament to Madison's reflections on size. While partiality, extremism, and conflict exist within its process of collaborative editing, the sheer size of the Wikipedia community has important moderating effects. With millions of registered contributors from all parts of the world and all possible political, cultural, and religious persuasions, the size and diversity of Wikipedia serves as a structural check against extreme and inaccurate points of view.<sup>6</sup>

In the context of Wikipedia, fanatics, vandals, and self-promoters have almost no chance of mobilizing a majority faction devoted to the promotion of their point of view. Their efforts to distort Wikipedia's content are often neutralized by the vast array of well-

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<sup>6</sup> This structural check is by no means perfect. Wikipedia's users clearly favor certain demographics. According to a self-report by Wikipedia, "80 percent [of editors] are male, more than 65 percent single, more than 85 percent without children, around 70 percent under the age of 30" (Cohen 2009).

intentioned editors, who quickly “revert” their destructive contributions. As founder Jim Wales puts it, “one of the things that we do is that we have a very strong neutrality policy that actually works very well. It turns out most people are quite reasonable, even people who come from interest groups. They really understand that you can’t put in a one-sided rant because it won’t survive very long in Wikipedia” (NPR interview).<sup>7</sup>

On one reading of this quote, Wales seems to argue that the primary barrier to intolerance and extremism within Wikipedia is the cultural norm of neutrality, not the size of the deliberative community. He asserts that it is the guiding principle of “neutral point of view” (NPOV) that promotes an ethos of reasonableness even among those with a clear ideological bias. We agree that neutrality plays an important role, but we argue that this norm alone cannot ensure moderation. Although most Wikipedians adhere to this norm, there have always been a deviant few who undermine the encyclopedia’s neutrality by posting inappropriate or biased content. It is in checking these deviant few that size plays an essential role. In fact, Wales references the moderating effects of size when he says, “you can’t put in a one-sided rant because it won’t survive very long in Wikipedia.” The speed with which such “one-sided rants” disappear requires more than the mere norm of neutrality. It also requires the thousands of Wikipedia users who comb through its pages eliminating errors and bias.

In addition to these procedural benefits, the vast size of online interactions within Wikipedia appears to overcome many of the epistemic problems that emerge in homogeneous groups. By increasing the size and diversity of participants, Wikipedia’s process of collaborative editing increases the amount of information incorporated into the

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<sup>7</sup> In addition, self-serving edits often backfires, as it did with the Church of Scientology when the Wikipedia Arbitration Committee publicly reprimanded and banned the IP addresses of the Church (MacMillan 2009).

process of content creation. The vast size of Wikipedia coupled with the diversity of its contributors introduces new facts, theories, and opinions. Rather than pushing groups toward factually incorrect outcomes, it mitigates error and bias, channeling interactions toward more accurate outcomes.

While critics argue that Wikipedia is riddled with errors and misinformation, a recent side-by-side comparison of the encyclopedia against *Encyclopedia Britannica* shows that many of its entries have a similar number of errors. To test Wikipedia's accuracy, *Nature* sent 42 science entries from both encyclopedias out for peer review by experts in the field. Reviewers were told to count the number of errors in each entry and were not told which entries corresponded to which encyclopedia.

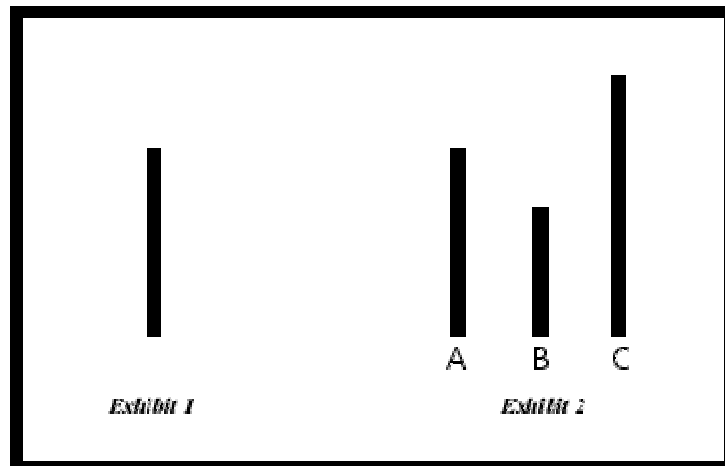
The results showed that the two encyclopedias had virtually the same level of accuracy. Out of the 42 entries, the reviewers found eight serious errors: four in Wikipedia and four in the *Encyclopedia Britannica*. The reviewers also pointed out 162 minor errors in Wikipedia and 123 minor errors in the *Encyclopedia Britannica* (Nature 2005). While more research is needed to determine whether Wikipedia's accuracy extends beyond science articles, these preliminary results point toward an unexpected outcome. They show that despite the chaotic nature of content creation on Wikipedia, where content emerges from a vast array of ordinary users rather than elites, its accuracy is, at the very least, in the same league as that of *Britannica*. The point here is not to say that Wikipedia is superior to or more accurate than *Britannica*. It is to say that these preliminary findings appear to support the more modest conclusion that Wikipedia's collaborative editing process evades the epistemic dangers of group polarization – that it results in collaborative outcomes that appear to enhance collective understanding.

To be sure, there are still serious concerns about the quality of information on Wikipedia. The case most often cited to illuminate Wikipedia's epistemic deficiencies occurred in the spring of 2005. As a prank, Brian Chase fabricated an entry on John Seigenthaler, a well-known journalist who served briefly as an assistant to Robert Kennedy. Chase's Wikipedia entry falsely claimed that Seigenthaler lived in Russia for much of his life and that he was thought to have played an important role in the assassinations of both Robert and John F. Kennedy. Despite the obvious falsity of these claims, Chase's entry went unnoticed and uncorrected for 132 days (Economist 2006). Incidents such as these illustrate that Wikipedia's radical egalitarianism is both its greatest strength and its greatest weakness – that this deliberative platform is susceptible to vandalism and malicious attempts to post false information. Despite such occasional acts of vandalism, Wikipedia has come remarkably close to realizing the epistemic aspirations of deliberative democrats. In Aristotle's language, Wikipedia has tapped into the intelligence of the many to produce results that outperform the excellent few.

## *2. The Problem of Hidden Profiles*

The potential for distortion in the real-world practice of deliberation is not unique to homogeneous groups. Even within heterogeneous groups, a number of factors can erode both the epistemic and procedural quality of deliberation. One problem arises from what are called "hidden profiles" (Hastie 1993; Stasser & Titus 1985; Stasser & Titus 2003). Hidden profiles occur when accurate information exists within the group, but cannot be obtained.

Such hidden profiles result from several primary empirical barriers to free and open information exchange. One problem is that, as Tocqueville might remind us, majorities can have tyrannical effects on the minority within the group, silencing ideas and information that fall outside the scope of majority opinion (Tocqueville 2004). This silencing effect occurs because those in the minority have significant incentives to stay quiet: opposing the majority places their reputation in jeopardy; supporting it does not. Sunstein, following the “Asch Conformity Experiment” (1955), confirms Tocqueville’s point empirically. Asch’s experiment was set up in the following way: groups of seven to nine college students were asked to view a series of charts (see below) and to identify the lines in Exhibit 2 that matched the line in Exhibit 1 (Asch 1955, 32).



All the participants in the group except one were “confederates” and all were told to announce their answers out loud (Sunstein 2003, 18). In the control groups, where there was no pressure to conform, the non-confederates erred less than 1% of the time (Sunstein 2003, 18). However, when the confederates began unanimously giving incorrect answers, the non-confederates followed suit. In fact, 36.8% of the non-



confederates gave the same incorrect answer as the confederates, and in the set of 12 questions, 70% answered at least one question wrong (Sunstein 2003, 19). In addition to answering incorrectly more frequently, the non-confederates experienced measureable levels of anxiety and a general reluctance to answer. Therefore, agreeing with Tocqueville, Sunstein states that social pressure causes individuals to “follow others and silence themselves, without disclosing knowledge from which others would benefit” (Sunstein 2003, 6).

Information may also be concealed because low status members, who may have relevant information, often defer to high status members (Mansbridge 1983; Sanders 1997; Sunstein 2006). When confronted with the assertions of confident high status members, in other words, minorities, women, and others with lower social status will often accept, rather than actively challenge, these assertions. In Jane Mansbridge’s study of town meetings in Selby, for instance, she finds that “face-to-face democracy” generates both feelings of friendship and solidarity and also conditions that silence those with lower social status:

In this town meeting, as in many face-to-face democracies, the fears of making a fool of oneself, of losing control, of criticism, and of making enemies all contribute to the tension that arises in the settlement of disputes...To preserve the atmosphere of agreement, the more powerful participants are likely to withhold information and to exert subtle pressures that often work ultimately to the disadvantage of the least powerful (Mansbridge 1983, 71).

In the actual practice of deliberation, these social pressures construct a powerful set of implicit social barriers that diminish the pool of available information and arguments.

The emergence of such hidden profiles in the practice of deliberation challenges both the procedural aspiration toward inclusion and the epistemic aspiration toward accuracy. From the procedural perspective, such group dynamics prevent a fully

inclusive process of information exchange. When status inequalities, majority tyranny, and forms of hidden profiles silence some participants, such deliberations fall short of full inclusion. Rather than including all participants, they privilege the perspectives of the majority or those with higher social status. From the epistemic perspective, such hidden profiles create problematic informational conditions that erode the accuracy of conversation. By silencing those who hold potentially valuable information, errors in collective understanding may often go unchecked.

As with the problem of group polarization, Wikipedia's unique structure offers an important corrective to the problem of hidden profiles. It has managed to evade much of the social pressure that arises from status inequalities and majority tyranny by creating a relatively anonymous structure of social interaction. In traditional deliberation, social norms and reputational pressures distort both the inclusiveness and accuracy of the process. As Sunstein (2006) explains, "group members impose sanctions on perceived deviants, and would-be deviants anticipate the sanctions in advance" (78). Knowing that they might be ridiculed or ostracized, group members who sit outside the majority will often remain silent – a result that diminishes the epistemic benefits of deliberation.

In contrast to face-to-face deliberations, the sense of relative anonymity within virtual communities such as Wikipedia's enables parties to evade many of these social pressures. For those who lack rhetorical eloquence, dread public speaking, or are intimidated by high status individuals, Wikipedia's virtual community offers a much safer space for collaborative content creation. As mentioned earlier, the ability of users to manufacture and customize their online identity causes traditional markers of status to become less relevant. In the world of Wikipedia, it does not matter whether you have an

advanced degree, whether you can think quickly on your feet, whether you are attractive, or whether you express your ideas with eloquence: what matters is whether you can contribute accurate information. As Wikipedia's founder Jim Wales declares: "To me, the key thing is getting it right. I don't care if they're a high-school kid or a Harvard professor" (Schriff 2006).

This is not to say that social pressures are absent entirely from Wikipedia. Like any community, Wikipedia does impose some sanctions on deviants who stray from its fundamental norms of civility and No Point of View. For instance, vandals and those caught engaging in "revert wars" will have their editing privileges suspended for the day or, in more extreme cases, be banned from the community for life. The power of such social pressures within online space, however, pales in comparison to the kinds of social pressures that exist in real-world deliberative contexts. Like almost any form of interaction in cyberspace, the relative anonymity of Wikipedia decreases the constraining effects of social norms. It creates a space within which participants can express novel facts and opinions with greater ease, which in turn appears to mitigate the powerful social pressures that distort face-to-face deliberation.

This structure of relative anonymity enables Wikipedia to, at least partially, promote both procedural fairness and positive epistemic outcomes. It promotes procedural inclusion in two primary ways. First, this process of editing is, at least in theory, open to all. Anyone with access to the Internet, either at home, at work, or in their community, may engage in collaborative editing. As one of the first sentences on Wikipedia's "About" page states, "*Anyone* with internet access can make changes to Wikipedia articles...Visitors do not need specialized qualifications to contribute"

(Wikipedia 2009a, emphasis added). Second, while its an open question empirically whether actual interactions within Wikipedia are more or less civil than ideal deliberation, Wikipedia has attempted to establish clear guidelines for discussion on “talk pages and IRC channels,” which attempt to promote civility and politeness. For instance, Wikipedians are told to “assume good faith” and are instructed not to “bite the newcomers” (Wikipedia 2009d). As a result of clear guidelines, and a commitment to civility as one of its core principles, Wikipedia promotes the procedural value of civility and respect (Wikipedia 2009e).

Wikipedia’s process of collaborative editing also appears to promote positive epistemic outcomes. First, it facilitates the aggregation of vast amounts of new information. The online encyclopedia now has entries on everything from esoteric historical figures to fringe celebrities and little known concepts. As a result, the scope of Wikipedia’s entries has expanded far beyond that of rival encyclopedias. Second, deliberations within Wikipedia correct and update information at an unprecedented speed. While traditional encyclopedias update entries every five to ten years, Wikipedia’s most popular entries will have been revised to reflect the most current information within hours of major political and social events. Finally, as we saw in the previous section, the structure of Wikipedia facilitates a process of information exchange with impressive levels of accuracy. None of this is to say that Wikipedia offers exhaustive coverage of potential public knowledge. While it excels at creating entries on popular topics with national scope, Wikipedia does not offer comprehensive information on local level affairs. So while its scope has surpassed that of traditional print

encyclopedias, it is worth remembering that its reach is far from extending into all areas of human knowledge.

## V. Wikipedia's Implications for Deliberative Democracy

As we have seen, Wikipedia overcomes many of the epistemic and procedural problems that arise in the actual practice of face-to-face deliberation. On the one hand, it helps overcome the problem of group polarization. By enabling a vast number of users to contribute information, Wikipedia cultivates a richly diverse contestatory space – one that counters group polarization. On the other, Wikipedia helps to overcome many of the worries that arise from hidden profiles. The relative anonymity of its process allows low status members to contribute without fear of humiliation, while also mitigating the problem of majority tyranny. These procedural and epistemic virtues of Wikipedia lead us to conclude that when combined with face-to-face deliberation, this new mode of content creation could work as a powerful supplement to traditional deliberation.

As we have stressed throughout, however, the procedural and epistemic virtues of Wikipedia should not lead to the simple conclusion that this model ought to replace face-to-face deliberation, nor should it lead us to think of Wikipedia in utopian terms. While the Wikipedia model overcomes group polarization and hidden profiles in certain contexts, it suffers from other shortcomings that can only be overcome through the continued practice of deliberation in face-to-face contexts.

The first problem – *the problem of size* – is that the procedural and epistemic virtues of Wikipedia tend to decline along with the size of the interactive community. At the national or international scale, with thousands of participants, this model excels.

When used at local levels or when few users participate, however, its virtues decline. The reason is that as participation declines and few users read or contribute to a wiki, prospective contributors will tend to discount the value of adding new content. This problem arose when the Department of Defense used a wiki-like software tool to promote interdepartmental collaboration. This system ultimately failed due to low participation (Thompson 2006). Contributions were so sparse that users lacked robust incentives to participate.

More important, as size decreases, the Madisonian checks that arise in the vast community of Wikipedia tend to decline. This arose when the *Los Angeles Times* attempted to use wikis to allow ordinary readers to participate in the collaborative creation of editorials about the War in Iraq. These “wikitorials” produced dismal outcomes: after just a few days, vandals had posted pornography and destroyed the content of these editorials (Economist 2006). In the absence of an expansive network of users, such acts of vandalism and extremism could not be moderated. The upshot of these examples is that the Wikipedia model only works when thousands of users collaborate. In small-scale decision-making contexts, face-to-face deliberation becomes essential.

The second problem – *the problem of normative content* – is that while the Wikipedia model enables users to explore descriptive questions, it may not improve discussions over normative questions. Wikipedia aims to offer descriptive knowledge. Its thousands of editors seek to find the “right” answers to questions of fact. And while political discussion benefits from sound assessments of facts, it also has a more normative dimension: it is concerned with discussions of political conditions as they

*should* be, not simply as they *are*. This marks another area where face-to-face deliberation supplements the Wikipedia model. When deliberations turn from descriptive to more normative questions involving basic values and principles, face-to-face deliberation excels. Deliberation, after all, enables participants not merely to exchange information but to transform their existing beliefs and values – to arrive at a more reflective set of beliefs through discussions with others. As Manin (1987) puts it, “The process of deliberation, the confrontation of various points of view, helps [citizens] to clarify information and to sharpen their own preferences. They may even modify their initial objectives, should that prove necessary” (351).

The final problem – *the problem of social capital* – is that the relative anonymity of the online interactions within Wikipedia fails to cultivate social capital and solidarity in real-world political contexts. Because Wikipedia thrives on a vast community of users scattered throughout the nation, or even the world, it fails to cultivate bonds between individuals at local levels. In face-to-face deliberation, by contrast, interactions tend to bolster what Putnam calls “social capital” – to cultivate the virtues of “mutual support, cooperation, trust, [and] institutional effectiveness” (Putnam 2000, 22). Unlike online interactions, the lack of anonymity in face-to-face deliberation enables homogeneous groups engaged in “bonding” to cultivate in-group “reciprocity” and “solidarity”, while also enabling heterogeneous groups engaged in “bridging” to cultivate tolerance and “broader identities” (Putnam 2000, 22-23). As we have seen, such homogenous and heterogeneous group deliberations raise many problems. Yet the many virtues that arise from cultivating social capital illustrate why the Wikipedia model ought to be thought of

as a supplement – rather than a replacement – to the traditional face-to-face model of deliberation.

Given the virtues and vices of both face-to-face deliberation and the online model of Wikipedia, we argue that these two modes of interaction should be used to complement one another. While face-to-face deliberation cultivates social capital and excels in smaller contexts, the Wikipedia model may counter the problems of group polarization and hidden profiles in larger contexts. Similarly, while the Wikipedia model results in promising procedural and epistemic outcomes in large-scale contexts, the face-to-face model of deliberation counters the problems of size, normative content, and social capital that emerge in online spaces.

This mixed assessment leads us to conclude that we ought to think of these two modes of interaction in Madisonian terms. Just as Madison (1987) relies on the “ambition” of each branch of government to counter and check the “ambitions” of others, we argue that the procedural and epistemic virtues of both the Wikipedia and the face-to-face model ought to be used to check the shortcomings of the other.

How might the Wikipedia model be used to complement traditional forms of deliberation? It is beyond the scope of this essay to offer a comprehensive account of how this model might be applied to political decision-making. We have, however, outlined a few possible ways in which this emerging form of online interaction might supplement traditional deliberation:

1. *State Referenda*: In states that allow citizen initiatives, it is often difficult to find unbiased and informative descriptions of referenda. Using public wikis, citizens could create their own informational resource on the pros and cons of



various measures. Unlike more elite driven assessments, these assessments would ideally reflect a wider set of concerns and would lack the partisan bias of television, radio, and print advertisements.

2. *Evaluating Representative Performance:* Wikis might also enable citizens to evaluate representative performance. They would provide citizens with a forum for going beyond the partisan exchange of sound bites – to construct a more neutral resource that examines the policies, legislative accomplishments, and character of representatives.

3. *Improving Government Bureaucracy:* Wikis might also provide the state with a tool for facilitating deliberations between and within its agencies. The CIA, for instance, recently adopted the wiki principle to streamline intelligence gathering. Following September 11th, intelligence agencies concluded that the CIA, NSA, and FBI each held valuable informational clues, which if pieced together might have prevented the attacks. To encourage the exchange of information between agencies, the CIA has created a wiki system called Intellipedia that allows a vast number of agents to combine intelligence. The hope is that such wikis will do to intelligence gathering what Wikipedia has done for encyclopedias – that they will enable users throughout the world to share information (Thompson 2006).

Ideally, such potential applications of the Wikipedia model would enhance existing forms of face-to-face deliberation. The information gathered through such political wikis would help to inform citizens and better equip them to enter into

deliberations over political decisions. Likewise, the face-to-face deliberations of citizens would help cultivate social capital, tolerance, and enable citizens to go beyond simply amassing information – to also explore the normative side of political questions and potentially even revise their existing preferences. So if the Wikipedia model ends up impacting the practice of politics, it ought to be viewed as an informational resource capable of enhancing, but not replacing, democratic deliberation.

### Works Cited:

- Aristotle. 1984. *The Politics*. Translated by C. Lord. Chicago: University of Chicago Press.
- Asch, Solomon. 1955. "Opinions and Social Pressure." *Scientific America* 193: 31-35.
- Brown, Rupert. 2000. *Group Processes*. Oxford: Blackwell.
- Cohen, Joshua. 1997 "Procedure and Substance in Deliberative Democracy." In *Deliberative democracy: Essays on Reason and Politics*, edited by Bohman and Rehg. Cambridge: MIT.
- Cohen, Joshua. 2002. "Deliberation and Democratic Legitimacy." In *Democracy*, edited by Estlund. New York: Blackwell Publishers.
- Cohen, Noam. 2009. "Wikipedia Looks Hard at Its Culture." *The New York Times* August 30.
- Economist. 2006. "The Wiki Principle." *The Economist* April 22.
- Estlund, David M. 2008. *Democratic Authority: A Philosophical Framework*, N.J.: Princeton University Press.
- Estlund, David M. 1997 "Beyond Fairness and Deliberation." In *Deliberative democracy: Essays on Reason and Politics*, edited by Bohman and Rehg. Cambridge: MIT.
- Habermas, Jurgen. 1979. "What is Universal Pragmatics?" In *Communication and the Evolution of Society*. Boston: Beacon Press.
- Habermas, Jurgen. 1997. "Popular Sovereignty as Procedure." In *Deliberative Democracy*, edited by Bohman and Rehg. Cambridge: MIT.
- Hastie, Daniel Gigone & Reid. 1993. "The Common Knowledge Effect: Information Sharing and Group Judgment." *Journal of Personality and Social Psychology* 65: 959-974.
- MacMillan, Douglas. 2009. "Wikipedia referees Scientology debate." *Business Week* May 29
- Madison, James. 1987. *The Federalist Papers*. New York: Penguin Books.
- Manin, Bernard. 1987. "On Legitimacy and Political Deliberation." *Political Theory* 15.3: 338-368.

- Mansbridge, Jane. 1983. *Beyond Adversary Democracy*. Chicago: University of Chicago Press.
- Mendelberg, Tali. 2002. "The Deliberative Citizen: Theory and Evidence." In *Political Decision Making, Deliberation and Participation*. New York: Elsevier Science Ltd.
- Misak, Cheryl. 2004. "Making Disagreement Matter." *Journal of Speculative Philosophy* 18.1: 9-22.
- Misak, Cheryl. 2008. "A Culture of Justification: The Pragmatist's Epistemic Argument for Democracy." *Episteme* 5.1: 94-105.
- Nature. 2005. "Internet Encyclopedias go Head to Head." *Nature* 438 (December 15): 900-901.
- Dee, Jonathan. 2007. "All the News That's Fit to Print Out." *The New York Times* July 1.
- Nino, Carlos. 1996. *The Constitution of Deliberative Democracy*. New Haven: Yale.
- NPR: Talk of the Nation, "Analysis: Wikipedia, Open Source, and the Future of the Web," transcript, November 2, 2005.
- Pettit, Philip. 2000. "Democracy, Electoral and Contestatory." In *Designing Democratic Institutions*, edited by I. S. a. S. Macedo. New York: NYU Press.
- Putnam, Robert. 2000. *Bowling Alone*. New York: Simon and Schuster.
- Rawls, John. 1996. *Political Liberalism*. Paperback edition. New York: Columbia University Press.
- Sanders, Lynn M. 1997. "Against Deliberation." *Political Theory* 25.3: 347-376.
- Schiff, Stacy. 2006. "Know it All." *The New Yorker* July 31.
- Smith, Marc and Peter Kollock. 1999. 1999. *Communities in Cyberspace*. New York, Routledge.
- Sunstein, Cass. 2000. Deliberative Trouble? Why Groups go to Extremes. *The Yale Law Journal* 110.1: 71-119.
- Sunstein, Cass. 2001. *Republic.com*. Princeton, NJ: Princeton University Press.

- Sunstein, Cass. 2002. "The Law of Group Polarization." *Journal of Political Philosophy* 10.2: 175-195.
- Sunstein, Cass. 2003. *Why Societies Need Dissent*. Cambridge, MA: Harvard University Press.
- Sunstein, Cass. 2006. *Infotopia*. New York: Oxford University Press.
- Talisse, Robert. 2004. "Towards a Peircean Politics of Inquiry." *Transactions of the C. S. Peirce Society* 40.1: 21-38
- Talisse, Robert. 2007. "From Pragmatism to Perfectionism: Cheryl Misak's Epistemic Deliberativism." *Philosophy & Social Criticism* 33.3: 387-406.
- Thompson, Dennis and Amy Gutmann. 2004. *Why Deliberative Democracy?* Princeton, NJ: Princeton University Press.
- Thompson, Clive. 2006. "Rewiring the Spy." *The New York Times Magazine* December 3.
- Titus, William and Garold Stasser. 1985. "Pooling of Unshared Information in Group Discussion." *Journal of Personality and Social Psychology* 48:1467-1478.
- Titus, William and Garold Stasser. 2003. "Hidden Profiles: A Brief History." *Psychological Inquiry* 14: 304-313.
- Tocqueville, Alexis De. 2004. *Democracy and America*. Translated by A. Goldhammer. New York: The Library of America.
- Wikipedia. 2006a. About Page. *Wikipedia*.
- Wikipedia. 2006b. Wikipedia Policies. *Wikipedia*.
- Wikipedia. 2006c. Talk Page: Abortion. *Wikipedia*.
- Wikipedia. 2008. *Annual Report*. Retrieved June 14, 2009, from [http://wikimediafoundation.org/wiki/Annual\\_Report](http://wikimediafoundation.org/wiki/Annual_Report)
- Wikipedia. 2009a. About Page. *Wikipedia*.
- Wikipedia. 2009b. Revision Control. *Wikipedia*.
- Wikipedia 2009d. Wikipedia Behavioral Guidelines. *Wikipedia*.
- Wikipedia 2009e. Five pillars. *Wikipedia*.

Wikipedia. 2009f. What Wikipedia is not. *Wikipedia*.

Wikipedia. 2009g. Wikipedia is in the real world. *Wikipedia*.

Wikipedia. 2009h. WikiScanner. *Wikipedia*.

Wikipedia 2010a. Why create an account? *Wikipedia*.