Much work in political science and political theory, ranging from the arguments of eighteenth-century political theorists, such as Condorcet and Rousseau, to modern social-choice theory, concerns the relationship between decision rules and collective choice. It is emphatically clear that the former have important consequences for the latter. Individuals’ preferences and beliefs are not only channeled but shaped by the rules governing decision-making.

Though this is a familiar claim for students of electoral laws and constitutional design, it is no less important for new forms of community on the Internet. To date, the literature on the social aspects of the Internet has been one of sweeping claims about the broad social changes (or lack of changes) that the Internet entails.¹ These wide-scale arguments—about whether the Internet is either a libertarian utopia or a space amenable to corporate and government control, is either prone to balkanization or is fertile ground for new forms of collaboration, is either generative of new ideas or is teetering on a knife-edge between lockdown and anarchy—have made important contributions. Yet because they make only very general claims, they lack comparative bite; in other words, they all have difficulty capturing the important variation in forms of social organization on the Internet, which are very far indeed from exemplifying a simple coherent logic.

In this essay, we argue that we should try to capture variation by paying more attention to the decision rules governing choice within collectivities on the Internet. As best we know, all of the sociologically “interesting” collective endeavors on the Internet are characterized by rules or norms; that is, blogs, online discussion groups, and other such forums of communication may appear chaotic and anarchic, but are characterized by informal rules that shape conversation.

* We are grateful to Martha Finnemore, Josiah Ober, and Scott Page for their comments and insights.

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More generally, rules structure the choices made by participants in a wide variety of endeavors, and hence influence the outcomes of these choices. Surprisingly, there is remarkably little work that seeks to examine these rules, and even less that tries to compare the relative effects of different rule systems. To the best of our knowledge, there is no existing literature whatsoever among political scientists and political theorists on this topic, despite the fact that new forms of interaction provide an extraordinary laboratory for understanding how diverse rule sets work.

Building on case studies of Wikipedia and the Daily Kos, we make three basic claims. First, we argue that different kinds of rules shape relations between members of the majority and of the minority in these communities in important and consequential ways. Second, we argue that the normative implications of these consequences differ between online communities that seek to generate knowledge, and which should be tolerant of diversity in points of view, and online communities that seek to generate political action, which need less diversity in order to be politically efficacious. Third, we note that an analysis of the normative desirability of this or that degree of tolerance needs to be tempered with an awareness that the actual rules through which minority relations are structured are likely the consequence of power relations rather than normative considerations.

The Role of Rules on the Internet

The existing literature in political science distinguishes between formal and informal institutions. Both kinds of institutions involve sets of rules and associated enforcement capacities. Formal institutions—laws and the like—are rules that are typically independently adjudicated and enforced by a specialized third party (the court system and associated state institutions). Informal institutions—social norms—are rules that are typically enforced by diffuse action on the part of members of the relevant community. Both of these kinds of institutions play an important role on the Internet.

However, to understand properly the ways in which rules structure choices on the Internet, it is necessary to understand a third kind of institution. Software code also shapes and constrains the kinds of choices that individuals make on the Internet. Here, rules of action are embedded within software code itself, potentially constraining individual action in a far more direct way than either

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informal or formal institutions. The tyranny of code is neither seamless nor universal (it is often possible to find bugs or flaws in the architecture that allow individuals partly or fully to evade constraints), but it has sufficient consequence to be a very important force indeed in shaping individuals’ actions.

These three kinds of rules—laws, informal norms, and rules embedded in software—all have consequences for the choices that people can and cannot make on the Internet. In the next section, we examine the ways in which these rules work in two prominent and successful websites—Wikipedia and the Daily Kos. Specifically, we provide an initial account of how these rules shape relations in the epistemic realm (Wikipedia) and in a political context (the Daily Kos) between majorities and minorities on contentious issues. Formal rules, such as laws, only have indirect consequences at best for majority-minority relations in Wikipedia and the Daily Kos, although they are certainly consequential for other aspects of these two collective projects. We thus concentrate on showing how informal rules and code, both separately and together, structure individual choices in ways that have important consequences for both knowledge generation and political action.

Wikipedia

The well-known collectively created encyclopedia Wikipedia (www.wikipedia.org) is often treated as a successful example of informal web-based collaboration in action. The site is open to easy revision by casual users. However, Wikipedia is not anarchic; it is characterized by both code-based rules and a dense set of informal rules and norms. The most important of these rules is code-based. On the English-language version of Wikipedia at least, most articles can be edited by anyone willing to devote the minimal time and energy to click on the “edit” tab. It is not even necessary for the prospective editor to register with the site before editing an article (although prior registration is required if the editor wishes to create a new article).

This rule of open editing has important implications for relations between members in an epistemic majority and those in the minority. In principle, the ease of revision means that those in the minority on a particular issue are able to reopen debate and reassert their perspective with considerable ease. Indeed, even a single person with a differing perspective can introduce changes and/or block changes that are not to her liking. In practice, however, informal rules, and more
hierarchical sanctioning mechanisms, such as temporary blocking (which are supposed to be reserved for extreme cases, but may be misapplied), limit the ability of determined minorities to exercise veto power. First, Wikipedia editors are supposed to adhere to the so-called three-revert rule, which states that an editor cannot revert others’ edits to a specific page more than three times in a twenty-four-hour period. This rule is intended to make “edit wars,” in which individuals or groups with differing opinions seek to revert each other’s edits, less likely. Second, in cases of persistent bad behavior, an administrator (one of a self-selected minority of Wikipedia editors who have some special privileges) can block a user from editing Wikipedia entries for a period of time. Furthermore, administrators can “protect” pages that are the subject of heated argument from editing for a short period of time, or “semi-protect” pages that are subject to frequent “drive-by vandalism,” so that only registered Wikipedia users can edit them.

These sanctioning mechanisms back up a set of soft rules and procedures. Editors with different perspectives on a particular article are supposed to try in good faith to resolve their differences on the article’s “talk page” (a secondary page, dedicated to meta-discussion of the article). Where this fails, they may ask another editor to step in to help resolve the dispute, make a “request for comment” from members of the wider community, request informal or formal mediation, or look for arbitration from a committee appointed by Jimmy Wales, the founder and éminence grise of Wikipedia, whose members typically require high percentages of positive votes to be appointed in a nonbinding annual election.

These procedures are accompanied by a variety of policies and guidelines that lay out the appropriate standards to which articles should be written (such as Neutral Point of View). Most of these policies and guidelines have themselves been arrived at through consensus, although some key actors (notably Wales and his legal advisors) may step in as creators of policies and guidelines where they see fit.

The norms of Wikipedia are articulated in language that emphasizes civility and mutual respect. Nonetheless, there is strong empirical evidence that edit wars are quite common. Aniket Kittur, Bongwon Suh, Bryan Pendleton, and Ed Chi examine the network relations between and among editors of pages where there are clear clashes over evidence, and find that clear groupings emerge. As Travis Kriplean, Ivan Beschastnikh, David McDonald, and Scott Golder argue, Kittur et al.’s visualizations suggest that different articles have “in-groups” and
“out-groups”—groups who effectively claim authority over a particular article, and groups whose points of view are likely to be rejected.\textsuperscript{13} As Kriplean et al. further note, policies are often invoked on controversial topics less as means of generating consensus than of bolstering the case for one particular version of the article and its backers, and denigrating those who disagree with this version.

More generally, Wikipedia editors are supposed to seek consensus. How consensus is to be measured is not precisely defined, although the policy specifies that silence equals consent. Following Philippe Urfalino, we may consider the Wikipedia policy goal more precisely as reaching “apparent consensus”: the aim is not unanimity, but absence of dissent.\textsuperscript{14} The claim of consensus on a particular point is itself often used as a strategic weapon in fights over what articles should look like. Urfalino suggests two key reasons why opponents may remain silent in the presence of apparent consensus even though they continue to reject a proposal: because of the relative power of the proposal’s partisans (their capacity to retaliate, including by withholding support in future circumstances) and because such ongoing dissent would be regarded as hubristic once one’s viewpoint has been heard and rejected.\textsuperscript{15} To the extent that some networks of editors are more powerful than others, the norm of apparent consensus may result in the marginalization of hierarchically subordinate networks.

If it were the case that epistemic humility, rather than subordination, caused those in the minority on an issue to retreat, we might say that the norm of apparent consensus was eliciting attractive moral behavior on the part of the minority.\textsuperscript{16} Unfortunately, in light of Kriplean et al.’s work, we suspect that power, rather than the recognition of one’s fallibility, is the mechanism generating apparent consensus in many, if not most, controversial cases.

The Wikipedia project has created a considerable intellectual resource. However, this resource does not necessarily emerge from a smooth-running and consensual process, much less an anarchistic bazaar. Instead, it emerges from a rule-based system in which both software code and semi-informal rules play an important role. Moreover, one of the key problems that Wikipedia has to confront is precisely that of reconciling minority and majority points of view when they differ starkly from each other. Some basic features of Wikipedia’s software code (open editing) favor minorities, yet semiformal rules and procedures have sprung up in part to limit the power of recalcitrant minorities to veto change or to behave in ways that other editors perceive as irresponsible. The result is that outcomes are often the result of power struggles rather than real consensus.\textsuperscript{17}
The Daily Kos

The Daily Kos (www.dailykos.com), founded in May 2002, is perhaps the most successful online political community in the United States, with over 100,000 registered users, 600,000 unique daily visitors, considerable media clout, and the ability to attract major politicians and presidential candidates to its yearly meetings. It is a community of vigorous Democratic partisans, who nonetheless have at times been harshly critical of what they see as the institutionalized shortcomings of the Democratic Party. It is a key part of the “netroots”—a broadly defined grouping of Democrats who have converted their early anger over the Iraq war (and the failure of Democratic leaders to forcefully oppose it) into a broader political program.18

Like Wikipedia, the Daily Kos provides individuals with the opportunity to engage in debate, but in contrast to Wikipedia, the debate, and the political activism arising from it, is the end product. The Daily Kos does not provide users with the ability to edit each other’s writings. Instead, it provides them with a mixture of online soapbox (the ability to write so-called diaries, or blog entries, once a day), audience participation (the ability to comment on others’ diaries), and feedback (the ability to rate others’ comments). Like Wikipedia, it combines code-based restrictions with informal norms that are intended to prevent certain kinds of behavior.

The Daily Kos provides membership to anyone with a valid e-mail address who wishes to register. However, in order to discourage drive-by-vandalism commenting, it forbids new members from posting comments for a period of twenty-four hours, and from posting diaries for a period of one week. After probation, members are able to post one diary a day. The Daily Kos’s founder, Markos “Kos” Moulitsas Zuniga, takes a direct role in shaping the community, retaining ultimate authority over site policy and occasionally banning individuals without recourse. In addition to Zuniga, a number of bloggers whom he has selected get front-page posting privileges, allowing them both to post on the front-page blog (which receives the most attention) at will, and to “promote” other Daily Kos diaries that they believe to be deserving of attention. All new diaries are linked for a short period after publication on a section of the front page entitled “Recent Diaries.” Diaries that have received many positive votes from other members of the Kos community receive more prominent billing in a separate section entitled “Recommended Diaries.”
Members of the Daily Kos community can also vote on the quality of comments. Originally, users could rate each other on a scale of 0 to 4, where 4 was excellent and 0 suggested that the commenter was a “troll”—an individual who wished to disrupt conversation, and whose comment should be hidden. Only trusted users—those who had been around for a while and acquired enough “mojo”—were allowed to troll-rate people’s comments with a 0, often leading to the comment being hidden. However, this rating system was eventually abandoned because of unanticipated social pressures; trusted users began to fight with each other, creating a situation of “roving bands of rival gangs [that] were throwing around troll ratings because of personality disagreements and just generally abusing the system.” This led to a system in which users can vote only to “recommend” a diary, and in which trusted users can only troll-rate others’ comments three times a day. However, commenters who receive a high number of troll ratings in a short period of time are liable to be banned automatically from further posting.

In addition to these technical measures, informal community norms play an important role. Diaries that are believed to be looking for controversy by stating unpopular points of view are likely to receive hostile or derisory comments. Unpopular comments can be troll-rated. The boundaries between acceptable and unacceptable points of view are not entirely clear, sometimes leading to the kinds of rating wars described above, or to other kinds of action.

For example, although there is a clear norm in the Kos community of support for Democratic candidates, some Democrats (especially those who are perceived as “accommodationists” and potentially disloyal to the party) receive vigorous criticism. While there are some clear standards (Democratic politicians, such as Joe Lieberman, who perceive themselves as above party politics have few, if any, supporters in the Kos community), there are also some borderline cases. For example, it was clear that presidential candidate Hillary Clinton was highly unpopular with rank-and-file “Kossacks” (as indicated by regular straw polls), and at best received grudging respect from regular front-page posters. Diaries supporting Hillary frequently received negative comments, especially as she began to use unpopular tactics in her last-ditch efforts to win the nomination.

The result was that Hillary supporters felt themselves to be beleaguered and discriminated against within the Kos community and eventually went “on strike,” refusing to write further diaries until the matter was resolved. Zuniga and other senior members of the Kos community showed little sympathy for the
strike, describing their efforts as “comic relief.” Pro-Hillary members of the Daily Kos sought to justify themselves in normative terms, claiming that such a site as the Daily Kos should support all Democrats. Zuniga and others argued in response that it was a big Internet, and that there were plenty of other places where Hillary supporters could find a home. Given both an apparent anti-Hillary consensus within the Daily Kos and the support of Zuniga himself and other senior members of the Kos community, the majority prevailed.

Majority rule of this kind may appear dismissive of minority perspectives, but it is not necessarily a serious normative problem. The site is intended to bring together people who mostly share a set of common ideological positions, to allow them to gather politically useful facts and build politically useful forms of analysis, and ultimately to promote the reform and political success of the U.S. Democratic Party. Given its goals, the Daily Kos is considerably less tolerant than Wikipedia of ideological divergence, privileging political efficacy over open-ended debate. Thus, the mechanisms of choice are structured so as to systematically exclude certain points of view (those that are hostile to the political interests of the Democratic Party) and to aggregate opinions around a clear and delimited program of action. The Daily Kos emphasizes movement building. Its system of aggregation privileges both (a) points of view that are congenial to the site’s founder and his collaborators, and (b) points of view that enjoy significant support among the members.

Obviously, this means that certain minority viewpoints are likely to receive less of a hearing than in Wikipedia, notably those that dissent from the basic goals of the site. However, even those minority viewpoints that seem legitimate within the broad boundaries of debate among ideologically similar Democrats but that dissent from the views of the majority or of hierarchically privileged actors may receive short shrift. The aim of consensus here is, in theory, to develop a platform capable of inspiring social action, and thus a certain degree of ideological homogeneity is necessary. There is some danger, however, that if fellow-travelers who challenge the dominant perspective on relatively insignificant matters find themselves marginalized, the site’s constituency may become fragmented, weakening its capacity to serve as a basis for a movement.

**What It All Means**

We believe that the case studies outlined above—brief and preliminary though they surely are—support our basic claim that we can learn a lot about the
consequences of collective projects on the Internet by looking at how the specific rules of these projects structure collective choice. In particular, we argue that it is revealing to look more closely at how these rules structure relations between majorities and minorities in both epistemic and political contexts.

First, it is clear not only that the rules of these communities structure relations between majorities and minorities, but that the problem of majority-minority relations is key to their internal governance. In contrast to many offline political communities, the most important problem in Wikipedia and the Daily Kos is often to prevent the tyranny of the minority from consistently overwhelming the majority. More generally, many forms of social activity on the Internet are much more open than their offline equivalents; it is extraordinarily easy to become a member of Wikipedia or the Daily Kos, to start commenting on a blog, and so on. This bias toward openness is part of what gives the Internet its “generative” character. However, it also means that collective online projects are vulnerable to disruption by outsiders who do not share the goals of the project, because they do not agree with them, because they enjoy being “trolls,” or because they have harmful economic incentives (for example, they can profit by publishing spam comments).

Second, we suggest that different collective projects, with different collective goals, may reasonably look to different balances of majority-minority relations. Here, Scott Page’s account of the benefits and drawbacks of diversity is a useful starting point. Page suggests that heuristic diversity (differences, roughly, in points of view) is very valuable to knowledge generation. However, he also notes that diversity of final goals may make group coordination more difficult, and that heuristic diversity often tends to be correlated with diversity of goals. Thus, it is highly plausible that such collective projects as Wikipedia, which stress knowledge generation, ought to be more tolerant of minorities, even when those minorities have goals that are at odds with those of the majority, as long as those minorities bring different heuristics (and thus different forms of knowledge) to the collective project. Such collective projects as the Daily Kos, which stress collective action, face different trade-offs: for them, the diverse knowledge and heuristics that minorities may bring to the project may often be outweighed by the ways in which those minorities would disrupt their ability to engage in collective action. This trade-off—which we believe is crucial—is often ignored in contemporary work deplo-ring the ways in which the Internet creates ideological cocooning effects. Some degree of cocooning is likely a necessary by-product of political efficacy.
This assessment suggests that some of the differences in how the rules of Wikipedia and the Daily Kos handle majority-minority relations are normatively justified. It should not, however, be taken as arguing that these rules are functionally appropriate means for achieving their respective goals of heuristic diversity and political efficacy, or that the trade-offs in the two communities are necessarily the right ones. To the contrary, there is good initial evidence that these rules and norms emerge, at least in part, from power struggles among individuals with different objectives within these projects. At best, the resulting norms are likely to reflect unwieldy compromises. We do not have sufficient evidence to trace specific rules back to specific struggles, but we do have enough to feel confident that these rules often arise less from consensus than from sharp disagreements, as in offline communities.25

NOTES
3 Lessig, Code and Other Laws.
4 Although as Internet-based social projects, such as Wikipedia, generate adjudication mechanisms, the line between informal rules and formal ones is blurring.
5 Benkler, The Wealth of Networks.
7 See, for example, this account: en.wikipedia.org/wiki/Wikipedia:Administrators'_noticeboard/IncidentArchive276#User:Gerry_Lynch_Unfairly_blocked_as_a_sockpuppet.
9 In principle, anyone who has been a regular Wikipedia user for a period of time, is familiar with Wikipedia policies, and does not receive too many objections from others when she applies, will become an administrator. We are unaware of any research that investigates whether there is significant divergence between principle and practice.
10 See further, en.wikipedia.org/wiki/Wikipedia:Resolving_disputes.
13 Kriplean et al., “Community, Consensus, Coercion, Control.”

This may prove uncongenial to some theorists of deliberation, although it may be quite compatible with other accounts of deliberation, such as Jack Knight and James Johnson, Politics, Institutions, and Justification: A Pragmatist Theory of Democracy (forthcoming), which stress that clashes of interest may often be irresolvable.


Interview with Markos Moulitsas Zuniga, July 2006.


Zittrain, The Future of the Internet.


Sunstein, "Neither Hayek nor Habermas."