Utopian Knowing:

The design and politics of Wikipedian consensus

[Paper]

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Abstract

Wikipedia is an ad hoc utopia. Edit by edit, article by article, the "online encyclopedia that anyone can edit" holds a steady drumbeat to an epistemological future. But all utopias are filled with silences that are open to critique. Numerous scholars have examined the various ways that Wikipedia's self-evident values of autonomy, openness, and participation often obfuscate underlying flows of power (O'Neil, 2009; Tkacz, 2014; Menking and Rosenberg, 2020). In this paper I mobilize feminist critical political theory to follow this same thread and to question another watchword of peer production: consensus. By mobilizing Johanna Drucker's (2013) design and media archeology methods, I unfold the various places where consensus is articulated: Wikipedia's utopian and democratic desires, its consensus policy, and its interface [1].

Through a discourse analysis of these imaginaries, practices, and techniques I identify the multitude of ways that Wikipedians perform consensus: not only through understanding and decision-making, but also by composing, showing, encoding, closing, and calculating consensus. However, because Wikipedia's utopian desire is over-determined by consensus, its political design is ill-equipped to address the political conditions of pluralist societies. This is because critical feminist political theorists like Nancy Fraser (1997), Chantal Mouffe (2000), Jane Mansbridge (2017) and Katarzyna Jezierska (2019) have identified the necessity of recognized the democratic value of dissensus that emerges from our encounters with others. As such the platform's socio-technical structures enforces an artificial limit on its own democratic potential. If Wikipedians are to remain stewards of a transition to a wiser society, then it is necessary to re-imagine the role that consensus should play in organizing knowledge: not as an ideal goal, but as just one possible outcome in the production of encyclopedic knowledge.

Keywords: Wikipedia, consensus, policy, user interface, democratic knowledge

Wikipedia's future without politics

The socio-technical design of Wikipedia's collaborative platform beckons us to dream. Indeed, the encyclopedia's co-founder Jimmy Wales made such dreaming easy when he described why people get involved with the project. "Imagine a world," he said, "in which every single person on the planet is given free access to the sum of all human knowledge" (Miller, 2004). Over the past two decades, this multi-lingual project has captured the imagination of a massive volunteer base of over 59 million registered users who have produced over 55 million encyclopedic articles (Wikimedia Foudation, 2020a; 2020b). This is not an insular achievement. As theorist Yochai Benkler noted, Wikipedia has become "the first cut on most subjects of significance" and has become "the basic knowledge utility of contemporary society" (2019, p. 4).

But following close on the heels of this utility is a utopian people. As researchers have indicated, the platform has been designed to make it easy to transform every reader into an encyclopedic "coauthor," and "to give *everyone* the chance to contribute equally" (Matei and Britt, 2017, p. 51, my emphasis) so that the quality of the encyclopedia becomes intimately tied to its "broad and diverse participation" (Menking and Rosenberg, 2020, p. 17). The goal — regardless of its impossibility — is for each of us to become a *Wikipedian*. This would mean not just making the occasional minor edit. It would mean becoming a member of a community who complies with a set of "beliefs, values, common understandings and practices" (Pentzold, 2011, p. 718).

The value system of this community borrows heavily from the developer culture and Free Software Movement that under-girds Wikipedia's platform (Tkacz, 2014, p. 22; O'Neil, p. 75, p. 130). At their core, adherents of the movement imagine a clear symmetry between the technical affordances of a decentralized "peer-to-peer" network and the possibility to increase peer-based

collaboration and individual freedom (O'Neil, 2009, p. 17). This has manifested in the pursuit of autonomy, “conspicuous contribution” and demonstrable skill (O'Neil, 2009, pp. 38-39); collaboration and self-organization (Reagle, 2010, p. 46-49); as well as the principle of openness which Nathaniel Tkacz identified as an adoption of Friedrich Hayek's theory of an "open society" based on decentralized competition (Tkacz, 2014, p. 20).

Wikipedians are upheld as exemplars of such a community, specifically because of the “self-conscious use of open discourse, usually aimed at consensus” (Benkler, 2006, p. 72). This preference for networked consensus is common to peer production projects (Haythornthwaite, 2009, p. 4; Reagle, 2010, p. 102–103; Dafermos, 2012) and is indebted to David Clark's of the Internet Engineering Task Force governance model. "We reject," he announced, "kings, presidents and voting. We believe in: rough consensus and running code” (Reagle, 2010, p. 101). In most of the literature, Wikipedia's consensus-building activities are situated within the talk page discussions that are associated with every article or project page (Benkler, 2006, p. 72; Reagle, 2010, p. 52; Kriplean, et al., 2007, p. 7; Forte and Bruckman, 2008, p. 7). Benkler described this process of consensus as “the synthesis of positions and opinions” by making these opinions “jostle for space” in a “free-flowing exchange of competing views” (Benkler, 2006, p. 218). After this process, “the output is more easily recognizable as a collective output and a salient opinion” (Benkler, 2006, p. 218).

Autonomy, collaboration, openness, and consensus; when all of these values are assembled together, they produce a unique topological vision: a flat world where the non-hierarchal structure of the internet creates the conditions to support a non-hierarchical society. As such, instead of kings, presidents, and the majority having the authority to shape society, the production of society itself was imagined to be a "communal, collaborative project" (Bruns,

2008, p. 326) which could create a "future without politics" (Tkacz, 2014, p. 7). However, politics are far from being absent in this peer-produced encyclopedia.

As Mathieu O'Neil's early critique demonstrated, the community maintains its coherency through several "regimes of online authority" ranging from the charisma of hackers to the aggregated index-authority of the network (p. 80). Likewise, Arwid Lund explained that it is "built using a sophisticated hierarchy, where contributing administrators, registered users, anonymous users and bots […] have specific tasks and are ranked in an ordered system" (Lund, 2015, p. 56). Menking and Rosenberg critiqued the various ways that Wikipedia's five pillars fall short of its promise of participation by approaching these principles from a feminist epistemology perspective which includes the insight that "knowledge is situated" (2020, p. 11) and is not neutral. For instance, despite providing a free product that is "at least in principle radically open," there is a hidden social "cost" to the encyclopedia that "may discourage participation" (Menking and Rosenberg, 2020, p. 17). Such discouragements have been expressed through the widespread use of discriminatory edits and acts of harassment toward marginalized groups based on race, gender, and sexuality (van der Velden, 2011; Menking and Erickson, 2015; Damas and Mochetti, 2019).

These concerns about Wikipedia should not be misunderstood as a failure of commitment to openness and participation. Instead, it is the way that Wikipedia's socio-technical imaginary openness, which is “individual-centric in terms of decisionmaking, responsibility, competition” (2014, p. 34), tends to obfuscate "the political." Briefly summarized, Chantal Mouffe defined *the political* as that ever-present antagonism that creates the context and purpose for *politics* — those "practices and institutions through which an order is created" (Mouffe, 2005, 9). According to Tkacz, Wikipedia struggles to adhere to its ideals because it has created "a world full of binary

opposites—open/closed, flat/hierarchical, decentralized/centralized, ad-hocracy/bureaucracy, democratic/totalitarian, and so on—that actively hinders our ability to make sense of the political" (2014, p. 181). What we require is a language that provides us the means to examine how "the seeds of closure are always already present within the open" (p. 181). Considering the privileged place that consensus has also played on Wikipedia, it is necessary to question how it too places limits on Wikipedia's political imaginary.

Discourse, design, and the utopian critique

Ruth Levitas described utopia as a "method" and "critical tool" of the twenty-first century (2013, p. xi). This method includes excavating "the images of the good society" latent within political programmes (p. 153); examining who is imagined as legitimate and illegitimate subjects of this society (p. xvii; p. 153); and to use these analyses to build an architecture of utopia which forms a "critique and reconstitution" of society (p. 198). This description of utopia easily aligns with theorists of media archeology who study "imaginary media" and are interested in how impossible desires are "projected onto actual media machines both by their designers and by the public" (Kluitenberg, 2011, p. 48). Kluitenberg's goal, like Levitas', is to not only critique these media but to also "retain a certain utopian potential of communications media without stepping into the pitfalls of overly eager media imaginations" (Kluitenberg, 2006, p. 9). It is under this theoretical framework that this paper excavates and reconstitutes how Wikipedia mediates its democratic imaginary for transforming society as a discourse.

In alignment with *utopia as method*, discourse analyses "investigate and analyse power relations in society and to formulate normative perspectives" in order to articulate "the possibilities for social change" (Jørgensen and Phillips, 2002, p. 2). Such analyses have been

applied to Wikipedia (Tkacz, 2014; Pentzold, 2009; Lund, 2015; Lindgren, 2014) by analyzing textual relationships, that is, "how specific texts draw on earlier meaning formations and how they mix different discourses" (Jørgensen and Phillips, 2002, p. 139). However, within Laclau and Mouffe's definition, a discourse “encompasses not only language but all social phenomena” (p. 33). This provides a methodological opening for focusing on what media archaeologists call "discourse networks" that recognize how "seeming non-communication is as important as communication" (Parikka, 2012, p. 111).

It is this sense that I follow researchers who identified that Wikipedia is composed of socio-technical relationships bound to the platform's infrastructure and code (Ford and Wajcman, 2017; Geiger, 2014, p. 17). However, I differ by relying on Johanna Drucker's media archaeological and design-based methods of analyzing visual knowledge. She theorized that interfaces operate as logistical devices that process information “through a set of analytic frames that are grounded in cognitive experience in *advance* of being read as meaningful” (Drucker, 2014, p. 156, emphasis original). Understanding how these frames are constructed requires the analysis of the "unfolding of graphic traditions" (p. 5) and the "structuring regimes" of wireframes (p. 177). Like discourse analysis and the ontological mode of utopia as method, Drucker's form of analysis focuses on how interfaces generate an "enunciated subject" that is "created by the structuring and desiring machines of representations" (pp. 146-147).

This methodological triangulation of utopia, discourse, and design suggests that it is necessary to analyze both the meanings and the materials of utopian discourse. Following this I first begin by analyzing political theories that question what role consensus should play within democracy. Secondly, I provide a textual analysis of two versions of Wikipedia's consensus policy to identify practices of consensus. Thirdly, by using the articulations of the policy as a

starting place, I use wireframes and media archaeological discourse analysis to identify how the interface enunciates particular subjects of consensus. In keeping with Levitas' third mode of utopia, architecture, the complement of this article seeks to provide a "provisional hypothesis" (Levitas, 2013, p. 198,) for envisioning Wikipedian consensus through the lens of critical feminist political theory. As such, this analytical outline covers the imaginaries, practices, and techniques that produce Wikipedia's unique set of discourses concerning consensus.

Consensus as democratic imaginary

Tkacz's rhetorical inversion concerning Wikipedia's politics of openness provides the same kind of theoretical lift that Mouffe used to explain the political value of consensus. In her critique of liberal theories of democracy, she explained that “[c]onsensus is indeed necessary” to maintain democratic systems; it is the means by which we can create a common identity; and in her words, a “moment of closure” that forms a “people” (2000, p. 113). But this also means that consensus is “and will always be — the expression of a hegemony and the crystallization of power relations” (2000, p. 49). The caveat is that in order to keep consensus democratic, it must also “be accompanied by dissent” (Mouffe, 2000, p. 113).

Chantal Mouffe summarized that unlike her agonist theory of democracy, liberal democratic theories position consensus as "the aim of democracy" (2005, p. 29) and operate under the presumption of a “nonexclusive public sphere of rational argument” (1994, p. 1545). In part, this focus on consensus can be read as a theoretical counterpoint to Walter Lippman's famous argument that democracy should be organized by "a centralized body of experts" who "act as society’s intelligence" (Whipple, 2005, p. 160). John Dewey fundamentally disagreed with this passive view of citizenship. He argued that all societies exist "*in* communication"

(1916, p. 5, emphasis original) and that the ideal form of democracy is the "Great Community" which is sustained by the "free and full intercommunication" between individuals (1946, p. 211) and that "[c]onsensus demands communication" (1916, p. 6), rather than passive assent.

With a similar focus on deliberation, Jürgen Habermas argued that democracies need to be organized through a public sphere. Through this abstract space he theorized the possibility of a legitimate and objective consensus on “what was practically necessary in the interest of all” (1991, p. 83). This is achieved by through a deliberative process of “intersubjective understanding” (2008, p. 172) that emerges from “publicity and inclusiveness,” “equal rights to engage in communication,” “exclusion of deception and illusion” and the “absence of coercion” (2008, p. 50; p. 82; 2003, p. 36).

But feminist theorists have argued that putting consensus on a pedestal comes at a cost. In order for deliberative consensus to be maintained, Nancy Fraser explained that interlocutors are required to set aside “differences in birth and fortune and speak to one another as if they were social and economic peers” (1997, p. 77). However, this bracketing of difference is more accurately a description of the "protocols of style and decorum that were themselves correlates and markers of status inequality" (p. 78). Her major concern was that this means the public sphere was not inclusive at all because these protocols "functioned informally to marginalize women, people of color, and members of the plebeian classes" and prevented equal participation (p. 78).

Zizi Papacharissi echoed Fraser's concern when she argued that what typically counts as "civility" is actually the politeness associated with "a set of formal and informal norms that guide conversation." (p. 262). The concern she had for democratic discourse was that politeness is often expressed as the "avoidance of disagreement" and "the assertion of common ground" (p.

262) — characteristics that deny the fact that "democracy can merit from heated disagreement" and passion (p. 262). Her solution was to make a sharp conceptual distinction between politeness and *civility*, which she defined as a commitment to "collective traditions of democracy" (p. 260). Through this framing, Papacharissi sought to ensure that politeness could not be used as a shield for undemocratic statements (p. 279) and political discussion "cannot be dismissed when it is simply impolite" (p. 281).

The articulation of civility as politeness points to the under-lying problem of a consensus-oriented view of democracy. Citing Jane Mansbridge, Joseph Reagle argued that if consensus is always the goal, then it is likely only achievable within small and localized communities (2010, p. 110). This largely the case since each distinction of a group of people will “[conjure] up its dominant or majority referent,” which “implicitly excludes those whose experiences differ from that majority” (Mansbridge, 1993, p. 367). However, if political difference and not consensus is the goal, Mansbridge argued that voting can be used to legitimize a minority which can “rework their ideas and their strategies, gathering their forces and deciding in a more protected space in what way or whether to continue the battle” (Mansbridge. 2017, p. 105).

As an alternative reading of this situation, Katarzyna Jezierska (2019) argued that the problem of democratic theory is the perceived role of consensus as the "telos" of deliberation (p. 22). By replacing it with "understanding", she argued that both consensus and dissent can be considered possible and desirable outcomes of deliberation (p.16). This demotion of consensus also means that it is not a device for democratic decision-making. Since it is oriented toward understanding, the outcome of consensus "provides stronger support for decisions" but is not the mechanism itself (p. 18). For this task, she suggested that the preferred institutional design for decision-making is "voting after deliberation" (p. 19).

This last point concerning decision-making shifts our attention to Friedrich Hayek's neoliberal approach to democracy. Put briefly, Hayek explained that deciding how to solve society's problems does not “rely on the application of anyone’s given knowledge, but encourage the interpersonal process of the exchange of opinion from which *better knowledge* can be expected to emerge” (Hayek, 1990, p. 148, my emphasis). He further explained that such knowledge emerges from "action," and is most effectively organized through market-based "competition" (p. 149). The results of these economic encounters is the "exchange" of turning the "enemy into friend" and including others in the community (p. 60). It is therefore through the aggregate of the decisions of strangers coordinated by a price system that Hayek imagined the simultaneous discovery of "better knowledge" and the creation of a community. While Hayek did not explicitly use the term consensus, his phrase "better knowledge" and its connections to community are suggestive of the concept.

To summarize the discursive field so far, each theory of consensus rallies against the idea of a centrally-organized democracy and coalesce around the concepts of communication, community, and rationality. However, Dewey's, consensus is a process for forming democratic understanding through face-to-face encounters; Hayek alludes to the product of "better knowledge" for decision-making through the rationality of the market; and Habermas's public sphere allowed for consensus to operate as both understanding and decision-making (Jezierska, p. 18). In feminist articulations of consensus, these same characteristics suggest homogeneity, coercion, and exclusion, because they ignore the legitimacy of dissensus as a valid outcome of understanding within pluralist societies. As an aside, the aggregated forms of competition like voting or the market exist as important — though peripheral — markers of the meaning of

consensus. In the following section, I describe the degree to which these different theories connect to Wikipedia's consensus policy.

Consensus as policy

Consensus has been considered by researchers to be "the most fundamental articulation work done within Wikipedia" (Kriplean, et. al., 2007 p. 9). That is because it is fundamental to creating Wikipedia's “policy environment,” — a hierarchy of policies, guidelines, and essays — that “encodes and explains norms” in ways that institutionalize the ideals of the project (Beschastnikh, et. al., 2008. p. 27). These documents range from the standardization of content styles, the notability of topics, reliable sources, as well as expected forms of user conduct ('Wikipedia:List of policies and guidelines', 2020). What holds them together is the fact that each policy is "controlled by community-wide consensus" ('Wikipedia:Policies and guidelines', 2009). The creation of this environment follows an iterative path of development. First, Wikipedians begin to document practices they think are important in the form of essays. If there is increasing agreement about the critical importance of these practices, essays become designated as guidelines and then policies (Kriplean, et. al., 2007, p. 2). Because of this incremental path, policies are considered to be descriptive and changing documents that are written after a social norm has been established (Butler, Joyce and Pike, 2008, p. 1103).

The development of consensus as a policy follows this path. In 2004, the user Hyacinth started a project page to document consensus as a practice. Designated as "Wikipedia:Consensus" or WP:Consensus, the user described that “Wikipedia is a consensus,” but that it “may become impossible to maintain as ever-growing numbers of new people toss articles around” ('Wikipedia:Consensus', 2004). This project page continued to be developed by

other users contributing to the page with it becoming a guideline in 2005 (“Wikipedia:Consensus,” 2005) and a policy in 2007 ('Wikipedia:Consensus', 2007). In February 2007, a hyperlink to the policy was added as part of the description of Wikipedia's principle of conduct, which now describes how "Wikipedia's editors should treat each other with respect and civility" ('Wikipedia:Five pillars', 2007; 2020). In 2008, WP:Consensus was linked as part of a template that announced that users ensure that each edit to any policy “reflects consensus” ('Template:Policy', 2008). With this quick history between 2005 and 2008, consensus transformed from an implicit practice to *the* measure by which the development of all other policies are held to be considered legitimate.

WP:Consensus, 2007

[INSERT FIGURE 1]

Figure 1: Screenshot of the first version of WP:Consensus to be designated a policy, January 18, 2007.

When WP:Consensus was first designated as a policy in 2007, it opened with two assertive sentences: “Wikipedia works by building consensus. Consensus is an inherent part of a wiki process” ('Wikipedia:Consensus', 2007). This was followed by four different visions for consensus. The first conceptualization described consensus as the accumulation of unchanged edits made to an article page as they constitute the “unanimous approval of the entire community.” Under this condition, “Silence equals consent,” and “is the ultimate measure of consensus” ('Wikipedia:Consensus', 2007). Notably, this is not a deliberative concept of

consensus. The preferential treatment of action and the asynchronous aggregate of individual efforts closely aligns Hayek's discovery of "better knowledge" (1990, p. 148).

The second conceptualization specifies that consensus occurs on talk pages. In this space, users are instructed to resolve disagreements “through polite discussion and negotiation” and that “[e]ditors must always assume good faith and remain civil” and “reasonable” ('Wikipedia:Consensus', 2007). This articulation echoes Habermas' theory of consensus where the bedrock of resolving disputes is premised on the “decorum” (Fraser, 1997, p. 78) and “etiquette” of politeness (Papacharissi, 2004, p. 260) within the public sphere.

The third articulation shifts from consensus meaning understanding and toward decision-making. It explained that consensus is established when Wikipedians document a guideline and that is created “to save people the time having to discuss the same principles over and over” ('Wikipedia:Consensus', 2007). Importantly, this articulation positions precedent and tradition as form of authority and that the deliberation of community norms is less valuable than action. As such, this approach to consensus is distanced from Dewey's theory and edges toward Habermas's balance of understanding and decision-making.

The fourth articulation of consensus further complicates this theoretical situation. When users cannot voluntarily come to a consensus, users should resort to the community's dispute resolution processes, “which are designed to assist consensus-building when normal talk page communication gets stuck” ('Wikipedia:Consensus', 2007). In 2007, dispute resolution was inscribed as avoiding disputes, deliberating, disengaging, and seeking the opinion of non-involved editors ('Wikipedia:Dispute resolution', 2007). Each of these processes for dealing with controversy reflects Dewey's assertion that “[c]onsensus demands communication” (1916, p. 6). But when communication fails, users are instructed to appeal to an Arbitration Committee who

vote on a binding decision vote ('Wikipedia:Dispute resolution', 2007). This last resort of assenting to a voting authority runs counter to Dewey's vision of a participatory democracy and suggests that this process is not oriented toward democratic understanding as Jezierska defined it (2019, p. 1). Instead, it aligns more closely with Lippmann's view of democracy and aligns with a bureaucratic approach to decision-making.

After these four conceptualizations of consensus, the policy explains that “consensus is not immutable” and that it can “change.” This leads to a tangent about voting. In cases of "supermajority" the policy stated that "it should be seen as a process of 'testing' for consensus, rather than reaching consensus.” Afterward, consensus is permitted to be judged by “the facilitator, often an admin" ('Wikipedia:Consensus', 2007). This statement is theoretically interesting because it both denies the democratic value of voting as a decision-making mechanism while also positioning the authority of a bureaucrat above those of the discussants, again hearkening to Lippmann.

Finally, the policy also admitted that “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” ('Wikipedia:Consensus', 2007). This, the policy stated, “is not a consensus.” This concern over the power of majority reaffirms the distrust of voting embedded in the hacker-notion of David Clark's rough consensus (Reagle, 2010, p. 102) and aligns with concerns about the public sphere being manipulated by "communication distortions," a concern shared by both Dewey and Habermas (Whipple, 2005, p. 158).

At the end of this first version of the consensus policy, it is clear that there are a number of competing views concerning what consensus is, how it operates, and who is involved in the

process. While there is a persistent attachment to Lippmann's bureaucratic view of consensus, it is not consistent. At various points the policy dabbles with Hayek's aggregative approach to "better knowledge", Habermas's attention to civil discourse, and a Deweyian focus on participation rather than authority. Additionally, the meaning of Wikipedian consensus leans towards meaning "decision-making" while at various points also means "understanding." What this review of the first draft of the policy suggests is that Wikipedian consensus did not first appear as a verbatim copy of any one theory of consensus. Instead, it emerged as a composition of contrasting and conflicting theories that outline a whole coterie of subjectivities that are operators of Wikipedia's utopian consensus: active editors, judging administrators, civil discussants, and majoritarian voters.

WP:Consensus, 2019

[INSERT FIGURE 1]

Figure 2: Screenshot of the most recent version of WP:Consensus at the time of analysis, January 22, 2019.

As of January 22, 2019 ('Wikipedia:Consensus', 2019), some of the initial conceptualizations of consensus were re-articulated as top-level headings. Under the first heading "Achieving consensus," consensus is conceptualized “Through editing” and “Through discussion” ('Wikipedia:Consensus' 2019). Like the first version, these articulate a difference between consensus as exists on the article page (as aggregated individual edits supported by passive agreement) and the talk page as a deliberative form of consensus. One major difference in this version is that the aphorism “Silence means consent” is now re-articulated as a link to an

essay that says “[s]ilence does not imply consent when drafting new policies” ('Wikipedia:Consensus', 2019).

Under the section "Determining consensus," the policy is concerned with the relationship between a consensus "among a limited group of editors, at one place and time" and how it "cannot override community consensus on a wider scale” ('Wikipedia:Consensus', 2019). This means that above all else, it is the authority of the community that shapes the structure of the encyclopedia. The page goes on to state that “community consensus” is inscribed in Wikipedia’s policies, and that these policies are valued for their “stability and consistency” and therefore are subjected to a different “standard of participation” where “[i]mprovements to policy are best made slowly and conservatively” ('Wikipedia:Consensus', 2019). This is an interesting turn of discourse. In contrast to the ideas of quick action and passive consensus that are associated with making edits to articles, policies are positioned as being slow and deliberative. This adheres to Jezierska's view of "ethical-political discourses" aimed at "understanding 'who we are' and 'who we want to be'" (p. 4).

Under the section describing consensus-building, editors are encouraged to maintain a “neutral, detached, and civil attitude.” But when this is difficult to maintain, editors are directed toward “soliciting outside opinions” and “Administrative or community intervention” ('Wikipedia:Consensus', 2019). It is here that we come across the first tentative role of dissensus as the policy describes what to do in the case of "no consensus." However, this condition is not a legitimate outcome. Instead, users are instructed on how to procedurally transform "no consensus" into consensus.

Like the first version, this version of the policy assert that “consensus can change,” and it is inscribed as a flowchart of editor actions of moving from a “previous consensus” to a “new

consensus." As such the concept of "consensus-building" is caught within the tensions of Habermas's theory of the public sphere. It is caught between understanding and procedural decision-making. Finally, one aspect of this latter version of the policy is that it makes an important caveat. Despite consensus being fundamental to Wikipedia, not all decisions are "subject to consensus of editors." These exemptions include the Arbitration Committee, legal issues, and the operations of sister projects maintained by the Wikimedia Foundation (Wikipedia's parent organization) ('Wikipedia:Consensus', 2019).

What emerges from this analysis of the first and relatively recent version of WP:Consensus is that consensus is multi-faceted and is not the application of one single theoretical perspective of democracy. Within the article space of Wikipedia, consensus is largely construed as the aggregate of editing activity which does not require deliberation. In contrast, talk page consensus is deliberative in nature, with the consensus concerning policies being the most difficult to change. However, for both regular talk pages and policies, it is assumed that deliberation usually ends with consensus. When it does not, that is when Wikipedian's turn to bureaucratic authority to make decisions. Another characteristic of Wikipedian consensus is that it has "versions" that change over time.

As such, there is no one way that Wikipedian perform consensus. Sometimes, it is changed through editing. Likewise, by *not* editing they are contributing to consensus. In other cases, it is actively "achieved" as a goal by civil discussants or it is "determined" by an administrator. Importantly, nothing of the two versions of the policy are suggestive of any of the critical feminist political theories that position dissensus as important democratic concept. In

fact, the policy does much to diminish its value. These discursive conflicts are suggestive, but they are also incomplete. It is not altogether clear why this specific set of meanings have taken precedence on Wikipedia, and if there are meanings of consensus being articulated within the encyclopedia that go beyond the policy. The next section of the analysis examines this question by interrogating Wikipedia's interface.

Consensus also relies on a coarse ontology of subjects. Consensus is either contributed to by agency-laden individuals — like editors or administrators — or it exists at the level of the community. In keeping with this, the collective decisions of socially identifiable groups, such as the Wikimedia Foundation or the Arbitration Committee, are outside the purview of Wikipedian consensus. As such, it appears that consensus requires users to either act as individualist users or as a cohesive community, with not much discursive room in between.

Consensus as interface

The results of the textual analysis of the policy point illuminate that Wikipedian consensus is articulated as relationships between democratic theories of consensus and the places where consensus is situated. For instance, the meanings of consensus as aggregated agreement or as a deliberative understanding are delegated to completely different spaces: the article page and the talk page. Following the insight of Drucker (2013), this points to the critical role that interfaces play in generating knowledge and enunciating particular kinds of knowing subjects (pp. 146-147). As such, I adapted Drucker's frame analysis method (p. 155) to the spaces that the consensus policy identified as important to articulating consensus: Article, Policy, Talk, Edit, and History.

[INSERT FIGURE 3]

Figure 3: Sample of Wikipedia pages used to design the composite wireframes

A purposive sample of these frames was chosen by collecting twenty representative instances of Wikipedian consensus: Wikipedia's policies and featured articles. This sample of twenty pages and their respective talk, history, and edit pages were then analyzed for their most common features as a means to create composite wireframes. In producing the wireframes I became aware of "different forms of visualization" (Drucker, 2014, p. 65–66) that were specific to each space and used these to unfold their graphic traditions to understand how the interface was being used to frame consensus. Data for the analysis was collected on May 13 and 14, 2019.

The composition of consensus

[INSERT FIGURE 4]

Figure 4: Wireframe composition of Wikipedia's Article and Policy frames.

The visual space of English Wikipedia's articles is inherited from expectations about the mercurial form of the book (Figure 4, left). A quick glance at the composite illustrates that Wikipedia articles are rife with the denizens of the page: paragraphs, headings, footnotes, cross-references, images, tables, and lists. Decisions about how these elements are arranged are not made lightly. During the 2014 reassessment of Wikipedia's typographic style (Walling, 2014), the designers made discreet typographic decisions to ease the "monotony of the page" and to allow "users to efficiently scan the page or engage in long form reading" (Mediawiki, 2014). Katherine Hayles described this cognitive activity of pecking, juxtaposing, and switching rapidly "between different information streams" (2012, p. 69) is a practice practices by centuries of scholars who sifted through archives (p. 61).

In accordance with this epistemological activity is the list, a device that proliferates within the frame of the article. Liam Cole Young defines the list as an "an operational form of writing" that streamlines as much as it combines and associates disparate information (Young, 2013, p. 498). This is achieved because each list is a "context of citation" that "draws things together and puts them in relation to one another," which in turn mobilizes the "many voices within the text in order to strengthen its case" (p. 506). This capacity of association can also be extended to other encyclopedic devices: the hypertext link or cross-reference (Zimmer, 2009); diagrammatic images functioning as glosses (Franklin-Brown, 2012, p. 136).

These visual forms are not simply "entry points" designed to service the readability of the text. They are epistemological couriers dealing in the goods of disparate intellectual traditions. Their presence within the same visual space is purposefully designed to be read as if they belong together. They disrupt the linear authority of the singular author and introduce the "many voices" of expertise and editors into a visual context of citation. Assembled together, the article frame is a visual argument that these diverse knowledges belong together. They are a consensus by composition and visual proximity, one that is prefigured by the aesthetic and epistemological traditions of scholastic book-making.

The judgement of consensus

While the Policy frame shares some of the visual similarity with its article counterpart, it lacks the same level of visual depth and polyvocality (Figure 4, right). That is because policies do not generate knowledge through outward trajectories, but by drawing knowledge into the Gordian knot of the document. As Lisa Gitelman explained, the document is "the kind of knowing that is all wrapped up with showing, and showing wrapped with knowing" (Gitelman,

2014, p. 1). This is a function of how Wikipedia makes a epistemological difference between the articles and policies/projects since they serve administrative functions and are not “part of the encyclopedia proper” ('Wikipedia:Project namespace', 2019).

Following this distinction, policies operate in the “document mode” of wiki editing (Cunningham and Leuf, 2001, p. 332) since they are explicitly designed to “document the good practices that are accepted in the Wikipedia community” ('Wikipedia:Policies and Guidelines', 2019). Technically, Wikipedia encapsulates the epistemological function of the document in the form of the “Policy Shortcut.” Signified by right-aligned outlined boxes, these devices are both a short form name to describe a policy section and an anchored link that can be used to redirect users anywhere on Wikipedia to a specific section of a policy ('Wikipedia:Shortcut', 2020).

In the context of consensus, the policy shortcut is a device for dividing; deployed not for decision-making, but for decision-cutting. When the policy is invoked as a hyperlinked word, Viegas et al. argued that it “is easy for moderators to point users to the precise rules they might be breaking” (2007, p. 9). However, Kriplean et. al. argued against this optimistic reading of the situation. Instead, because the policies themselves are open to interpretation, the researchers found “many examples of complex power plays that contributors make to control content and coerce others during the consensus process” (Kriplean et. al., 2007, p. 1). This invocation of the rules has been used by users in order to “'speak in the name of' something greater than themselves — a principle, the entity Wikipedia — which gives them 'authority' in the ongoing interaction” (Gauthier and Sawchuk, 2017, p. 397). As such, both the policy and its stand-in, the policy shortcut, oscillate between knowing and showing consensus.

The encoding of consensus

[INSERT FIGURE 5]

Figure 5: Wireframe composition of Wikipedia's Source Editor and Visual Editor frames

From 2001 to 2013, the only way for users to edit a page was to use the Source Editor, an in-browser word processor that only displayed plain text files. With the intent of users authoring the same document, Ward Cunningham designed the wiki database to store “flat-text” files (Cunningham and Leuf, 2001, p. 22) that were formatted using the markup language WikiSyntax (pp. 118–119). After discussions about the accessibility of Wikipedia which included the limitations of using this syntax, the Wikimedia foundation created a user-friendly interface for the encyclopedia, the Visual Editor (Cohen, 2014). This Editor allowed users to make direct changes to a page instead of editing the wikitext markup language (Protalinski, 2013). While the Visual editor was different from its predecessor, it was still composed with similar actions strung along its length (undo, redo, format, style, link, cite, insert characters, help, edit notices, page options, change editor). Using this interface, users can click on different objects of a page, edit them directly, and the make a new version of the page by clicking on the “Publish changes” button.

Both the Source and Visual editor owe much to the history of print, where the formatting of texts was done by many hands in the publication process through "proofreader’s marks" (De Vinne, 1916, pp. 322–324). As computers became integral to the mid-twentieth century publishing, handwritten markup shifted to short programmable codes (Lee, Worral, et al, 1968, pp. 127–128), and then to a program that could print itself (Mathews, 1965). These efforts culminated in the 1960s with the standardization of a generic digital markup language (Cohen and Rosenzweig, 2006, p. 88). During this same period, electric typewriters were re-purposed as

the first remote computer terminals. Not only would the characters of the IBM Selectric typewriter serve as the foundation of a programming language (Tuttle, 1981), their fixed-width structure offered the affordance of debugging code by distinguishing between code critical characters (Brownlee, 2014). It is this tradition of programming that is embedded in the monospace fonts used to display Wikipedia wikitext, especially the font Courier which was designed by Howard Kettler for IBM typewriters (Ramos, 2015, p. 65).

According to Cunningham, the consequence of including this word processor as part of the wiki software interface was that the "program wants everyone to be an author" (Cunningham and Leuf, 2001, p. 22). However, Matthew Kirschenbaum explained that the history of word processing and printing has been socially and technically structured by facilitating the tasks of office work, not literary authorship (2016, p. 16). This is affirmed by the fact that Edit frame affords encoding, formatting, inserting, and text manipulation of a text, rather than tools to author a creative work. So when Cunningham argued that adding content to a wiki "can cause the result to drift toward an implied consensus style" (2001, p. 326), it is with an understanding of consensus from this interface. Through the Edit frame, editors are consensus publishers; with every click of the "Publish" button, consensus is encoded; it is presented, processed, formatted, and republished.

The enclosure of consensus

[INSERT FIGURE 6]

Figure 6: Wireframe composition of Wikipedia's Talk and History frames

Each discussion on the talk page begins with a <H2> heading followed by a "post" paragraph. This post constitutes the trunk of discussion and is then bifurcated by a cascade of

indented replies — each terminated by a "signature" with a username link and a timestamp (Figure 6, left). In most cases, the resetting of indentation indicates "the start of a new thread in the discussion" (Laniado, Tasso, Volkovich, and Kaltenbrunner, 2011, p. 178). This figure of the ever-growing tree has become naturalized within computer interfaces, although this was not always the case. There has been a long discussion on the best way to organize digital file storage. This debate has been figures that take the form of "tape" (Turing, 1936, p. 231), hierarchies of "slave" and "master" (Dijkstra, 1971, p. 135), as well as trees (Madnick, 1970, p. 122). It was this latter idea that gained support in the early development of the Unix operating system (Salus, 1994, p. 2), and found its way into the bulletin board services (BBS) (Rafaeli, 1986, p. 123), usenet, and other turn-based web forums (Lueg and Fisher, 2012, p. 57) as a means to organizing digital communication.

It is therefore with little surprise that Ward Cunningham designed the wiki software with a "thread mode" for collaborative editing. However, what is unique to the wiki is that these "threads" are intended to be processed through "refactoring" which Cunningham describes as the convergence of agreement between contributors and produce a single paragraph that "capture the ideas present in the discussion" (Cunningham and Leuf, 2001, p. 333).

This process can be seen to play out on Wikipedia's talk pages through a number of enclosures. Refactoring discussion can occur by "closing" it with an {{Archive}} tag which renders a purple box around the whole discussion. Occasionally, the "closer" will use the template to add a statement that summarizes the result of the discussion and whether or not there was a consensus. Users can create a notice box at the top of the talk page in order to alert new users as to acceptable conduct and occasionally indicate if there is a consensus on an issue, such

as which dialect of English the article is written in. In other words, these boxes are encapsulate the results of previous debates and concerns particular to the talk page.

Another example of this kind of work is the archive box produced by bots like Lowercase sigmabot III. These bots perform the task the humans have the option to do manually: identify threads that are no longer active and move them to an archive page to ensure the talk page contains only vital discussion and is easier to read (Laniado, *et. al.*, 2011, p. 179). Archiving bots automatically archive threads by calculating the differences between the current date and the last reply of a discussion thread. If the thread has been inactive for a period of time established by a user, then the bot moves the thread to the archive. These moved discussions are then captured a list of numbers into archive header or box ('Help:Archiving a Talk page', 2020). In the context of consensus, these archives represent the discussions that are agreed to no longer be relevant to discussion and can be considered to be settled. Visually then, the form of consensus on the talk page is not the discussion thread. It is the box and its subject the "closer" rather than the discussion and its participants.

The calculation of consensus

Formally, the history frame begins with a section of options to view the “newest / oldest” and can be subdivided by sets of 20, 50, 100, 250, and 500 revisions (Figure 6, right). Below that is a button to “Compare selected revisions” which can be used to display the differences between any two versions side-by-side. Following the “mw-history-compareselectedversions” section is the body of the page which is composed of a list of revisions with quantitative and qualitative details about each. The history frame appears as the most homogeneous frame of the six studied as each line of a revision includes the same information: time of creation, username, total bytes,

difference of bytes from the previous version, and an edit summary. If a user is logged in, there are two other options to revert the edit and to thank the user of the version. Technically, each revision line is encoded as a list using the <ul> and <li> tags. But in terms of visual form, the list of revisions also operate like chronicles or "tables concerning time" (Dumville, 2002, p. 1).

A table, according to Drucker, can "hold information" and has "performative capabilities" to operate on that information (Drucker, 2014, p. 88). Because of this performativity, tables do not just represent knowledge, they generate it. This position is confirmed by Wolfgang Ernst who argued that record-keeping, annals, and archives had equal, if not more, capacity to "tell" culture by "counting rather than recounting" (p. 71). Like Drucker, he argued that "[k]nowledge is in fact coupled to the very act of telling, that is, providing a narrative sequence when apparently insignificant facts are being interwoven into a complex reality that cannot be observed directly" (p. 148).

In the case of the history frame, this is demonstrated by the calculated byte difference between each version. From the perspective of researchers, the history page has been used to interpret controversy and aggressive editing behaviours (Viégas, Wattenberg, and Kushal, 2004). In these respects, the history page is used as a lens into anti-social activity. As a result, a whole host of subjects are generated from this calculation table: vandals and counter-vandal bots, editing and maintenance bots, watchers, admins, reverters, and thankers. The conceit of the history frame as a chronicle is that knowledge is tantamount to the accumulation of quantified information. As an effect, not only does consensus change and is mutable, as was articulated within WP:Consensus, it exists as calculated reversions. It is without coincidence that some signifiers of the consensus policy included the terms "new," "version," and "revert." These are

the same discursive articulations embedded in the structure of history frame. In this context, Wikipedian consensus is a form of accounting, a constant dip and peak of accumulated bytes.

Conclusion

Levitas' utopia as method is based on excavating what is meant by "the good society" and outlining the ontology of who is included and excluded from it. This paper has fulfilled both roles. Other scholars have noted that Wikipedia's political imaginary sought to flatten social hierarchies, even to the point of imagining, as Tkacz described, a "future without politics" (2014, p. 7). This is confirmed in this study by the analysis of Wikipedia's consensus policy. It was demonstrated that its discursive articulation presumed that consensus is always be possible and that disagreement and dispute must be resolved. This is further reinforced by the reliance of politeness to characterize deliberative consensus, a situation that conflates social norms of agreement with civility, a concept that must make space for passionate disagreement (Papcharissi, 2004, p. 262). But Wikipedian consensus is not just a deliberative concept for understanding and decision-making.

What counts as consensus on Wikipedia is also articulated by its interface. In these situations, consensus is made sensible through the performance of epistemological operations like composing, showing, encoding, enclosing and calculating. As a result, there are theoretical articulations of consensus that are hitched onto Wikipedian's capacities for political action: Hayek's vision of aggregated “better knowledge” finds purchase in the byte counts of the history page; Dewey's concentration on participation and Habermas's civility finds semblance in the cascade of comments that become refactored as settled and archived discussions. Lippmann's

technocratic processes of forming knowledge is an idea that circulates within the structure of Edit frame's word processor.

But not every interface performances of consensus was articulated by Wikipedia's consensus policy. Missing is a clear articulation of scholarly consensus, the type that emerges from the associations made from lists, texts, citations, juxtaposed images and hierarchical headings that connect disparate intellectual traditions together as a gestalt of topical agreement. Instead of the documentation of consensus (like Wikipedia's policies), this space presents a composition of consensus, one that WP:Consensus does not have a corollary.

Another absence is that neither the policy nor the interface provide discursive articulations for dissensus. It is not something that is expressed as a practice nor does is the interface provide a purposeful space where it can be performed. As such, the feminist ideal of acknowledging the democratic value of both consensus and dissensus is insensible to Wikipedia's apparatus precisely because its socio-technical design articulates consensus as its primary output, instead of one technique among many in this epistemological apparatus. Under these current conditions there is little discursive space for Wikipedians to make sense of the intimate relationship between the epistemological and the political that makes utopia a desire worth knowing.

Endnotes

[1] Portions of this paper are based on my dissertation *The Trouble with Knowing: Wikipedia and the political design of encyclopedic media*.

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