

People Who Can Take It

How Women Wikipedians Negotiate and Navigate Safety

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ABSTRACT

Wikipedia is one of the most successful online communities in history, yet it struggles to attract and retain women editors—a phenomenon known as the *gender gap*. We investigate this gap by focusing on the voices of experienced women Wikipedians. In this interview-based study ($N=25$), we identify a core theme among these voices: safety. We reveal how our participants perceive safety within their community, how they manage their safety both conceptually and physically, and how they act on this understanding to create safe spaces on and off Wikipedia. Our analysis shows Wikipedia functions as both a multidimensional and porous space encompassing a spectrum of safety. Navigating this space requires these women to employ sophisticated tactics related to identity management, boundary management, and emotion work. We conclude with a set of provocations to spur the design of future online environments that encourage equity, inclusivity, and safety for historically marginalized users.

KEYWORDS

Participation, online communities, safety, safe spaces, gender gap, Wikipedia

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1 INTRODUCTION

The first time Helena—a scientist and published author—edited Wikipedia, her edit was immediately reverted. She recalled, “*It was not only reverted, it was reverted with a ‘You don’t know your ass from a hole in the ground’ kind of a note.*” But she persisted. She created a new account, read Wikipedia’s policies, and continued to contribute. When another user blanked Helena’s Wikipedia user page—deleting her content and leaving her a death threat—and administrators refused to act, Helena took a break: “*I took a hiatus. I told everybody to just basically go shove it. I may never come back to Wikipedia’ is what the message says; ‘I’ll think about it.’*”

Today, Helena has been editing Wikipedia for more than 14 years. When asked to reflect on her earliest experiences, she replied, “*There’s a wonderful phrase. I culled it out the other day. I put it in a little file folder to share with you. ‘We throw brand new potential editors directly into shark infested waters, then yell at them for splashing at the sharks.’*”

In this interview-based study, we wade into these “shark infested waters,” asking how women Wikipedians like Helena remain in the community and continue to participate even when they feel unsafe and even when, upon seeking help, they are ignored or admonished.

Our contribution is threefold: (1) We examine the ways in which Wikipedia functions as both a multidimensional and porous space that exists along a spectrum of safety; (2) We identify tactics interviewees develop to manage their participation and navigate spaces they experience as unsafe; and (3) We present provocations for designing

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online environments to mitigate safety challenges and encourage unimpeded participation. Although Wikipedia is the site of our research, our findings resonate with challenges and insights beyond Wikipedia—to other online communities in which women and members of marginalized groups continue to take on the burden of negotiating and navigating their safety often with little help from the platforms themselves (e.g., [2,48,80]).

2 BACKGROUND AND MOTIVATION

Wikipedia is not only the world’s largest online encyclopedia, it is also one of the most successful online communities in history. Wikipedia now exists in more than 300 languages and is hosted by the Wikimedia Foundation (WMF), a non-profit organization that “provides the essential infrastructure for free knowledge” [86]. People from all over the world edit Wikipedia, with the goal of creating the most extensive repository of information possible. Regular contributors call themselves Wikipedians; they are dedicated to the Wikimedia “movement”—producing and maintaining a collection of sites, events, and projects that value “freedom of speech, knowledge for everyone, and community sharing” [87]. As Wikipedia co-founder Jimmy Wales noted in 2014, “Some [Wikipedians] are buttoned-down. Some are rock and roll. The articles they write and edit cover everything from aardvarks to ZZ Top. And they’re all true believers in Wikipedia’s power” [85].

Wikipedia is powerful: its content informs multiple information systems [49], topping Google search results and shaping the responses of virtual assistants like Siri and Alexa [57]. Recently, *The Atlantic* described Wikipedia as the “arbiter of truth” in a post-truth world [50]. In addition to the public recognizing the influence of Wikipedia, technology giants like Amazon [89] as well as HCI researchers also have a vested interest in the project. For example, Wikipedia is increasingly used not only to provide content to other systems but also to train algorithms and artificial intelligence agents (e.g., [67]).

Wikipedia, however, is not without its problems. Wikipedia’s guidelines instruct editors not to “bite the newbies,” but they also proclaim, “there are no rules,” and community norms tend to reward aggressive behaviors (e.g., [35,43,69]). As others have noted (e.g., [8,12,35]), these cultural contradictions not only make it difficult for newcomers to participate, but also create a labyrinth of spaces that are, at once, safe and unsafe depending upon who the user is and how they navigate passage. Although Wikipedia purports to be the encyclopedia “anyone can edit,” as Ford & Wajcman observe, “not everyone does” [24]. By best counts, more than 80% of Wikipedians are

men [38]. This demographic skew in participation has come to be known as the *gender gap*.

In 2016, Katherine Maher, the Executive Director of the WMF, addressed this gap in her speech on privacy and harassment at MozFest [75]. Maher began her talk by sharing a story about an experienced woman Wikipedian who has been harassed, threatened, and doxed both on and off Wikipedia. Maher emphasized this woman’s experiences were not unusual. Acknowledging this, the WMF has begun to prioritize researching and combatting harassment on Wikipedia in the past few years, starting with a 2015 survey. The survey received responses from 3,845 Wikimedia users—79% of whom were men—finding that “38% of the respondents could confidently recognise [*sic*] that they had been harassed,” and “51% witnessed others being harassed” [36]. Respondents experienced many types of harassment including: name calling, trolling/flaming, content vandalism, outing/doxing, hacking, impersonation, revenge porn, stalking, threats of violence, and discrimination. Aside from impersonation, women reported higher occurrence on average of all forms of harassment. Notably, 54% of respondents who experienced online harassment decreased their participation as a result.

Since the 2015 survey, the WMF has partnered with Jigsaw, an incubator within Google’s parent company Alphabet, to study how crowdsourcing and machine learning can help detect and curb personal attacks. Initial findings indicate the majority of attacks came from 9% of Wikipedians who are “highly toxic” [36]. In response to these findings, the WMF’s Anti-Harassment Tools team released an interaction timeline tool to help users report harassment and administrators interrogate online interactions when reviewing reports. Despite these initiatives, both the WMF and academic researchers have yet to tease apart the complicated relationship between the gender gap and harassment.

Our study contributes to understanding these complexities by drawing attention to the ways in which our interviewees—all women Wikipedians—experience the gender gap differently and, as a result, hold a variety of positions about safety. In particular, we focus on how these perspectives influence how they socially construct safety—often in the form of exclusive safe spaces—within and outside of Wikipedia. We also highlight the tactics they use to continue to participate even when they feel unsafe.

3 RELATED WORK

We review related work in four topical sections: (1) women’s participation in *commons-based peer production systems*—systems in which large numbers of people work

collaboratively and voluntarily without financial compensation; (2) Wikipedia’s participatory gender gap; (3) psychological safety and safe spaces; and (4) online harassment. Although we recognize lurking and reading [45,60] as legitimate forms of participation, we define *participation* henceforth as the practice of engaging in constructive, continuous, identifiable activity in the form of content contribution or community involvement. Given the focus of this paper (safety rather than online harassment), we have included only a brief review of work related to online harassment.

3.1 Women’s participation in commons-based peer production systems

Although the majority of online communities defined as social media sites (e.g., Facebook, Instagram, Twitter) see gender parity, even reporting women’s participation at higher rates than men’s [3], most commons-based peer production systems (e.g., Linux, Slashdot, Wikipedia, OpenStreetMap) evidence a gender gap in participation [77,81]. These gaps can be partially explained by the origins of these systems. Unlike social media sites (i.e., privately owned, for-profit platforms), commons-based peer production systems evolved from the free/libre opensource software (F/LOSS) movement, which prioritizes voluntary collaboration in the service of content creation and community service. With this prioritization, one could imagine women—with their high percentage of postsecondary degrees [18], humanities expertise [30], and librarianship positions [46]—would be the likeliest to participate in and contribute to these ventures, particularly with Wikipedia’s goal to be a text-based repository of “free knowledge.”

Yet, women’s participation in these peer-production systems remains low, and many researchers blame cultural factors. For example, Reagle [66] explains that within the open-source movement, which primarily centers on the production and exchange of source code, a “geek stereotype and discursive style” prevails. These cultural markers, he says, “can be unappealing [to women] and the ideas of freedom and openness can be used to dismiss concerns and rationalize the gender gap as a matter of preference and choice” [66]. Other researchers (e.g., [22,56,63]) support Reagle’s argument that many peer-production communities align themselves with a construct of technology described as “geek masculine” and alienate women by valorizing a stereotypical masculine work culture [47]. Our study builds on this work, interrogating how women’s experiences of Wikipedia’s culture impact the ways they negotiate their safety and subsequently manage their participation.

3.2 Wikipedia’s participatory gender gap

Wikipedia’s gender gap first came into focus after the Collaborative Creativity Group at the United Nations University Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT) partnered with the WMF to do a comprehensive survey of Wikipedia readers and contributors in 2008. Translated into 20 languages and completed with more than 170,000 responses, the survey found only 13% of Wikipedia contributors at the time were women [33]. In response to the UNU-MERIT survey, Sue Gardner, then Executive Director of the WMF, set a goal to increase women’s participation in Wikipedia globally to 25% by 2015. The *New York Times* published an article about Gardner’s intentions [13], and she responded with a blog post entitled “Nine reasons women don’t edit Wikipedia (in their own words).” The reasons she cites include a lack of a user-friendly interface, a lack of discretionary time, a lack of self-confidence, an aversion to conflict, a misogynist atmosphere, and a sexually charged culture [29].

Researchers have since tested many of Gardner’s claims. One of the earliest studies [42] confirmed a gap in women’s participation and noted the percentage of women editing was not increasing over time. This study also reported that: (1) men and women focused on different content areas; (2) articles with a higher percentage of women editors were more likely to be protected (a range of states that protect pages from unregistered or inexperienced users); (3) women were more likely to have their edits reverted and to stop participating as a result; and (4) the gender gap has a “detrimental effect” on content presumed to be of interest to women. Collier & Bear [14] examined the UNU-MERIT survey data, proposing the gap may exist because women are less likely to engage in conflict, more likely to lack self-confidence, and less comfortable with criticism. Hargittai & Shaw [37] relatedly, suggested women may be less likely to participate in Wikipedia due to a lack of Internet skills. Like parts of Gardner’s 2010 blog post, many of these findings situate the gender gap as a result of women having or not having specific traits or skills.

However, other studies have pointed to the ways in which women actively contribute to Wikipedia, making more significant revisions [4] and writing longer messages than men [44]. These findings counter arguments that women’s skills or traits alone determine their levels of participation. In addition, researchers such as Ford & Wajcman [24] and Menking & Erickson [53] have argued women Wikipedians participate despite “Wikipedia’s origins and the infrastructures on which it relies [being] based on foundational epistemologies that exclude women” [24]. Our findings also suggest the gender gap is not *only* the result of a “pipeline problem” [74] or a “lack”

in women [37]; we describe how it also a consequence of a culture that does not prioritize the safety of all of its members.

3.3 Psychological safety and safe spaces

3.3.1 Psychological safety as an ontological construct . As a construct, safety is multidimensional. In physical terms, being safe means being protected from injury or bodily harm. In non-physical terms, safety is described most often under the banners of *ontological security* or *psychological safety*. The first of these phrases derives from Giddens [31], who refers to the condition as one where the foundational elements of one’s experience—the routines, in particular—are not disrupted. The continuity this order provides is what gives people a secure foundation upon which to act. Psychological safety, by contrast, focuses more on the sense of safety a person has in the face of potential risk-taking. This idea was introduced by Schein and Bennis [71], deepened by Kahn [40], and is most often recognized in the work of Edmondson [20]. Edmondson defines *psychological safety* as a shared belief that any risk taking on the part of an individual will not lead to negative consequences—risk taking, in other words, is collectively understood as sanctioned, not discouraged or illegitimate, behavior. (A risk in this context refers to something that is non-normative within the culture of the group or company, not something illegal or ill-advised.)

When psychological safety is present in an organization, it lays the foundation for innovation and change (i.e., risk taking and the learning that comes with it) and facilitates the “willing contribution of ideas and actions to a shared enterprise” [21] from its organizational members. In the same spirit, Kahn says psychological safety encourages individuals to engage. Individuals disengage when they sense a situation lacks safety and they engage when they feel assured their participation will not adversely affect their self-image, status, or career.

3.3.2 Safe space as a feminist ontological construct . The concept of *safe space* emerged from the women’s movement in the late twentieth century and has since been adopted by activist groups and pedagogical communities. Originally, safe spaces were female spaces or cultures [5], such as the separatist, womyn-only rural communities of the 1970s known as “lesbian lands” and documented in Cheney [9]. Historically, safe spaces were exclusive by definition; they were welcoming only to specific marginalized identities rather than to people who partially identify with or who want to be allies with marginalized groups. They also failed to recognize *intersectionality*: the interconnected nature of race, gender, socio-economic class, ability, sexuality, etc. [16]. Today,

however, a safe space is defined as a place or environment in which a person or a specific group of people can feel confident that they will not encounter discrimination, harassment, emotional and/or physical harm.

Over the years, feminist and LGBTQ researchers have problematized the term “safe space,” rejecting the dichotomy that presents private spaces as inherently safe and public spaces as inherently unsafe, studying domestic violence as an important counter-case [76,90]. Others have examined the paradoxes of safe spaces in gay and lesbian communities, noting how highlighting differences to create safe spaces can actually increase the risk of harm for people in those spaces (e.g., gay and lesbian bars since the Pulse Nightclub shootings [17]). As The Roestone Collective notes (citing Barrett, 2010), the term has become so overused it risks becoming a “undertheorized metaphor” [68]. Despite these critiques of safe space as a feminist ontological construct, we the emic resonance of safe spaces—particularly separatist spaces—in our data and, thus, acknowledge this construct for the meaning it still conveys.

3.4 Online harassment

HCI researchers have examined online harassment from a variety of perspectives across a range of platforms [62]. Most relevant to our focus on safety and safe space (as opposed to online harassment in general) are recent publications by Forte et al. [25] and Scheuerman et al. [72]. In the former study, the authors consider privacy and perceived risk on both Wikipedia and Tor, finding Wikipedians often modify their participation to mitigate perceived risks and concluding with a call for designers to consider both internal and external threats to members of online communities [25]. In the latter study, the authors interrogate how transgender and non-binary users experience safety, carefully articulating how technologies can enable both prosocial behaviors as well as “insider harm” and normalized harassment (e.g., microaggressions) [72]. Both of these studies shift our attention from asking questions about what motivates online harassment [10] or how we might categorize it [7] to what we can learn from how users manage their safety and socially construct safe spaces (see [82]). Our findings continue this thread of inquiry, identifying tactics our participants use to cope to support their agency and unimpeded participation.

4 METHODS

Our study description begins with a declaration of our relationship to our analytical topic. The first author has engaged in the Wikimedia communities as an active participant-observer for five years. All three authors are women.

4.1 Ethical considerations

We obtained Institutional Review Board (IRB) approval from the University of Washington and approval from the WMF’s Research Committee before recruiting participants. We provided all participants with study information and asked they (1) acknowledge they were 18 years of age or older and (2) provide either verbal or written consent. Interviewees were also invited to review their transcripts and provide comments.

4.2 Study design

Our study began with a set of semi-structured interviews investigating the gender gap. The focus of our interviews was: *Who are the women of Wikipedia? What do they think about the gender gap? Why do they stay?*

4.2.1 Recruitment . We recruited interviewees via existing WMF mailing lists, Wikipedia user talk pages, snowball sampling, and face to face interactions at Wikimedia-related events. We also used purposive sampling to seek out women Wikipedians who indicated they did not care about the gender gap or disagreed with how the phenomenon has been portrayed by the media or the WMF.

4.2.2 Data collection . The first author conducted interviews ($N=25$) using a semi-structured protocol over the course of 14 months spanning 2014-15. All interviews were conducted in English. All interviews were audio-recorded and then transcribed; the first author also took interview notes. Interviews ranged between 40-90 minutes.

4.2.3 Data analysis . All interview transcripts were imported into NVivo, a qualitative data analysis software tool, where the first author conducted *in vivo* coding [52]. Because the data was collected iteratively and in tandem, we used inductive coding and coding memos to identify emerging themes [78]. Then, we conducted axial coding of a subset of interview data. In this paper, we focus specifically on themes about safety. Of this data, we ask: *How do participants perceive and experience safety? How do they navigate spaces they perceive as unsafe? How do they socially construct safe spaces? What can they teach us about designing online communities differently in the future?*

4.2.4 Demographics . All 25 interviewees are women. However, only 23 said they identify as women—via account settings, user boxes, or text on their user pages—on Wikipedia. They are well-educated, have significant experience on the English language Wikipedia, and are actively involved in a range of ‘sister projects’ (e.g., Wikimedia Commons, Wikivoyage) as well as other language Wikipedias. To protect the privacy of our interviewees, we have assigned pseudonyms. See Table 1.

Table 1: Interviewees with reported vocation and years participating on the English Wikipedia as of 2018. *Some vocations have been generalized to protect identities. **Country of residence at time of interview. ‡Some interviewees are no longer active due to retirement, banning, or death.

| Pseudonym | Vocation* | Country** | Years |
|-----------|-------------------|-----------|-------|
| Allison | Social worker | USA | 11‡ |
| Aneesha | Teacher | India | 8 |
| Anne | Graduate student | USA | 11 |
| Diane | Non-profit | USA | 11 |
| Elena | <i>Unknown</i> | Italy | 7 |
| Elizabeth | Non-profit | USA | 13 |
| Helena | Biologist | USA | 12 |
| Jenn | Journalist | USA | 12 |
| Jordan | Professor | USA | 12 |
| Lena | Graduate student | Russia | 9 |
| Lillian | Business | USA | 11 |
| Lucy | Engineer (CS) | England | 4 |
| Magda | Retired professor | Australia | 13 |
| Marissa | Non-profit | USA | 7 |
| Mary | Researcher | USA | 14‡ |
| Megha | Researcher | India | 12 |
| Mia | Graduate student | USA | 5 |
| Nico | Professor | Germany | 13 |
| Norah | <i>Unknown</i> | Canada | 12 |
| Oona | Retired professor | England | 12 |
| Riddhi | Researcher | India | 8 |

| Pseudonym | Vocation* | Country** | Years |
|-----------|------------|-----------|-------|
| Riley | Researcher | England | 8 |
| Sam | Editor | Spain | 7 |
| Sophia | Professor | Germany | 14 |
| Susan | Non-profit | USA | 12‡ |

5 FINDINGS

Prior studies have investigated how women’s participation on Wikipedia is impacted by reverted edits, conflict, criticism, or harassment. Our study presents a different and complementary perspective: one of how the gender gap plays out on and off Wikipedia creating a spectrum of safe and unsafe spaces, and how participants navigate these spaces while managing their safety and constructing safe spaces.

5.1 Wikipedia is a multi-dimensional space existing along a spectrum of safety

5.1.1 Wikipedia is many different spaces. Analysis from our interviews reveals Wikipedia is many different spaces, a fact often overlooked by researchers. Some of these spaces are determined by material differences in the ways Wikipedia actively construes itself across both digital and physical worlds. First, Wikipedia consists of: mailing lists; Internet relay chat (IRC); different namespaces on Wikipedia (e.g., an article talk page, a user page, a user talk page); edit-a-thons, events where editors create and/or improve a specific type of content; hackathons, sprint-like events in which people involved in software development work on specific projects; Wikimania, the annual conference for Wikimedians; smaller annual conferences such as WikiConference North America; chapter meetings, independent organizations of Wikimedians who meet locally; workshops; and meet-ups.

Each of these subspaces possesses a different character as well as a different material identity. These characterological differences affect the cultures associated with each of these spaces, which gives rise to different types of interactions among the Wikipedians who engage there:

If you go to a hackathon, they are very laddie—you know, boys will be boys, but I think [Wikipedia] is a more supportive environment [...] There are social spaces like IRC, but IRC is very technical, and a lot of people won’t go on it. (Riley)

As Riley makes clear, each digital space has a recognizable character, and this character affects her

participation as a woman differently. For example, in spaces in which voting takes place (e.g., internal Wikipedia pages such as ones where Request for Adminships (RfA) occur) she thinks “being a female has absolutely worked in [her] favor.”

5.1.2 The spaces that make up Wikipedia are porous. Despite their identifiable distinctions, the multiple digital and physical spaces that comprise Wikipedia are also porous; they bleed into one another. Interviewee Mia recalls receiving unwanted attention across several of Wikipedia’s constituent spaces:

There’s this one guy who is part of the chapter here that was, for a while, posting date invitations on my talk page, that would say how much he wanted to spend time with me. Then it became a thing at edit-a-thons that he would attend too, where I felt like he was harassing me. I reported it to the chapter president, who did very little about it.

Even off-Wiki and on other social media sites—such as Twitter and Facebook—interviewees said they have felt unsafe due to their associations with Wikipedia. For example, Allison—who experienced conflict on and was eventually banned from Wikipedia—talked about how harassment followed her from Wikipedia to other social media platforms:

I brought that harassing tweet to a functionary’s attention via the Wikipedia Women’s Facebook page, but I’m really paranoid about reaching out that way. Several women there now know more about me than I feel safe with, with my Wikipedia experience.

Feeling “really paranoid” is not only a feeling. As Diane noted, some people who participate in other online communities—not only on Facebook and Twitter, but also on 4chan, Reddit, and Encyclopedia Dramatica—are “dedicated” to “outing” Wikipedians:

When I [joined], there was a man who was particularly interested in stalking women in technology. He had a focus on women through Wikipedia, both staff and volunteers. This is not a safe man. This is a scary man. This is a man who has been to jail for sexual violence and stalking. I don’t think we do enough as a culture—Wikipedia—to make people aware of the potential danger. There’s a huge group out there, who are dedicated specifically to outing people on Wikipedia. If you try to go on Wikipedia with a pseudonym [...], then you do run the risk that these people are going to come after you, and they’re going to reveal who you are anyway.

Off-Wiki spaces can also be places where people call Wikipedians names and circulate rumors about them, said Jenn:

[4chan] is not a place where most people with common sense would go. Someone told me that yesterday. It’s not on Wikipedia or anything, but I went, ‘Well, that’s funny. It

could be worse.’ [...] I’ve been called so much stuff, and other women have been called names too.

Our interviewees’ experiences underscore the falsity of the premise that Wikipedia is a single website. Rather, it is a large dynamic territory with distinguishable yet porous subspaces, each of which cultivates cultures that influence the cultures of adjoining spaces and may even provide a problematic template for how these cultures should all operate. Unfortunately, Wikipedia’s connections to many other online communities (some of which are “dedicated” to criticizing and “outing” Wikipedians) create an expansive backdrop that informs many women’s experiences of online participation. As Susan observed near the end of her interview: “Internet harassment of women in many forums is an unfortunate reality we all have to deal with.” On the whole, Wikipedia’s multiple, porous spaces do not provide an exception to this rule.

5.1.3 Wikipedia is not always an unsafe space . Our interviews also revealed diversity with regard to the characterization of Wikipedia as an unsafe space. Certain respondents perceive Wikipedia to be a neutral space in terms of their safety. Nico, for example, approaches her involvement in Wikipedia as an experiment, creating multiple accounts with different gender identities:

[S]o in the meantime I have made Wikipedia an object of study, from my angle, unpaid, but it has become more rewarding in a way because any hurtful stuff can go into the data I collect.

This kind of distancing allows Nico to interpret community rules about sock puppetry (i.e., creating multiple accounts) and other ways of engaging in Wikipedia’s online spaces as flexible: “just read those [rules] with boys’ eyes and you’re free.” Wikipedia is a “rewarding” space for her *only* in that “hurtful stuff” can be transformed into data.

Lena, likewise, reports Wikipedia does not cause her problems:

It’s a common question in feminism and some software groups, but I really see no difference in the relationship between me and any project which would be caused by gender.

For these interviewees, how they experience and make sense of gender affects how they experience Wikipedia as a space. In Nico’s case this sense-making involves curiosity and distancing as well as emotional labor [53], but it doesn’t protect her from threats to her psychological safety; in Lena’s case this sense-making involves separation and de-prioritization of her gender.

Interviewees also recount experiences of Wikipedia as a “refuge”—despite their contradictory descriptions of Wikipedia as “dysfunctional” for women. For example, Anne noted how Wikipedia provided a safe space for her when peers harassed her at school:

Wikipedia was totally a refuge because they [her peers] didn’t know how to use talk pages. They didn’t know how to

code, they didn’t know to do all of that stuff. So, that was like my safe space. It was great. Which is really weird because Wikipedia—we all know how dysfunctional it is—towards women and towards young people. The fact that that community was my safe space as a young woman, that’s kind of scary.

For Anne, it is “kind of scary” to think of Wikipedia as a safe space “as a young woman” given what she also describes as a “dysfunctional” community and given her experiences with harassment. She clarifies, however, with the explanation: “They [specific Wikipedians] were the people who created the safe space.” Other interviewees shared similar stories of finding camaraderie, community, and support in the Wikimedia movement both on and off-Wiki.

In sum, interviewees remain as editors because they are able to employ different strategies to translate parts of Wikipedia into neutral and even supportive spaces—by engaging in identity management (e.g., creating multiple user accounts with different genders, deprioritizing one’s gender identity), emotion work, or forming relationships with specific community members who then help them create safe spaces. Nonetheless, these solutions are not designed into or promoted within Wikipedia.

5.2 Making Wikipedia a safer space

As the previous section noted, how our participants accomplish safety on Wikipedia is tightly coupled with the tactics they use to manage adversities. In this section, we continue our examination of the ways our interviewees exercise their agency to make Wikipedia a safer space.

5.2.1 Addressing bad behaviors . One strategy for creating safety involves banishing “the trolls” from Wikipedia—a responsibility interviewee Sam laid at the feet of the WMF:

Rather than make [the mailing list] a safe place for people to proactively discuss things, they [WMF employees] systematically empower the trolls. So, when [trolls are] gunning for your job, you have to remain silent in so many ways. And by remaining silent, you’re actually making it easier for the trolls, but if you open your mouth, you don’t have a support network. That makes it very, very difficult for women to participate. That’s why if someone came to me—if you came to me today and said, ‘I am a woman. I want to work on women’s issues. I want to get involved in Wikipedia.’ I would tell you, ‘Please don’t.’

Susan, another interviewee, corroborated this view, “I believe the failure to discourage bad male behavior is one of the reasons so many women quit Wikipedia. It doesn’t always feel like a safe place.” That is, in Susan’s opinion women do not “quit Wikipedia” simply because they do not have specific traits or skills. They leave because there is a “failure” to address “bad” behavior, which Susan associated directly with men. Safety, in this sense, is an

achievement of cultural enforcement interviewees cannot accomplish on their own but only in concert with other Wikipedians (e.g., administrators) and with institutions like the WMF.

5.2.2 *Creating women-only spaces*. Another strategy that emerged in our interviews was the idea of creating women-only spaces, as interviewee Mary suggested:

As much as I'm not personally a fan of female-only groups, they have been shown to be extremely effective in making people feel safe and feel like, 'This is a space where I can go, and I don't have to feel like someone's going to attack me.' I know that there have been female-only edit-a-thons and things like that, so people feel like they can fail.

Although Mary does not like exclusive spaces for women only (i.e., separatist spaces) she admitted they have been “extremely effective in making people feel safe.” Several other participants shared how they managed to find and create safe spaces off-Wiki. Despite having access to intentionally supportive on-Wiki spaces like The Teahouse [55] and the WikiWomen’s Collaborative, Jenn said:

We don't feel safe on Wiki. Not all of us, but a lot of us don't, so why keep doing this on Wiki when we can take it another place, another level, and put it on a place where it's easy to find people?

In her case, she started a Facebook page for all women Wikipedians, acknowledging a separate, private Facebook group for “incredibly prolific women” Wikipedians already exists. Facebook, for Jenn and others, affords a space “where it’s easy to find people” and where “creating a place multiple people can maintain” with the goal of “sharing people’s work is important.” As Jenn noted, “the majority of the women I know who edit Wikipedia are on Facebook and Twitter.”

Some interviewees reported creating safe spaces that cut across both digital and physical worlds, particularly when recruiting and working with new editors:

I think women need personal invitation. And they need time. And they need a safe space where they feel like they can contribute without being—without having people jump down their throats. So, I'm positing that by creating a personal environment offline and by talking to people and reaching out to people—people are a lot less likely to give up. (Anne)

So, thinking about local libraries—a library in your local town. For women, libraries might be kind of a 'safe place' to learn to edit Wikipedia. (Lillian)

Both Anne and Lillian are actively involved in outreach efforts and, as Anne noted, “creating a personal environment offline” in which to engage new editors who are women may be required in addition to creating safe spaces on Wikipedia.

In sum, some interviewees perceive the governing and moderating bodies of Wikipedia (e.g., administrators, chapter presidents, WMF employees) as complicit in sustaining unsafe spaces and may choose to create their own safe spaces as separatist spaces for women both off-Wiki and offline. This is how they make Wikipedia safer.

5.3 Constructing safety for oneself

The enactment of safety for many of our interviewees is also a personal endeavor which accounts for shifts in behavior as well as perspective. Participants report employing particular strategies to construct forms of safety for themselves in their various forms of participation. All of these strategies reflect an overall desire to avoid Wiki drama, defined as “the unnecessary creation, prolongation, and/or spreading of conflict and strife” [88]. This active avoidance of Wiki drama was also evident in our interviewees’ descriptions of the kinds of articles they choose to edit and the kinds of work they choose to do. We expand on these issues below.

5.3.1 *Choosing what to edit*. All Wikipedians choose what to edit because the community is based on volunteer labor, and editing is self-directed. However, our interviewees spoke to how they chose not to edit certain articles or articles about certain topics expressly because they wanted to avoid conflict. For example, Jordan talked about “huge debates” and why she chooses not to participate in “contentious places”:

I think there are times when there are huge debates. Often, I don't participate in these sorts of things because I really care about taking all the information into account. [...] I think avoiding the contentious places is simpler.

Magda noted many articles have “gatekeepers” who consider specific editing spaces to be “their personal property”:

A lot of articles have what I call gatekeepers, which are individuals who, as far as I can see, regard it as their personal property. Others are not welcome to edit there.

She continued, saying “I decided that the way to deal with it is to shrug and go and edit another article. There’s plenty more for me to do, why waste my time where it’s going to be difficult.” Like Jordan, Magda avoids “contentious places,” noting that it is a key reason why she does not edit around the subject of Indigenous peoples:

What I learned from that is quite simply, it's easiest to stay away. Again, there's plenty of other things I can edit. I avoid anything that's described as an 'aboriginal massacre.' Don't touch it because it's in the eye of the beholder, et cetera. There's an example. I choose not to edit in controversial topics because I don't want to live with the controversy.

Magda and Jordan both think carefully about the articles and topics they avoid. As Jordan says, she “really care[s] about taking all of the information into account,” and Magda admits she “know[s] all this stuff around protocols for working with Indigenous peoples” from her professional training. However, both women choose not to edit anything that might result in having to “live with the controversy.” Their decision not to edit has less to do with the content of the articles themselves and their skills and knowledge in relation to those topics, but rather to do with the culture of Wikipedia and their sense of safety.

5.3.2 Choosing what work to do . Although editing is central to the work done on Wikipedia, it is not the only work a Wikipedian may choose to do. As noted above, Wikipedians also organize local chapters, facilitate edit-a-thons, and participate in outreach. They also do other kinds of coordination work on-Wiki:

There is some work I do because it needs to be done, and everyone who is committed to Wikipedia ought to do it at least once in a while, but I don't particularly enjoy it. (Oona)

Here, Oona listed: “detecting and cleaning up copyright infringements” (“mind-numbingly boring” and “extremely time-consuming”); copyediting to remove “puffery” (“with the added ‘pleasure’ of pushback” from the articles’ creators); participating in Articles for Deletion discussions (which can include “desperation and aggression” on the part of article creators). Oona does not particularly like this kind of work, but she performs it because “it needs to be done.”

However, Oona does have limits. For example, she has no desire to do the work of an administrator:

I'm not an administrator and don't want to be. Editors who work in topics which are perennially under assault from people trying to use Wikipedia for propaganda, broadly construed, often burn out for periods, sometimes permanently. I have tremendous admiration for those who have taken on the Sisyphean task of keeping such articles neutral and factual. I couldn't do that work.

Though Riley ran for and won an administrator position, she said, “*I hate anything that involves drama.*” When asked what kinds of advice she would give to women who want to edit Wikipedia and avoid drama, she replied:

Number one: Don't take things personally. Number two: There are absolutely thousands of things to do on Wikipedia that will not get you criticized, that don't have any drama attached to them.

5.3.3 Performing emotion work . Controlling one's emotions or actions in an effort to conform to community norms is a kind of emotion work [39,53], particularly when it comes to avoiding the appearance of “weakness”—an attribute considered especially distasteful on Wikipedia, as Diane expressed:

I've talked to the guy who called me 'cunt'. I understand that not everybody can do this and, frankly, I don't think people should have to, but I also believe that the Wikipedia community has a certain respect for people who can take it.

After telling a story about a “really tough” friend who plays roller derby and who tried to edit Wikipedia, but who left with “some really weak excuse that the community was combative,” Riley shared a similar sentiment: “*No one is obligated to make you feel better about yourself.*”

To be able to “take it,” Diane engages in emotion work and also advocates practicing a kind of respectability politics by making “sure that [she] always behave[s] impeccably.” She believes this will have the preemptive effect of ingratiating her with other community members should there be a confrontation:

People will rally to your side if you can make it clear who the good guy is in a confrontation. For that reason, I myself make sure that I always behave impeccably. I don't ever respond in kind, I don't ever respond angrily. You often only have a few—people will read for 20 seconds and then decide where they stand on an issue. If you don't give any room for them to be confused about who you are and what you're doing, then it's a whole lot easier for you to make your case.

Oona, too, talked about the need for emotion work, drawing attention to the dissonance between how she feels “inwardly” and how she reacts “outwardly”:

How did I react? I inwardly laughed, but outwardly talked him down from his high dudgeon. By the end, I think he realized he had made quite an ass of himself. [...] The chap eventually ended up indefinitely blocked for a host of far greater sins than calling me a 'feminized nebbish.'

Although we all perform emotion work to navigate social situations and manage others' expectations, Wikipedia's practices and norms around “feeling rules” [39] are codified in guidelines and essays—such as “Deny recognition” (i.e., “Don't feed the trolls”), “Assume good faith” and “Ignore all the rules.” As Marissa admitted, these kinds of codified norms, ironically, create the conditions for Wikipedians to engage in abusive behaviors:

The theory to good faith is sort of this shining pillar that should exactly be about motivation and interaction and not just around your edit, right? [...] We also use some of these pillars to hit each other over the head in conversations.

In sum, to construct safety for themselves, our interviewees engage in boundary work (e.g., identifying work they will and will not do) and emotion work (e.g., adapting their outward expressions of emotions). These efforts help them to avoid spaces they perceive as stressful and/or threatening—even when the community might benefit from their expertise—and to manage their participation in ways that decrease the potential for “drama” and conform to Wikipedia's norms.

6 DISCUSSION

Our participants have developed sophisticated tactics for managing their participation even when they feel unsafe—both at collective and personal levels. While our interviewees do not represent all perceptions and experiences of safety on and in Wikipedia, they do help us to understand the practices experienced women Wikipedians use to stay active participants in this multidimensional and porous space. Looking at these practices as a whole, we wish to emphasize three key points.

First, as Pentzold [64] suggests, Wikipedia is an *ethos-action community*. In the case of our interviewees, Wikipedia as an ethos-action community means combining the ethos of what it means to “be a Wikipedian” with an action-oriented responsibility to enact change, even they know the community or institution will not provide the help or intervention sought. This kind of participation is possible because our participants are well-versed in the policies, norms, and practices of their community; they know ways to create pockets of safety—both offline and/or off-Wiki—that may not be evident to all, especially newcomers. They also possess the necessary knowledge (gleaned often from unwanted experience) to navigate Wikipedia in ways that personally make them feel safe. As Diane said to us, Wikipedians are “people who can take it.” Take it, indeed, but only by engaging in a series of tactical maneuvers that are not only invisible but also largely unacknowledged.

Second, for all of these women Wikipedians, *intersubjectivity* [6]—shared understanding based on Wikipedia’s language, norms, assumptions, and values—plays a key role in how they ascribe meaning to their experiences. They are shaped not only by their interactions with other Wikipedians but also by the values of the Wikimedia movement (e.g., “freedom of speech, knowledge for everyone, and community sharing”). Even as they develop strategies, manage their participation, and navigate passage, Wikipedia shapes them. In this way, their construction of safety and safe spaces is inherently “relational work” [6]. It is difficult to tease apart their positions as women from their positions as Wikipedians. As Pentzold notes, Wikipedia “binds its members to a network of allegiance” [64]. But should this allegiance be a requirement for participation?

Third, though many of our interviewees associated “bad” behaviors with men, our findings suggest the underlying culture of Wikipedia rather than the gender gap is at the heart of the issue. As Vitak et al. note, harassment of women is a widespread, persistent social problem that has migrated to and become normalized in online spaces: “Unlike online attacks on men, women are

harassed *because they are women* [authors’ emphasis]” [82]. Wikipedia’s culture is influenced not only by this larger social phenomenon but also by the rhetoric of *meritocracy*—a “social system where individual talent and effort, rather than ascriptive traits determine individuals’ placements in a social hierarchy” [1]—that permeates commons-based peer production environments. Research (e.g., [26,59]) suggests that women who believe in meritocracy evidence reduced well-being, blaming themselves for not being able to overcome barriers—even when barriers are discriminatory. Thus, because meritocracy obscures discrimination based on ascriptive traits (e.g., gender and sex), it contributes to women’s perceptions and experiences of safety in online communities like Wikipedia.

6.1 Provocations for consideration

As evidenced by 4chan, Reddit, Encyclopedia Dramatica, and the Something Awful Forums (see [61]), an online community does not need to be safe for all users to be successful. We would argue, in contrast, that if a peer production environment—or any online community—aspire to be *inclusive* (i.e., “the encyclopedia anyone can edit”), our findings provide at least two provocations.

6.1.1 Inclusivity requires safety . Inclusivity—welcoming and encouraging a diversity of opinions, approaches, and backgrounds without requiring adherence to any particular one—requires both physical and psychological safety. If an online community’s culture shapes norms, practices, and policies in a way that inhibit risk-taking by its members, the best it can hope for is an empty kind of tokenism that denies structural inequalities [92]. For example, Riley recognizes benevolent sexism [32] benefits her in certain spaces on Wikipedia (i.e., her RfA) while other spaces—spaces that aren’t safe for risk-taking because they involve “drama”—are better abandoned. Inclusion should be an elemental aspect of any community that seeks to maintain its vitality and promote innovation because both of these things require risk-taking on the part of its members. Research proves again and again that diverse teams and inclusive environments are not only more rewarding for team members but also more productive [15]. We found that editors like Jordan, Magda, and Oona choose *not* to edit in areas in which they are subject matter experts due to a lack of psychological safety. Relatedly, other researchers have asked whether the participatory gender gap has impacted the quality of Wikipedia’s content (e.g., [34,42,84]). Clearly, not only do diverse communities require inclusivity, but inclusivity also requires safety.

6.1.2 Porous spaces require new approaches to safety . That many of us live in a connected world is no longer

debated [54,65]. What is less evident is how porous these connections are—impacting the integrity of participants’ contributions as well as their safety. For example, the English language Wikipedia’s Arbitration Committee was unprepared for the off-Wiki doxing and sexual harassment of our interviewee Allison, who—in the midst of trying to plead her case—was banned from Wikipedia. This online porosity was surprising both for the committee and for Allison, but spaces like Wikipedia will only become *more* porous. This kind of porosity differs significantly from channel switching—when users actively select different spaces for different kinds of communication [73]—or, similarly, communication places [58] in that interviewees report a lack of consent and control when threats to their safety bleed from one online space to another or from an online space into their offline lives. This reality requires us to adopt a new understanding to ensure participant safety: one that relies on design to facilitate the development of a shared culture—that values safety as well as inclusivity—across complex terrains. We need to shift away from thinking of this porosity as an exception in our lives and start thinking of it more as a rule for which we can do a better job of designing.

6.1.3 Provocations for design. From our empirical findings and in light of the provocations above, we present three provocations for designing more equitable, inclusive, and safer online environments for historically marginalized users (e.g., women, transgender folks and/or people of color).

First, designers can both acknowledge their role in shaping online and offline spaces and ask what kinds of harm their designs afford to whom. Here we mean “designers” and “designs” in the most expansive way: designers of sociotechnical spaces (e.g., IRC, wikis, mailing lists, platforms, systems) as well as designers of workshops, designers of hackathons, designers of policies, etc. As our interviewees observe, the character (i.e., *laddie, social, technical, personal, safe*) and material identity (e.g., affordances allowing direct, uninvited contact a user cannot block such as the date invitations Mia received on her talk page) of the multiplicity of spaces that make up Wikipedia directly impacts the kinds of interactions that take place in and how they experience each one of those spaces. So, a designer can ask: *What can a bad actor do in this space? Which aspects or features of this space are most vulnerable to manipulation and exploitation? How might someone subvert the rules?* Envisioning techniques, such as those in Value Sensitive Design (e.g., [28,91]) or The Tarot Cards of Tech [79], are particularly well-suited to help designers explicitly consider the implications of their choices.

Second, we encourage designers to create tools to help people make and manage their own separatist safe spaces, particularly online. Though separatist spaces are

ontologically fraught, people who routinely face threats to their physical and psychological safety need them. Many of our interviewees talked about creating these kinds of spaces off-Wiki via private Facebook groups or during offline events because Wikipedia doesn’t provide the tools, places, or community support for this type of activity. In fact, one of our interviewees faced substantial opposition, accusations of discrimination, and harassment when she proposed a women-only space on-Wiki. (We haven’t shared the details of her story or her pseudonym because the dedicated community of Wikipedia editors is relatively small, and we want to protect her confidentiality.) On the surface, we realize this recommendation may appear to be in conflict with our call for inclusivity. However, inclusivity—unlike allegiance—does not require adherence to one approach or solution. It requires a recognition that differences can only be negotiated by embracing them rather than fearing a loss of privilege or power. As a Twitter user tweeted when #YesAllWomen was trending, “If you don’t understand why safe spaces are important, the world is probably one big safe space to you” [70].

Third, as in our first provocation, we encourage designers of sociotechnical spaces to consider their ability to help alleviate the burden of adaption resting solely on the shoulders of users who may already face significant societal barriers (e.g., [1,41,48]). Although these kinds of barriers cannot be designed away, they may be mitigated. We suggest designers consider Feinberg’s explanation that they occupy a situated position in which they use “amorphous” yet critical “abstract material”—consisting of their lived experiences and worldviews—even if it remains unacknowledged [23]. Therefore, designers who do find themselves in positions to affect change can acknowledge the “abstract material” under their command and strive to use it with equity for others who do not share their positions. For example, a white cisgendered woman from the United States who is designing a platform intended for global use might reflect on her positionality, examine her assumptions about safety, and seek feedback from colleagues and users who do not share her perspective.

Finally, although these provocations for consideration and design are grounded in empirical data from a qualitative study of Wikipedia [78], they resonate beyond Wikipedia and align with related research. For example, our findings support Nafus’ conclusion that the purported openness in F/LOSS communities paradoxically frees technical considerations from social ones thus enabling the perpetuation of exclusionary practices [56] (a conclusion also supported by Reagle [66]). Beyond open-source communities, our findings also resonate with a recent memo shared by Mark S. Luckie, Facebook’s former Strategic Partner Manager for Global Influencers, upon his departure from the company. In his memo, Luckie, a black man, outlines what he calls Facebook’s “black people

problem,” describing how black users’ attempts to create safe spaces are “derailed by the platform itself” [48]. Similarly, our interviewees’ reports of how they create safety for themselves where Wikipedia does not underscore the role the design of a sociotechnical system plays and help us ask how we can design technologies that account for rather than reify social inequalities.

7 LIMITATIONS

One limitation of this study is that the majority of our participants are experienced Wikipedians. While our sampling may seem to suffer from survivorship bias, the goal is exactly that: to understand how these women have survived, remaining active even when they feel unsafe. Future work will investigate how women and members of marginalized groups who are newcomers experience and manage safety. Also, while many of our interviewees may benefit from certain aspects of privilege (e.g., socio-economic status, race), we did not collect this demographic data, so we cannot engage with their intersectionality empirically. However, there is a pressing need for future work in HCI to ask these kinds of questions.

8 CONCLUSION

Although the desire to center the voices of women Wikipedians motivated our initial study, our findings extend far beyond Wikipedia. Open-source systems of all kinds continue to reflect participatory gender gaps [51], social media sites continue to grapple with online harassment [19], and corporations from Uber [27] to Ford Motor Company [11] continue to be subject to internal investigations and sexual harassment lawsuits. As former Wikipedian Adrienne Wadewitz wrote, simply adding women to these environments will not fix the issues [83]. Wadewitz was right. But listening to, believing, and valuing the experiences of women who are already active participants in these environments is certainly the first step forward.

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